Social and Emotional Skills for Better Lives

FINDINGS FROM THE OECD SURVEY ON SOCIAL AND EMOTIONAL SKILLS 2023

OECD

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OECD
BETTER POLICIES FOR BETTER LIVES

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Preface

At a time where the kinds of things that are easy to teach and test have also become easy to digitise and automate, and where a multitude of disruptions require individuals to constantly learn, unlearn and relearn to find and adjust their place in life and work, individuals need skills that go beyond academic knowledge. These are skills like cooperation, empathy, and creativity to find solutions, or the persistence to get things done despite challenges. Such social and emotional skills underpin our ability to interact with other people and manage our own emotions and behaviour in healthy and productive ways.

Comparative evidence of these skills has been limited. This report seeks to fill that gap: it presents findings on the state of these skills in 15- and 10-year-old students across 23 sites. The report is based on the second round of the world's first system-level survey of such skills, the Survey on Social and Emotional Skills (SSES).

Social and emotional skills have become established concepts in education systems and research—and rightly so. A large body of work shows that they support academic learning, help predict labour market and employment outcomes, affect individual's health and well-being, and support healthy democracies. Consequently, they now appear in the curricula of many countries. Yet they appear in many different ways and assessing—never mind comparing—their development within or across systems has proven difficult. They are particularly complex. They develop across social contexts, not only school; they manifest themselves differently across individuals; and their expression and value vary across cultures. Additionally, most education systems do not have specifically designed tools or measures to assess these skills. Numerous tools exist, but they assess a fragmented range of skills or are not valid for the many systems who wish to use them. However, as these skills are integrated into more systems, determining what practices and policies are effective, for which skills and age groups, becomes only more urgent.

The OECD has addressed this gap through the SSES, turning a challenge into an opportunity for international collaboration, learning and policy exchange. In the past decades, the OECD has made itself a world leader in comparative education data and the innovation of education metrics. This role also gives it influence to shape the dialogue and use of these measures. It takes this role seriously. The aim of SSES is not to create another layer of top-down accountability, but rather to create a shared space, terminology and repository of evidence for understanding and promoting these skills and thus, human flourishing. It aims, first, to give educational practitioners and policymakers a lens—ideally one of many—to see the landscape of these skills in their own countries. For many, that land is still obscured, with no comprehensive data or information. Second, it aims to help us look outward to each other, to the next city, region or country that may have the idea, policy or programme we need.

This collaborative approach is embedded in the design of SSES. Its inception mobilised experts from around the world. It draws on frameworks that have been validated in multiple countries and cultures. Participating sites helped revise and finalise the instruments, including the themes of the contextual questionnaires. It thus strikes a balance between universal measures and cultural adaptation.

Following the successful inaugural round of SSES in 2019, SSES 2023 extended the work and coverage. Six countries participated nationwide along with another 10 subnational entities from diverse areas.

Ukraine joined amid its ongoing conflict and two sites from SSES 2019 rejoined in 2023. Thus, with findings from 23 sites involved in either or both SSES 2019 and 2023, this offers a unique opportunity to examine the impact of the pandemic and war on students' social and emotional skills and well-being.

The results from SSES 2023 show that students' social and emotional skills are linked to their academic success, aspirations for the future and well-being. In other words, skills such as persistence, empathy, curiosity, and emotional control can help students lead a healthy, happy, and purposeful life. We see that students with high levels of social and emotional skills achieve better grades and have higher aspirations for their future, demonstrating that building these skills can go hand-in-hand with supporting students to reach their potential as learners. We also see that, like cognitive skills, social and emotional skills are not equitably distributed among students, with gaps between boys and girls and by socio-economic background larger in some sites than others. Participating sites can use these data to identify skills to target and inequalities to address as part of their education policy agendas. SSES demonstrates the value of social and emotional skills for developing well-rounded citizens who are equipped to tackle 21st century challenges. While the importance of these skills is increasingly recognised by policy makers, employers, education professionals, and the wider public, the task for governments is to ensure that their value is reflected in their policies, including which outcomes and skills are measured.

Andreas Schleicher

Director for Education and Skills

Special Advisor on Education Policy to the Secretary-General

Foreword

SSES is the most comprehensive international large-scale assessment to date that provides education systems with information on their students' social and emotional skills. It was designed to address gaps in data by covering a comprehensive range of skills and gather extensive contextual information about school and home factors that might influence these skills, all using reliable, validated tools for cross-country comparison. The first round of SSES was conducted in 2019 in 10 cities from around the world, with findings published from 2021-2023. It showed the feasibility of measuring social and emotional skills across countries and demonstrated its value in addressing research questions and policy issues related to social and emotional skills. Participating local governments from Bogotá (Colombia) to Suzhou (China) applied findings to policy and practice, often in collaboration with partner foundations or universities.

This report is the first of two international reports on the rich findings of the SSES 2023. It documents robust and reliable information on students' social and emotional skills, and how these skills relate to individual, family, and school characteristics. It explores broader policy and socio-economic contexts related to these skills. It reinforces the evidence base for countries to focus more on social and emotional skills as a pathway to developing well-rounded citizens in their education policy agendas. Together with other OECD surveys in the Directorate for Education and Skills, SSES points to the holistic, lifelong development of cognitive, and social and emotional skills as the best foundation for fulfilled and productive lives.

Acknowledgements

The Survey on Social and Emotional Skills (SSES) is a collaborative endeavor involving the participating sites and the OECD's Centre for Educational Research and Innovation.

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Reader's guide

What is the Survey on Social and Emotional Skills?

The Survey on Social and Emotional Skills (SSES) is an international survey designed by the OECD's Centre for Educational Research and Innovation to improve understanding of social and emotional skills among 10- and 15-year-old students. SSES aims to understand how levels of these skills differ among students with different characteristics; how these skills matter for important student outcomes; and how students' school and home environments influence skill development.

Which social and emotional skills are covered in SSES?

The 15 skills measured were selected to provide a comprehensive coverage of those that are relevant for children's and adolescents' success and well-being. Further information on why and how these skills were selected can be found in the SSES assessment framework (Kankaraš and Suarez-Alvarez, 2019[1]). See Table 1 for a full list of the skills included in SSES 2023 and their definitions.

Some changes were made to skills measured in SSES 2023 compared to SSES 2019. In SSES 2019, achievement motivation and self-efficacy were measured as 'additional skills' that were created from items used to evaluate other skills. In SSES 2023, achievement motivation is measured using a new set of dedicated items and self-efficacy is not measured. Items to measure cooperation were included in SSES 2023, however this skill did not conform to the necessary technical standards and was therefore excluded from the analysis. Further information can be found in the SSES 2023 Technical Report (forthcoming).

How were these skills measured?

All students complete a questionnaire where they indicate the extent to which they agree or disagree with a series of statements. Examples of statements include: '*I keep working on a task until it is finished*', '*I stay calm even in tense situations*' and '*I am able to defend my interests when they are challenged*'.

Who participated in SSES?

Students in sixteen sites – six countries and ten sub-national entities - participated in SSES 2023. Data from seven sites who participated in the first round of SSES in 2019, but not in 2023, are also included in analyses in this report wherever possible to expand the coverage of the average across sites.

Bogotá (Colombia) and Helsinki (Finland) participated in both SSES 2019 and 2023. For these two sites, only their data from SSES 2023 are included in the average across sites. Where possible, results in these sites are compared between 2019 and 2023. All sites in SSES 2019 and 2023 surveyed 15-year-olds. All SSES 2019 sites surveyed 10-year-olds, however surveying this age group was made optional in SSES 2023. See

Table 2 for a list of sites who participated in SSES 2019 and 2023, including whether they surveyed 10-year-olds.

Students' teachers and principals were also surveyed in all SSES 2019 and SSES 2023 sites. Students' parents were surveyed in some sites. Teacher, principal and parent data are not used for analyses in this report; however, teacher and principal data will be included in future outputs.

Table 1. Description of the skills included in the Survey on Social and Emotional Skills 2023

Domain	Skill	Description	Behavioural examples
Open-mindedness	Curiosity	Interested in ideas and love of learning, understanding and intellectual exploration; an inquisitive mindset.	Likes to read books, to travel to new destinations. Opposite: Dislikes change, is not interested in exploring new products.
	Tolerance	Is open to different points of view, values diversity, is appreciative of foreign people and cultures.	Has friends from different backgrounds. Opposite: Dislikes foreigners or people from different backgrounds.
	Creativity	Generates novel ways to do or think about things through exploring, learning from failure, insight and vision.	Has original insights, creates valued artworks Opposite: Acts conventionally; not interested in arts
Task performance	Responsibility	Able to honour commitments and be punctual and reliable.	Arrives on time for appointments, gets chores done right away. Opposite: Doesn't follow through on agreements / promises.
	Self-control	Able to avoid distractions and sudden impulses and focus attention on the current task in order to achieve personal goals.	Postpones fun activities until important tasks are completed, does not rush into things. Opposite: Is prone to say things before thinking them through. Binge drinking.
	Persistence	Able to persevere in tasks and activities until they get done.	Finishes homework projects or work once started. Opposite: Gives up easily when confronted with obstacles/distractions.
	Achievement motivation	Sets high standards for oneself and works hard to meet them.	Enjoys reaching a high level of mastery in some activity. Opposite: Lack of interest in reaching mastery in any activity, including professional competencies.
Engaging with others	Sociability	Able to approach others, both friends and strangers, initiating and maintaining social connections.	Skilled at teamwork, good at public speaking. Opposite: Can struggle in working with a larger team, avoids public speaking.
	Assertiveness	Able to confidently voice opinions, needs, and feelings, and exert social influence.	Takes charge in a class or team. Opposite: Waits for others to lead the way; keeps quiet when disagrees with others.
	Energy	Approaches daily life with energy, excitement and spontaneity.	Is always busy; works long hours. Opposite: Gets tired easily without physical cause.
Collaboration	Empathy	Understands and cares about others, and their well-being. Values and invests in close relationships.	Consoles a friend who is upset, sympathises with homeless people. Opposite: Tends to misinterpret, ignore or disregard other person's feelings.
	Trust	Assumes that others generally have good intentions and forgives those who have done wrong.	Lends things to people, avoids being harsh or judgmental. Opposite: Is secretive and suspicious in relations with people.
Emotional regulation	Stress resistance	Effectiveness in modulating anxiety and able to calmly solve problems (is relaxed, handles stress well).	Is relaxed most of the time, performs well in high-pressure situations. Opposite: Most of the time worries about things, difficulties sleeping.
	Optimism	Positive and optimistic expectations for self and life in general.	Generally in a good mood. Opposite: Often feels sad, tends to feel insecure or unworthy.
	Emotional control	Effective strategies for regulating temper, anger and irritation in the face of frustrations.	Controls emotions in situations of conflict. Opposite: Gets upset easily; is moody.

Table 2. Participants in SSES 2019 and 2023

	SSES 2023 participant	SSES 2019 participant	Surveyed 15-year-olds	Surveyed 10-year-olds (optional in SSES 2023)
Bulgaria	Yes		Yes	
Chile	Yes		Yes	
Mexico	Yes		Yes	
Peru	Yes		Yes	
Spain	Yes		Yes	
Ukraine	Yes		Yes	Yes
Bogotá (Colombia)	Yes	Yes	Yes	Yes
Daegu (Korea)		Yes	Yes	Yes
Delhi (India)	Yes		Yes	
Dubai (United Arab Emirates)	Yes		Yes	
Emilia-Romagna (Italy)	Yes		Yes	
Gunma (Japan)	Yes		Yes	
Helsinki (Finland)	Yes	Yes	Yes	Yes
Houston (United States)		Yes	Yes	Yes
Istanbul (Türkiye)		Yes	Yes	Yes
Jinan (China)	Yes		Yes	Yes
Kudus (Indonesia)	Yes		Yes	Yes
Manizales (Colombia)		Yes	Yes	Yes
Ottawa (Canada)		Yes	Yes	Yes
Sintra (Portugal)		Yes	Yes	Yes
Sobral (Brazil)	Yes		Yes	Yes
Suzhou (China)		Yes	Yes	Yes
Turin (Italy)	Yes		Yes	
Total	**16**	**9**	**23**	**13**

Before starting the survey, each site agreed a definition of their target population: the group of students the survey results should represent. From the target population, a random sample of students was surveyed. Table 3 provides a list of each site that participated in SSES 2023, their target population definition and any cautionary notes that should be considered when interpreting their data. The target population varies between sites, with some only surveying students in public or private schools, and these differences should be considered when interpreting analyses.

Table 3. SSES 2023 site descriptions, target population definitions and cautionary notes

Site description	Target population definition	Cautionary notes
Bulgaria is an OECD accession candidate country located in Europe.	15-year-old students in public and private schools. There were 57 373 SSES eligible students in 1 091 schools.	None.
Chile is an OECD member country located in South America.	15-year-old students in public and private schools. There were 229 026 SSES eligible students in 5 753 schools.	None.
Mexico is an OECD member country located in North America.	15-year-old students in public schools. There were 633 576 SSES eligible students in 16 284 schools. However, these estimates are not consistent with those from PISA 2022.	The data is not fully representative of the target population and present major deviations from several technical standards. For this reason, data for Mexico is excluded from the international average and reported separately.

Peru is an OECD accession candidate country located in South America.	15-year-old students in public and private schools. There were 543 882 SSES eligible students in 16 977 schools.	None.
Spain is an OECD member country located in Europe.	15-year-old students in public and private schools. There were 487 622 SSES eligible students in 7 876 schools.	None.
Ukraine is a prospective OECD member country located in Europe.	10-year-old and 15-year-old students in public and private schools from 19 of 27 Ukrainian regions. There were 415 927 SSES younger cohort eligible students enrolled in 11 963 schools and 289 953 SSES older cohort eligible students in 11 038 schools.	Russia's war of aggression against Ukraine meant that a minority of Ukrainian regions where it was not safe to conduct the survey are not covered. Data are representative of 19 of 27 Ukrainian regions. For this reason, data for Ukraine is labelled 'Ukraine (19 of 27 regions)'. In addition, the consequences of the war also had an impact on students' participation rates. Data for 10-year-old students should be interpreted with some caution as student response rates were lower than expected (72%). Data for 15-year-old students should be interpreted with caution as student response rates were much lower than expected (57%).
Bogotá is the capital of Colombia, an OECD member country. .	10-year-old and 15-year-old students in public and private schools. There were 87 501 SSES younger cohort eligible students in 1 679 schools and 91 501 SSES older cohort eligible students enrolled in 1 146 schools.	None.
Delhi is the capital of India, an OECD Key Partner country.	15-year-olds in public schools managed by the Directorate of Education in the Government of the National Capital Territory of Delhi. There were 244 856 SSES eligible students in 964 schools.	Data should be interpreted with some caution as student response rates were lower than expected (72%).
Dubai is a city in the United Arab Emirates (UAE), a non-OECD member country.	15-year-old students in private schools. There were 18 100 SSES eligible students in 170 private schools.	None.
Emilia-Romagna is a region located in northern Italy, an OECD member country.	15-year-old students in public and private schools. There were 22 594 SSES eligible students in 172 schools.	None.
Gunma is a prefecture located in central Japan, an OECD member country.	15-year-old students in public and private schools. There were 14 757 SSES eligible students in 79 schools.	None.
Helsinki is the capital of Finland, an OECD member country.	10-year-old and 15-year-old students in public schools. There were 5 883 SSES younger cohort eligible students in 96 public schools and 4 090 SSES older cohort eligible students in 68 public schools.	Data for 15-year-old students should be interpreted with some caution as student response rates were lower than expected (70%).
Jinan is the capital city of Shandong province in eastern China, an OECD Key Partner country.	10-year-old and 15-year-old students in public and private schools. There were 105 510 SSES younger cohort eligible students in 708 schools and 71 167 SSES older cohort eligible students in 338 schools.	None.
Kudus is a city in the Central Java province of Indonesia, an OECD Key Partner country.	10-year-old and 15-year-old students in public and private schools. There were 13 716 SSES younger cohort eligible students in 570 schools and 10 470 SSES older cohort eligible students in 207 schools.	Data for both 10- and 15-year-olds should be interpreted with some caution as the samples drawn may not be fully representative of the target population. The data is estimated to be representative of 9 199 10-year-old students and 4 697 15-year-old students in Kudus.
Sobral is a municipality in the state of Ceará in the northeast region of Brazil, an OECD accession candidate and Key Partner country.	10-year-old and 15-year-old students in public schools. There were 2 339 SSES younger cohort eligible students in 55 schools and 2 586 SSES older cohort eligible students in 34 schools.	None.
Turin is a city located in northern Italy, an OECD member country.	15-year-old students in public and private schools. There were 14 647 SSES eligible students in 150 schools.	None.

How to interpret findings in this report

Average across sites

Where averages across sites are provided, these correspond to the arithmetic mean of all participating sites, except for Sintra (Portugal) and Mexico. Data for Sintra (Portugal) did not meet the technical standards. See Table 3 for cautionary notes for Mexico.

Standardised differences

Standardised differences quantify the size of the difference between two groups – such as differences in levels of stress resistance between boys and girls – using a common scale. The difference can be interpreted as the number of standard deviations, on average, by which the groups differ. Typically, a standardised difference (also referred to as effect size, Cohen's d) of around 0.2 is considered small, 0.5 is moderate and 0.8 or more is large. The larger the difference, the less overlap there is between the two groups and the more noticeable the difference is likely to be (Sullivan and Feinn, 2012[2]).

Standard errors

The statistical estimates presented in this report are based on samples of students, rather than values that could be calculated if every person in the target population in every country had answered every question. Therefore, each estimate has a degree of uncertainty associated with a sampling error, which can be expressed as a standard error.

Statistically significant findings

Differences considered to be statistically significant from either zero or between estimates are based on the 5% level of significance, unless otherwise stated. In the figures, statistically significant estimates are denoted in a darker tone.

Rounding

Because of rounding, some figures in the tables may not add up exactly to the totals. Totals, differences and averages are always calculated on the basis of exact numbers and are rounded only after calculation. All standard errors in this publication have been rounded to one or two decimal places. If the value 0.0 or 0.00 is shown, it does not imply that the standard error is zero, but that it is smaller than 0.05 or 0.005, respectively.

Abbreviations

Coef Coefficient

Dif. Difference

ESCS Index of economic, social and cultural status

N Number of observations

S.D Standard deviation

S.E Standard error

SSES Survey on Social and Emotional Skills

% S. D. Percentage of standard deviation

Additional technical information

Readers interested in additional technical details are directed towards the short technical note at the end of this volume (Annex A), the SSES 2019 Technical Report (OECD, 2021[3]) and the SSES 2023 Technical Report (forthcoming).

This report has StatLinks for tables and graphs at the end of the chapters, which means that all tables and figures are assigned a URL leading to an Excel® spreadsheet containing the underlying data. To download the matching Excel® spreadsheet, just type the link into your Internet browser, starting with the https://doi.org prefix, or click on the link from the e-book version.

The database of the Survey on Social and Emotional Skills houses the raw data and scales presented in this report. The database allows users to break down data in more ways than is possible in this publication in order to conduct their own analyses of students' social and emotional skills in participating sites. The database can be accessed from the project's website (http://www.oecd.org/education/ceri/social-emotional-skills-study/).

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Executive summary

The Survey on Social and Emotional Skills (SSES) is an international survey designed to improve our understanding of students' social and emotional skills, including how these skills relate to key life outcomes.

Sixteen sites, including six countries, took part in SSES 2023. Within this report, SSES 2023 data is combined with data from seven other sites that participated in SSES 2019 wherever possible.

A broad set of 10- and 15-year-old students' skills were measured:

- Task performance skills (persistence, responsibility, self-control and achievement motivation)
- Emotional regulation skills (stress resistance, emotional control and optimism)
- Engaging with others skills (assertiveness, sociability and energy)
- Open-mindedness skills (curiosity, creativity and tolerance)
- Collaboration skills (empathy and trust)

All sites measured these social and emotional skills among 15-year-olds whereas measuring them among 10-year-olds was optional in SSES 2023. All findings in this report relate to 15-year-old students unless stated otherwise.

There are disparities in social and emotional skills by students' age, gender and family background

- Younger students (10-year-olds) typically report higher social and emotional skills than older students (15-year-olds), particularly trust, energy and optimism.
- Boys tend to report higher emotional regulation skills (particularly stress resistance), energy, trust, and sociability than girls at age 15. Gender disparities in these skills largely emerge in adolescence, except for stress resistance, where a difference is already visible at age 10.
- On average, girls report higher tolerance, achievement motivation, empathy and responsibility than boys at age 15.
- Socio-economically disadvantaged students report lower levels of all skills compared to advantaged students, on average, and these gaps are largest for open-mindedness skills (creativity, tolerance and curious) and those related to engaging with others (assertiveness, sociability and empathy).

Students reported lower levels of most social and emotional skills in 2023 than in 2019 in the two sites that participated in both years

- In Helsinki (Finland) and Bogotá (Colombia), both 10-year-olds and 15-year-olds tend to report lower social and emotional skills in 2023 compared to 2019. These differences are largest for open-

mindedness skills (tolerance, creativity and curiosity) but are also found for responsibility, self-control, trust, and sociability in both sites.

- In both sites, gender disparities in emotional regulation skills and energy widened, with boys reporting even higher levels of these skills than girls on average in 2023 compared to 2019.

Girls report less healthy behaviours and lower levels of life satisfaction and psychological well-being than boys, however they tend to be more ambitious

- On average, girls report less healthy behaviours, such as eating breakfast, getting enough sleep and exercising regularly, than boys. Girls also tend to report lower well-being outcomes - life satisfaction, psychological well-being, relationship satisfaction and body image - and higher test and class anxiety than boys.
- Girls are more likely to expect to complete tertiary education and have a managerial or professional career in the future than boys.

Most 15-year-olds are not getting enough sleep which can negatively impact their well-being

- On average across sites, over half of 15-year-olds say they get less than eight hours of sleep most nights.
- Getting enough sleep has the strongest relationship with students' psychological well-being and life satisfaction of any health behaviour.
- Students with higher optimism, energy, and task performance skills (particularly achievement motivation, persistence, and responsibility) engage in healthier behaviours, including getting enough sleep, eating healthily, and exercising regularly.

Students with lower social and emotional skills tend to have poorer well-being outcomes

- Students with lower emotional regulation skills (particularly optimism), energy and trust tend to report poorer well-being outcomes, including lower life satisfaction and psychological well-being.
- The skills that are most strongly and consistently associated with well-being outcomes – optimism, energy and trust - are those with the largest drops between age 10 and 15 and the largest gender disparities.

Students with higher task performance skills and curiosity achieve greater academic success

- Students who report higher task performance skills (particularly achievement motivation and persistence) and curiosity tend to achieve better grades in reading, mathematics and arts and are late for or skip school less often.
- Task performance skills and curiosity are associated with academic achievement among both boys and girls, as well as disadvantaged and advantaged students, suggesting that these skills can support better outcomes for all students.

Students with higher open-mindedness and task performance skills are more prepared and more ambitious for their future education and career

- Open-mindedness skills – particularly curiosity, but also creativity and tolerance – are associated with students' career exploration and their expectations to complete tertiary education or have a managerial or professional career in the future.
- Task performance skills (particularly achievement motivation and persistence) - the skills most strongly associated with academic performance – are also linked to these activities and expectations.

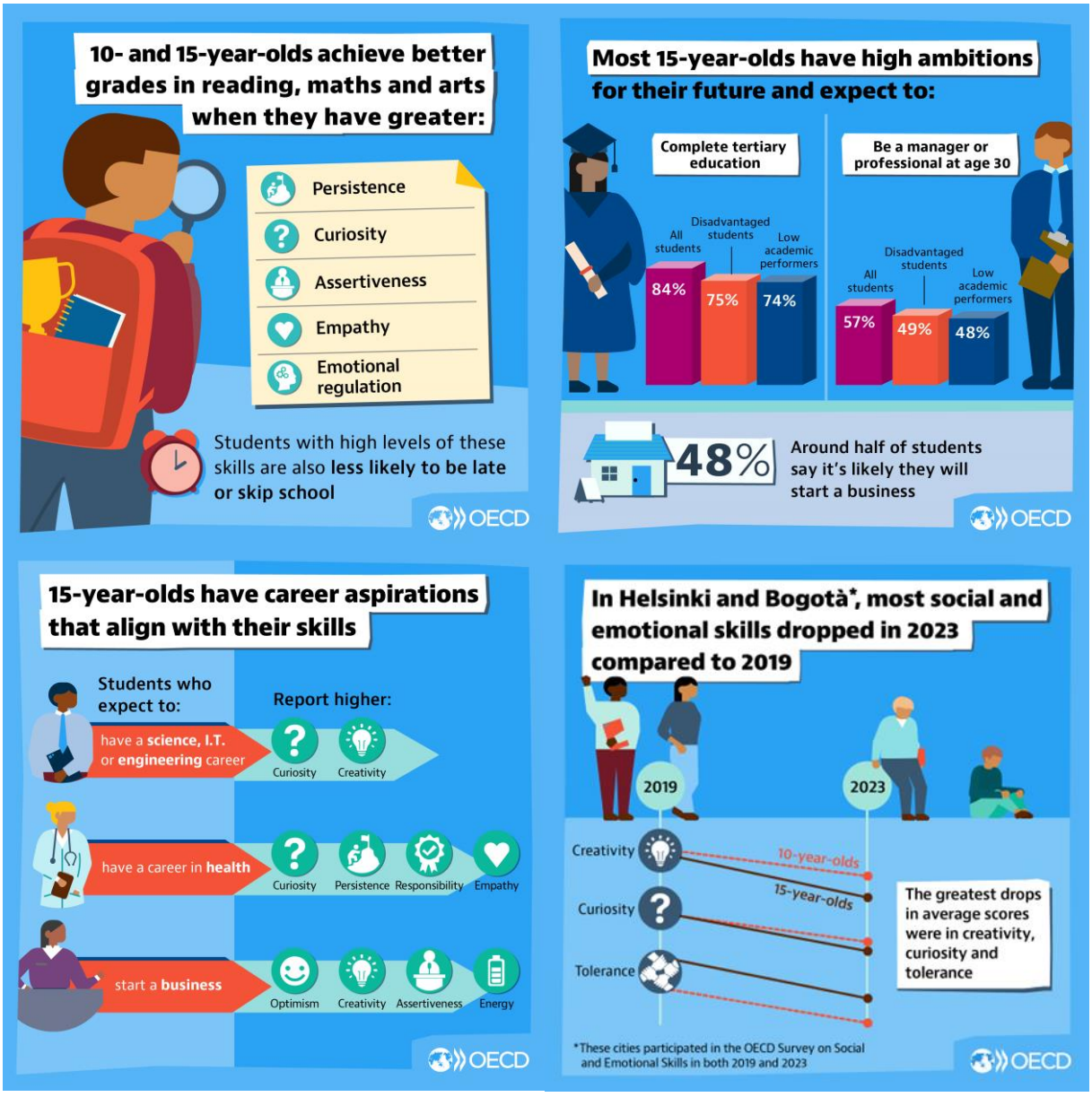
There are high levels of ambition among students, including among disadvantaged students

- Most 15-year-old students have carried out three to four career development activities as they prepare for the world of work. The most common activities are researching higher education programmes and careers online.
- Most students expect to attend tertiary education and have a managerial or professional career in the future, while around half of students say it is likely they will start their own business. Although lower than socio-economically advantaged students and students with top academic grades, there are still relatively high levels of these ambitions among disadvantaged students and those with the lowest grades.

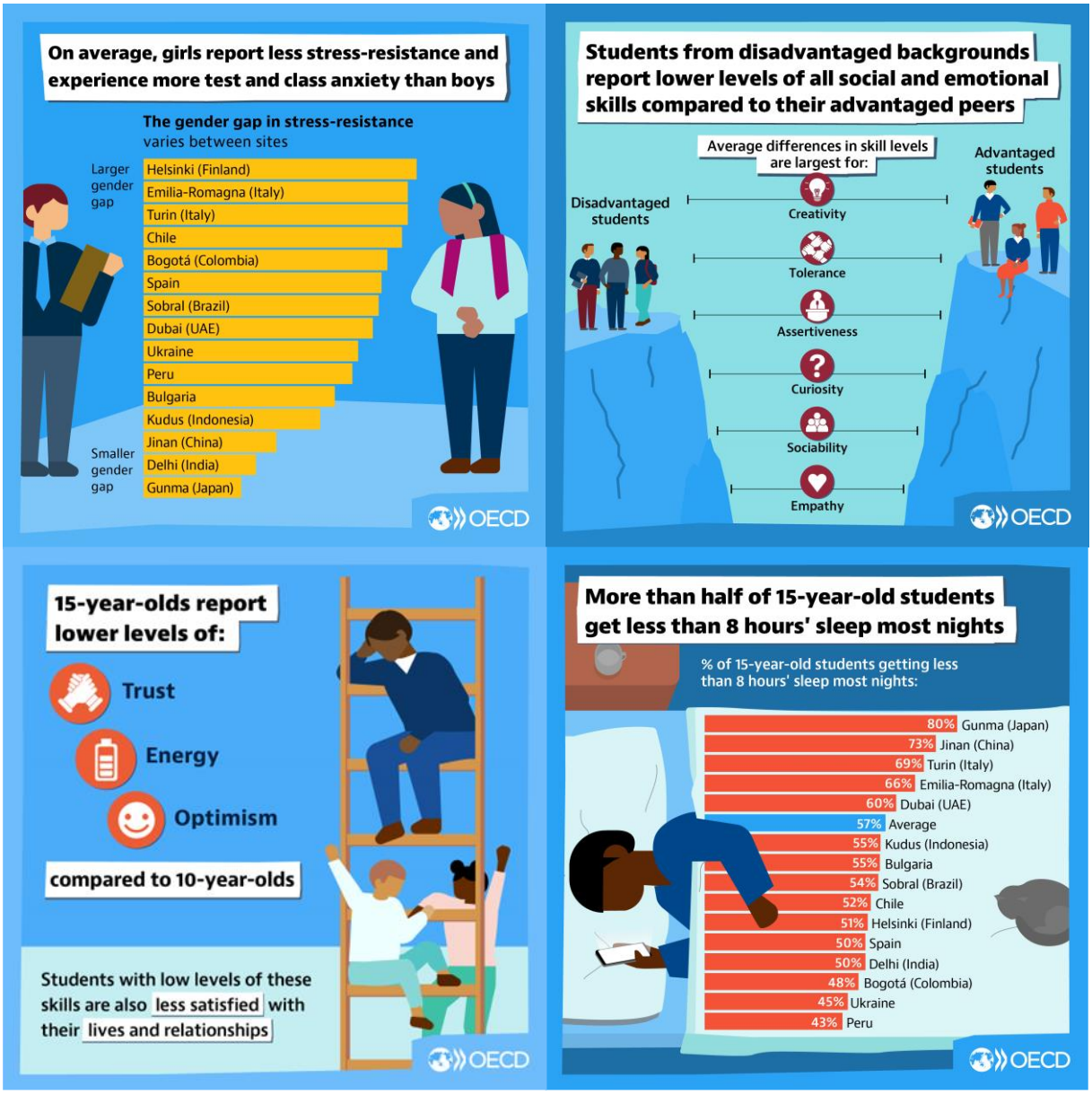
Students are identifying career paths that align with their social and emotional skills

- Students are more likely to expect to take up a career in Information, Communication and Technology (ICT), science and engineering if they report high curiosity or creativity, while they are more likely to expect a career in health if they have high task performance skills, curiosity or empathy.
- Students who expect to start their own business tend to report higher engaging with others skills (energy, assertiveness, sociability), optimism and creativity than those who do not.

Infographic 1. SSES 2023 key results [1/2]



Infographic 2. SSES 2023 key results [2/2]



1 Measuring to enhance social and emotional skills

This chapter situates the OECD's Survey on Social and Emotional Skills within the context of wider efforts to describe, monitor and develop these skills.

Why an international survey on social and emotional skills?

Social and emotional skills are holistic skills: they underpin everything people do. It matters whether someone can actively socially engage and get along with other people. It matters whether someone can effectively recognise and regulate their emotions, focus on a task, and get things done. It matters whether someone can engage with and learn from new experiences and new ideas. And it matters in many dimensions of our lives. A growing body of research (Chernyshenko, Kankaraš and Drasgow, 2018[1]; OECD, 2015[2]; Steponavičius, Gress-Wright and Linzarini, 2023[3]) shows that social and emotional skills are necessary for academic learning, significant predictors of labour market and employment outcomes, strongly related to individual's health and well-being, and key ingredients of peaceful and prosperous democracies. However, the findings from the OECD's 2019 Survey on Social and Emotional Skills indicated that social and emotional skills are unequally distributed across gender and socio-economic background (OECD, 2021[4]).

Taking stock of these findings, many education systems acknowledge that they have a responsibility to recognise and promote learners' social and emotional skills (OECD, 2023[5]). Social and emotional competencies are now included in the curricula of most OECD countries and many others (Das et al., 2023[6]). An OECD report examined recent curriculum changes in several countries, including Australia, British Columbia (Canada), Estonia, Finland, Japan, New Zealand, Norway, Ontario (Canada), Wales (United Kingdom), Argentina, and Hong Kong (China). It found that such changes often focus on cross-curricular competencies tied to multiple disciplines, frequently including social and emotional skills (OECD, 2020[7]).

Most countries across the OECD have begun to include these skills in their curricula through various methods, such as:

- integrating social and emotional skills as a holistic theme across the curriculum. For example, New Zealand's curriculum describes five "key competencies", among which "managing self" and "relating to others" cover social and emotional skills.
- incorporating specific aspects of social and emotional skills into the existing disciplinary areas. For example, in many countries, global competencies, which typically include empathy and tolerance (two social and emotional skills examined by the Survey), are embedded across many of the learning areas, with humanities, national languages, science and the arts being the largest domains. Collaboration is also widely and relatively uniformly embedded across multiple learning areas, with the exception of mathematics. Some countries opt for developing a particular social and emotional skill as part of a specific subject. For example, at upper secondary level, Portugal encourages collaboration and responsibility in courses on institutions and democratic participation, and Kazakhstan does the same in law courses.
- creating unique courses and areas of study devoted to subjects that include both a content and a social and emotional skills component. For example, in 2019, curriculum for 11th and 12th grades in Chile was updated to respond to emerging national and global developments through the creation of new subjects conducive of social and emotional learning including "Sciences for Citizenship" and "Participating and Argumentation in a Democracy" (Das et al., 2023[6]).

Even more transformative is the initiative undertaken by the Delhi government (India) to implement the Happiness Curriculum, which promotes students' happiness and well-being by cultivating social and emotional skills through the creation of unique courses. The Happiness Curriculum was launched in 2018 in 1 024 government schools in New Delhi, India, constituting of a daily 45 minute class for over 800 000 students from nursery to grade 8. Evaluation studies found that the social and emotional well-being of students improved over time, thanks to regular happiness classes (see Box 1.1).

Finally, other methods of integrating social and emotional learning, which are not or only indirectly related to curriculum design, include the provision of time in students' schedules for experiences that promote

social and emotional learning, such as extracurricular activities. For example, students can build responsibility through volunteering opportunities, or develop collaboration, creativity, or energy through drama clubs or team sports. Furthermore, investment in training and capacity-building opportunities for teachers and school leaders allows them to incorporate these aspects into teaching practices.

Box 1.1. The Happiness Curriculum in Delhi (India)

Happiness Curriculum is a flagship programme of the Delhi government that expands education's purpose from traditional pedagogy and practice to the development of confident, mindful, responsible, and happy individuals who will work together to build a harmonious society. It is the first step towards broadening the formal public education system to promote students' well-being and happiness with an emphasis on social and emotional skills. The curriculum's premise is that assisting students in developing the skills associated with happiness will improve not only their learning but also their life outcomes.

The Happiness Curriculum was launched in 2018 as a daily 45-minute class, six days a week, for over 800 000 students from nursery to grade 8 in 1 024 government schools in Delhi, India. The programme also included training sessions for teachers, programme coordinators and facilitators. Delhi's Happiness Curriculum combines a localised and contextualised understanding of happiness and its significance in the Indian context with social and emotional skills as outlined in international frameworks. The framework is based on a 'happiness triad': physical senses (labelled as Momentary Happiness), feelings within relationships (labelled as Deeper Happiness), and learning and awareness (labelled as Sustainable Happiness). This curriculum aims to enable students to move beyond searching for happiness through materialistic means; rather, focusing on learning and awareness of self and others and cultivating skills and human values to experience a sustainable form of happiness. The programme also includes guidance regarding the implementation of three pedagogical practices labelled 'mindfulness', 'stories and activities', and 'expressions'.

- Mindfulness practices support children to be mindful of their own emotions, thoughts, and actions; reduce stress; and become self-attentive. Classroom practices include starting the class with mindful check-in, followed by mindful sensory activities and ending the class with a mindful check-out. Younger children (in grade 1) are taught to pay attention to their senses, such as what they can hear, smell, taste, and feel. As they advance, they engage in activities like mindful walking, drawing, muscle relaxation, and exploring emotions. By grade 8, they are prompted to reflect on their feelings and thoughts, discerning differences between them. The teacher encourages students to share their mindfulness experiences both at home and school, whether practicing alone or with others.
- Stories and activities have been curated to reflect the real-life scenarios of ordinary people and focus on relationships, responsibilities towards others, finding a purpose in life, empathy, and gratitude. After narrating the story in the class, the teacher uses questions to encourage students to reflect on their own thoughts and behaviours. The teachers typically ask whether the students identify with story characters or what their actions would be in similar situations. This approach allows for a deep exploration of concepts like happiness.
- The expressions component focuses on the natural desire of individuals to express thoughts and feelings. Students are encouraged to explore the purpose of their lives and reflect on their actions and behaviour towards others.

A mixed method evaluation found that, overall, the social and emotional well-being of students improved over time with regular happiness classes. The effectiveness of classroom practice was analysed through observations of teachers and students during each of the mindfulness, story and activity, and

expressions components. Overall, teachers' time management and follow-up questions played a crucial role in facilitating reflective discussions and enhancing learning outcomes. Interviews with teachers suggested that most understood the curriculum's objectives and purpose. As well as incorporating the novel pedagogies of the Happiness Curriculum in Happiness classes, teachers also incorporated them into other subjects. Teachers also observed that the curriculum had a positive impact on their students. Teachers found that students had become more honest, respectful, disciplined inside classrooms, caring about school and more responsible about their surroundings. The interviews with students revealed that the Happiness classes have enabled them to become more self-aware, be mindful of their actions, self-reflect and bring about a change in their behaviour. For example, students recounted various occurrences from their everyday experiences, illustrating how the Happiness Curriculum has enabled them to reflect on the causes of their circumstances and find methods to alter their behaviour and outlook.

Sources: (Das et al., 2022[8]) (Das et al., 2023[6])

As the inclusion of social and emotional skills in curricula continues to grow, assessing these skills becomes key to meeting student learning objectives. Education systems need to assess how equitably students are supported in developing these skills. The evaluation process can also identify misalignments with classroom realities and unintended policy consequences (OECD, 2013[9]). At the policy level, promoting social and emotional learning presents major challenges in implementation and in the 'attained curriculum' – the curriculum as experienced by students and teachers, rather than as it is written (OECD, 2023[10]). In brief, collecting system-wide information on the development of social and emotional skills is important for national monitoring purposes in education. This includes achieving national goals, implementing curriculum, and ensuring equity (OECD, 2013[9]).

However, unlike other areas of learning, most education systems do not have specifically designed tools or measures to assess the development of social and emotional skills across the attained curriculum. A recent OECD report (OECD, 2023[5]) provided an overview of how countries across the OECD assess social and emotional skills in upper secondary education. It concluded that strategies for system-wide monitoring are still emerging in many systems. Current strategies typically draw upon a variety of sources to piece together an understanding of students' social and emotional skills, although this picture may remain incomplete. Types of assessments of social and emotional skills at the upper secondary level are classified against two dimensions: (i) whether the assessment is explicit or implicit and (ii) whether it relies on information collected from inside or outside the classroom. *Implicit* assessments within the classroom are often based on students' and teachers' *reflections* about students' social and emotional skills, while *explicit* assessments are based on *actual performanc*e on specific tasks, as part of subjects like 'digital technologies and communication' or 'morality and civics'. *Implicit* assessments outside the classroom put the focus on students' *participation* and *engagement* in extra- or co-curricular activities, communities outside the school, projects and work experience, while *explicit* assessments outside the classroom are based on students' *achievements* in these activities.

Why have education systems not developed a unified or systematic approach to monitor and assess social and emotional skills? The complex nature of these skills presents a challenge. They are demonstrated and developed across a wide variety of contexts, of which school is only one, and manifest in different ways for different individuals. This variability makes system-wide assessment challenging. Additionally, the value and expression of these skills varies across cultures and education systems. This variation makes international comparisons difficult from both a conceptual and methodological standpoint, yet such comparisons provide valuable insights. Comparing a large group of education systems helps to shed light on universal educational processes by answering the following questions: which social and emotional skills consistently matter for which outcomes, regardless of the cultural context? Which teaching practices are consistently related to stronger social and emotional skills? Site- and country-specific deviations in the

universal principles are also useful to pinpoint and interpret. Why is curiosity more strongly related to academic achievement in some education systems than in others? What does it tell us about social and emotional learning in those systems and the value placed on this competency? Are there some education systems more efficient at closing gaps in students' social and emotional skills or at promoting certain skills, than others? What do they do differently?

The OECD, through the work done by the Centre for Educational Research and Innovation (CERI), has been a forerunner with its research, conceptual and assessment framework for defining and measuring social and emotional skills in a cross-country setting (Chernyshenko, Kankaraš and Drasgow, 2018[1]; OECD, 2015[2]). This pioneering work paved the way to the design and implementation of the OECD's Survey on Social and Emotional Skills (SSES). SSES is the most comprehensive international large-scale assessment to date that provides education systems with information on their students' social and emotional skills (OECD, 2021[4]). A great strength of SSES lies in its conceptual and methodological underpinning – its inception mobilised experts from around the world. SSES also provides insights in to how students' social and emotional skills relate to key life outcomes and helps identify factors in students' home, school and peer environments that promote or hinder the development of social and emotional skills. The aim of SSES is not to create another layer of top-down accountability but to help educational practitioners and policymakers shift towards looking outward to the next school, city or country.

The first round of SSES was conducted in 2019 in 10 cities from around the world, with findings published from 2021 onwards (OECD, 2023[10]; OECD, 2021[4]). This first round showed the feasibility of measuring social and emotional skills across countries and demonstrated its value in addressing research questions and policy issues relating to social and emotional learning. How did the participating cities use SSES findings? Many local governments applied them to policy and practice, often in collaboration with partner foundations or universities. For instance, in Bogotá, the Colombian Institute for Educational Evaluation (ICFES) organised sessions that used the survey data to raise awareness among policy makers, teachers, parents and caregivers of the relationship between social and emotional skills and cognitive development. The Secretariat of Education of Bogotá used SSES findings to inform their plans for developing safe and supportive school environments. ICFES also liaised with several thousand educational practitioners to analyse SSES findings and discuss with them how to update their teaching practice. In addition, Bogotá has been identified as a leading example for social and emotional learning programmes, and Bogotá's practices are being promoted in the rest of the country. Other SSES participants helped schools implement change. In Portugal, the city of Sintra and the Gulbenkian Foundation used the SSES data to inform schools about students' levels of social and emotional skills. Schools grouped in clusters received a diagnosis report and were tasked with identifying key areas for improvement as the basis for developing an action plan. Importantly, the municipality recognised the importance of this work and the need for adequate support – a specialised team was hired to support the schools in implementing their action plans in the following two years. In parallel to Sintra's participation in SSES 2019, the Portuguese Gulbenkian Academies for Knowledge supported the nationwide implementation of interventions to promote social and emotional learning in people aged 0 to 25 years. Forty of these interventions were evaluated, using SSES 2019 instruments for pre-and post-test assessment of all participants' social and emotional skills. A team tasked to evaluate these interventions found evidence of significant positive impact of the Academies' work on various skills. Specifically, consistent impacts from the perspective of children and teachers, particularly for the skills of curiosity and assertiveness, were found (Barata et al., 2024[11]). Another encouraging example comes from Helsinki (Finland) where the municipality collaborated with the University of Helsinki to further analyse the survey data and use the results to produce research and experience-based tools and support for schools, teachers and students in the city. Barometers and dashboards were devised and shared among teachers and school leaders to facilitate monitoring of students' advancements in social and emotional skills and learning. These initiatives were implemented with the aim of narrowing the disparities arising from social segregation within the city.

What's new in SSES?

Following the successful inaugural round of SSES in 2019, the second round in 2023 saw expanded geographical coverage. Six countries participated nationwide along with another 10 subnational entities from diverse areas. This report compiles findings from the 23 sites and countries involved in either or both SSES rounds (for more details on participating sites, please see Table 2 in the Reader's Guide). Notably, two cities – Bogotá (Colombia) and Helsinki (Finland) – rejoined the SSES in 2023, presenting a unique opportunity to compare their current data with that from 2019 and to understand the impact of the COVID-19 pandemic on students' social and emotional skills and well-being.

In 2023, Ukraine joined the SSES amid ongoing conflict. Russia's war of aggression against Ukraine has profoundly affected the nation, inflicting damage on infrastructure and profoundly impacting its youth. Growing up in an active war zone, Ukrainian children face violence, displacement, disrupted schooling, and socio-political upheaval. The SSES findings are crucial in understanding how students are coping and maintaining their social and emotional resilience amidst these challenges, offering insights into the unique impacts of war on children's socio-emotional development.

Recent global events underscore the importance of social and emotional skills. The prolonged isolation due to COVID-19, Russia's war of aggression against Ukraine and ongoing conflicts in other areas of the world highlight the need for skills like stress resistance, empathy, trust and tolerance. This report aims to enrich the international evidence base regarding these essential social and emotional skills, providing a comparative perspective on their development and significance in diverse global contexts.

The survey instruments and procedures used in 2023 are like those used in 2019, with some minor adjustments and improvements, allowing for meaningful comparisons across participating sites and over time. The key features of SSES survey design remain the same:

- International target population: 15-year-old students, their teachers and school leaders (in 2023, surveying 10-year-old students and surveying parents were made optional.)
- Target sample size: 3 000 students, 500 teachers and 75 school leaders per site
- Survey instruments: self-reported assessment for students and self-reported questionnaires for each target population, each requiring between 30 and 60 minutes to complete
- Mode of data collection: online by default with possibility to complete the survey on paper
- Survey window: data collection started in March 2023 in Spain and finished in January 2024 in Delhi (India).

New themes have been incorporated into the contextual questionnaires to focus more on several aspects: students' career prospects and employability (as detailed in Chapter 4), the influence of gender stereotypes on gender-related gaps in social and emotional skills, teaching and schooling practices that support social and emotional learning, and the potential effects of online or hybrid schooling on the development of social and emotional skills (as discussed in the forthcoming report due in late 2024).

Application of this report's findings to policy and practice

The findings from SSES 2023 (combined with those of 2019) are presented in two international reports: the present one focuses on social and emotional skills as predictors of key life outcomes; the forthcoming report (due for publication towards the end of 2024) will focus on societal, school and teacher-related factors that can foster or hinder the development of social and emotional skills.

This report provides further empirical evidence for the importance of a wide range of social and emotional skills for key life outcomes (see Chapters 3 and 4 in particular). Applying these findings to policy and practice requires considering parallel developments in the field of social and emotional learning (SEL).

Recent research supports the idea that social and emotional skills are not only malleable but that they can be developed through deliberate school interventions. Compared to OECD's first report on SSES findings (OECD, 2021[4]), an important departure is shifting the focus from malleability to teachability.

Malleability denotes susceptibility to change due to environmental influences, whether deliberate and unintentional. These can be experiences, relationships, or general contexts at home, in school and in society more broadly (Cantor et al., 2019[12]). For example, the ability to form healthy attachments has been shown to be highly malleable (Immordino-Yang, Darling-Hammond and Krone, 2019[13]). Attachment patterns form after birth, primarily through our relationships with our caregivers and later, peers and others (Cantor et al., 2019[12]). Schools and activities outside the home do create opportunities to learn relationship skills and adjust attachment patterns. Yet the ability to form healthy attachments itself is likely a broader, less teachable and more malleable capacity that arises from our key personal relationships. Caregivers are its primary mediators (Cantor et al., 2019[12]).

Although the term might be debated, "teachability" denotes susceptibility to deliberate intervention in education settings. These can be school-based, after-school or out-of-school interventions that take place outside students' homes. They are led by instructors who are, generally, not the students' caregivers. Teachability matters more to the education community as it describes skill changes arising specifically from intentional efforts of educators and instructors. For example, evidence suggests that emotional control or, the ability to manage one's own emotions such as anger, is teachable. Numerous programmes were found to improve emotional control from preschool to secondary school (CASEL, 2023[14]; Grant et al., 2017[15]; Jones et al., 2021[16]).

A huge body of evidence reviewed by the OECD (Steponavičius, Gress-Wright and Linzarini, 2023[3]), including multiple meta-analyses of SEL interventions around the world, have determined that social and emotional skills can be taught in school settings across age groups and national contexts. Impact varies, however, depending on the implementation and context. In addition, considered separately, not all social and emotional skills can be considered equally teachable. OECD's latest review of recent studies found that evidence is robust for 12 of the 23 examined skills but moderate, limited or unclear for 11 of them. Empathy, metacognition, co-operation, self-control, assertiveness, stress resistance, emotional control, social problem-solving and self-efficacy were found to be the most teachable skills, based on the most recent studies (Steponavičius, Gress-Wright and Linzarini, 2023[3]).

Previously, the OECD has found that deliberate interventions at school can develop skills such as open-mindedness, creativity, curiosity and critical thinking. Specifically, CERI's project titled 'Fostering and Assessing Creativity and Critical Thinking in Education' has developed a shared professional language for creativity and critical thinking in education, thereby facilitating its teaching, learning, and formative assessment across countries within various curricula (Vincent-Lancrin et al., 2019[17]). An international network of schools and teachers from 11 countries, representing diverse cultures and educational approaches, carried out two school years of fieldwork and data collection. The team developed and field-trialled a series of OECD rubrics on creativity and critical thinking. They also created additional resources for teachers, including design criteria for lesson plans, about 100 peer-reviewed lesson plan examples, and other pedagogical resources to foster students' creativity and critical thinking. Teachers received robust professional development plans, including training sessions, individual feedback, and participation in a professional learning community through both face-to-face meetings and digital platforms. The project underwent rigorous evaluation and demonstrated that creativity and critical thinking can indeed be taught, learned, and assessed in schools at both primary and secondary levels.

This first volume of SSES 2023 findings focuses on the social and emotional skills that predict key life outcomes. This chapter aimed to convey the evidence that many of these foundational skills can be taught. However, for the latest analyses on teaching and schooling practices currently used to support social and emotional learning in SSES-participating sites, readers will need to wait for the publication of the second volume on SSES 2023 findings later this year. In the meantime, this current report includes text boxes that

feature interesting country cases, showcasing how social and emotional skills can be developed through school-based interventions.

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2 Social and emotional skills across socio-demographic groups

This chapter looks at differences in social and emotional skills between students from different socio-demographic groups. Differences are discussed among students by their age (10-year-olds compared to 15-year-olds), gender, economic, social and cultural status and migration background.

In Brief

Policy Insights

- **Measure students' social and emotional skills to identify disparities between students and changes in levels of skills over time.** Students' social and emotional skills should be measured to evaluate the effectiveness of efforts to build their skills and reduce disparities between students. Data from 2019 and 2023 in two sites – Helsinki (Finland) and Bogotá (Colombia) – show that levels of most skills declined among both 10- and 15-year-olds. This demonstrates the importance of measurement to identify such trends.
- **Build students' social and emotional skills to reduce disparities, as efforts are made to reduce disparities in academic outcomes.** While social and emotional skills are important outcomes in their own right, their development may also help to reduce inequalities in other areas, including well-being and educational outcomes.
- **Ensure social and emotional learning is accessible to and effective for all student groups.** Older students and disadvantaged students tend to report lower levels of most skills. In terms of gender differences, boys typically report higher levels of emotional regulation skills, energy, trust, and sociability, while girls report higher levels of tolerance, achievement motivation, empathy and responsibility, on average. Given these variations, approaches to social and emotional learning should be evaluated to ensure they are accessible to and effective for all student groups, particularly those who tend to report lower skill levels.
- **Target support to students identified with particular social and emotional needs or implement universal approaches.** On average, there are differences in levels of skills between students by age, gender, and economic, cultural and social background. However, behind these averages, there is much overlap in skill levels between student groups. Students in need of support can therefore be best identified by measuring their skills or universal approaches, that target all students, can be implemented.
- **Help students identify their strengths and areas for growth.** Girls and disadvantaged students tend to give poorer self-evaluations of their skills compared to their peers, particularly at age 15. This may reflect underestimation of abilities among some students. Sharing objective information with students about their skills in a supportive environment may help students to counter negative self-beliefs.
- **Recognise adolescence as a sensitive developmental period.** Older students report lower levels of most social and emotional skills. This is particularly the case for optimism, trust, and energy, which are the skills most strongly linked to health and well-being outcomes. Students' social and cognitive skills mature during adolescence. This period therefore presents an opportunity for education systems to build students' skills at a time when they are especially adaptable and can be put into practice.
- **Support students with the transition from primary to secondary education.** During this transition, shifts in peer-to-peer and student-teacher relationships, as well as difficulties adapting to new demands, may impact students' social and emotional skill development and well-being. At the same time, teachers of older students tend to be less well-equipped to support their students' social and emotional development.

Social and emotional skills are inequitably distributed

This chapter explores how students' social and emotional skills differ according to their age, gender, socio-economic status and migration background. Groups that may be at particular risk of having low levels of these skills are identified to inform policy measures aimed at equitable and sustainable skill distribution.

Equity in education is a central aspect of the Survey on Social and Emotional Skills (SSES) and a major concern of countries worldwide. SSES starts from the premise that there are no differences in the ability to learn these skills across groups defined by race, ethnicity, or gender. The United Nations Sustainable Development Goals Target 4.7 (United Nations, 2015[1]) advocates "ensuring that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development". In this context, social and emotional skills, including empathy and tolerance, are key for citizens and societies to achieve these goals and secure the basis for functioning democracies.

The current landscape, as set out in this chapter, suggests there is still a long way to go to achieve these goals. There are differences in skills, on average, between students by age, gender, and economic, social and cultural status. These differences are often remarkably consistent across the diverse range of sites taking part in SSES. As well as being important skills in their own right, deficits in these skills may negatively affect students' health and well-being and limit their academic achievement and future career prospects. Disparities between student groups in these skills may therefore contribute to inequities we see in a range of other outcomes in these same groups, such as lower psychological well-being among girls or poorer academic performance among students from lower socio-economic backgrounds.

SSES results and wider research demonstrate that these disparities are not fixed and development of these skills in children and young people can be influenced by education systems. While the direction of disparities tends to be similar – for example girls report lower emotional regulation skills in all sites and disadvantaged students report lower assertiveness in all but two sites – the size of these differences varies and, for some relationships, there are exceptions. In addition, within groups, there is much variation: it is not uncommon for girls to report higher levels of skills that, on average, are typically higher in boys. Likewise, in the same way that some disadvantaged students outperform advantaged students academically, many also report higher social and emotional skills than their peers.

Many of these skills have been shown to be sensitive to intervention, including within school, and influence from the school environment (Steponavičius, Gress-Wright and Linzarini, 2023[2]). Consequently, efforts to cultivate these skills among students are worth pursuing. This is widely recognised: the development of social and emotional skills is an aim of most education systems, as set out in official curricula (OECD, 2021[3]). However, to bridge the gaps set out in this chapter, systems need to go beyond making this merely an ambition of the education system. Approaches to social and emotional learning should be carefully designed to incorporate effective practice and ensure they meet the needs of students and wider society. Practice should be carefully implemented and evaluated to ensure that it is effective. Care should be taken to ensure that students with different characteristics and from different backgrounds have equal access to opportunities to develop their skills and that approaches are effective across student groups, particularly those who tend to have lower levels of these skills.

Age

In this section, differences in skill levels between younger (10-year-old) and older (15-year-old) students are discussed[1,2]. In most sites, 10-year-olds are enrolled in the last grade(s) of primary school, while 15-year-olds are towards the end of lower secondary or the beginning of upper secondary school. Differences

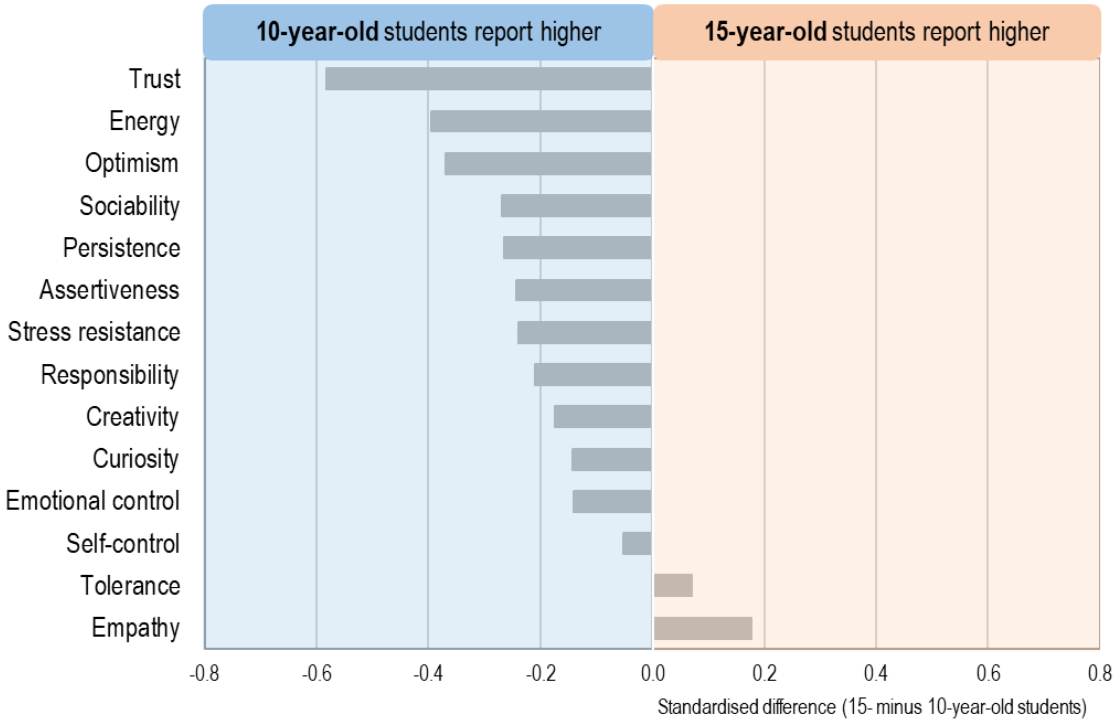
in the levels of social and emotional skills reported by these different cohorts can provide insights into how the transition from primary to secondary education, and the different learning and social environments these typically provide, can impact students' development of these important skills.

Younger students report higher levels of most social and emotional skills compared to older students

On average, younger students (10-year-olds) report higher levels of all social and emotional skills except empathy and tolerance, compared to older students (15-year-olds) – see Figure 2.1. These trends are broadly consistent across sites, although age differences in most skills tend to be larger in Jinan (China) and Suzhou (China) and smaller in Ukraine than in other sites (see Figure 2.4).

Figure 2.1. Age differences in social and emotional skills

Standardised differences between the scores of 10- and 15-year-old students, average across sites



Note: All differences are statistically significant with a threshold $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.3

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SSES 2019 found that teachers of older students tend to be less equipped to support students' social and emotional learning: teachers of younger students receive more training, are required to promote social and emotional learning in their work more often and are more likely to work with parents to reinforce skill promotion (OECD, 2023[4]). Younger students are also more likely to have their social and emotional skills evaluated by their teachers. Taken together, teachers of older students in lower or upper secondary school might particularly benefit from training to support students with their social and emotional learning.

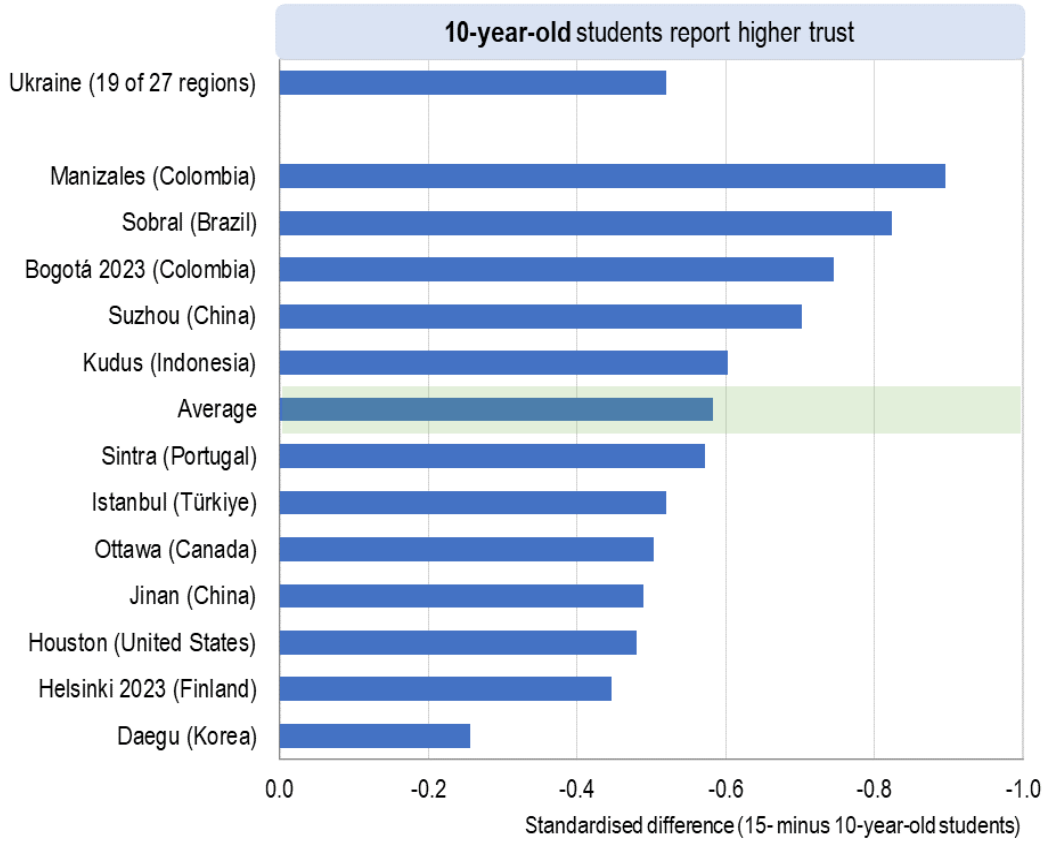
Older students tend to report lower trust, energy and optimism compared to younger students

Trust is the skill with the largest gap between younger and older students on average across sites, followed by **energy** and **optimism**. Younger students report higher levels of these three skills, on average, than older students in all participating sites (see Figure 2.4).

While age differences in these skills are found in all sites, they are larger in some than others. For example, Figure 2.2 shows the average difference in trust between 10- and 15-year-olds in each site. This age difference is largest in Colombian sites (Bogotá and Manizales) and Sobral (Brazil) and smallest in Daegu (Korea). For energy and optimism, these age differences are largest in Jinan (China) and Suzhou (China) – and Istanbul (Türkiye) for optimism - and smallest in Ukraine (see Figure 2.4).

Figure 2.2. Age differences in trust

Standardised differences in trust between the scores of 10- and 15-year-old students, average across sites



Note: All differences are statistically significant with a threshold $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.3

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Some of the shifts in these skills may be due to typical developmental changes between late childhood and adolescence. During adolescence, students develop a better perception of themselves and of how others perceive them (Sebastian, Burnett and Blakemore, 2008[5]). Older children tend to take greater consideration of the perspectives of others and how they compare to their peers, which may lead them to adjust their self-assessments and give lower appraisals of their skills than younger children. Younger children are also typically hyper-optimistic. As they enter adolescence, children begin to learn more from

negative outcomes and become more realistic in their appraisals (Habicht et al., 2022[6]). This optimism-bias is reflected in the particularly high levels of **trust** and **optimism** reported by younger students compared to older students. These skills indicate positive expectations: students with high trust and optimism assume others have good intentions and that things will work out well.

In terms of **energy**, adolescence is marked by delayed sleep and rise times, often leaving teenagers' sleep patterns misaligned with the early waking expectations of schools and wider society (Anastasiades et al., 2022[7]; Galván, 2020[8]). Adolescents commonly report getting too little sleep: on average, over half of 15-year-olds in SSES get less than eight hours of sleep most nights. Poor sleep quantity and quality among young people also appears to be increasing in many OECD countries (Aston, 2018[9]). Sleep deficits are linked to poorer health outcomes, as well as students' learning capacity and academic performance (Curcio, Ferrara and Degennaro, 2006[10]; Bacaro, Carpentier and Crocetti, 2023[11]). Efforts to improve students' sleep quality and quantity can include teaching sleep hygiene, where students learn healthy habits, such as going to sleep and waking at regular times. In addition, avoiding caffeine and digital devices for a period before bed are commonly recommended. Adjusting students' environment, such as delaying start times to school or examinations, can also be considered (Minges and Redeker, 2016[12]).

While it may not be unusual for 15-year-olds to give a lower appraisal of these skills than 10-year-olds, low levels of them can still be an indicator of concern. **Optimism** is strongly associated with mental health and well-being outcomes (see Chapter 3), including life satisfaction and psychological well-being, as are **energy** and **trust** to a lesser extent. Low levels of these skills indicate a tendency to be suspicious of others, feeling sad often and tiring easily, all of which can be indicators of low mood. Adolescence is a formative period, with many physical, emotional and social changes, and a time when symptoms of anxiety, depression or other conditions can emerge (Rapee et al., 2019[13]). Low levels of these skills, and particularly declines in them, should therefore be proactively addressed to enhance young people's immediate well-being and lay the groundwork for their long-term mental health and resilience.

Older students also tend to report lower sociability

In all sites except Ukraine, younger students report higher levels of sociability than older students. These differences are largest in Daegu (Korea), Jinan (China), Sintra (Portugal) and Suzhou (China). Students with high sociability can approach others, both friends and strangers, and maintain social connections. During adolescence, an increase in self-consciousness and a transition towards more homogeneous peer groups, where relationships are based on shared beliefs and ideas, might impact students' perceptions of their social skills (Parker et al., 2015[14]). These changes create more complex social landscapes, where students face challenges of inclusion and exclusion, which may contribute to a lower self-assessment of this skill among adolescents.

Older students also typically report lower persistence, stress resistance and responsibility

Younger students also report higher levels of **persistence**, **stress resistance** and **responsibility** on average in most sites. Persistence is particularly positively associated with academic success (see Chapter 4), as is responsibility to a lesser extent, and stress resistance is the most protective against test and class anxiety (see Chapter 3). Students with low levels of these skills give up easily when faced with challenges or distractions, lack interest in their schoolwork and are excessively worried by their workload or exams. 15-year-old students' lower self-assessments of these skills than 10-year-olds may reflect the increased academic demands placed on students as they get older. While many students are equipped to cope well with these higher expectations, some may become easily overwhelmed or disengaged from their studies in response to these challenges. The differences in students' assessments of these skills between ages 10 and 15 are not the same in all sites. Students might be better supported through the transition to secondary education in some sites than others or the shift in workload may be less extreme. Older students

report particularly lower levels of persistence than younger students in Jinan (China) and Suzhou (China) and this was the largest age gap of all skills in Suzhou (China), while age gaps in stress resistance and responsibility are also significantly larger in these sites than others. Conversely, in Houston (United States), Istanbul (Türkiye), Sintra (Portugal) and Ukraine, there are no or relatively small significant differences in these skills between younger and older students.

Older students tend to report higher empathy and tolerance than younger students

Older students tend to report higher levels of **empathy** and **tolerance**, although there are some exceptions (see Figure 2.4):

- For **empathy**, older students report higher levels on average in all sites except Suzhou (China), where younger students report higher levels on average, and Jinan (China), where there is no significant difference.
- For **tolerance**, older students report higher levels on average in most sites while younger students report higher levels on average in Daegu (Korea), Jinan (China), Kudus (Indonesia) and Suzhou (China).

Having **empathy** and **tolerance** requires students to be aware of the feelings and perspectives of others, including those different to their own. While abilities to share and understand others' feelings emerge in early childhood and continue to develop into adulthood, adolescence is a particularly important development period for these skills (Oh et al., 2019[15]). Improved abstract thinking, moral reasoning, and increased autonomy, all allow the development of more complex forms of empathetic abilities. While levels of empathy tend to increase during this period, there are substantial differences between young people. Longitudinal research has shown that even small decreases in empathy in adolescence can be a risk factor for poorer societal outcomes later in life (Allemand, Steiger and Fend, 2014[16]). Nurturing these skills among students is therefore crucial for students' development, preparing them to have good relationships with others and participate in wider society.

Older students tend to report higher levels of other skills, but these gaps tend to be smaller and there are many exceptions

For **assertiveness**, **emotional control**, **creativity** and **curiosity**, younger students report lower levels of these skills on average across sites as shown in Figure 2.1. However, age differences for these skills tend to be smaller and there are some sites where the trend is reversed or there is no significant difference (see Figure 2.4). However, there are exceptions. Relatively large age differences, with older students reporting lower levels, are seen in these skills in Jinan (China) and Suzhou (China). In Jinan (China), the average age difference in assertiveness is one of the largest of all skills in SSES. In Sobral (Brazil), older students also report relatively lower levels of assertiveness than younger students compared to other sites.

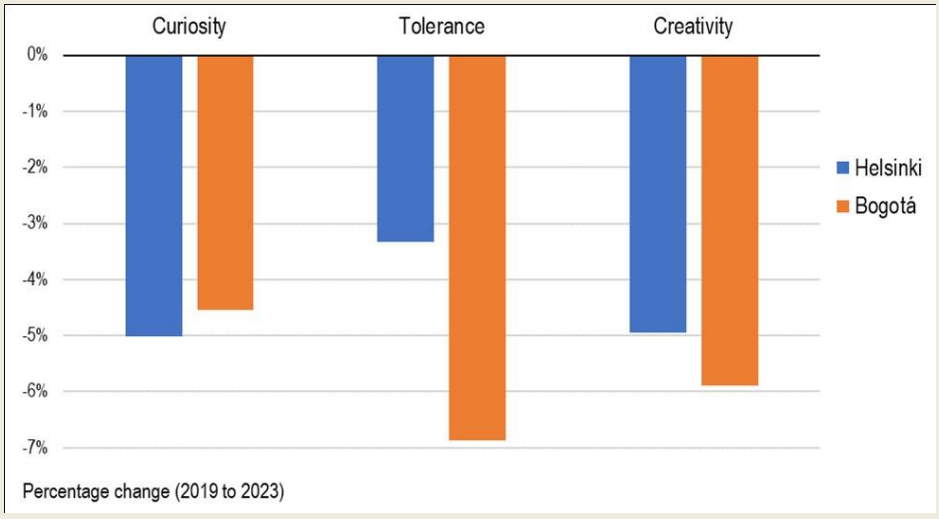
Box 2.1. Differences in students' levels of social and emotional skills between 2019 and 2023

The cities of Bogotá (Colombia) and Helsinki (Finland) participated in both SSES 2019 and SSES 2023, enabling a comparison of students' social and emotional skills across these years within each site.

Despite considerable geographic, cultural and economic differences between these sites, there are remarkable similarities in the shifts in students' social and emotional skills between 2019 and 2023. Similar changes also tend to be seen in both the younger (10-year-old) and older (15-year-old) cohorts in both sites. This suggests that global factors in the intervening period – such as the COVID-19 pandemic, increased conflict and economic instability – may have played a role in these shifts.

In Helsinki and Bogotá, both 10-year-olds and 15-year-olds report lower levels of most social and emotional skills in 2023 compared to 2019. These differences are largest for **open-mindedness skills** (**tolerance**, **creativity** and **curiosity**) - see Figure 2.3. Lower levels of responsibility, self-control, trust, and sociability are also reported in both sites in 2023 compared to 2019, while lower levels of optimism and energy are reported in Bogotá.

Figure 2.3. Differences in 15-year-olds' open-mindedness skills between 2019 and 2023



Note: All differences are statistically significant with a threshold $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.8

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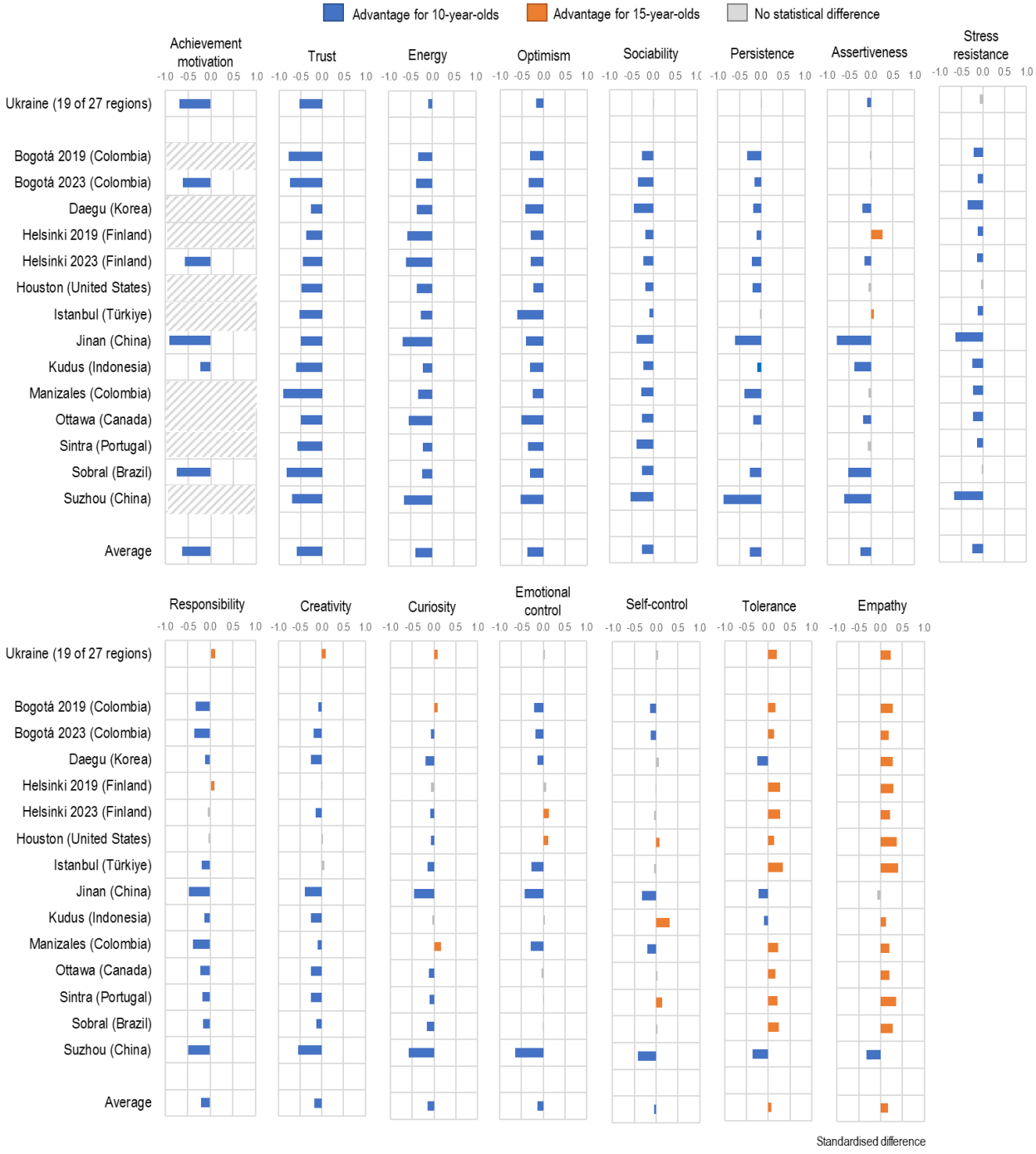
Gender gaps in favour of boys in **emotional regulation skills** (**emotional control**, **stress resistance** and **optimism**) and **energy** widened further in both Bogotá and Helsinki between 2019 and 2023. This was due to:

- Girls reporting lower levels of emotional control and energy in 2023 compared to 2019, while there was little change in levels of these skills among boys.
- Boys reporting higher levels of stress resistance in 2023 than in 2019 in both sites, while girls reported lower levels in Bogotá and little difference in Helsinki between these years.
- Both boys and girls reporting lower levels of optimism in Bogotá in 2023 than in 2019, but this drop was much larger for girls. In Helsinki, there was little change in the gender gap in this skill between these years.

Figure 2.4. Age differences in social and emotional skills by sites

Standardised differences between the scores of 10- and 15-year-old students



Note: Significant differences are at a threshold of $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.3

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Gender

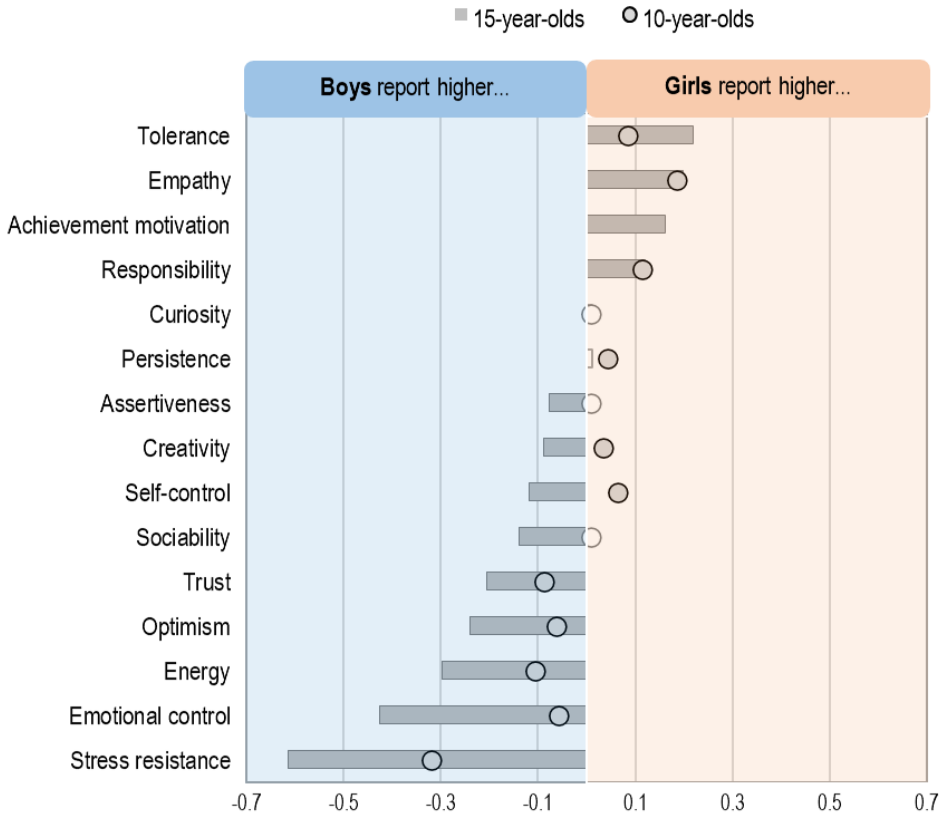
In this section, skill levels are compared between boys and girls[3,4], including how gender differences shift between ages 10 and 15. The existence of gender gaps in academic performance are well-documented (OECD, 2023[17]), as well as disparities in job-related outcomes, health indicators and political participation (OECD, 2023[18]; Beauregard, 2013[19]; Kennedy et al., 2020[20]). However, gender disparities in levels of social and emotional skills are less well understood.

Girls and boys evaluate their social and emotional skills differently and these differences are more pronounced at age 15

Gender differences in students' skills tend to be wider at age 15 compared to age 10 (see Figure 2.5). For most skills, these differences are remarkably consistent across participating sites (see Figure 2.7).

Figure 2.5. Gender differences in social and emotional skills

Standardised differences between the scores of girls and boys, average across sites



Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. Data for achievement motivation for 10-year-olds is only available for 6 sites and therefore omitted from the chart.
Source: OECD, SSES 2023 Database Table B2.4

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Boys tend to report higher emotional regulation skills, energy, trust, sociability, and self-control compared to girls

On average, boys report higher **emotional regulation skills** (**stress resistance**, **optimism** and **emotional control**) and **energy** than girls at age 15 in all participating sites. In addition, 15-year-old boys report higher **trust**, **sociability** and **self-control**, on average, in most sites.

- For **stress resistance** and, to a lesser extent, **energy**, the gender differences in favour of boys are already visible in most sites at age 10. These gaps then tend to grow larger by age 15.
- For **emotional control**, **optimism**, **trust** and **sociability**, there are no significant gender differences in these skills at age 10 in most sites. These gender differences therefore tend to emerge in adolescence.
- For **self-control**, there is a small gender difference in favour of girls at age 10 in most sites. This trend tends to reverse in favour of boys during adolescence.

Although boys typically report higher levels of these skills than girls in all participating sites, the size of these differences varies. For example, Figure 2.6 shows the average difference in **stress resistance** between boys and girls in each site. In some sites – particularly Daegu (Korea), Gunma (Japan) and Suzhou (China) – the average gender difference in this skill is small, meaning there is a large overlap in levels of stress resistance among boys and girls. Conversely, the average gender difference approaches one standard deviation in Helsinki (Finland) and Italian sites (Emilia-Romagna and Turin), meaning there is much less overlap between girls and boys in levels of this skill.

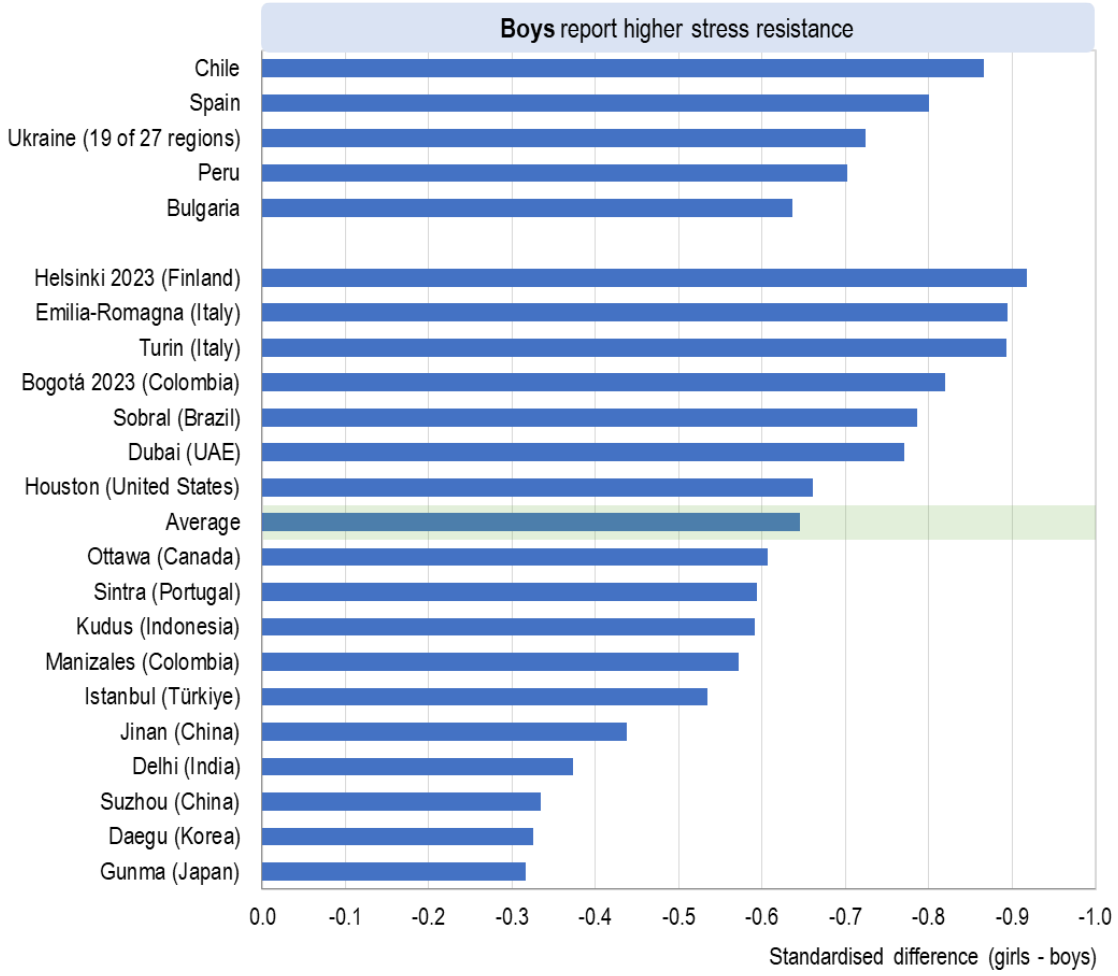
Emotional regulation skills (stress resistance, emotional control and optimism) are associated with students' health and well-being outcomes. As well as reporting lower levels of these skills, girls also typically report lower psychological well-being and life satisfaction and higher test and class anxiety than boys (see Chapter 3). Adolescent girls are more likely to express feelings of sadness and anxiety and to be diagnosed with depression or anxiety disorders than boys, a difference that persists into adulthood (Chaplin and Aldao, 2013[20]; Breslau et al., 2017[21]). There is some evidence that these gender disparities have worsened in recent years within some sites. Box 2.1 discusses how levels of social and emotional skills among students differ in 2023 compared to 2019 in Bogotá (Colombia) and Helsinki (Finland). In both sites, gender differences in emotional regulation skills (emotional control, stress resistance and optimism) and energy among 15-year-old boys and girls widened further between 2019 and 2023. Both boys and girls reported lower levels of optimism in Bogotá in 2023 than in 2019, but this drop was much larger for girls. In Helsinki, there was little change in the gender gap in optimism between these years.

While these trends are broadly consistent across sites, there are also some notable exceptions:

- In Delhi (India), Jinan (China) and Suzhou (China) there are no significant gender differences in **trust**.
- In Delhi (India), Gunma (Japan) and Sintra (Portugal), there are no gender differences in either **sociability** or **self-control** at age 15, unlike in most sites. In Emilia-Romagna (Italy), Houston (United States), Kudus (Indonesia) and Spain, there are also no gender differences in self-control, while in Ottawa (Canada), girls report higher levels of this skill. In Bulgaria and Helsinki (Finland), there are no gender differences in sociability.
- Gender differences in favour of boys are already visible at age 10 in Bogotá (Colombia) and Sobral (Brazil) for **trust**, **sociability**, **optimism** and **emotional control**, unlike in most sites where these differences are only seen at age 15.

Figure 2.6. Gender differences in stress resistance

Standardised differences in stress resistance between scores of 15-year-old girls and boys, average across sites



Note: All differences are statistically significant with a threshold $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.4

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Girls tend to report higher tolerance, achievement motivation, empathy and responsibility compared to boys

Girls report significantly higher **tolerance, achievement motivation**[5]**, empathy and responsibility** in most sites compared to boys at age 15. For **empathy** and **responsibility**, the gender gap at age 15 is similar to that at age 10, suggesting there is little shift in the distribution of these skills during adolescence. **Tolerance** is the only skill where the gender gap grows larger towards girls between age 10 and 15 (see Figure 2.5). While these trends are broadly consistent across sites, there are some exceptions. In Jinan (China) and Suzhou (China) there are no significant differences between boys and girls in tolerance, empathy, or responsibility (or in achievement motivation in Jinan (China)). The only skill where girls report higher levels than boys in these sites, on average, is assertiveness. Gender differences in Jinan (China) and Suzhou (China) also tend to be smaller than average for other skills. Gender differences in social and emotional skills therefore manifest somewhat differently in these sites compared to others.

Studies consistently find that women and girls tend to display higher levels of **empathy** than men and boys (Rochat, 2022[21]). Gender differences in relevant behaviours have been identified as early as infancy, and

these gaps then tend to widen with age, typically peaking around puberty (Lam, Solmeyer and McHale, 2012[22]). This could explain some of the gender differences seen in political opinions and voting patterns. For example, women tend to be less supportive of stringent immigration policies and more supportive of increased spending on social welfare programs (Halman et al., 2022[23]).

Boys tend to report higher creativity and assertiveness, however these gaps tend to be smaller than for other skills and there are exceptions

For **creativity**, there is a general trend towards boys reporting higher levels of this skill, however these differences tend to be smaller compared to other skills and are only seen in around half of sites (Chile, Daegu [Korea], Emilia-Romagna [Italy], Gunma [Japan], Helsinki [Finland], Istanbul [Türkiye], Jinan [China], Sobral [Brazil], Spain and Suzhou [China]). Bulgaria, Delhi (India) and Ukraine are exceptions to this trend, where girls report higher levels of creativity than boys on average.

For **assertiveness**, boys report higher levels than girls in some sites (Bulgaria, Dubai (United Arab Emirates), Emilia-Romagna [Italy], Helsinki [Finland], Istanbul [Türkiye], Manizales [Colombia], Sintra [Portugal], Spain and Turin [Italy]). The reverse trend is seen in Delhi (India), Jinan (China) and Suzhou (China), where girls report slightly higher levels on average.

For curiosity and persistence, there are no consistent gender differences

For **curiosity** and **persistence**, there are mixed findings, with no significant gender differences overall. In some sites, differences are found in favour of boys and, in others, in favour of girls. However, these differences tend to be small, indicating a large degree of overlap in levels of these skills among girls and boys.

Boys report higher **curiosity** than girls on average in some sites (Daegu [Korea], Gunma [Japan], Istanbul [Türkiye], Jinan [China] and Suzhou [China]) whereas the reverse trend – girls reporting higher levels - is seen in others (Bulgaria, Delhi (India), Houston [United States], Kudus [Indonesia], Manizales [Colombia], Ottawa [Canada] and Sintra [Portugal]).

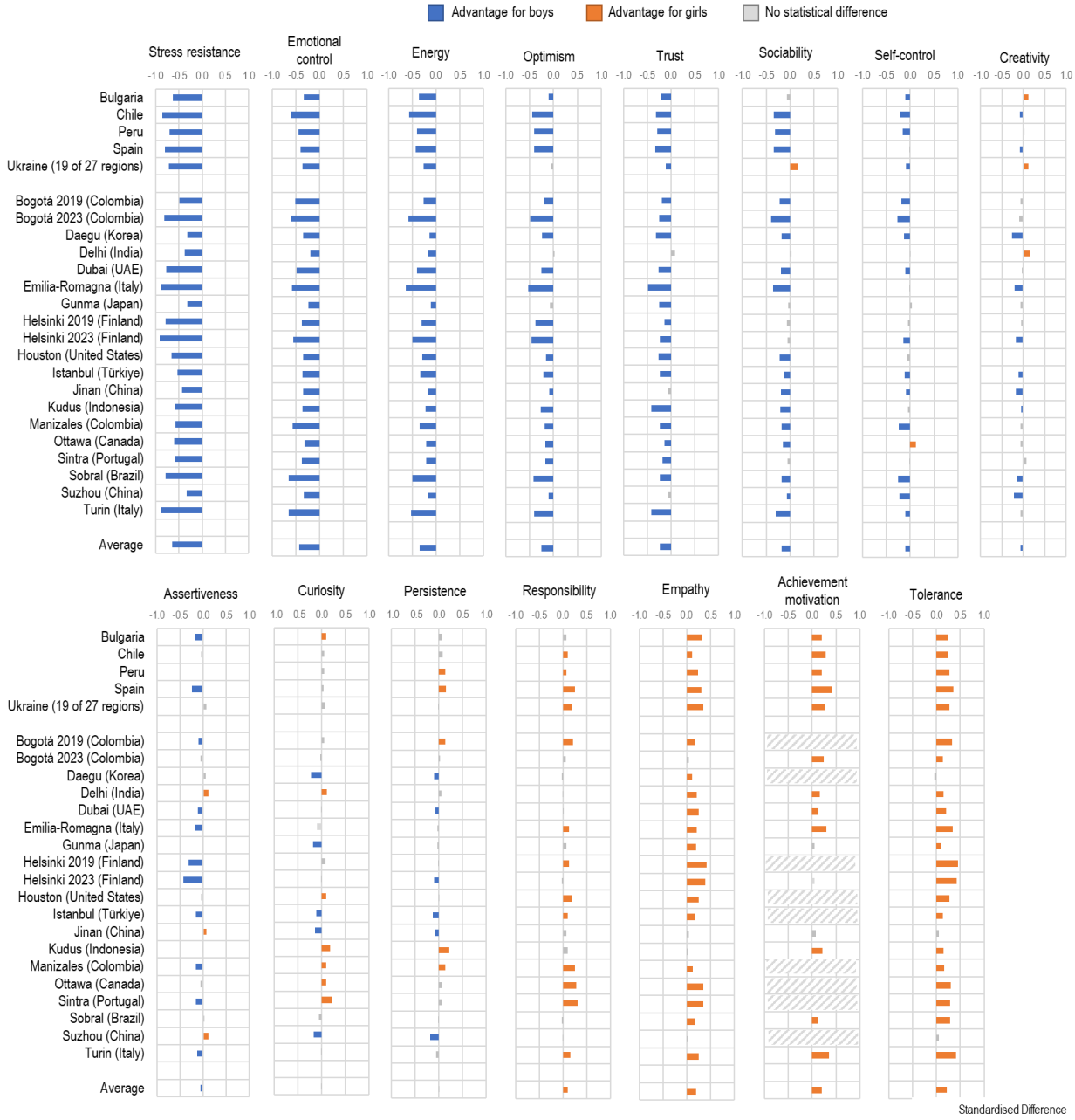
Boys report higher **persistence** than girls on average in some sites (Daegu [Korea], Dubai [United Arab Emirates], Helsinki (Finland), Istanbul [Türkiye], Jinan [China] and Suzhou [China]), while the reverse trend is found in others (Kudus [Indonesia], Manizales [Colombia], Peru and Spain).

Gender gaps widen between ages 10 and 15 for most skills and these shifts tend to favour boys

Figure 2.5 illustrates how the gender gaps in social and emotional skills change between ages 10 and 15, indicating whether the shift favours boys or girls. Between these ages, shifts in gender differences favour boys for most skills, particularly for emotional regulation skills (emotional control, stress resistance and optimism), energy, sociability, trust, self-control, and creativity. Notably, tolerance is the only skill where the gender gap widens in favour of girls between ages 10 and 15. This suggests an overall decline in girls' self-assessment of their skills compared to boys between these ages, with the exception of tolerance. Girls also report lower levels of health behaviours, body image, life satisfaction, satisfaction with relationships, and current psychological well-being compared to boys, as outlined in Chapter 3. This aligns with broader trends showing lower levels of self-esteem and confidence among girls and women in various contexts, with a tendency for women to attribute success to luck, or other external sources, and failure to lack of ability or hard work (Ellis et al., 2013[24]). This demonstrates the importance of providing students with accurate and objective assessments of their skills, which can help to challenge negative self-beliefs.

Figure 2.7. Gender differences in social and emotional skills by sites

Standardised differences between the scores of 15-year-old girls and boys



Note: Significant differences are at a threshold of $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.4

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Economic, social and cultural status

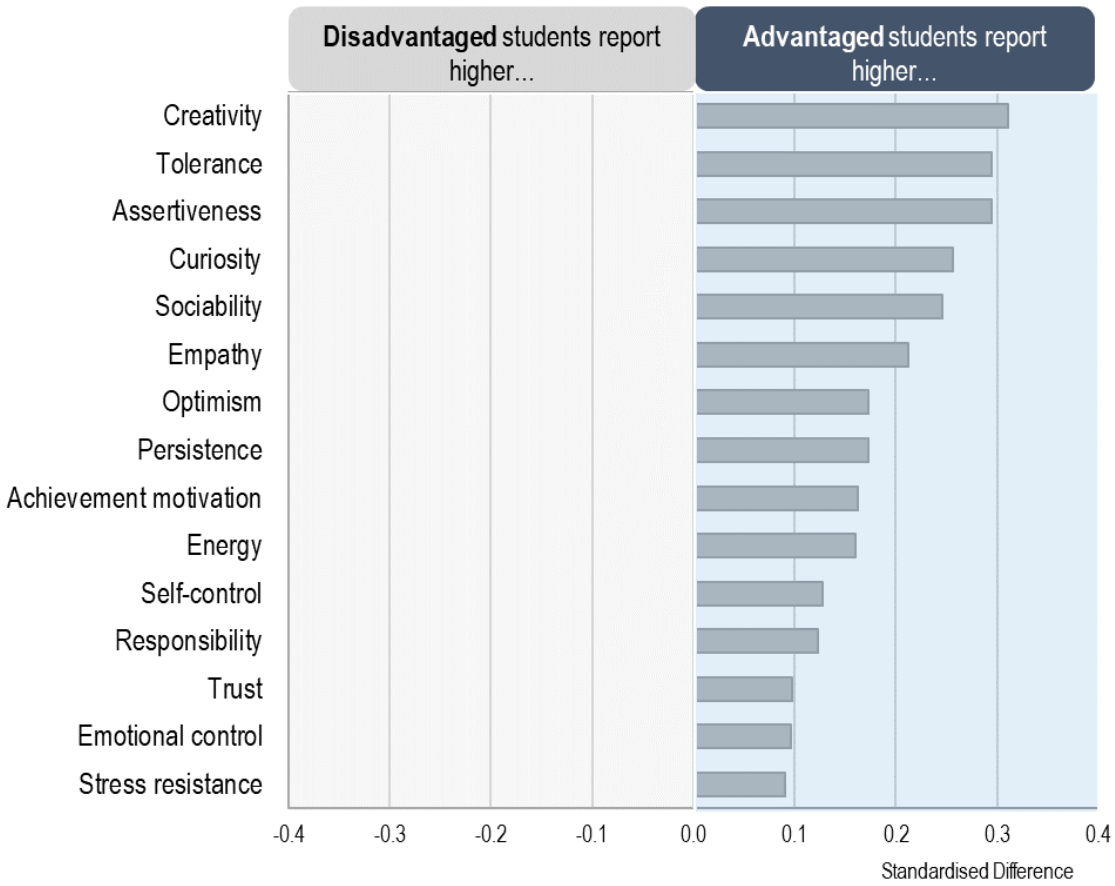
In this section, levels of social and emotional skills among the most advantaged and most disadvantaged students, according to their economic, social and cultural status, are compared[6]. This status is based on students' parents' levels of education and occupations and the number of certain possessions at home,

such as electronic equipment and vehicles. Disadvantaged students are those in the bottom quarter within their site based on this status, while advantaged students are those in the top quarter.

Disadvantaged students report lower levels of all social and emotional skills, on average, compared to their advantaged peers (see Figure 2.8). This trend is seen in all participating sites (see Figure 2.11). Across all skills measured in all participating sites, there are only a handful of examples where this trend is reversed. These findings mirror patterns seen in academic skills, where economic, social and cultural status is a strong predictor of poorer performance (OECD, 2023[17]).

Figure 2.8. Socio-economic differences in social and emotional skills

Standardised differences between the scores of the advantaged and disadvantaged 15-year-old students, average across sites



Note: All differences are statistically significant with a threshold $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.5

StatLink https://stat.link/x3t4hp

On average, the families of students who are economically, culturally and socially disadvantaged have lower incomes, lower levels of education and less prestigious jobs. These inequalities affect all areas of students' lives and persist into adulthood. Students from disadvantaged families typically have poorer access to quality education and learning resources and are more likely to have poorer educational attainment (OECD, 2019[25]). They are more likely to have poorer health and have a higher likelihood of developing many physical and mental health conditions (Reiss, 2013[26]). When they enter the labour market, their earnings are likely to be considerably lower than their advantaged peers (OECD, 2018[27]). SSES results show that similar inequalities exist in students' social and emotional skills. Given that these

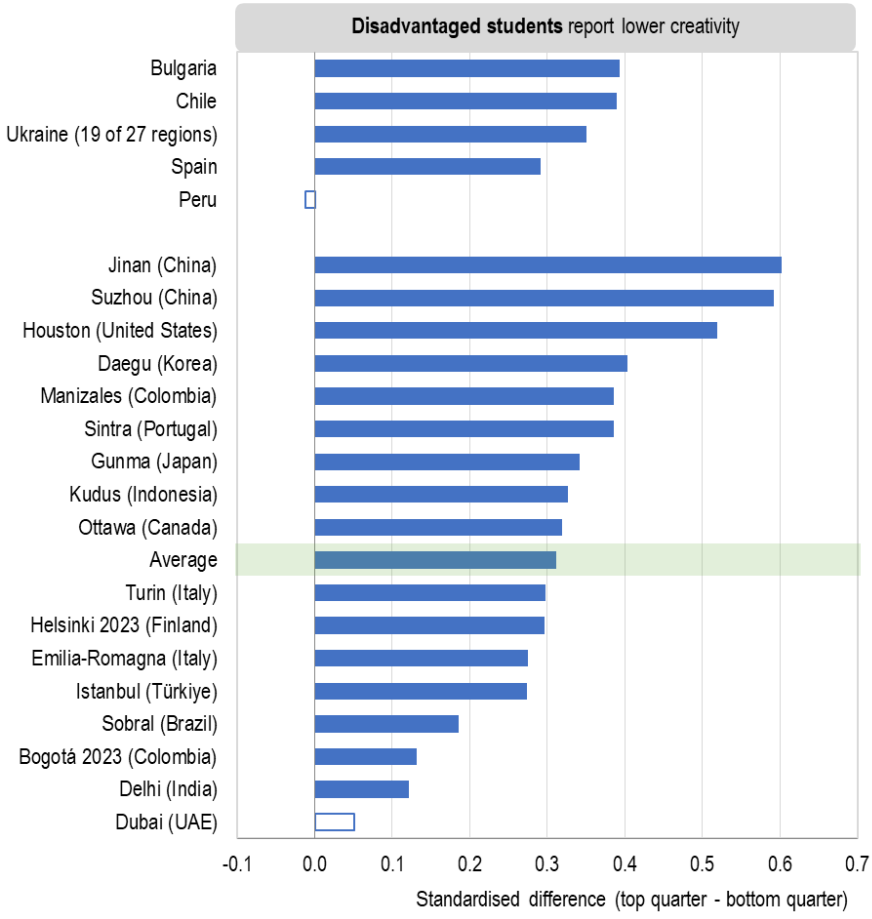
skills are associated with better health, education and labour market outcomes after controlling for disadvantage and other factors, lower levels of these important skills may also contribute to the inequalities seen in other outcomes.

In some sites, the target population includes only public schools (Mexico, Delhi [India], Helsinki [Finland], Houston [United States], Ottawa [Canada] and Sobral [Brazil]) or private schools (Dubai [United Arab Emirates]). This means that the full range of student backgrounds in these geographies are unlikely to be represented and differences by socio-economic background should be interpreted with this in mind. However, even after accounting for these differences, disparities by socio-economic background tend to be larger and more consistent in some sites than others. For this reason, smaller differences by socio-economic background in these sites compared to average are not highlighted in the following sections.

There are larger gaps between the most advantaged and disadvantaged students in almost all skills in Chile, Houston (United States), Jinan (China) and Suzhou (China) than on average across sites. In Istanbul (Türkiye) and Peru, these gaps tend to be smaller or non-existent for many skills. Figure 2.9 shows the range in the average difference in creativity between socio-economically advantaged and disadvantaged students across sites. In Peru, there is no significant difference in this skill between these student groups, and differences are small in Bogotá (Colombia), Helsinki (Finland), Spain, Italian sites (Turin and Emilia-Romagna) and Istanbul (Türkiye), meaning there is a large overlap in levels of this skill among advantaged and disadvantaged students. These differences are largest in Houston (United States), Jinan (China) and Suzhou (China), where the average difference is over half a standard deviation.

Figure 2.9. Differences in creativity by socio-economic status

Standardised differences in creativity between the scores of advantaged and disadvantaged 15-year-old students, average across sites



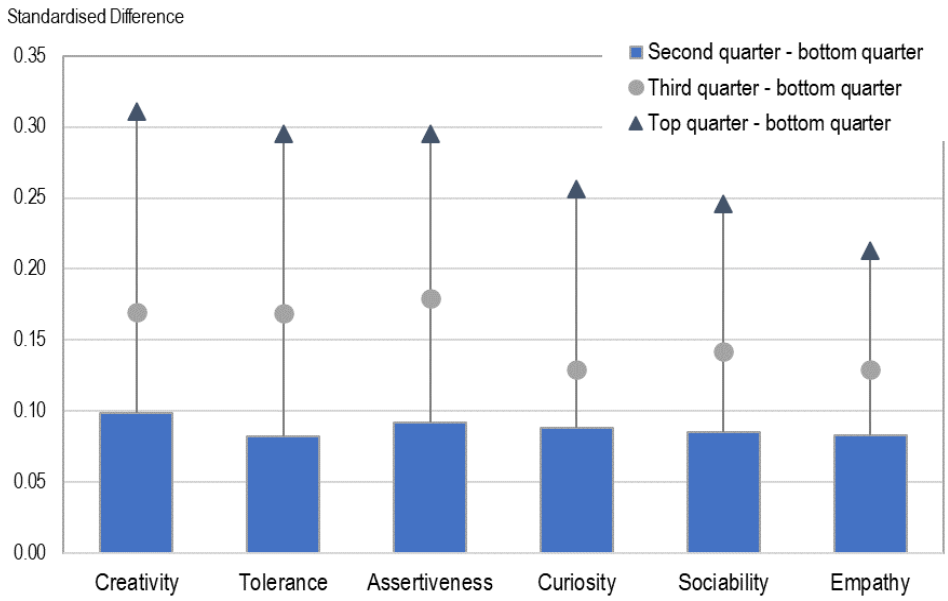
Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES Databases (2019, 2023) Table B2.5

StatLink https://stat.link/5mblc9

The relationship between economic, social and cultural status and the skills of **creativity**, **tolerance, assertiveness**, **curiosity**, **sociability** and **empathy** is particularly strong (see Figure 2.10). For these skills, gaps are not only seen between the most advantaged (top quarter) and most disadvantaged students (bottom quarter). Students who are somewhat advantaged (second quarter) and somewhat disadvantaged (third quarter) also report higher levels of these skills, on average, than the most disadvantaged students. This demonstrates that economic, social and cultural status is a spectrum: the higher a students' status, the greater their advantage. However, it is not inevitable that disadvantaged students will have poorer outcomes. Behind the averages, there are many disadvantaged students who report high levels of skills, comparable to how many disadvantaged students achieve academic success.

Figure 2.10. Differences in social and emotional skills by socio-economic status

Standardised differences by quarter of socio-economic status, average across sites



Note: All differences are statistically significant with a threshold $p < 0.05$
Source: OECD, SSES Databases (2019, 2023) Table B2.5

StatLink https://stat.link/lcm190

The largest and most consistent gaps between advantaged and disadvantaged students among 15-year-olds are in the skills of **creativity**, **tolerance** and **assertiveness**. While differences in these skills are found in most sites, there are some exceptions[7]. For creativity, no significant difference by socio-economic background is found in Peru and this disparity is particularly smaller in Bogotá (Colombia) than other sites. For tolerance, no differences are found in Italian sites (Emilia-Romagna and Turin) or Sintra (Portugal) and the difference is smaller in Spain than other sites. For assertiveness, no significant difference by socio-economic background is found in Peru.

Students who report low **creativity** find it challenging to generate novel ideas or new ways of doing things. This could present a barrier for students with a lower economic, social and cultural status in accessing higher education and certain professions, particularly those with projected growth in the future (Autor, 2015[28]). Indeed, students with lower levels of creativity are less likely to expect to have careers in the Information, Communication and Technology (ICT), science and engineering sectors when they are older (see Chapter 4). Jobs that require creative thinking skills are at less risk of automation, therefore this skill can help students adapt to a rapidly changing labour market that requires people to think flexibly and innovatively.

Students with low **assertiveness** struggle to voice their opinions and tend to let others take the lead, reflecting a lack of confidence in their abilities. Access to economic, cultural, and social capital can bestow knowledge, experiences and resources that bolster confidence in one's ideas and boost leadership skills, such as tutoring, access to unpaid or informal internships and extra-curricular activities (Hora et al., 2021[29]; Mikus, Tieben and Schober, 2021[30]). Disadvantaged students tend to have less ambitious expectations for their future than their advantaged peers, even when they have similar levels of academic attainment. This can lead them to make choices that limit their career options and earning potential, such as opting for a vocational rather than an academic high-school track or not pursuing higher education (Parker et al., 2016[31]). Low assertiveness among students from a lower socio-economic background may contribute to these differences in beliefs and behaviours. A recent review by the OECD found strong

evidence that assertiveness is predictive of job performance and moderate evidence for its role in life satisfaction (Steponavičius, Gress-Wright and Linzarini, 2023[2]). These outcomes are highly relevant to disadvantaged students. Individuals with lower economic, social and cultural status are less likely to be promoted to leadership positions (Barling et al., 2023[32]) and, as discussed in Chapter 3, disadvantaged students tend to report lower levels of life satisfaction and psychological well-being.

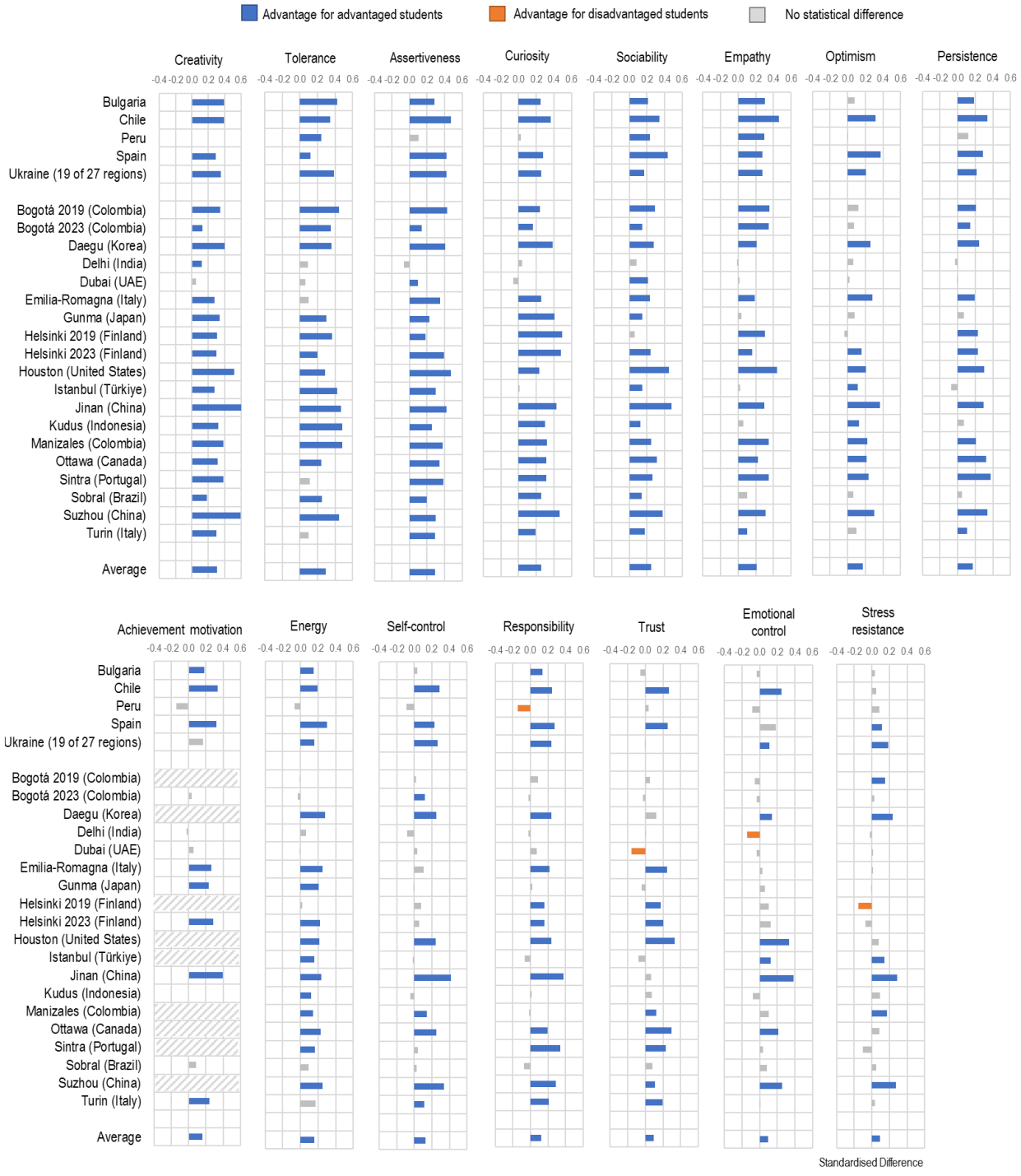
The most socio-economically disadvantaged students in each site also report lower levels of other skills from the **open-mindedness** (**curiosity**) and **engaging with others domains** (**sociability** and **energy**), as well as **empathy**, **achievement motivation**, **persistence**, **responsibility**, and **optimism** in most sites compared to their disadvantaged peers.

- For **curiosity**, the most disadvantaged 15-year-old students report lower levels of this skill on average compared to their advantaged peers in all sites except Delhi (India), Dubai (United Arab Emirates), Istanbul (Türkiye) and Peru, where there are no significant differences.
- For **sociability**, the most disadvantaged 15-year-old students report lower levels of this skill on average compared to their advantaged peers in all sites except Delhi (India), where there are no significant differences.
- For **empathy**, the most disadvantaged 15-year-old students report lower levels of this skill on average compared to their advantaged peers in all sites except Delhi (India), Dubai (United Arab Emirates), Gunma (Japan), Istanbul (Türkiye), Kudus (Indonesia) and Sobral (Brazil), where there are no significant differences.
- For **optimism**, the most disadvantaged 15-year-old students report lower levels of this skill on average compared to their advantaged peers in all sites except Bogotá (Colombia), Bulgaria, Delhi (India), Dubai (United Arab Emirates), Gunma (Japan), Sobral (Brazil), Peru and Turin (Italy), where there are no significant differences.
- For **persistence**, the most disadvantaged 15-year-old students report lower levels of this skill on average compared to their advantaged peers in most sites except Delhi (India), Dubai (United Arab Emirates), Gunma (Japan), Istanbul (Türkiye), Kudus (Indonesia), Peru and Sobral (Brazil), where there are no significant differences.
- For **energy**, the most disadvantaged 15-year-old students report lower levels of this skill on average compared to their advantaged peers in all sites except Bogotá (Colombia), Delhi (India), Dubai (United Arab Emirates), Peru, Sobral (Brazil) and Turin (Italy), where there are no significant differences.
- For **responsibility**, the most disadvantaged 15-year-old students report lower of this skill on average compared to their advantaged peers in all sites except Bogotá (Colombia), Delhi (India), Dubai (United Arab Emirates), Gunma (Japan), Istanbul (Türkiye), Kudus (Indonesia), Manizales (Colombia), and Sobral (Brazil), where there are no significant differences, and Peru, where advantaged students report lower levels.

For **self-control**, **emotional control, stress resistance** and **trust**, while there is a general trend towards disadvantaged students reporting lower levels of these skills, these relationships tend to be weaker and there are exceptions.

Figure 2.11. Differences in social and emotional skills by socio-economic status by sites

Standardised differences between the scores of advantaged and disadvantaged 15-year-old students



Note: Significant differences are at a threshold of $p < 0.05$. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.

Source: OECD, SSES 2023 Database Table B2.5

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Migration background

In this section, the social and emotional skills of students with a migrant background (where the student or at least one of their parents was born in a country different to that of the assessment) to those of students who were born, or both their parents were born, in the country of assessment are compared.

Data on the relationship between migration background and academic performance generally finds small and inconsistent differences that tend to reduce or disappear after controlling for economic, social and cultural status (OECD, 2023[17]).

SSES results show that, on average, the differences in skills between students from a migrant background and their peers are small across sites (see Table B2.6). Behind this average, these relationships are inconsistent between sites, with native students tending to report higher skills than students with a migrant background in some sites and the reverse trend in others. For example, native students tend to report higher levels of almost all skills in Bulgaria and Delhi (India), while the opposite is found in Helsinki (Finland) and Ottawa (Canada). This may be due to different migration contexts between sites, including different drivers of migration and the level of overlap between migration background and economic, social and cultural status.

Some sites have very small proportions of students from a migrant background. When sites where fewer than 1-in-20 students are from a migrant background[8] are excluded, the only consistent finding within the remaining sites is that students from a migrant background tend to report higher levels of **tolerance** than their peers. The exceptions to this are Bulgaria and Delhi (India), where the reverse relationship is found, and Jinan (China), where there is no significant difference.

Annex 2.A. Chapter 2 Tables

Online tables for each chapter can be accessed via the StatLink.

Table 2.1. Tables Chapter 2. Social and emotional skills across socio-demographic groups

Table	Title
Table B2.1	Dispersion of students' social and emotional skills
Table B2.2	Variability of social and emotional skills
Table B2.3	Age differences in social and emotional skills
Table B2.4	Gender differences in social and emotional skills
Table B2.5	Differences in social and emotional skills by socio-economic status
Table B2.6	Differences in social and emotional skills by migrant status
Table B2.7	Differences in social and emotional skills by number of language(s) spoken
Table B2.8	Differences in social and emotional skills between 2019 and 2023, by student characteristics

StatLink https://stat.link/ce0mju

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Notes

[1] 13 sites with data for both age groups are included in analysis by age (see the Reader's Guide).

[2] Differences in achievement motivation by age are not discussed as comparable data is only available for six sites, however these data are included in Figure 2.4. Age differences in social and emotional skills by sitesFigure 2.4.

[3] Students self-report their gender. In addition to "Male" and "Female", the option "Other" was provided in most sites.

[4] Analysis by gender includes 22 sites from SSES 2019 and SSES 2023 and analysis by gender and age includes 13 sites with data for both age groups (see the Reader's Guide). Data for achievement motivation is not discussed for 10-year-olds as comparable data is only available for six sites.

[5] Analysis of achievement motivation only includes SSES 2023 sites (see Reader's Guide).

[6] Analysis by economic, social and cultural status includes 22 sites from SSES 2019 and SSES 2023.

[7] Exceptions are only discussed in sites where the target population includes both private and public schools.

[8] Daegu (Korea), Gunma (Japan), Istanbul (Türkiye), Kudus (Indonesia), Manizales (Colombia), Peru, Sobral (Brazil), Suzhou (China) and Ukraine are excluded as fewer than 1-in-20 students have a migrant background.

3 Well-being and health

This chapter examines the relationships between students' social and emotional skills and six well-being and health indicators: student health behaviours, body image, life satisfaction, satisfaction with relationships, current psychological well-being, and test and class anxiety. It also looks at skills associated with health and well-being resilience among students from disadvantaged backgrounds.

In Brief

Policy Insights

- **Cultivate students' optimism to improve their well-being and health outcomes.** Students who are more optimistic engage in healthier behaviours; are more satisfied with their lives, relationships, and body image; have less test and class anxiety; and report greater psychological well-being. By building optimism, education systems might help close the well-being gap that exists between boys and girls and advantaged and disadvantaged students, where girls report poorer levels of all health and well-being outcomes and disadvantaged students of all except test and class anxiety. SSES finds that higher optimism is more strongly associated with higher life satisfaction and relationship satisfaction among disadvantaged students and girls, and with better body image for girls, suggesting these students could particularly benefit from efforts to cultivate this skill.
- **Develop students' social and emotional skills more broadly to improve their health and well-being.** Beyond optimism, higher levels of other social and emotional skills are associated with better health and well-being outcomes. Energy, stress resistance, trust, emotional control, achievement motivation, responsibility and persistence are particularly strongly and consistently associated with positive outcomes.
- **Build students' stress resistance and other emotional regulation skills to reduce test and class anxiety among students.** Students with higher levels of these skills report being less anxious in relation to tests and schoolwork. Developing emotional regulation skills could also reduce the disparity between girls' and boys' levels of test and class anxiety; girls report being more anxious generally, but they may benefit from emotional regulation skills even more than boys.
- **Assist students with ambitious academic goals to achieve a healthy balance that supports both their aspirations and their well-being.** Students who are highly driven towards achievement tend to experience more intense feelings of concern or nervousness during tests compared to students who are less achievement motivated. While a manageable level of this concern may serve as a motivator for some students, high test and class anxiety is associated with poorer academic outcomes. Students can be supported to cultivate a 'growth mindset', where challenges and setbacks are seen as opportunities for learning. This approach may support students to approach tests and classwork with a healthier perspective and less fear of failure.
- **Encourage students to adopt healthy habits to boost their well-being.** Students who report healthier behaviours also report better current psychological well-being, life satisfaction, and body image. Sufficient sleep, regular physical exercise and eating fruits or vegetables are the behaviours most strongly associated with better well-being among students. Potential interventions could include multicomponent health promotion programmes, sleep education programmes, or delaying school start times to improve adolescents' sleep.
- **Build social and emotional skills to support disadvantaged students' resilience which can serve as a protective factor.** On average, only 1-in-10 disadvantaged students are resilient in their well-being and health – meaning that they have some of the highest levels of life satisfaction, current psychological well-being, or health behaviours in their site. Resilient

disadvantaged students report higher levels of most social and emotional skills compared to those who are not resilient.

Building health and well-being through social and emotional skills

An individual's well-being and health directly impacts their quality of life (Felce and Perry, 1995[1]; OECD, 2013[2]). Well-being and health are foundational for personal happiness, productivity, and societal prosperity. Among children and youth, the importance of well-being is two-fold: children's well-being today matters for their future (the developmental perspective) and children have a right to a good childhood here and now (the child rights perspective) (OECD, 2015[3]; Ben-Arieh et al., 2014[4]). Education systems around the world increasingly recognise the importance of well-being. The role of schools has expanded to support students' development more broadly, including their well-being (Burns and Gottschalk, 2019[5])

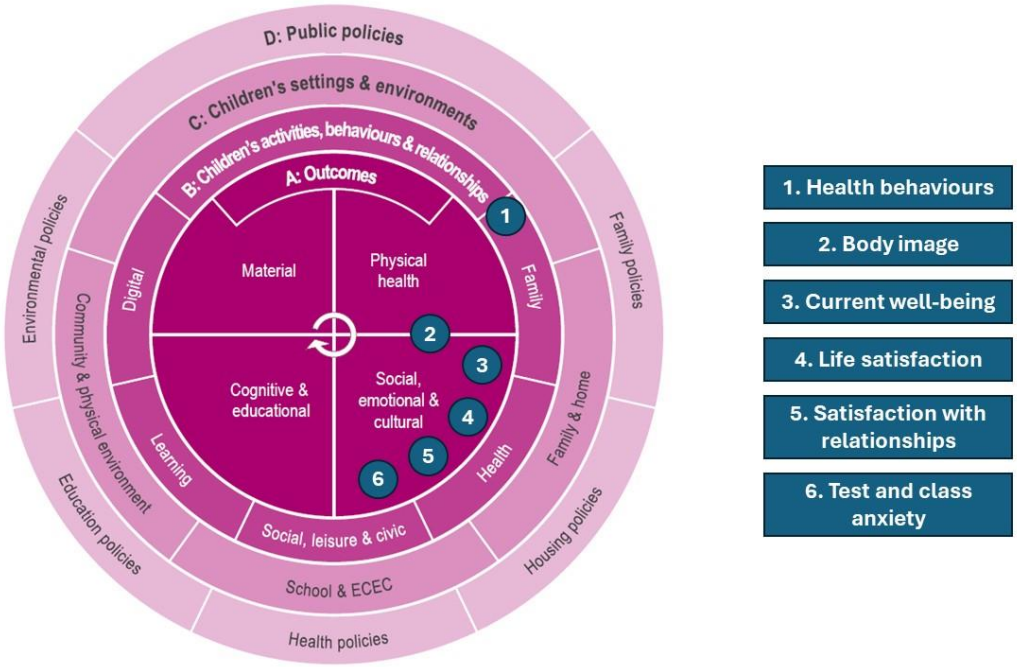
Equipping students with skills and tools to lead healthy and fulfilling lives is one way to do this, including the development of social and emotional skills. These skills[1] are consistently related to students' subjective well-being as well as their health and health-related behaviours (Strickhouser, Zell and Krizan, 2017[6]; Steponavičius, Gress-Wright and Linzarini, 2023[7]; Chernyshenko, Kankaraš and Drasgow, 2018[8]).

This chapter examines the relationships between 15-year-old students' social and emotional skills and various measures of their well-being and health. Relationships between social and emotional skills and the following six indicators are discussed:

- **Life satisfaction**, the extent to which students feel satisfied with their life as a whole.
- **Current psychological well-being**, a measure of students' mood during the most recent two weeks
- **Satisfaction with relationships**, the extent to which students are satisfied with their relationships with their parents or guardians, friends, classmates, and teachers.
- **Body image**, the extent to which students feel positively about how they look.
- **Test and class anxiety**, the extent to which students are concerned about possible negative consequences or failure in tests or their schoolwork.
- **Health behaviours**, a measure of the students' engagement in healthy behaviours that promote their health and well-being, including getting enough sleep, exercising, and eating well, and avoiding cigarettes and alcohol.

Figure 3.1 shows how these six measures are situated in the OECD aspirational child well-being measurement framework (OECD, 2021[9]). This framework covers multiple dimensions of well-being - material well-being; physical health; social, emotional, and cultural well-being; and cognitive development and educational well-being. Five of the six measures discussed in this chapter are considered child health and well-being outcomes in this framework: life satisfaction, satisfaction with relationships, current psychological well-being, test and class anxiety and body image. These outcomes all sit within the social, emotional, and cultural well-being dimension, while body image is positioned within both this dimension and that of physical health. The sixth measure – health behaviours – is considered a child-level influence of well-being. For this reason, this chapter also examines how students' health behaviours relate to their body image, life satisfaction, and current psychological well-being outcomes.

Figure 3.1. Survey on Social and Emotional Skills well-being and health measures situated in the OECD aspirational child well-being measurement framework



Source: Adapted from 'Measuring What Matters for Child Well-being and Policies' (OECD, 2021[9])

Differences in well-being and health outcomes by student characteristics

SSES results show systematic gaps in the levels of health and well-being indicators between girls and boys, and between socio-economically advantaged and disadvantaged students[2]. Average gaps also emerge between native students and students with migrant background[3], but the pattern of differences is not consistent across sites.

Boys and advantaged students report better well-being and health than girls and disadvantaged students

Boys report better well-being than girls, on average, across all six measures (Figure 3.2). Compared to girls, boys report higher levels of five of the positive well-being and health indicators, while reporting lower levels of test and class anxiety – the anxiety that students may feel in test settings and in relation to schoolwork.

Advantaged students report higher levels of the five positive well-being and health measures than disadvantaged students on average across sites, however there is no difference, on average, in the levels of test and class anxiety by socio-economic background. Although advantaged students tend to report more positive body image than their disadvantaged peers, meaning they tend to think and feel more positively about their own body, this pattern is not consistent across sites. In Kudus (Indonesia) and Peru, disadvantaged students report better body image than advantaged students, on average.

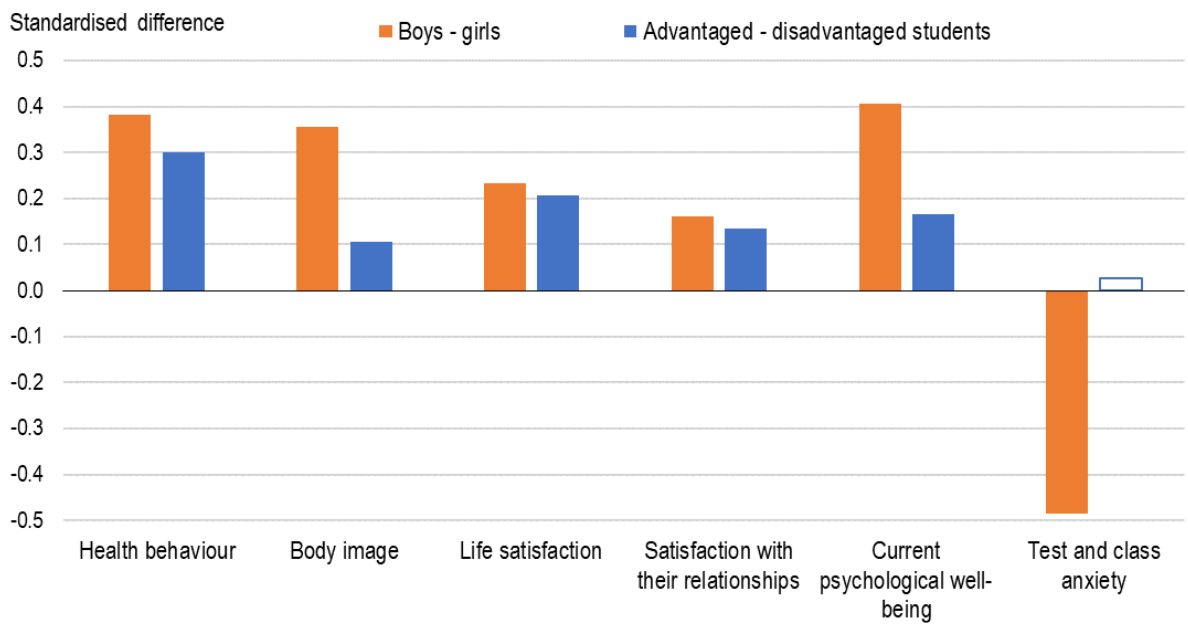
The gender and socio-economic differences identified in SSES results largely align with previous studies (Inchley et al., 2020[10]; Saab and Klinger, 2010[11]; Cosma et al., 2023[12]). For example, the World Health Organisation's Health Behaviour in School-aged Children (HBSC) survey found that girls and less affluent adolescents were more likely to perceive themselves as "too fat", while boys and adolescents from more

affluent families were more satisfied with their lives and reported better mental well-being. Social well-being – in terms of family and peer relationships – was on average higher among young people from high-affluence families, while girls reported higher levels of loneliness than boys. At age 15, girls reported a significantly higher prevalence of schoolwork pressure. HBSC also found that adolescents from high-affluence families felt more pressured by schoolwork (Inchley et al., 2020[10]; Cosma et al., 2023[12]).

On average across sites, students with a migrant background report lower levels of health behaviours, life satisfaction, relationship satisfaction, but also lower test and class anxiety than native students. However, behind these averages, there is considerable variation across sites in terms of size and direction of these differences (Tables B3.4, B3.15, B3.21, B3.32). For example, students with a migrant background report greater life satisfaction and relationship satisfaction than native students in Helsinki (Finland). These differences may be due to the nature and extent of migration differing widely between sites.

Figure 3.2. Gender and socio-economic differences in students' well-being and health

Standardised differences in the six measures of well-being and health by gender and by socio-economic status, average across sites



Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined
Source: OECD, SSES 2023 Database Tables B3.4, B3.9, B3.15, B3.21, B3.26 and B3.32

StatLink https://stat.link/81ugew

Health behaviours

Health behaviours matter because the actions of young people affect their health and well-being outcomes, both today and in the future. For example, participation in sports for children and adolescents predicts mental and social health (Eime et al., 2013[13]) and is associated with decreases in depressive symptoms (Wegner et al., 2020[14]). Substance use is associated with a variety of adverse mental and physical health outcomes (Hall et al., 2016[15]). Sufficient sleep improves adolescents' mood and memory, while sleep deprivation contributes to decreased cognitive control and vigilance (Short et al., 2020[16]; de Bruin et al., 2017[17]; Telzer et al., 2013[18]).

SSES measures health behaviours by asking students about the frequency with which they engage in five behaviours: eating breakfast, eating fruits or vegetables, doing at least 20 minutes of vigorous physical activity, sleeping at least eight hours at night, and smoking cigarettes or drinking alcohol. A health behaviours index is calculated based on students' responses to these questions.[45]

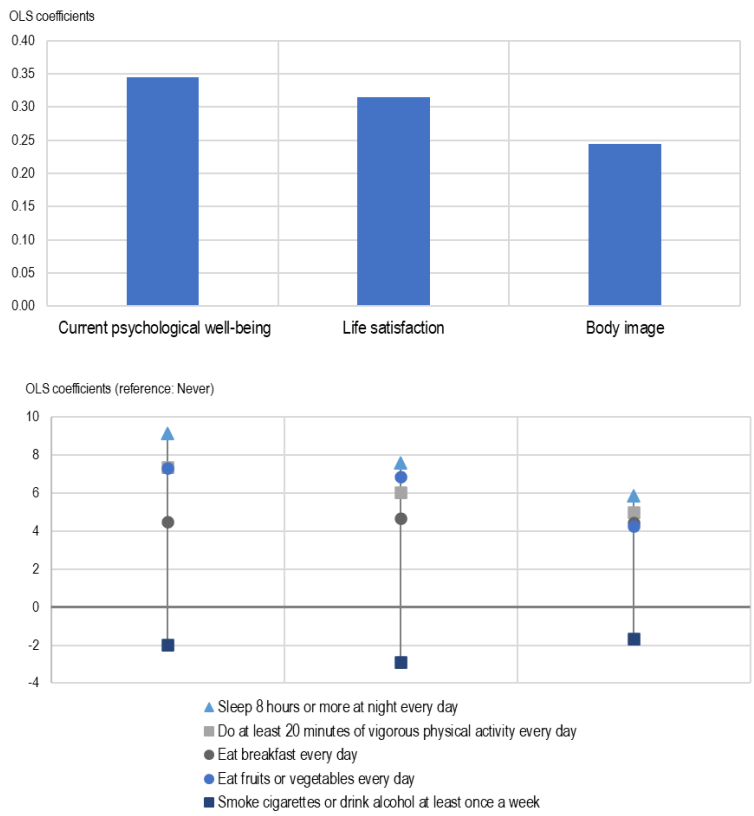
Health behaviours predict well-being and many students report insufficient sleep and physical exercise, skipping breakfast and eating too little fruits and vegetables

Because health behaviours function as immediate influences on youth's well-being, the relationship between students' health behaviours and three relevant well-being indicators (life satisfaction, body image, and current psychological well-being) are examined. Aligned with the theoretical well-being framework applied in this chapter (Figure 3.1), SSES results show that students' health behaviours are related to, and potentially influence, students' life satisfaction, current psychological well-being, and the way that students feel about their bodies.

Health behaviours are most strongly associated with students' current psychological well-being, followed by their life satisfaction and body image (Figure 3.3). These relationships are found in all sites.

Figure 3.3. Relationships between students' health behaviours and well-being indicators

Regression coefficients of the health behaviours index and individual health behaviours on well-being indices



Note: All differences are statistically significant with a threshold $p < 0.05$. All models control for gender, socio-economic and migrant status. Higher scores on the health behaviours, current psychological well-being, life satisfaction and body image indices indicate more positive levels of these indicators.
Source: OECD, SSES 2023 Database Tables B3.10, B3.16 and B3.27

StatLink https://stat.link/1bl94o

Sleeping at least 8 hours each night is the strongest predictor of all three outcomes, which aligns with evidence that sleep improves adolescents' mood and mental well-being, and conversely, that sleep disturbances contribute to anxiety (Short et al., 2020[16]; Tarokh, Saletin and Carskadon, 2016[19]) (McMakin and Alfano, 2015[20]). For optimal health, adolescents should regularly sleep between 8 to 10 hours (Paruthi et al., 2016[21]). Across sites, however, only a quarter of students say that they sleep at least 8 hours at night every day. 14% of students report that they never get 8 hours of sleep, while overall, over half of students get insufficient sleep most nights (Figure 3.4). Insufficient sleep is most common among students in Gunma (Japan) and Jinan (China), where around a quarter of students never sleep 8 hours per night (Table B3.3). Changes in sleep patterns are a natural part of adolescence and older adolescents go to bed later (Colrain and Baker, 2011[22]). However, factors such as use of screen-based digital technology can further delay bedtimes and contribute to reduced total sleep duration (LeBourgeois et al., 2017[23])Insufficient sleep in adolescence can also be aggravated by early school start times (Minges and Redeker, 2016[24]).

Doing at least 20 minutes of vigorous physical activity each day is the second strongest predictor of student body image and current psychological wellbeing (together with eating fruits and vegetables). It is the third strongest predictor of life satisfaction. Participation in sports contributes to youth's self-esteem, better social interactions and fewer depressive symptoms, as well as improved body image (Wegner et al., 2020[14]; Eime et al., 2013[13]; Sabiston et al., 2019[25]; Hausenblas and Fallon, 2006[26]). Over 1-in-10 15-year-olds report that they never do as much as 20 minutes of vigorous physical activity, while an additional 2-in-10 only do so once a week or less (Figure 3.4). The World Health Organisation recommends that children and adolescents incorporate vigorous-intensity physical activities at least three times a week (WHO, 2020[27]). This means that approximately a third of 15-year-olds on average across sites do not meet the WHO guideline. Sobral (Brazil) has the highest proportion of students who say they never exercise (almost 3-in-10) whereas in Dubai (United Arab Emirates), Jinan (China) and Ukraine, only between 6 and 7% of students report this (Table B3.3).

Dietary habits also have a strong link with students' current psychological well-being, body image and life satisfaction, and eating fruits or vegetables is a stronger predictor than regular breakfast, except for body image, where both behaviours are equally relevant. There is systematic evidence that eating breakfast is positively related to adolescents' well-being and quality of life, and that unhealthy dietary habits relate to dissatisfaction with one's body image (Lundqvist, Vogel and Levin, 2019[28]; Bodega et al., 2023[29]). On average across sites, approximately half of 15-year-old students report eating breakfast every day, and a further 11% say they have breakfast 4-6 times per week (Figure 3.4). However, this leaves more than one-third of students missing breakfast most mornings. In previous research, skipping breakfast has been linked to a risk of obesity and metabolic diseases (Monzani et al., 2019[30]). There is large variation across sites, however. Almost 8-in-10 students in Gunma (Japan) say that they eat breakfast every day, while just over one-third of students in Delhi (India) do so (Table B3.3). Just over 4-in-10 students indicate that they eat fruits or vegetables every day on average across sites, however this varies considerably between sites. According to the World Health Organisation, five portions of fruits and vegetables should be consumed each day (WHO, 2019[31]), which means over half of 15-year-olds across sites do not eat enough fruit and vegetables.

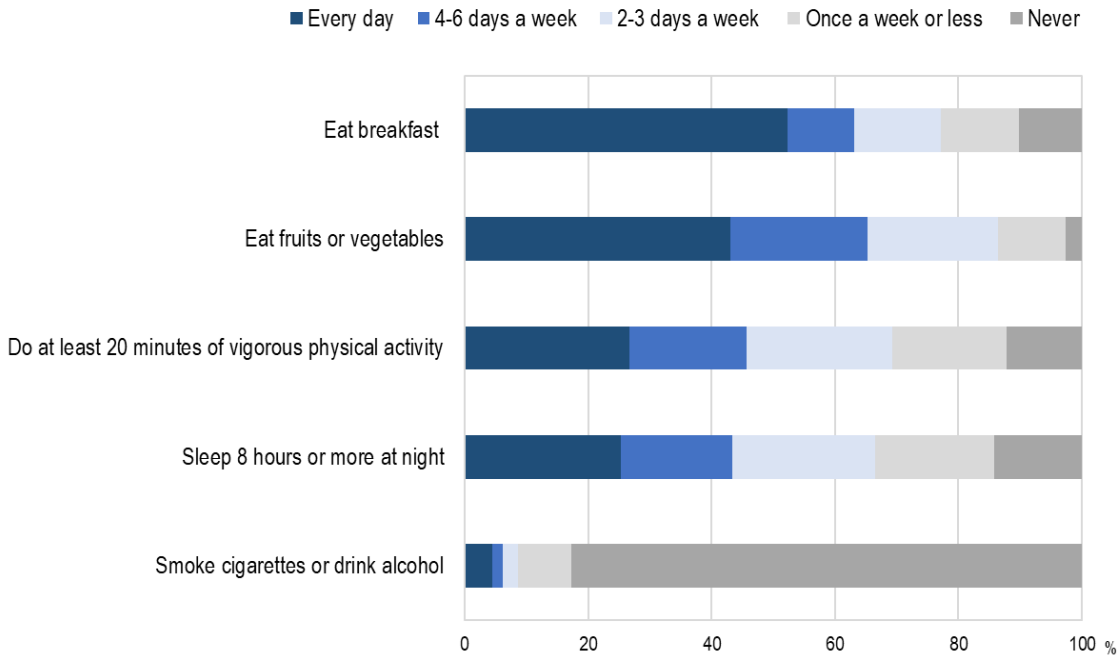
Students who say they have smoked cigarettes or drunk alcohol tend to report lower well-being than students who say they never smoke or drink. This is true for all three well-being indicators. This finding is consistent with existing evidence of negative effects of substance use among youth on mental health and other outcomes (Hall et al., 2016[15]). On the other hand, another explanation is that students who struggle with their well-being turn to alcohol and cigarettes as a coping mechanism (Wills, 1987[32]). SSES data shows that more than 8-in-10 15-year-old students say they never smoke cigarettes or drink alcohol. Around 1-in-10 report smoking cigarettes or drinking multiple times per week, and a similar proportion does this once a week or less often (Figure 3.4). Again, there is a considerable variation across sites. Whereas

almost all (99%) of students in Gunma (Japan) report to be non-smokers and drinkers, only 6-in-10 students report this in Bulgaria and Italian sites (Emilia-Romagna and Turin) (Table B3.3).

SSES data suggests that, beyond the direct relationship with students' physical health, promoting positive health-related behaviours such as sufficient sleep, regular exercise, and a healthy diet, as well as discouraging alcohol and cigarette consumption, can contribute to better well-being outcomes among adolescent students. Education systems could consider incorporating comprehensive, multicomponent health promotion interventions into the curriculum (van Sluijs et al., 2021[33]; Vander Ploeg et al., 2014[34]), implementing sleep education programmes (Chung et al., 2017[35]; Blunden and Rigney, 2015[36]; Cassoff et al., 2013[37]), or delaying school start times to improve adolescents' sleep (Minges and Redeker, 2016[24]).

Figure 3.4. Students' health behaviours

Frequency of individual health behaviours among 15-year-old students, average across sites



Source: OECD, SSES 2023 Database Table B3.3

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Boys and advantaged students tend to report healthier behaviours, however girls say they smoke cigarettes or drink alcohol more than boys in some sites

Overall, students report the highest levels of health behaviours in Ukraine, followed by Gunma (Japan) and Jinan (China). The lowest level of the health behaviour index among participating sites are measured in Italian sites (Emilia-Romagna and Turin), Sobral (Brazil) and Kudus (Indonesia) (Figure 3.5).

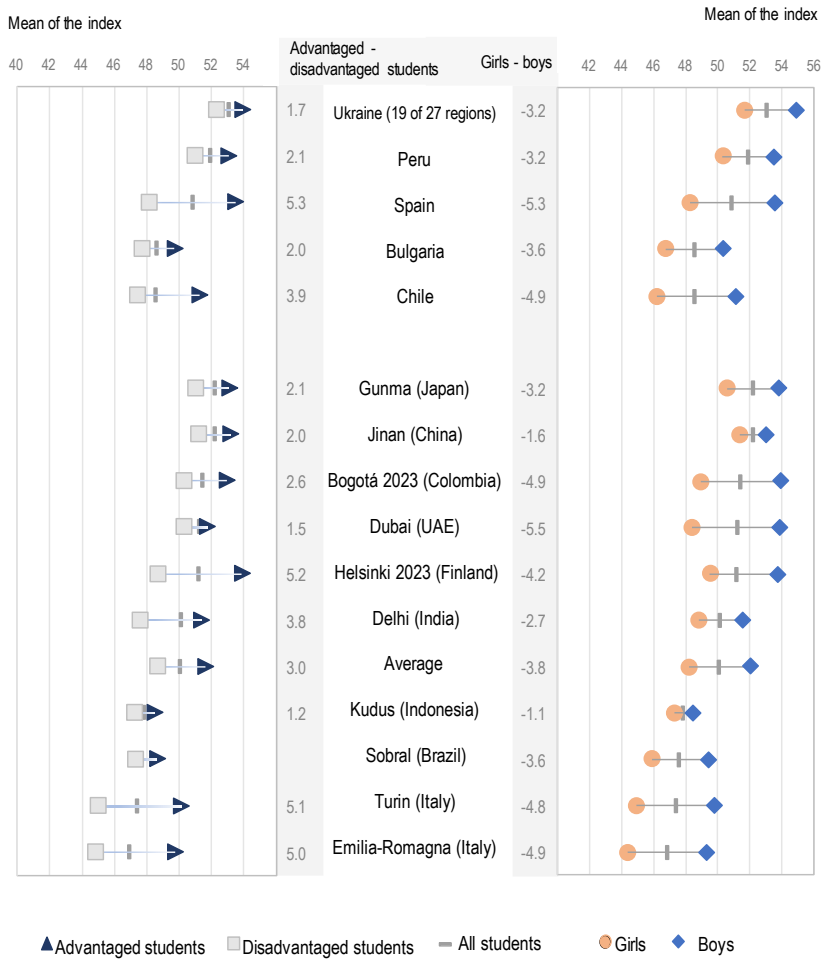
Figure 3.5 presents differences in the health behaviours index by gender and socio-economic background for each site. On average and in all sites, boys report healthier behaviours than girls. The gender gap is largest in Dubai (United Arab Emirates) and smallest in Kudus (Indonesia). Advantaged students score significantly higher on the health behaviours index than disadvantaged students. The biggest differences emerge in Spain, Helsinki (Finland) and Italian sites (Emilia-Romagna and Turin). Sobral (Brazil) is the only site where no significant gap between advantaged and disadvantaged students is found, however this

could reflect the low variation in socio-economic status in Sobral's (Brazil) target population, which excludes private schools. In most sites there is no difference in the health behaviours index between native students and students with migrant background.

These results align with the World Health Organisation's findings that adolescents from more affluent families generally have healthier eating habits. They are also more likely to regularly engage in physical activity, as are boys compared to girls (Inchley et al., 2020[10]). Existing research shows that risk behaviours such as drinking alcohol and smoking are more prevalent among boys than girls (Inchley et al., 2020[10]; Kennedy et al., 2020[38]). While this corresponds to the reported behaviours in some SSES sites, in others, girls report drinking alcohol and/or smoking cigarettes at a higher rate than boys (Table B3.46).

Figure 3.5. Students' health behaviours, by student characteristics

Mean of students' health behaviours index, by gender and socio-economic status



Note: Only differences that are statistically significant with a threshold of $p < 0.05$ are noted by site names. Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social, and cultural status (ESCS) in their own site. Higher scores on the health behaviours index indicate healthier behaviours. The target population includes only public schools in Delhi [India] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES 2023 Database Table B3.4

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Optimism, energy, and task performance skills most strongly predict health behaviours

Higher levels of all social and emotional skills measured in SSES are related to better health behaviours among students, to various extents. Accounting for gender, socio-economic and migrant background, optimism shows the strongest relationship with healthy behaviours among adolescents. This is followed by energy, achievement motivation, persistence, and responsibility. Empathy is the skill least strongly associated with health behaviours, and no significant relationship between this skill and health behaviours is found in Turin (Italy). Turin (Italy) is the only site where tolerance is also unrelated to students' health behaviours (Figure 3.6, Table B3.5).

The strong positive association between energy and health behaviours may be explained by one of the studied behaviours – physical exercise – which directly requires energy. In turn, healthy diet and sufficient sleep likely contribute to adolescents' energy levels. Previous studies have reported on the relationship between optimism and a healthy lifestyle, with higher optimism being linked to lower probability of smoking and a better diet (Non et al., 2020[39]; Ansari et al., 2019[40]; Trudel-Fitzgerald et al., 2019[41]). Most evidence on whether optimism primarily leads to a healthy lifestyle or whether a healthy lifestyle reinforces an optimistic outlook on life is not conclusive, though some longitudinal research has suggested that targeting optimism might be a fruitful strategy to improve health behaviours (Boehm et al., 2018[42]; Trudel-Fitzgerald et al., 2019[41]). Achievement motivation, persistence, responsibility, and self-control – all among the top skills associated with students' health behaviours – are task performance skills. These skills may help students resist engaging in unhealthy, risky behaviours which may offer instant gratification, but can be harmful in excess and over the long term. Task performance skills[6] have been found to predict a variety of heath behaviours, including diet and activity habits, smoking and drinking (Bogg and Roberts, 2004[43]).

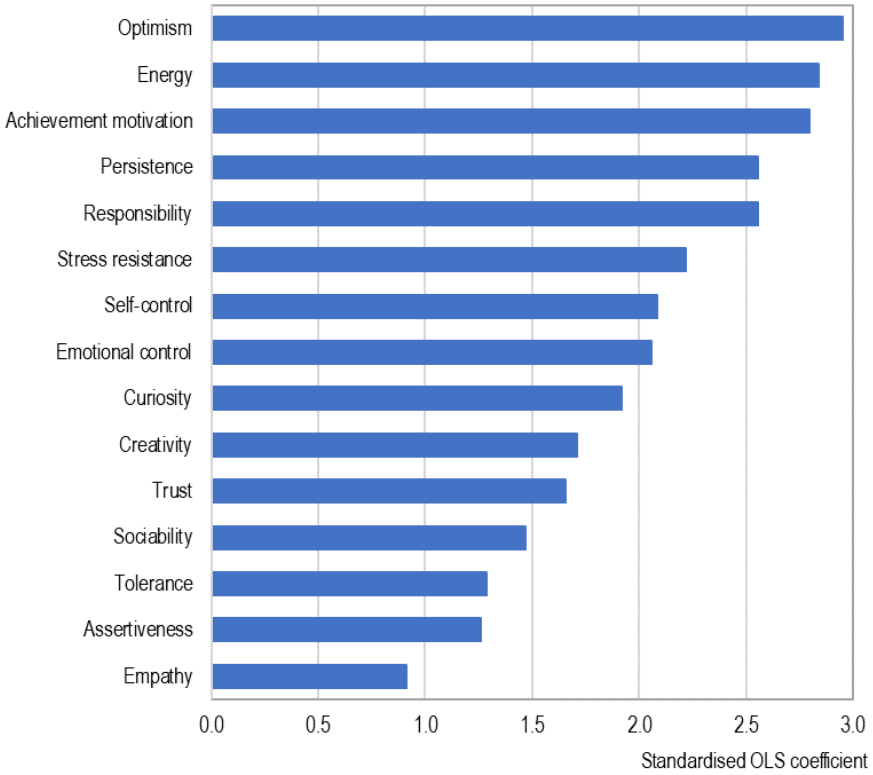
Health behaviours are more strongly associated with sociability for boys than for girls

Some gender differences exist, on average, in the relationships between skills and health behaviours (Figure 3.7). On average across sites, sociability, tolerance, persistence, assertiveness, creativity, responsibility, stress resistance, achievement motivation and empathy predict boys' health behaviours more strongly than for girls. Conversely, trust and emotional control are a stronger predictor of these behaviours among girls in comparison to boys. However, these gender differences are not seen in all sites, and sociability is the only skill where this gender difference is seen in most sites (Table B3.6).

In terms of differences by socio-economic background, on average, higher levels of all skills except energy, emotional control, assertiveness, and responsibility are more strongly associated with positive health behaviours among disadvantaged students than their advantaged peers. However, only a few sites drive these differences; in many other sites, no significant difference in the association between skills and health behaviours is found. Overall, this suggests that interventions that aim to build social and emotional skills can support positive health behaviours for students of all socio-economic backgrounds and that disadvantaged students may particularly benefit in some sites.

Figure 3.6. Relationships between social and emotional skills and students' health behaviours

Standardised regression coefficients of individual skills on students' health behaviours, average across sites

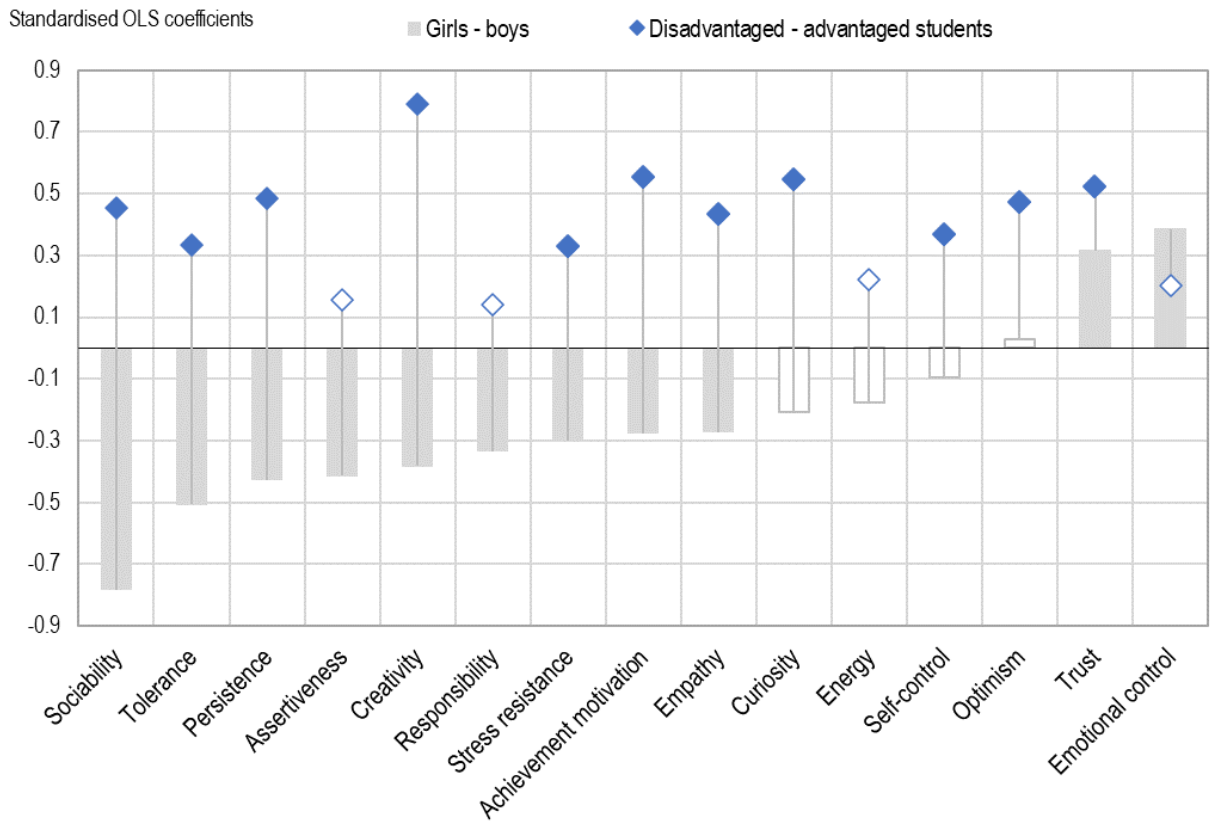


Note: All coefficients are statistically significant with a threshold $p < 0.05$. Models controls for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B3.5

StatLink https://stat.link/wjq71f

Figure 3.7. Differences in relationships between skills and health behaviours index by student characteristics

Differences in standardised regression coefficients of individual skills on students' health behaviours, average across sites, by gender and socio-economic status



Note: Significant differences are coloured, non-significant differences are outlined. Models control for gender, socio-economic and migrant status. Social and emotional skills are ranked by size of the effect on health behaviours index.
Source: OECD, SSES 2023 Database Tables B3.5, B3.6 and B3.7

StatLink https://stat.link/z86ixc

Box 3.1. Improving students' sleep in Japan through project-based learning

Jiyugaoka Gakuen High School in Tokyo was founded by Kishie Tezuka in 1930 to promote liberal education in Japan. Since its founding, the school has continued to develop with changing times. Today, the school develops course content that combines social and emotional learning (SEL), problem-based learning (PBL), and the Science, Technology, Engineering, the Arts and Mathematics (STEAM) approach, so that each student can identify and reach their goals.

In addition to traditional classes, students are offered a class once per week to work on an issue of interest to them. During one academic year, students identify a problem, study it, propose a hypothesis and a solution, design an experiment, conduct it, analyse the results, and make a proposal. Project groups are freely decided by the students, and themes and members can be changed during the class. The target group for this class is students aged 15-17. In 2023, approximately 400 students took the class.

To connect students' experiences in the classroom to the real world, opportunities are provided for students to collaborate online with companies, local people, and high school students from overseas in after-school activities.

The class curriculum has yet to be independently evaluated, however, the following observations have been noted by educators. More than one-quarter of the 113 student-identified problems related to sleep. This resulted in students examining different ways to address a variety of sleep problems. Each team designed an experiment to meet their own needs; for example, those who had problems falling asleep would research and implement relaxation methods for falling asleep, and those who spent too much time looking at their smartphones would put their smartphones in a box so that they could not use them. Students reported the results from their experiments, including whether sleeping for 8 hours made them feel better the next day, if they finished their homework faster when they could not use their phones, or if their intervention had no effect. Students developed skills to ask their own questions and solve their own problems. Students could freely research their interests with their peers, which led to stimulating conversation and creative ideas.

Source : (Imai, 2024[44])

Body image

Body image refers to students' subjective perceptions, thoughts, and feelings about their body. A healthy body image is an important component of both mental and physical health. A negative body image in adolescence is associated with development of eating disorders, avoidance of physical activity, and dysfunctional exercise (Reel, Voelker and Greenleaf, 2015[45]).

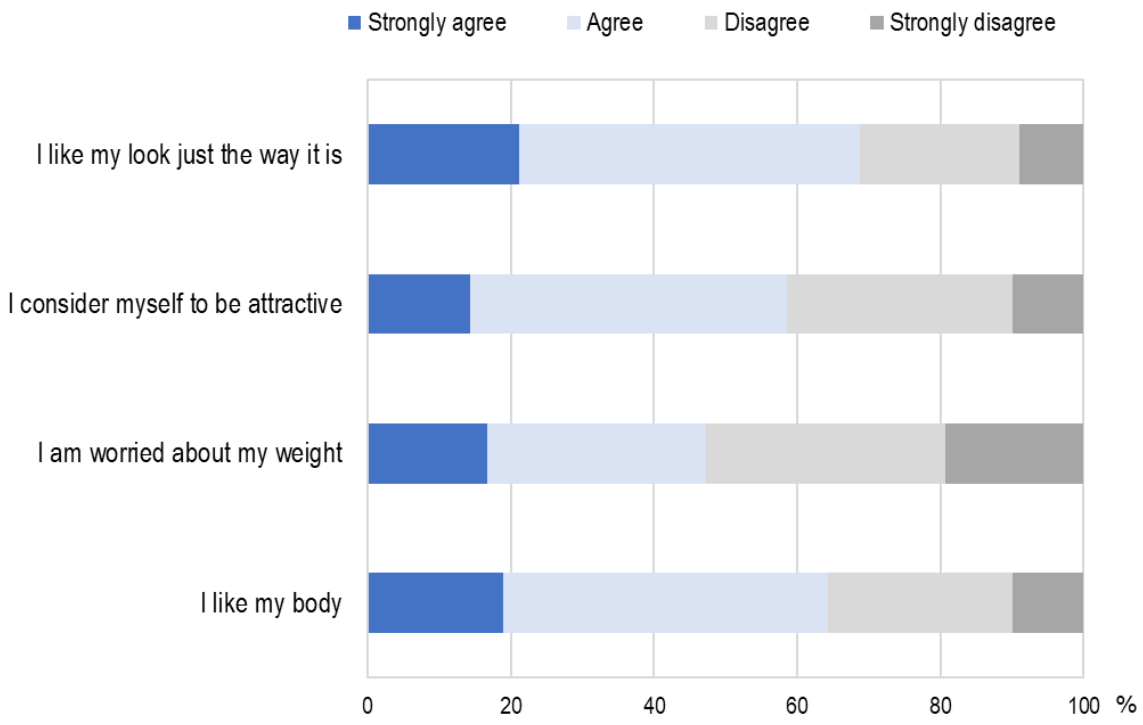
To measure students' body image, SSES asks students to what extent they agree or disagree with four statements: "I like my look just the way it is", "I consider myself to be attractive", "I am worried about my weight", and "I like my body". Student responses to these statements form the basis of the body image index.[7,8]

Most students are content with their bodies, but around one-third struggle with some aspect of their body image

As shown in Figure 3.8, on average, two thirds of 15-year-old students agree or strongly agree with the statement "I like my look just the way it is". Variations across sites exist, however. While nine out of ten students in Kudus (Indonesia) agree with this statement, only three out of ten do in Gunma (Japan). Similarly, on average, six in ten students agree with the statement "I consider myself to be attractive", but this varies between about one-quarter in Gunma (Japan) and nearly three-quarters in Delhi (India). On average across sites, approximately two-thirds of 15-year-old students also agree that they "like [their] body" (between one-quarter and more than eight in ten depending on the site). At the same time, on average, almost half of all 15-year-old students agree or strongly agree that they are "worried about [their] weight". Almost two-thirds of students worry about their weight in Chile, and even in Bulgaria, where the fewest students worry about their weight, one-third of students still agree with this statement (Table B3.8).

Figure 3.8. Students' body image

Percentage of students who agreed or disagreed with the following statements



Source: OECD, SSES 2023 Database Table B3.8

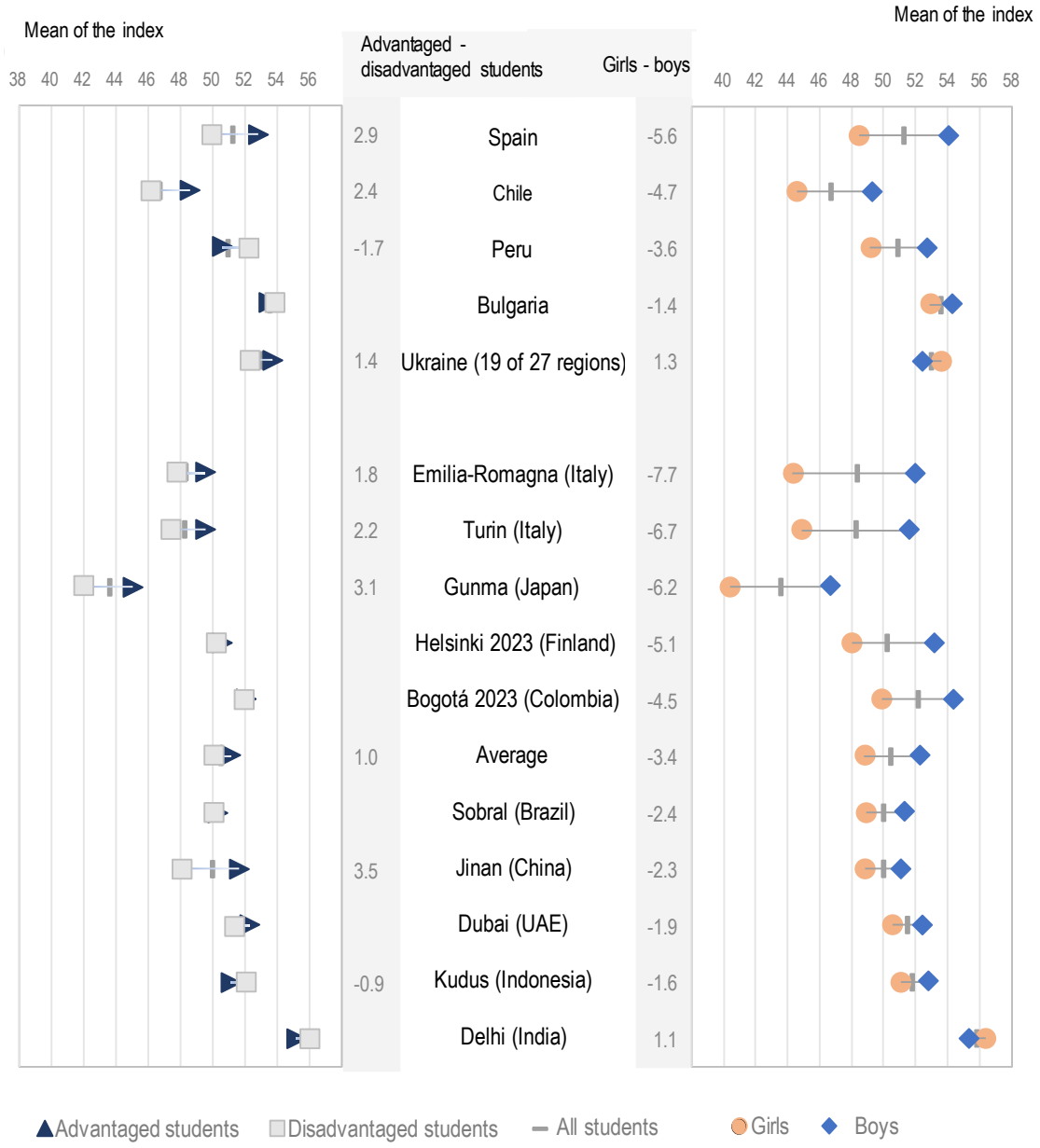
StatLink https://stat.link/ad4j0b

Girls have worse body image than boys in most sites

On average and in most sites, boys report more positive body image than girls. Other studies have found that girls are more likely to perceive themselves as "too fat" and are less satisfied with how their body looks (Inchley et al., 2020[10]; Abbott and Barber, 2010[46]). This gender difference is largest in Italian sites (Emilia-Romagna and Turin) and smallest in Bulgaria. In Delhi (India) and Ukraine, girls report slightly better body image than boys, on average. Advantaged students also report better body image than disadvantaged students, on average, but this is not consistent across all sites (Figure 3.9). On average, there are no differences in the body image of native students and students with migrant background.

Figure 3.9. Students' body image, by student characteristics

Mean of students' body image index, by gender and socio-economic status



Note: Only differences that are statistically significant with a threshold of $p < 0.05$ are noted by site names. Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social, and cultural status (ESCS) in their own site. Higher scores on the body image index indicate better body image. The target population includes only public schools in Delhi [India] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES 2023 Database Table B3.9

StatLink https://stat.link/18uhpy

Optimism, energy, and stress resistance relate most strongly to body image

On average, all social and emotional skills show a significant positive relationship with students' body image when controlling for gender, socio-economic and migrant background. The skill that stands out for its strongest association with body image is optimism. This is followed by stress resistance, energy, sociability, and responsibility. Most skills are significantly related to students' body image, not only on average across sites, but also in all sites. There are two exceptions – which are also the two most weakly related skills: empathy (no significant relationship in six sites and negatively related in Emilia-Romagna [Italy]), and tolerance (no significant relationship in Emilia-Romagna [Italy] and Sobral [Brazil]) (Figure 3.10, Table B3.11).

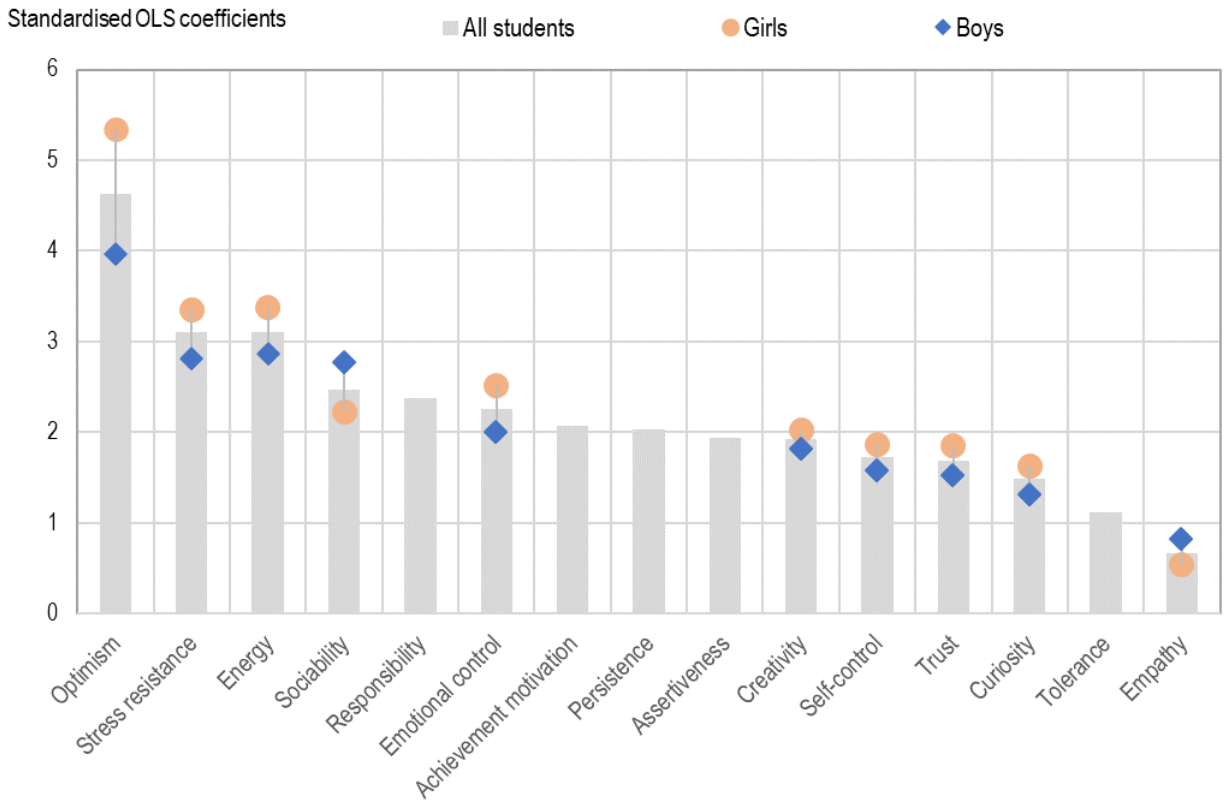
Emotional regulation skills enable students to deal with negative emotional experiences and stressors. This can include unrealistic beauty standards and expectations imposed by oneself and others. Three of the six skills most strongly related to body image (optimism, stress resistance and emotional control) are emotional regulation skills and two are engaging with others skills (sociability and energy). That these skills should be among the most relevant corresponds with research that finds lower levels of emotional regulation and engaging with others skills, as well as task performance skills[9], are associated with body dissatisfaction, regardless of gender or actual body weight (Allen and Robson, 2020[47]).

Girls' body image relates to optimism even stronger in comparison to boys

SSES results show that, while optimism predicts better body image for both girls and boys, on average and in most sites, this relationship is stronger for girls. On average, higher levels of emotional control, stress resistance, energy, self-control, trust, curiosity, and creativity are also more strongly related to positive body image for girls than boys. On the other hand, boys' body image is more strongly related to sociability and empathy than for girls' (Figure 3.10). Most of these differences are observed in a minority of sites, however. As for socio-economic differences, on average, the relationship between higher self-control and assertiveness with body image is larger for disadvantaged students than advantaged students, but these average differences are also driven by only a few sites (Table B3.13).

Figure 3.10. Relationships between social and emotional skills and students' body image

Standardised regression coefficients of students' body image on individual skills, average across sites



Note: All presented coefficients are statistically significant with a threshold $p < 0.05$. Gender coefficients are not presented when the difference between girls' and boys' effects is not significant. Model controls for gender, socio-economic and migrant status. Higher scores on the body image index indicate better body image.
Source: OECD, SSES 2023 Database Tables B3.11 and B3.12

StatLink https://stat.link/njv5z6

Life satisfaction

Beyond physical and psychological health, measuring how people subjectively feel about their lives provides us with valuable insights into well-being and overall quality of life as experienced by individuals and communities. Pursuit of high life satisfaction goes together with a commitment to overall happiness and fulfilment in society. Life satisfaction is a measure of subjective well-being. This means that, when a student is asked how satisfied they are with their life overall, their response is based on an evaluation of their quality of life according to their chosen criteria. This is a strength of this measure: it can provide insights into adolescents' well-being based on what is important to them. Students' evaluations may place different value on certain aspects of their lives, such as good health, their relationships or their family's financial situation. In addition to students' life experiences and values, cultural differences may also shape how adolescents evaluate different aspects of their lives and respond to such survey questions. The SSES results show not just differences in life satisfaction between sites, but also, as discussed below, differences between student groups and how social and emotional skills relate to this well-being outcome.

To measure life satisfaction, SSES asks students, “Overall, how satisfied are you with your life as a whole these days?”. Students respond on a scale from 0 (“not at all satisfied”) to 10 (“completely satisfied”).[10] This is the minimal single-question measure of subjective well-being recommended by the OECD (2013[2]) It captures respondent’s evaluative judgement of how their life is going with minimum response burden, and it was also used in SSES 2019 and the Programme for International Student Assessment (PISA) since 2015.

Most students say they are satisfied with their lives, however more than one-in-ten say they are not satisfied

SSES finds that – on average and in all sites - the average student is largely satisfied with their life. Some 68% of students reported that they are satisfied with their lives (students who reported between 7 and 10 on the life satisfaction scale). On average, 13% of students report not being satisfied (0-4 points) and just under one-third of 15-year-olds are very satisfied (9-10 points).

SSES shows there is variation in 15-year-old students’ life satisfaction across sites (see Figure 3.11). In Spain, 7% of students said they were not satisfied with their lives, while over 20% of students reported this in Delhi (India). In Manizales (Colombia), almost half of students said they were very satisfied with their lives, compared to about 15% in Turin (Italy) and Türkiye (Istanbul).

Life satisfaction in Helsinki (Finland) and Bogotá (Colombia) developed differently between 2019 and 2023

Life satisfaction was measured in both SSES 2019 and 2023. The average life satisfaction of 15-year-old students remained the same in Helsinki (Finland) but decreased from 7.6 to 7.2 in Bogotá (Colombia) in the intervening four years. The decrease in Bogotá (Colombia) may potentially reflect the aftermaths of the COVID-19 pandemic that took place in between the two SSES rounds, as children and adolescents faced increased rates of loneliness, anxiety, depression, and various mental health difficulties during the pandemic (Farrell et al., 2023[48]; Meherali et al., 2021[49]). Children and youth were particularly affected by pandemic-induced school closures. The fact that schools in Colombia remained closed for approximately three times longer than in Finland is one possible explanation for the difference in the students’ life satisfaction trend between the two sites (UNESCO, 2022[50]; OECD, 2022[51]). Of note, however, the decrease in life satisfaction observed in Bogotá (Colombia) is mostly accounted for by a drop in girls’ life satisfaction, while boys’ life satisfaction remained relatively stable. Boys and advantaged students report being more content with their lives than girls and disadvantaged students

Girls are less satisfied with their lives than boys (0.5-point difference) on average across sites. The gender gap is most pronounced in Chile and Peru, while in Ukraine, Delhi (India), and Kudus (Indonesia) there is no significant gender difference. The gap between girls’ and boys’ life satisfaction in Bogotá (Colombia) widened from 0.4 in 2019 to 1.0 in 2023 due to a drop in girls’ life satisfaction, and the gap remained stable (0.8) in Helsinki (Finland) (see Figure 3.11).

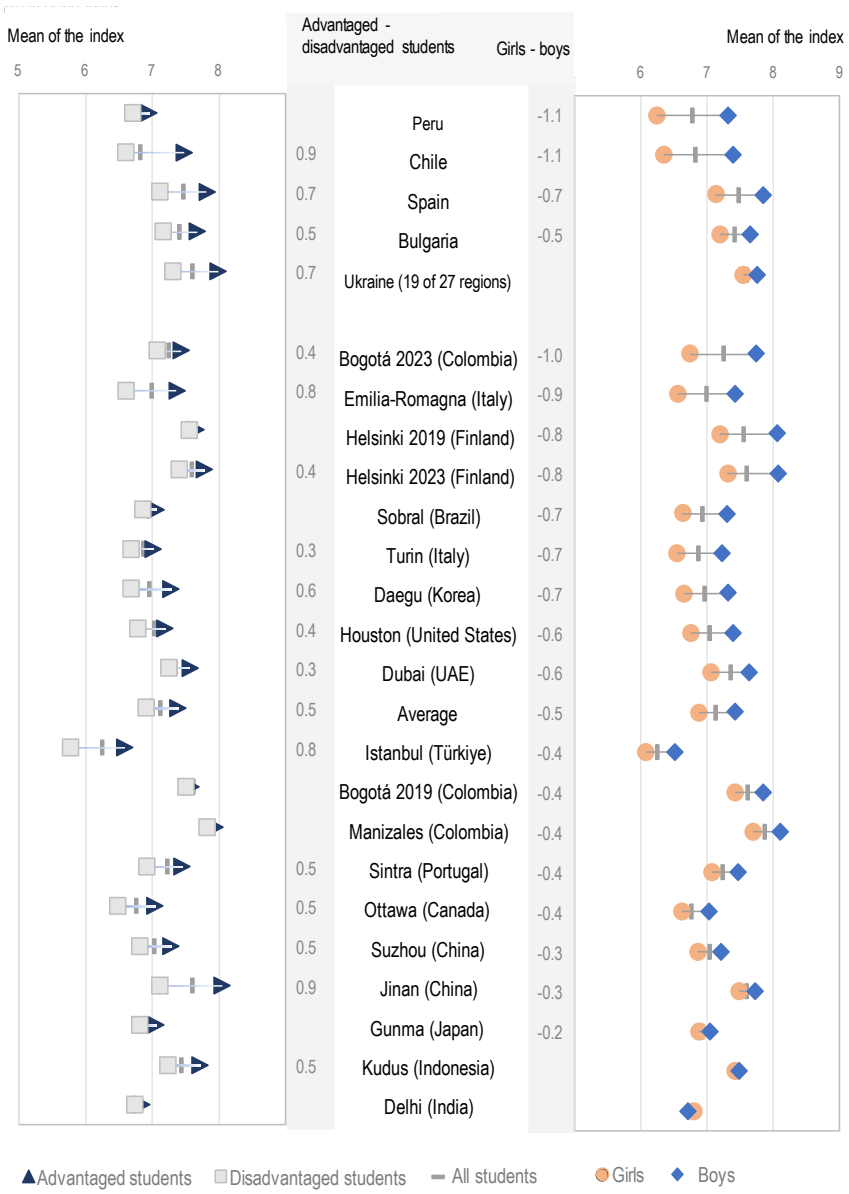
On average across sites, advantaged students are 0.5 points more satisfied with their lives than disadvantaged students Figure 3.11). The biggest gap of 0.9 points in favour of advantaged students emerges in Chile and Jinan (China). There is no significant difference in students’ life satisfaction by socio-economic status in Delhi (India), Gunma (Japan), Manizales (Colombia), Peru and Sobral (Brazil). In both Bogotá (Colombia) and Helsinki (Finland), an inequality in life satisfaction between advantaged and disadvantaged students emerged in 2023, whereas in 2019 there was no significant difference.

The SSES results are consistent with past PISA findings, which found that 15-year-old boys and advantaged students were more satisfied with their lives than girls and their disadvantaged peers (OECD, 2017[52]; OECD, 2019[53]).

The gap in life satisfaction of native students and students with migrant background suggests native students tend to be more satisfied, on average, but the size, direction, and significance of the difference varies across sites.

Figure 3.11. Students' life satisfaction, by student characteristics

Mean of students' life satisfaction index, by gender and socio-economic status



Note: Only differences that are statistically significant with a threshold of $p < 0.05$ are noted by site names. Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social and cultural status (ESCS) in their own site. Higher life satisfaction scores indicate greater satisfaction. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES Databases (2019, 2023) Table B3.15

StatLink https://stat.link/4zp7ex

Emotional regulation skills, energy, and trust are the strongest predictors of life satisfaction

All the social and emotional skills measured by the SSES are associated with students' life satisfaction, accounting for gender, socio-economic and migrant background. The most strongly related skill is optimism, with students who report being more optimistic also reporting to be more satisfied with their lives. Following optimism are energy, trust, stress resistance, and emotional control. Tolerance is the skill with the weakest positive link with life satisfaction, though this link is still found in most sites. The only sites where students who report being more tolerant are not more satisfied with their lives are Istanbul (Türkiye) and Manizales (Colombia)(Figure 3.12, Table B3.17).

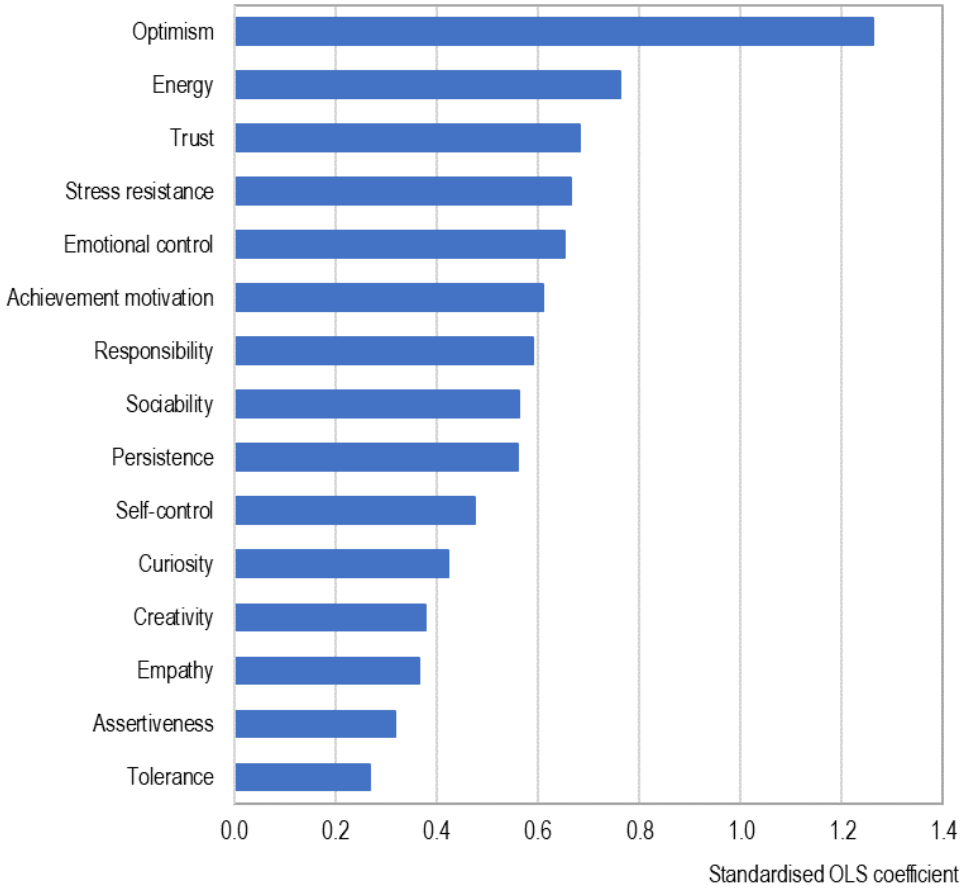
It is not surprising that students who tend to have more positive, optimistic outlook on life are also more satisfied with how their life is going. Likewise, students who have objective reasons to be satisfied with their lives might be more inclined towards optimistic views of the world. Optimistic people have been found to experience less distress in the face of adversity and possess better coping skills, which likely contributes to increased life satisfaction (Carver, Scheier and Segerstrom, 2010[54]). Optimism, stress resistance and emotional control are all emotional regulation skills, helping students navigate feelings of sadness, anxiety, and anger. Previous research has found a relationship between emotional regulation and engaging with others skills[11] and life satisfaction (Schimmack et al., 2004[55]), which persists over the long-term (Gale et al., 2013[56]). As students with higher energy levels approach daily life with more excitement and spontaneity, this may allow them to partake in a broader set of fulfilling experiences and activities. Trust then enables students to assume good intentions and refrain from suspicion towards others and the world, possibly contributing to greater contentment in life.

For girls, higher energy, optimism, and emotional control predict life satisfaction even more strongly than for boys

In terms of gender differences, while higher levels of all skills are associated with better life satisfaction among both boys and girls, the relationship between life satisfaction and eight of these skills is, on average, more pronounced for girls than for boys. This is especially true for energy, optimism and emotional control,, where this is found in most sites. A similar pattern appears in terms of differences by socio-economic background. On average, the relationships between most skills and life satisfaction are stronger for disadvantaged students than for advantaged students (Figure 3.13). This is due to differences in some sites, although not most. In other words, when it comes to life satisfaction, higher social and emotional skills appear to play a bigger role among girls and disadvantaged students in some sites.

Figure 3.12. Relationships between students' social and emotional skills and life satisfaction

Standardised regression coefficients of individual skills on students' life satisfaction, average across sites

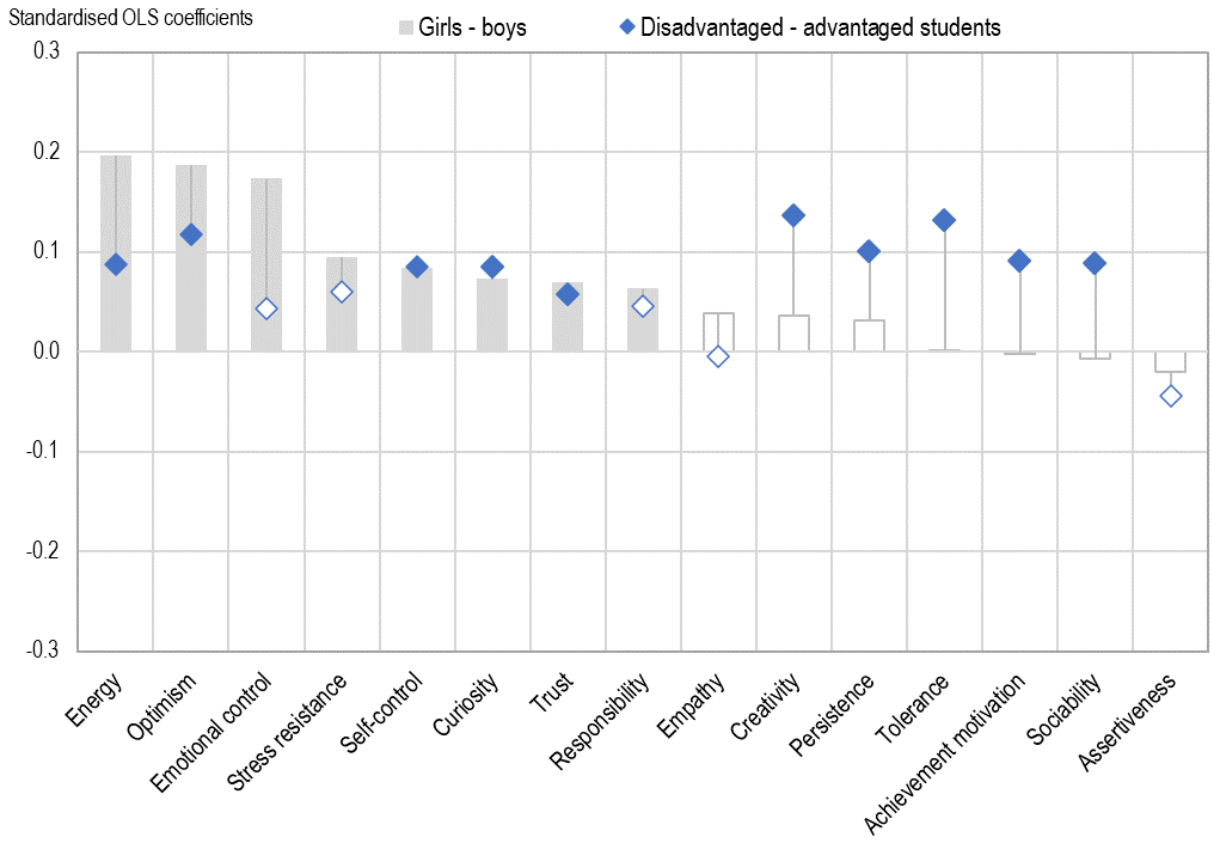


Note: All coefficients are statistically significant with a threshold $p < 0.05$. Models controls for gender, socio-economic and migrant status. Higher life satisfaction scores indicate greater satisfaction.
Source: OECD, SSES 2023 Database Table B3.17

StatLink https://stat.link/9qw4fl

Figure 3.13. Differences in relationships between skills and life satisfaction by student characteristics

Differences in standardised regression coefficients of individual skills on students' life satisfaction, average across sites, by gender and socio-economic status



Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES Databases (2019, 2023) Tables B3.18 and B3.19

StatLink https://stat.link/orxle0

Satisfaction with relationships

During the formative years of adolescence, individuals navigate complex social dynamics and seek support from relationships with peers, parents, and teachers. Positive relationships contribute to a sense of belonging, self-worth, and emotional resilience, fostering a supportive environment crucial for navigating challenges (Giordano, 2003[57]; Smetana and Rote, 2019[58]) (Burns and Gottschalk, 2019[5]). Adolescents' relationship satisfaction is therefore instrumental in promoting their overall well-being.

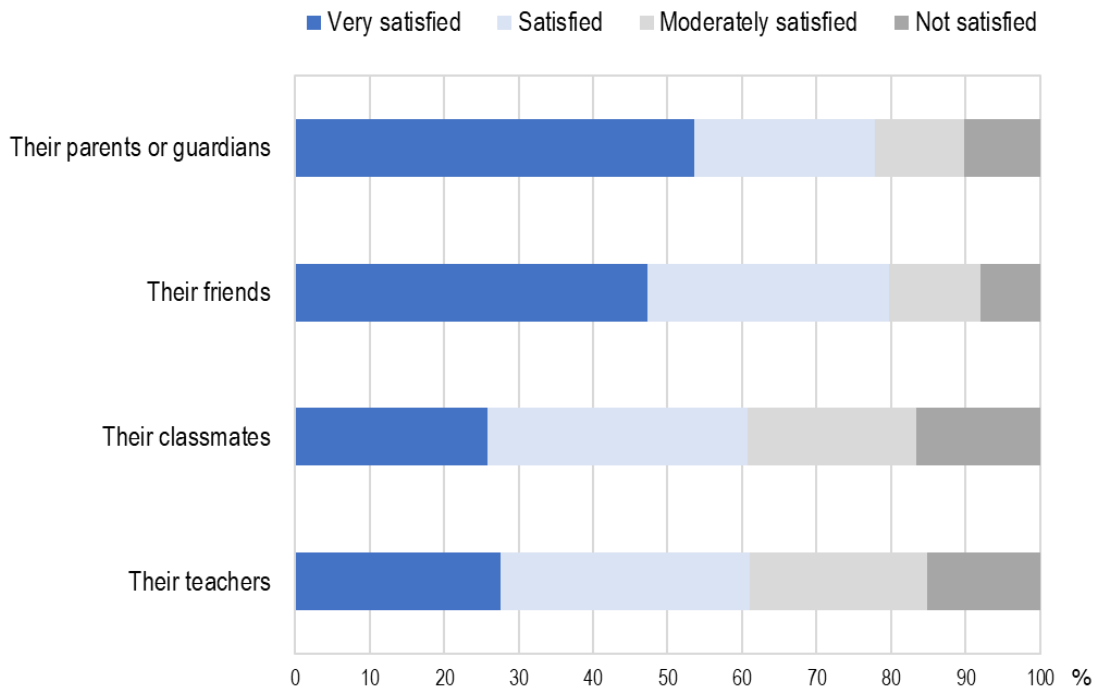
SSES asks students, "Overall, how satisfied are you with the following aspects of your life these days?" in relation to their relationships with four groups: their parents or guardians, their friends, their classmates, and their teachers. Students answer by rating their satisfaction with each of the four relationships on a scale from 0 to 10. A relationship satisfaction index is created based on the responses to these items.[12][13]

Around eight in ten students say they are satisfied with their relationships with parents and friends, while six in ten say the same about their relationships with teachers and classmates

15-year-old students' satisfaction with their different relationships varies. On average across sites, almost eight-in-ten say they are "satisfied" (7-8 points) or "very satisfied" (9-10 points) with their relationships with their parents and their friends. Six-in-ten say the same about their relationships with their classmates and teachers. On average across sites, one-in-ten students say they are "not satisfied" (0-4 points) with their relationship with parents or guardians, while just under one-in-ten (8%) say they are not satisfied with their friendships, and around 15% of 15-year-old students report being dissatisfied with their relationships with their classmates and teachers (Figure 3.14, Table B3.20).

Figure 3.14. Students' satisfaction with their relationships

Level of satisfaction with their relationships among 15-year-old students, average across sites



Source : OECD, SSES 2023 Database Table B3.20

StatLink https://stat.link/g1w0fs

Boys are more satisfied with their relationships than girls in most sites

On average, boys are more satisfied with their relationships than girls, and this holds true in most sites (Figure 3.15). This difference may arise from adolescent girls' greater psychological and emotional investment in peer relationships and friendships, which can cause them more interpersonal stress (Rudolph, 2002[59]). Exceptions are Delhi (India), Kudus (Indonesia) and Ukraine, where no significant difference emerges between the relationship satisfaction of girls and boys.

Advantaged students report higher satisfaction with their relationships, on average, though in many sites there is no significant difference (Bulgaria, Bogotá [Colombia], Delhi [India], Dubai [United Arab Emirates], Gunma [Japan], Peru and Sobral [Brazil]). Native students also report higher satisfaction, on average, with their relationships. However, this relationship is seen in less than half of sites. In seven sites, there is no

significant difference in relationship satisfaction between students with a migrant background and native students, while in Bogotá (Colombia) and Helsinki (Finland), students with migrant background report more satisfaction with their relationships than their native counterparts.

Figure 3.15. Students' satisfaction with relationships, by student characteristics

Mean of students' satisfaction with their relationships index, by gender and socio-economic status

Note: Only the differences that are statistically significant are added near the site names. Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social, and cultural status (ESCS) in their own site. Sites are ranked by descending order of the satisfaction with their relationships index. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES 2023 Database Table B3.21

StatLink https://stat.link/huy54d

Higher optimism, trust, and task performance skills are most positively related to students' greater satisfaction with their relationships

Higher levels of all social and emotional skills are positively related to students' satisfaction with their relationships, on average, and in all sites. Of all skills, students' optimism, trust, achievement motivation, persistence, and responsibility are most strongly related to better relationship satisfaction. Assertiveness is most weakly associated, on average (Figure 3.16).

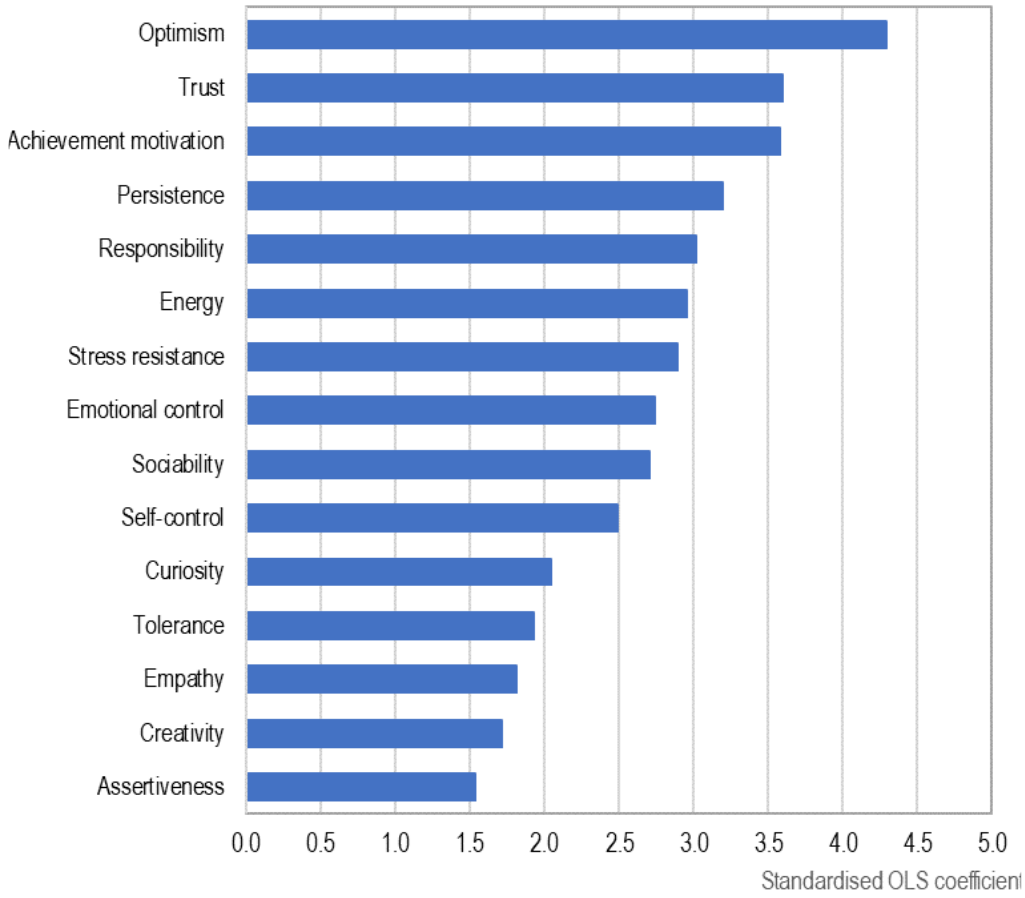
After optimism, trust is most strongly related to higher relationship satisfaction. Trust implies an ability to assume good intentions and forgive missteps and is crucial for healthy relationships, as it enables an individual to rely on another person for support and advice.

All skills are significantly related to both boys' and girls' relationship satisfaction, but some skills have a stronger relationship for one group or the other. Sociability, achievement motivation, tolerance, creativity, persistence, empathy, and assertiveness, on average, have a stronger association with relationship satisfaction among boys than girls. The opposite is true for energy, emotional control, and optimism: the same increase in these skills is associated with an even larger increase in relationship satisfaction among girls than boys (Figure 3.17). While these gender differences are seen on average across sites, it is important to note that they are not found in all sites.

In terms of socio-economic background, the association between most skills and relationship satisfaction among disadvantaged students is stronger, on average, than that of advantaged students. The relationships are found for both groups, however, and the overall differences are driven only by a few sites.

Figure 3.16. Relationships between students' social and emotional skills and satisfaction with their relationships

Standardised regression coefficients of individual skills on students' satisfaction with their relationships, average across sites

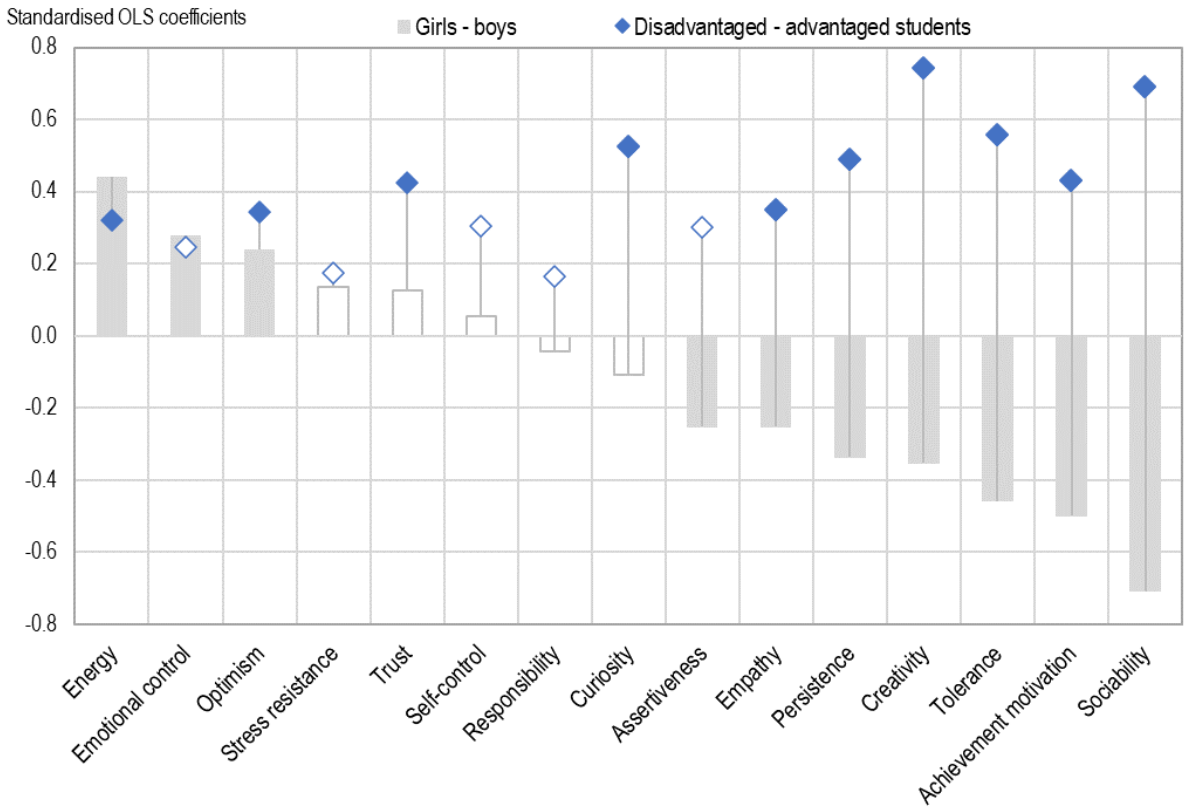


Note: All coefficients are statistically significant with a threshold $p < 0.05$. Models controls for gender, socio-economic and migrant status. Higher life satisfaction scores indicate greater satisfaction. Higher relationship satisfaction scores indicate greater satisfaction.
Source: OECD, SSES 2023 Database Table B3.22

StatLink https://stat.link/kywf1a

Figure 3.17. Differences in relationships between skills and satisfaction with relationships by student characteristics

Differences in standardised regression coefficients of individual skills on students' satisfaction with relationships, average across sites, by gender and socio-economic status



Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Tables B3.23 and B3.24

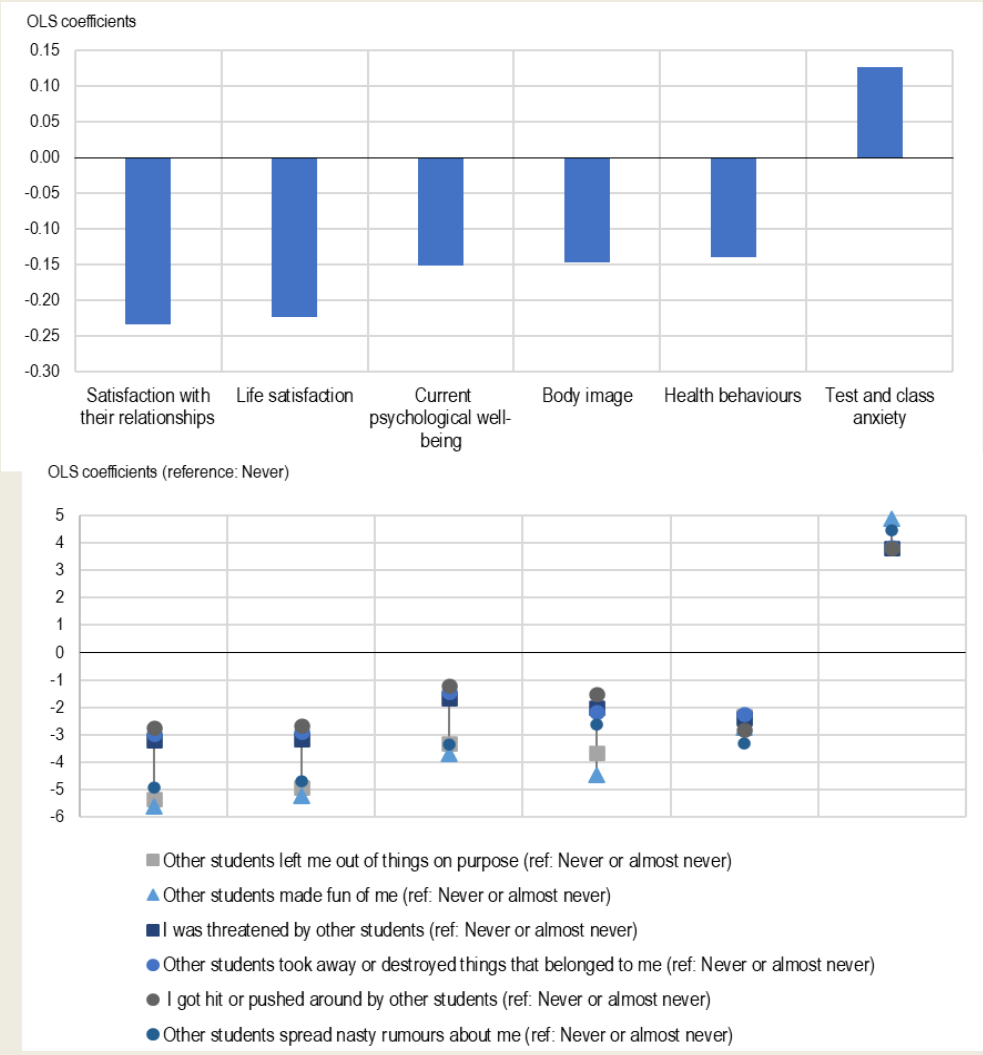
StatLink https://stat.link/j72xhb

Box 3.2. Bullying and student well-being

When students experience bullying, their health and well-being can suffer, and the effects may be long-lasting (Rigby, 2003[60]). Negative outcomes associated with typical bullying are also seen with cyberbullying (Gottschalk, 2022[61]). In SSES, more than half (55%) of 15-year-old students reported being bullied at least a few times in the past year, with around one-quarter experiencing this a few times a month or more. (Table B3.38). While SSES did not specifically ask about cyberbullying, students were instructed that bullying behaviours may occur even in digital space.

Figure 3.18. Relationship between students' well-being and bullying experience

Regression coefficients of well-being indices on bullying experience index



Note: All coefficients are statistically significant. All models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Tables B3.40, B3.41, B3.42 B3.43, B3.44, and B3.45

StatLink https://stat.link/yecxhm

The high prevalence of bullying is concerning: students who say they are bullied report worse health and well-being outcomes across all indicators. Students who report being bullied are less satisfied with their lives and their relationships, have poorer psychological well-being and body image, engage in fewer healthy behaviours, and experience more test and class anxiety (Figure 3.18). Students who have been bullied also have lower levels of all social and emotional skills, particularly optimism, emotional control, responsibility and trust (Tables B3.39, B3.40, B3.41, B3.42, B3.43, B3.44 and B3.45).

The most common type of bullying that students report to experience is being made fun of. Being made fun of on a weekly basis or more often is among the bullying behaviours most strongly related to lower levels of all well-being and health indicators (Figure 3.18). Bullying is an important phenomenon that shapes students' experience in school and beyond. SSES 2023 Volume II, which will be published later in 2024, will further focus on how students' environments contribute to their social and emotional skill development.

Current psychological well-being

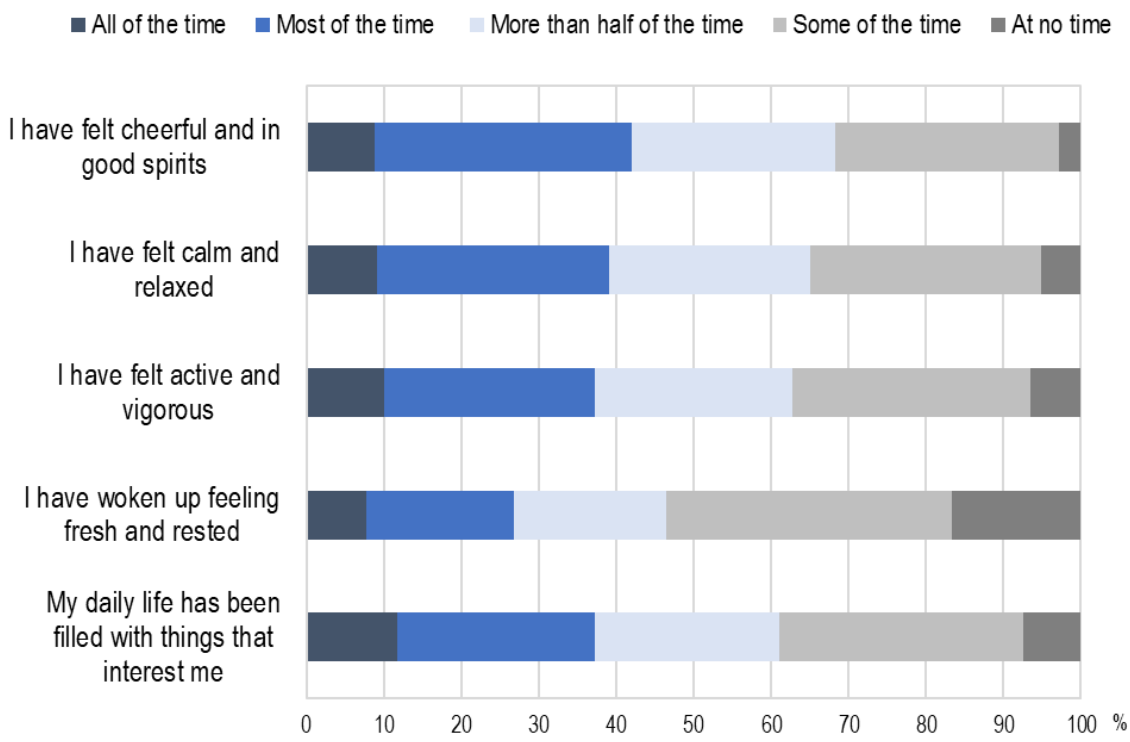
Immediate circumstances and experiences may cause students' well-being to fluctuate. SSES uses the World Health Organisation-Five Well-Being Index (WHO-5) (Topp et al., 2015[62]) to measure students' current psychological well-being. Students are asked how often during the past two weeks they felt: "cheerful and in good spirits", "calm and relaxed", "active and vigorous", "fresh and rested" after waking up, and that their "daily life has been filled with things that interest [them]". The answer options range from "at no time" to "all of the time". Based on this information, an index of the current psychological well-being was created.[14,15]

Almost two-thirds of students felt cheerful and in good spirits, calm and relaxed, active and vigorous, and that their daily life has been filled with things that interest them more than half of the time during the past two weeks

Figure 3.19 presents the average number of students in all sites who felt each way at a given frequency. On average across sites, more than 60% of students report that, in the most recent two weeks, they have felt cheerful and in good spirits, calm and relaxed, active and vigorous, and that their daily life has been filled with things that interest them more than half of the time. Less than half of students say they woke up feeling fresh and rested more than half of the time, which is consistent with the finding that over half of students do not get 8 hours of sleep most nights. Similarly, of the five statements, it was most common that students say they never wake up feeling fresh and rested (17%).

Figure 3.19. Students' current psychological well-being

Level of individual current psychological well-being among 15-year-old students, average across sites



Source: OECD, SSES 2023 Database Table B3.25

StatLink https://stat.link/ecj76a

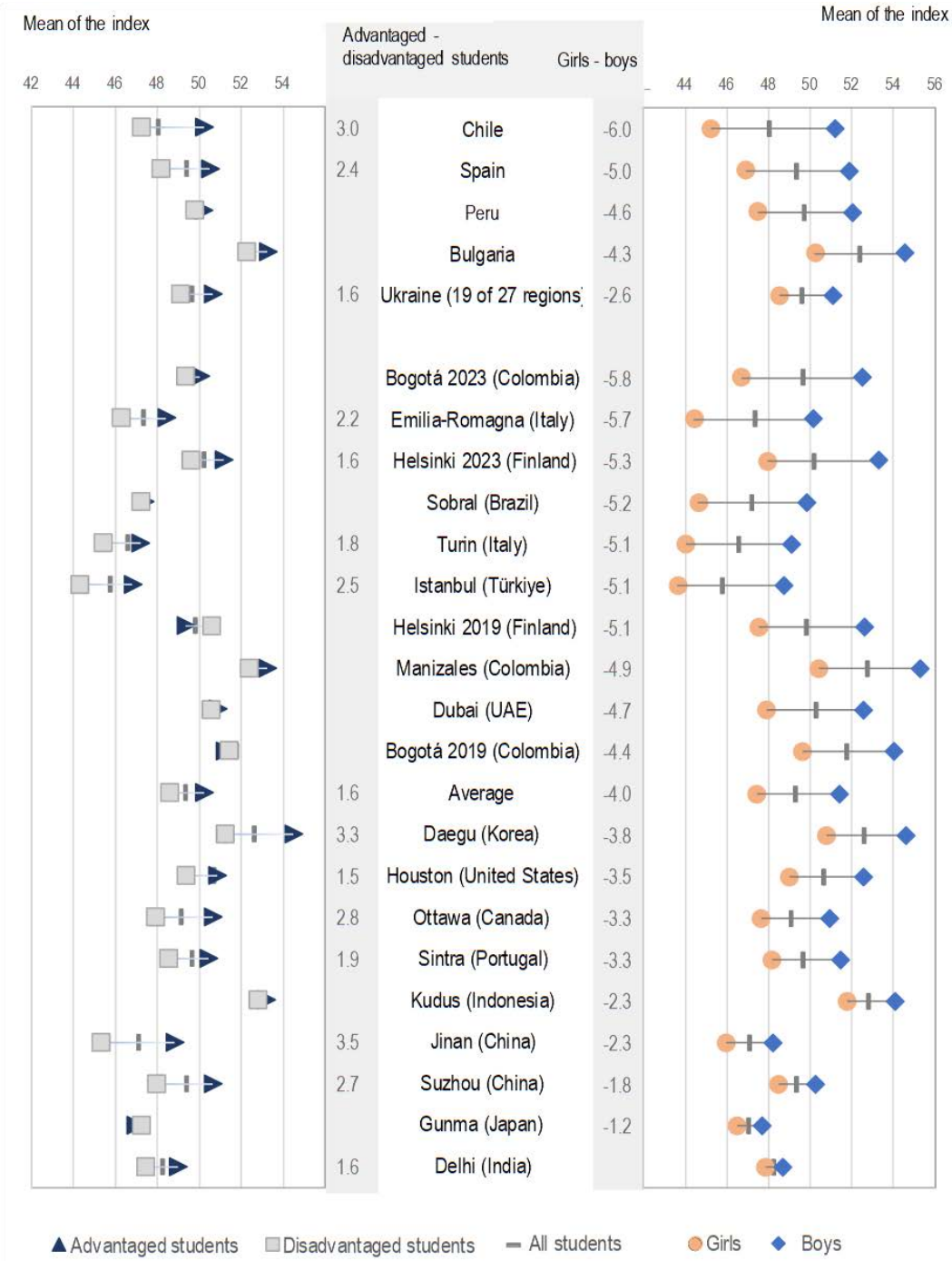
As with life satisfaction, there was a decrease in students' current psychological well-being in Bogotá (Colombia) between 2019 and 2023, but not in Helsinki (Finland) (Table B3.26).

Girls report lower current psychological well-being than boys in almost every site

Girls report significantly lower psychological well-being than boys, on average and in every site except Delhi (India), and the gender gap widened in Bogotá (Colombia) between 2019 and 2023. On average, advantaged students report higher levels of current psychological well-being than disadvantaged students, though this inequality is not found in all sites. While there was no significant difference in students' current psychological well-being by socio-economic status in Helsinki (Finland) in 2019, such a difference emerged in 2023 (Figure 3.20). There is no consistent pattern of differences in current psychological well-being based on students' migration background.

Figure 3.20. Students' current psychological well-being, by student characteristics

Mean of students' current psychological well-being index, by gender and socio-economic status



Note: Only differences that are statistically significant with a threshold of $p < 0.05$ are noted by site names. Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social, and cultural status (ESCS) in their own site. Higher current psychological well-being scores indicate greater levels of well-being. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES 2023 Database Table B3.26

StatLink https://stat.link/zmahfq

Emotional regulation skills and energy have the strongest association with students' current psychological well-being

Higher levels of all social and emotional skills are associated with greater psychological well-being among students, on average and in each site. The most strongly associated skills are optimism, energy, and stress resistance, followed by emotional control and trust. The skill with the weakest relationship with students' current psychological well-being is tolerance (Figure 3.21).

Overall, skills in the emotional regulation domain are among the most strongly related to students' current psychological well-being. This aligns with previous research, which has shown that both mental health and overall health are most strongly associated with emotional regulation skills, followed by task performance and collaboration skills[16] (Strickhouser, Zell and Krizan, 2017[6]).

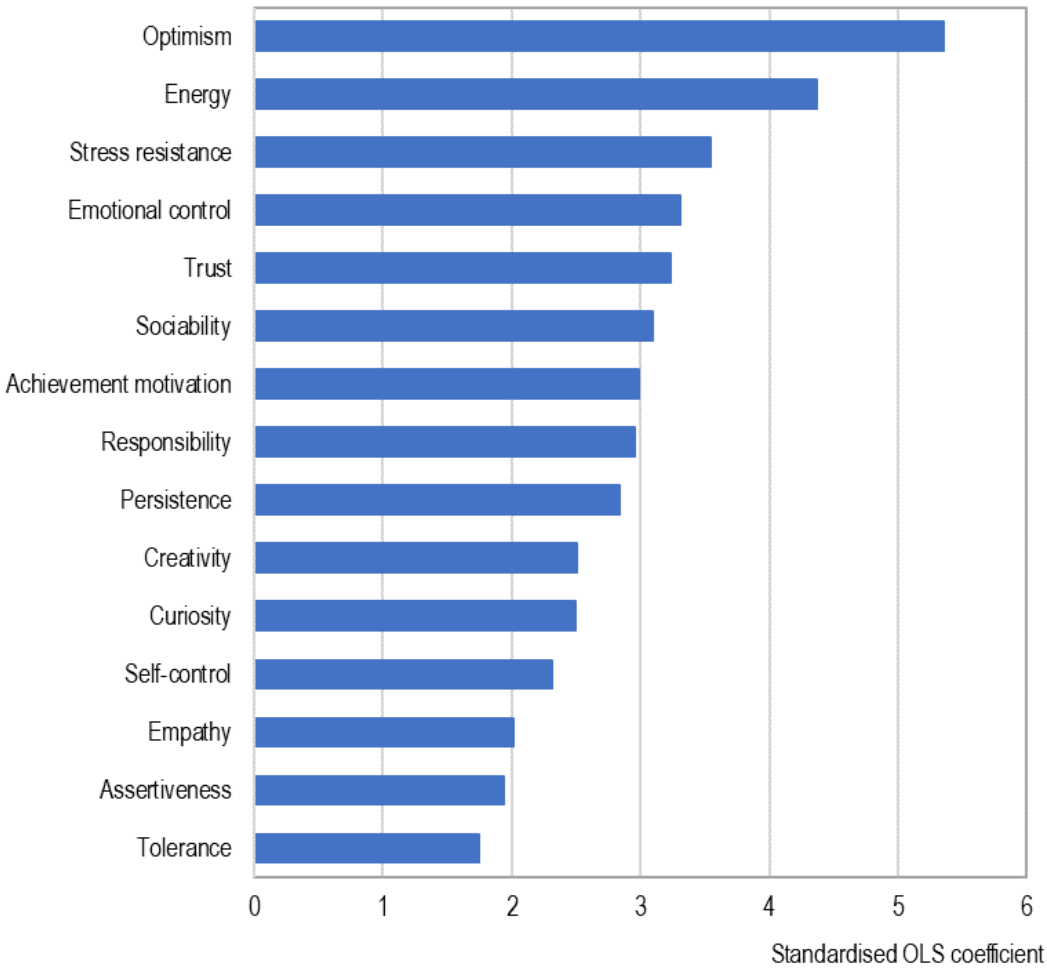
Some of the skills most strongly related with students' current psychological well-being are optimism, energy, and stress resistance, which are also among the top skills associated with better life satisfaction and body image. The SSES results suggest that the relative importance of an optimistic outlook, energetic disposition, and ability to navigate anxious feelings is shared across all three well-being outcomes, although the strength of the association between the skills and the three outcomes varies.

Students' trust and sociability, their ability to approach others and maintain social connections, also matter for their well-being. This may be explained by the support that adolescents harness from close relationships, and it is consistent with literature on peer support in adolescence as a protective factor against stress, anxiety, depression, and even suicide (Roach, 2018[63]; Burns and Gottschalk, 2019[5]).

Gender and socio-economic differences in the strength of association between skills and current psychological well-being on average across sites are presented in Figure 3.22. In terms of gender differences, higher energy, emotional control and optimism are more strongly associated with better current psychological well-being among girls than boys. Boys' current psychological well-being is more strongly related to eight of the measured skills. Simultaneously, the relationship of nine of the social and emotional skills and current psychological well-being is more pronounced for disadvantaged students than for their advantaged peers. However, these differences are only found in some of the sites.

Figure 3.21. Relationships between students' social and emotional skills and current psychological well-being

Standardised regression coefficients of individual skills on students' current psychological well-being, average across sites

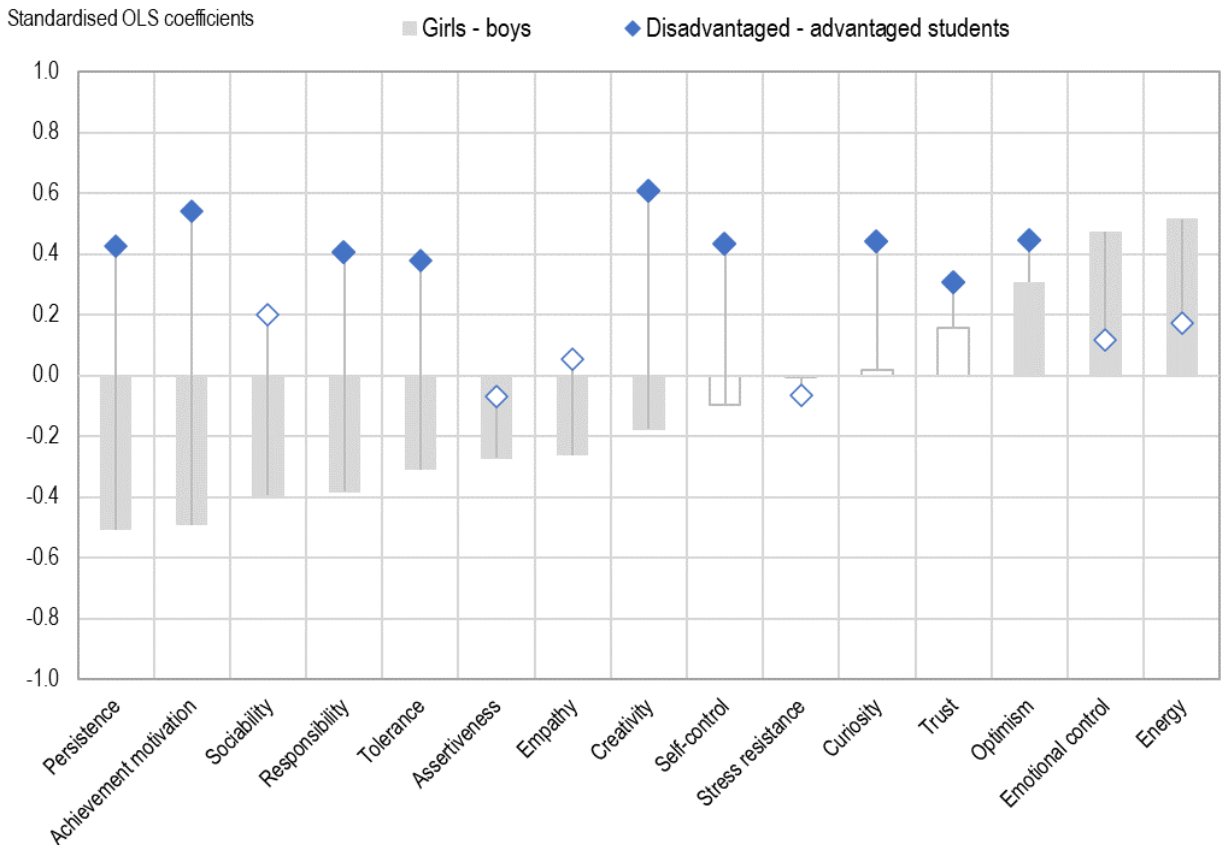


Note: All coefficients are statistically significant with a threshold $p < 0.05$. Models controls for gender, socio-economic and migrant status. Higher current psychological well-being scores indicate greater levels of well-being.
Source: OECD, SSES 2023 Database Table B3.28

StatLink https://stat.link/kbr30l

Figure 3.22. Differences in relationships between skills and current psychological well-being, by student characteristics

Differences in standardised regression coefficients of individual skills on students' current psychological well-being, average across sites, by gender and socio-economic status



Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Tables B3.29 and B3.30

StatLink https://stat.link/ri5vlf

Box 3.3. "En Sus Zapatos": An emotional education programme to tackle bullying from Spain

En Sus Zapatos: Un espacio de Empatía Activa ("In Their Shoes: A Space for Active Empathy") is an emotional education program to tackle bullying and to foster coexistence that relies on an artistic methodology called Teatro de Conciencia ("Theatre of Awareness"), which dramatises emotions. This training initiative is based on three pillars: identification and management of emotions, active empathy and positive conflict solving. The program is aimed not only at teachers and students (aged 4 to 17) but also at their families and no-teaching staff. "In Their Shoes" has reached more than 100,000 people in Spain (95,500 students, 4,500 teachers, families and no teaching staff) since its launch in the 2017-2018 school year, and it has been implemented in 8 Autonomous Communities: Madrid, Galicia, Andalusia, Catalonia, Castilla La Mancha, Valencia, Extremadura and the Balearic Islands. Since 2018, the Community of Madrid adopted it as an institutional program within the General Subdirectorate of Innovation Programmes and Teacher Training of the General Directorate of Teaching Quality and Bilingualism.

The methodology is based on a cascade-learning model: a number of teachers are trained and qualified to teach teachers and families of the participating schools about emotional literacy using the methodology of Theatre of Awareness, afterwards teachers trained will implement it to their classrooms. Finally, students also teach what they have learned to their peers in lower grades by performing a final play created by themselves and inviting the audience to participate in a forum. It is an internationally recognised programme for its important contribution in the field of socioemotional education by entities such as the Finnish organization HundrED and the Lego Foundation.

In the 2019-2020 school year, the programme was externally assessed by experts from the Carlos III University of Madrid and the University of Utrecht (Netherlands) with a close cooperation of the INEE (National Institute for Educational Assessment) of the Ministry of Education, Vocational Training, and Sports of the Government of Spain. The results of these assessments confirm that teachers have improved their emotional literacy and also as a result students have improved in inhibition and decreased their levels of concern and anxiety, which has allowed them to feel more confident in expressing their emotions and communicating with their peers and teachers. Students have also shown progress in their ability to feel, to practice active empathy, and to forgive sincerely. Finally, disruptive behaviors have decreased while the capacity to resolve conflicts positively and creatively has increased. This has led to a better classroom and school environment, resulting in fewer arguments among peers and less defiant and impulsive attitudes.

Source: (En Sus Zapatos, Un espacio de Empatia Activa[64])

Test and class anxiety

Test anxiety relates to anxieties or concerns about possible negative consequences or failure in evaluative situations (Zeidner, 2007[65]). It typically arises when students believe that the demands of the test situation exceed their abilities, and it is negatively associated with academic performance, including standardised tests and university entrance exams (von der Embse et al., 2018[66]).

SSES 2023 measures test and class anxiety using five items: "I often worry that it will be difficult for me to take a test", "Even if I am well prepared for a test I feel very anxious", "I get very tense when I study for a test", "I worry that I will get poor marks in school", and "I feel anxious about failing in school". Students are asked to indicate the extent to which they agree with these items. These items were used to create a test and class anxiety index.[17,18]

Half or more students express test or schoolwork related worries

On average across sites, approximately half of 15-year-old students worry about tests, while around two-thirds of students worry that they will get poor marks or report feeling anxious about failing in school (Figure 3.2315-year-old students in Ukraine report the lowest levels of test and class anxiety, while students in Gunma (Japan) report being most anxious in relation to tests (Table B3.32).

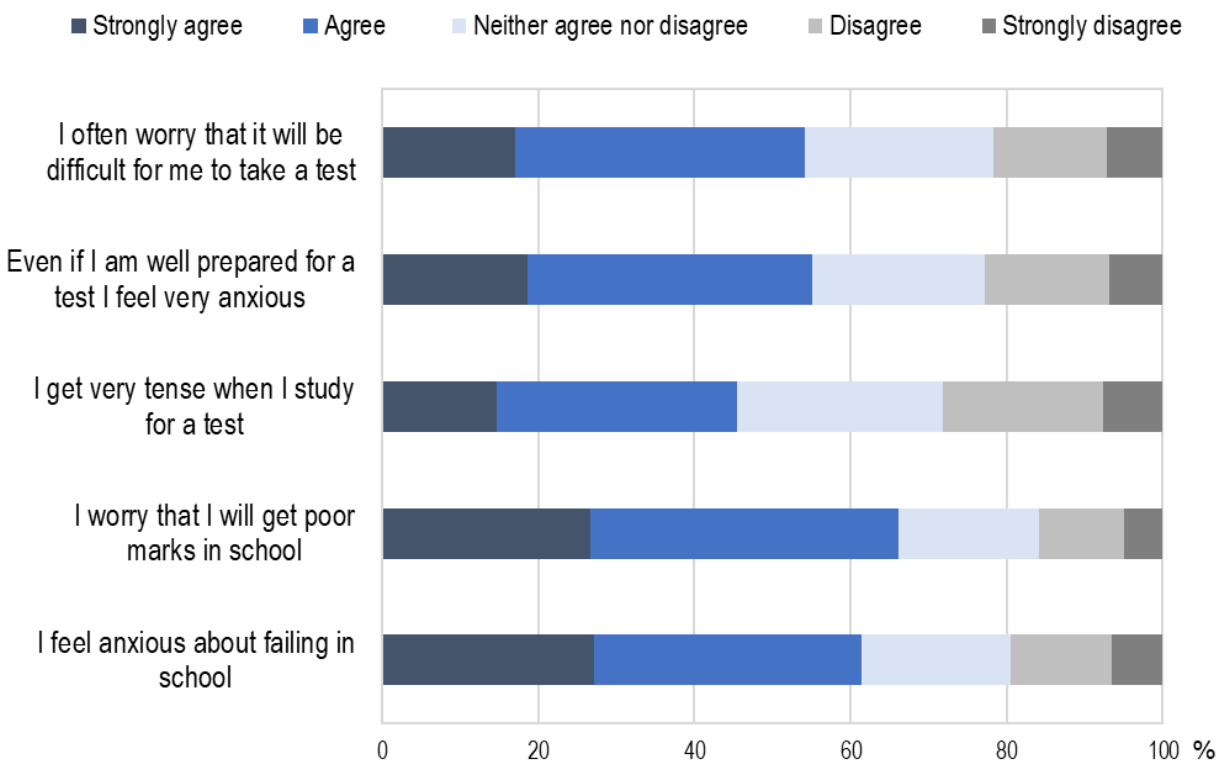
Girls report higher levels of test and class anxiety than boys

In all sites, girls score higher on the test and class anxiety index than boys, which means girls tend to feel more anxious about tests and schoolwork. The biggest gender gap was observed in Italian sites (Emilia-Romagna and Turin). On the contrary, Suzhou (China) has the smallest difference in girls' and boys' test and class anxiety. There is no difference, on average, between advantaged and disadvantaged students' experiences of test and class anxiety, although small differences in either direction were seen in a minority of individual sites (Figure 3.24).

The gender difference in test and class anxiety within SSES is consistent with previous studies, which find that adolescent girls have higher prevalence of test anxiety and report more schoolwork pressure than boys (Inchley et al., 2020[10]; McDonald, 2001[67]). Girls also tend to express greater fear of failure than boys (OECD, 2019[53]). In Bogotá (Colombia), the gender gap in test and class anxiety widened between 2019 and 2023 (Figure 3.24).

Figure 3.23. Students' test and class anxiety

Level of individual test and class anxiety among 15-year-old students, average across sites

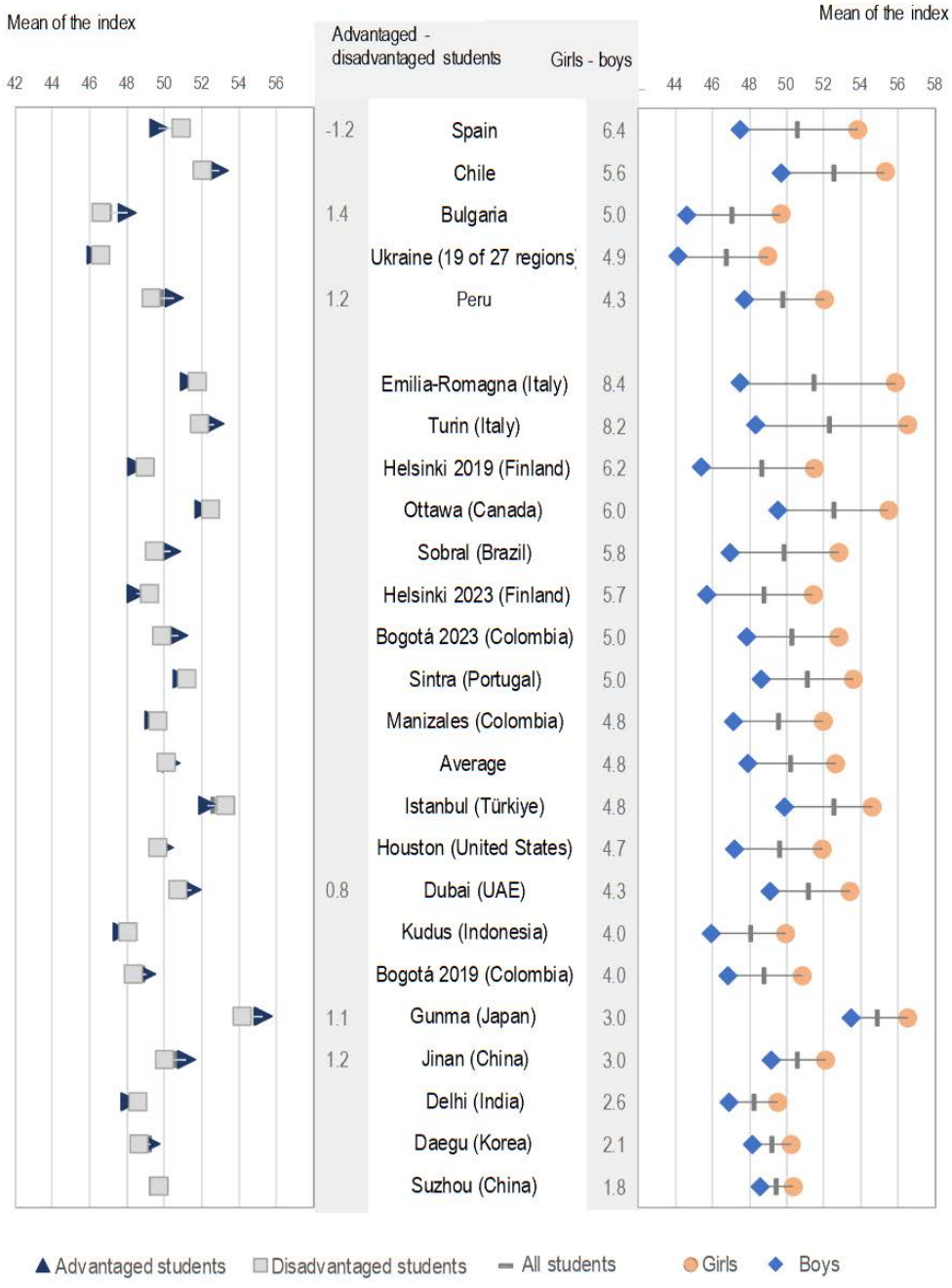


Source: OECD, SSES 2023 Database Table B3.31

StatLink https://stat.link/ytmcsa

Figure 3.24. Students' test and class anxiety, by student characteristics

Mean of students' test and class anxiety index, by gender and socio-economic status



Note: Only differences that are statistically significant with a threshold of $p < 0.05$ are noted by site names. Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social, and cultural status (ESCS) in their own site. Higher scores on the test and class anxiety index scores indicate higher levels of anxiety. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES 2023 Database Table B3.32

StatLink https://stat.link/sikcj9

Higher emotional regulation skills and energy predict lower test and class anxiety most strongly, while higher achievement motivation and empathy can be associated with greater levels

Higher levels of all but three social and emotional skills are associated with lower test and class anxiety, on average. By far the most strongly related skill is stress resistance, with students who report being more stress resistant also saying they are less anxious about tests and schoolwork. In the order of strength of their relationship with stress resistance, the other most important skills are optimism, emotional control and energy (Figure 3.25). Of note, a degree of variation exists between sites, as presented in Figure 3.27. For example, while most skills are negatively associated with test and class anxiety on average across sites, in Sobral (Brazil), only students who report greater stress resistance, optimism, emotional control, and energy also report lower anxiety. All other skills are either unrelated or associated with higher levels of anxiety in Sobral (Brazil).

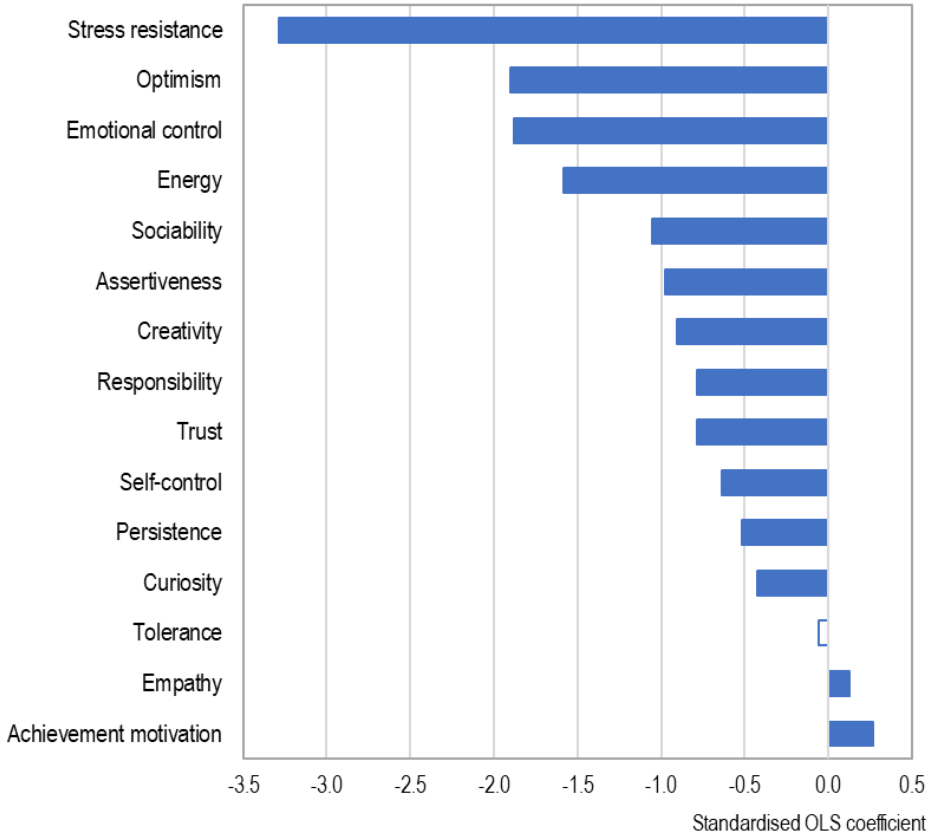
There is little relationship between tolerance and test and class anxiety, while achievement motivation and empathy are positively related to this outcome. This means that, on average across sites, students who report setting high standards for themselves and those who say they are empathetic also experience higher levels of test and class anxiety. While achievement motivation is an important skill to foster – it is the skill most positively associated with better academic outcomes (see Chapter 4) - students who work hard to reach their goals might need additional support to manage feelings of anxiousness in high-pressure test situations. Students might benefit from cultivating a 'growth mindset', where challenges and setbacks are seen as opportunities for learning. This mindset may support them to approach tests and classwork with a healthier perspective and less fear of failure (OECD, 2023[68]; Gouëdard, 2021[69])

Some social and emotional skills are, on average, more strongly related to test and class anxiety for girls and others for boys Figure 3.26). With increasing levels of stress resistance, trust, energy, optimism, and emotional control, girls report even lower average levels of test and class anxiety than boys. On the other hand, higher levels of persistence and responsibility are associated with even less test and class anxiety among boys than girls, on average. Empathy is not associated with boys' anxiety, but it has a positive relationship with this outcome among girls in some sites – meaning girls who are more empathetic tend to experience higher test and class anxiety. Similarly, while tolerance tends to be unrelated to girls' test and class anxiety, it is associated with lower levels of anxiety among boys.

In terms of socio-economic background, advantaged students on average seem to benefit even more so in terms of lower test and class anxiety from most social and emotional skills than disadvantaged students. These differences are found in several sites, but not in all.

Figure 3.25. Relationships between students' social and emotional skills and test and class anxiety

Standardised regression coefficients of individual skills on students' test and class anxiety, average across sites

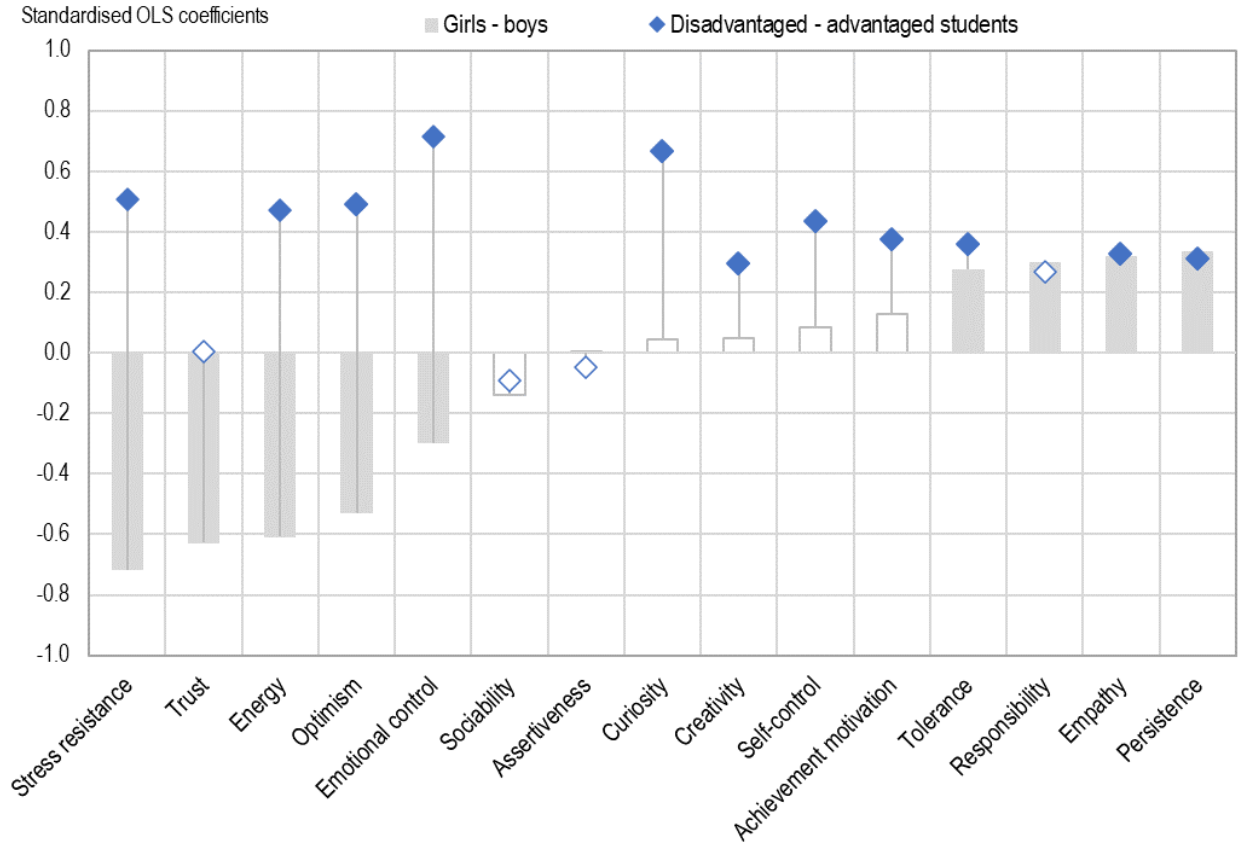


Note: Significant coefficients at a threshold of $p < 0.05$ are coloured, non-significant coefficients are outlined. All models control for gender, socio-economic and migrant status. Higher scores on the test and class anxiety index scores indicate higher levels of anxiety.
Source: OECD, SSES 2023 Database Table B3.33

StatLink https://stat.link/rzjqge

Figure 3.26. Differences in relationships between skills and test and class anxiety by student characteristics

Differences in standardised regression coefficients of individual skills on students' test and class anxiety, average across sites, by gender and socio-economic status

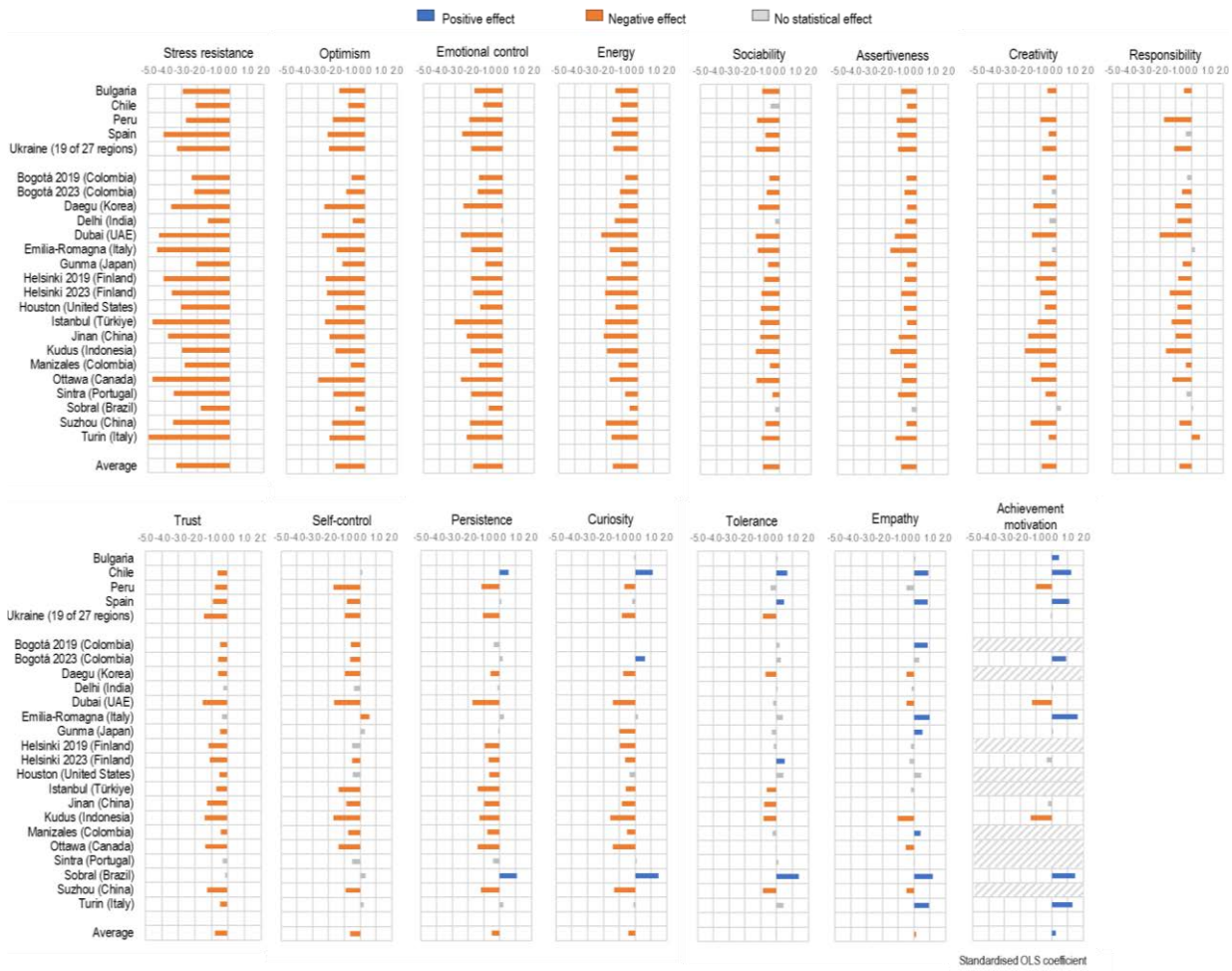


Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Tables B3.34 and B3.35

StatLink https://stat.link/4p3g95

Figure 3.27. Relationships between social and emotional skills and students' test and class anxiety by sites

Standardised regression coefficients of individual skills on students' test and class anxiety, by sites



Note: Significant coefficients are at a threshold of $p < 0.05$. All models control for gender, socio-economic and migrant status. Higher scores on the test and class anxiety index scores indicate higher levels of anxiety.
Source: OECD, SSES 2023 Database Table B3.33

StatLink https://stat.link/bgnrwa

Well-being and health resilience

Students from disadvantaged socio-economic backgrounds tend to have a lower prevalence of healthy behaviours and have poorer well-being outcomes. This is consistent with previous studies (Inchley et al., 2020[10]; Quon and McGrath, 2014[70]; Reiss, 2013[71]; Cosma et al., 2023[12]). Examining social and emotional skills of disadvantaged students who, nevertheless, have high levels of well-being and positive health behaviours can help identify skills that can support disadvantaged students' well-being and health resilience.

SSES 2023 defines students resilient in their health and well-being as those who are socio-economically disadvantaged in their own site, but who score in the top quarter of life satisfaction, current psychological well-being, or health behaviours in their site.

Box 3.4. Social, Emotional and Ethical (SEE) Learning in Ukraine: Resilience Amidst and Beyond War

SEE Learning, originally designed by Emory University, focuses on developing social and emotional skills needed to foster resilience, compassion, ethical awareness, attention, systems thinking, and the proactive and non-discriminatory mindset. Through the programme piloting, this has become the top priority of NGO EdCamp Ukraine in overcoming the consequences of the COVID-19 pandemic and Russia's war of aggression against Ukraine.

EdCamp Ukraine, supported by the Ministry of Education and Science of Ukraine, began implementing SEE Learning within a nationwide pilot in 26 schools across 23 regions in 2019, at a time military confrontation was limited to the temporarily occupied parts of the Donetsk and Luhansk regions, and the Autonomous Republic of Crimea. The expansion of SEE Learning in Ukraine has now gone beyond the initial pilot: the programme is now being implemented in nearly 200 Ukrainian schools, with around 5,000 educators having undergone comprehensive training. The programme can be integrated into the school ecosystem in various ways – as a separate lesson, within other disciplines, as club activities, or as class hours. The emotional component has also been integrated into the Standard of Elementary & Basic Education and the Professional Standards for Teachers/School Principals. In addition, the international SEE Learning programme is now present in 144 countries worldwide.

A key component of the SEE Learning programme includes the core concepts of the Community Resilience Model, created by the Trauma Resource Institute. After the start of the full-scale invasion of Ukraine, educators reported that they, as well as children, have practiced SEE Learning within their families: teaching resiliency skills to neighbours and friends.

The demand for SEE Learning in contemporary Ukraine is driven by three needs. First, it is a resilience-oriented approach that cultivates the belief that, often, individuals can use their own resources to handle challenges. Second, it encompasses body literacy: an integral part of recovery strategies and the ability to cope with stress. Finally, it includes self-compassion, which relates to the societal need to overcome survivor's guilt and take care of oneself. In this context, SEE Learning stands out because it spreads across the educational sector and is equipped with the essential teaching tools designed to foster skill development in both children and adults (educators, parents, and caretakers).

Currently, SEE Learning is being dynamically scaled across Ukraine, encompassing a range of associated educational initiatives. The national platform of opportunities for teacher professional development, EdWay, operated by EdCamp Ukraine, has 182 professional development programmes, which involve developing social and emotional skills and corresponding emotional-ethical competencies. These include Getting to know SEE Learning; Hibuki-school: Using the therapeutic toy in educational institutions as part of SEE Learning integration; and Resiliency Toloka. EdCamp Ukraine also oversees the government-public project POVIR (Podolannia Osvitnikh Vtrat i Rozryviv, "Overcoming Educational Losses and Gaps") launched to address the inevitable educational losses and gaps in students during crisis times, particularly through SEE Learning.

Source: (EdCamp Ukraine, n.d.[72])

Around one-in-ten disadvantaged students across sites are resilient in their well-being and health

On average, around one in ten disadvantaged students are resilient in their well-being and health across sites (Figure 3.28). The proportion ranges from 9% in Spain and Jinan (China) to 13% in Peru.

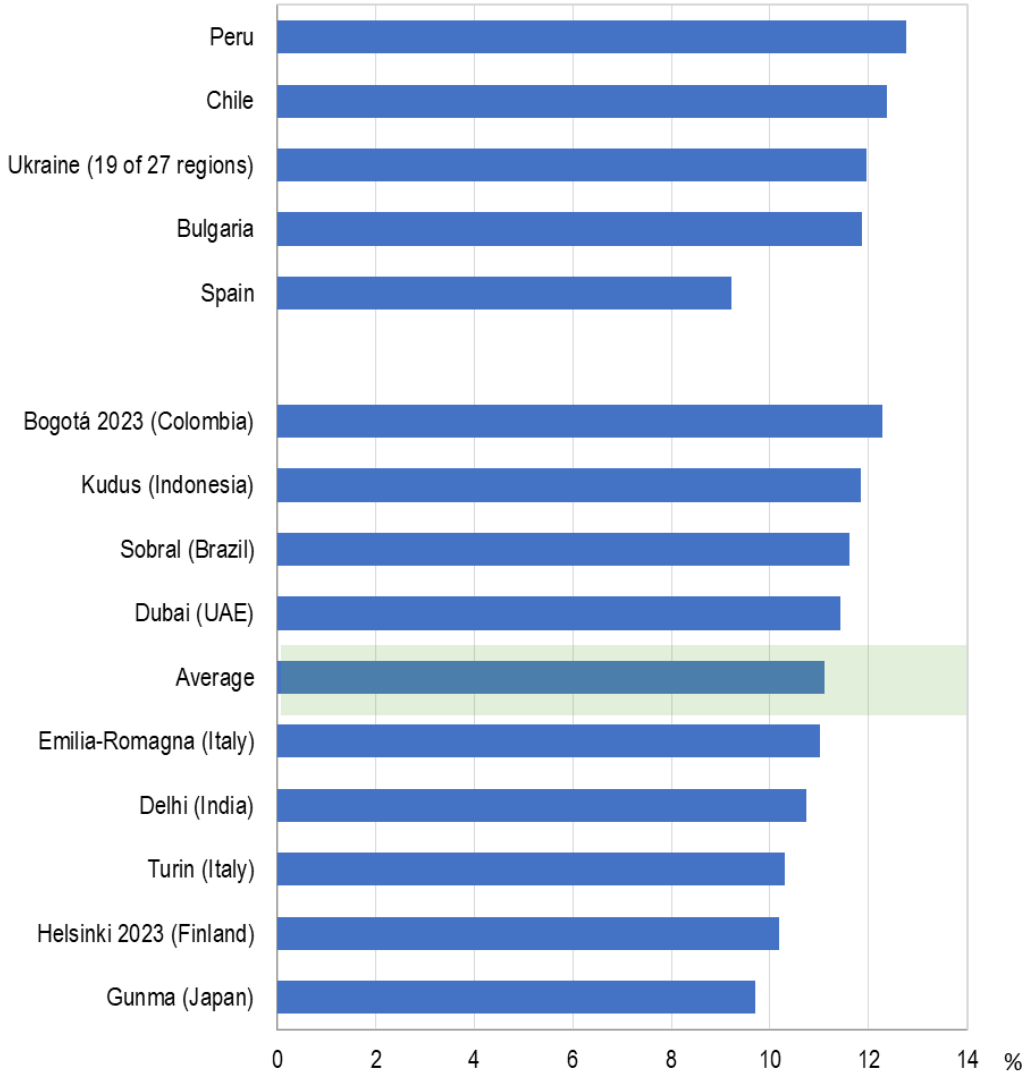
Students resilient in their well-being and health report higher levels of all but one skill

Results indicate that students resilient in their health and well-being report higher levels of most social and emotional skills, compared to students who are not resilient – the only exception being tolerance (Figure 3.29). The size of the difference varies across skills, however. The biggest difference is in optimism: resilient students report being much more optimistic than their non-resilient peers. Optimism is followed by higher levels of energy, trust, emotional control and stress resistance.

The fact that resilient students report higher levels of social and emotional skills suggests that social and emotional skills may function as a protective factor for disadvantaged students' well-being. Conversely, disadvantaged students with higher levels of well-being may find it easier to build their social and emotional skills. While these findings cannot ascertain the direction of the relationship, previous evidence shows that higher optimism is associated with people taking action to minimise health risks (Carver, Scheier and Segerstrom, 2010[54]). Developing social and emotional skills of disadvantaged students could therefore be a viable way to boost well-being and health outcomes and reduce socio-economic inequalities in health and well-being outcomes.

Figure 3.28. Students' health and well-being resilience

Percentage of socio-economically disadvantaged students resilient in their health and well-being, by sites



Note: Students resilient in their health and well-being are those socio-economically disadvantaged in their own site, but who score in the top quarter of life satisfaction, current psychological well-being, or health behaviours in their site.
Source: OECD, SSES 2023 Database Table B3.36

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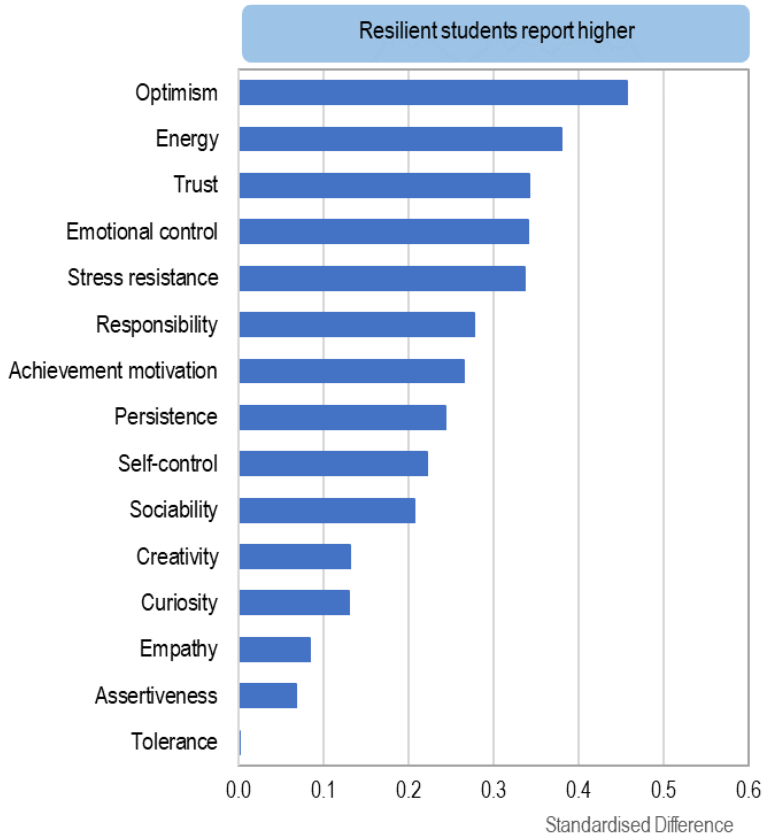
Figure 3.29. Social and emotional skills of students resilient in their health and well-being

Difference between skills of resilient students and other disadvantaged students, by sites



Note: Significant differences are coloured, non-significant differences are outlined. Students resilient in their health and well-being as those students who are socio-economically disadvantaged in their own site, but who score in the top quarter of life satisfaction, current psychological well-being, or health behaviours in their site. Social and emotional skills are ranked by descending order of the difference between skills of resilient students and other disadvantaged students.
Source: OECD, SSES 2023 Database Table B3.37

StatLink https://stat.link/8qodlu

Annex 3.A. Chapter 3 Tables

Online tables for each chapter can be accessed via the StatLink.

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Notes

[1] Some studies referenced refer to the Big Five domains of personality, on which SSES' social and emotional skills framework is based.

[2] Disadvantaged/advantaged students refer to those students who score in the bottom/top quarter of the index of economic, social, and cultural status (ESCS) in their own site.

[3] Native students are students who were born in the country of assessment and students who have at least one parent born in the country of assessment. Students with migrant background are students who were born abroad and/or have parents who were born abroad.

[4] The frequency of these behaviours and the relationships between social and emotional skills and these behaviours are assessed in 15 sites (data on these behaviours were not collected in SSES 2019).

[5] Readers interested in additional technical details about the calculation of the health behaviours index are directed towards the short technical note at the end of this volume (Annex A) and the SSES 2023 Technical Report (forthcoming).

[6] The referenced study refers to conscientiousness, the Big 5 domain on which the task performance domain is based.

[7] The agreement with these statements and the relationships between social and emotional skills and agreement with these statements are assessed in 15 sites (data on the agreement with these statements were not collected in SSES 2019).
[8] Readers interested in additional technical details about the calculation of the body image index are directed towards the short technical note at the end of this volume (Annex A) and the SSES 2023 Technical Report (forthcoming).

[9] This reference refers to the Big Five domains of Neuroticism, Extroversion and Conscientiousness, on which the domains of Emotional regulation, Engaging with Others and Task performance skills within the social and emotional skills assessment framework are based.

[10] The evaluation of life satisfaction and the relationships between social and emotional skills and life satisfaction are assessed in 22 sites (data were collected in SSES 2019 and 2023).

[11] This reference refers to the Big Five domains of 'emotional stability' and 'extroversion', on which the domains of 'emotional regulation' and 'engaging with others' within the social and emotional skills assessment framework are based.

[12] Students' satisfaction with these relationships and the associations between social and emotional skills and their satisfaction with these relationships are assessed in 15 sites (data on satisfaction with these relationships were not collected in SSES 2019).

[13] Readers interested in additional technical details about the calculation of the relationship satisfaction index are directed towards the short technical note at the end of this volume (Annex A) and the SSES 2023 Technical Report (forthcoming).

[14] The frequency of these feelings and the relationships between social and emotional skills and frequency of these feelings are assessed in 22 sites (data were collected in SSES 2019 and 2023).

[15] The item 'My daily life has been filled with things that interest me' was not included in the current psychological well-being index. Readers interested in additional technical details about the calculation of the WHO-5 index are directed towards the short technical note at the end of this volume (Annex A) and the SSES 2023 Technical Report (forthcoming).

[16] This reference refers to the Big Five domains of Emotional stability, Conscientiousness and Agreeableness on which the domains of Emotional regulation, Task performance and Collaboration skills within the social and emotional skills assessment framework are based.

[17] The agreement with these statements and the relationships between social and emotional skills and agreement with these statements are assessed in 22 sites (data were collected in SSES 2019 and 2023).

[18] Readers interested in additional technical details about the calculation of the test and class anxiety index are directed towards the short technical note at the end of this volume (Annex A) and the SSES 2023 Technical Report (forthcoming).

4 Educational success and career prospects

This chapter examines the relationships between students' social and emotional skills and their educational outcomes, as well as their career preparedness and job aspirations. Educational outcomes include students' academic performance in reading, mathematics, and arts; levels of absenteeism and tardiness; and students' expectations to complete tertiary education. Career preparedness and job aspirations cover students' participation in career development activities and their future career plans, including whether they expect to have a managerial or professional career or start their own business.

In Brief

Policy Insights

- **Build students' task performance skills, particularly achievement motivation and persistence, and curiosity.** Students with higher levels of these skills achieve higher grades in reading, maths and arts; are less likely to be late or skip school; and are more likely to expect to complete tertiary education. Developing these skills may help reduce disparities between students as these skills are associated with positive academic outcomes in a similar way among different student groups. These skills also predict greater social mobility aspiration among students whose parents have less prestigious or lower-paid jobs.
- **Consider how methods of academic assessment also measure students' social and emotional skills.** For example, assessment methods that take into account students' contributions in class may indirectly measure their assertiveness, while some assessments may require students to use creative thinking skills more than others.
- **Make career development activities more accessible to disadvantaged students and those with lower levels of social and emotional skills.** Disadvantaged students and students with lower levels of social and emotional skills more broadly are more likely to be uncertain about their future career plans and take part in fewer career development activities. This suggests that, despite these students having the most need for support with career planning, they are less likely to access it.
- **Ensure career development activities allow students to explore a variety of education and career options, including vocational education and training (VET).** In many sites, almost all students say they expect to complete tertiary education, suggesting a lack of awareness or interest in alternative education and career pathways.
- **Provide students with reliable information about their own skills and which skills are needed for different careers.** This information could help students form realistic career plans which are more likely to succeed. While students are aspiring to careers based on their fit with their skills, students' expectations may not always know what skills jobs require. This may be exacerbated by the fact that the most common career development activities that students undertake involve conducting research online, which may provide inaccurate information, or information poorly tailored to their needs.
- **Prioritise building students' knowledge and skills.** Efforts to boost students' aspirations as a tool to improve outcomes may be ineffective as most students display high levels of ambition for their future education and career. Education systems should focus resources on building students' knowledge and skills, including achievement motivation, persistence, and curiosity, to help them to fulfil their aspirations.

Social and emotional skills predict educational success

Education enables personal development and societal progress: enhancing employability, fostering economic growth, and contributing to social cohesion. Yet, access to high-quality education is not universal and there are large disparities in academic performance and career outcomes based on factors outside of individuals' control, including where they live, their sex and family background. Education systems invest

considerable resources in trying to reduce these disparities. While academic knowledge and skills are essential, social and emotional skills are equally important for students to flourish. The findings outlined in this chapter demonstrate that students' social and emotional skills are linked to their educational outcomes and future aspirations, even after accounting for differences by gender and socio-economic and migrant background. The development of students' social and emotional skills therefore does not come at the expense of academic learning. Instead, addressing disparities in these skills can be part of an effective strategy to improve students' educational outcomes.

Disparities in educational and labour market outcomes between student groups may, in part, be explained by inequitable distribution of these skills. Disadvantaged students consistently report lower levels of curiosity and task performance skills across sites, as discussed in Chapter 2 of this report, and curiosity is one of the skills with the strongest relationship with economic, cultural and social status. Disadvantaged students are more likely to be in school environments that are less safe and less academically rigorous, where teachers' resources are redirected from high quality teaching to managing students' behaviour (OECD, 2019[1]). These environments are less stimulating for curious students, which may lead to dulled interest in learning and disengagement. While the gaps in task performance skills, such as achievement motivation and persistence, between advantaged and disadvantaged students are smaller than for curiosity and several other skills, disadvantaged students report lower levels of these skills in most sites.

Adolescence is an important period for career exploration. Students are considering which occupations would be a good fit with their developing interests, values, and skills. At this time of exploration, students benefit from support from adults, including their parents, teachers, and career advisors. This support is especially critical in today's labour market, which is marked by increasing uncertainty and the need for adaptability. The rapid evolution of technology and emerging industries means that, when students enter the labour market, careers they aspired to may no longer be in-demand. Additionally, new careers that only recently emerged will be available to them. In such a dynamic environment, support to navigate these new opportunities and build the flexibility and resilience to thrive in a continuously changing professional landscape becomes invaluable.

Students' academic success: grades and levels of absence and tardiness

In this section, the relationships between students' social and emotional skills and academic outcomes (students' grades in reading, mathematics, and arts[1] and their levels of absence and tardiness[2]) are explored, beginning with those skills most predictive of these outcomes. Box 4.1 provides an overview of levels of absenteeism and tardiness in participating sites.

Academic attainment and levels of absence and tardiness are closely linked: students who frequently arrive late - or skip school altogether - miss out on valuable teaching time and tend to achieve poorer grades. While lateness is more common and typically has less serious consequences than skipping school, both can be warning signs that a student is at risk of dropping out of school (Chung and Lee, 2019[2]; OECD, 2019[1]). These behaviours also impact students who are not late or absent: other students in the class can be disrupted by late arrivals and teachers' resources can be taken up by dealing with latecomers and repeating missed information (Wilson et al., 2008[3]). Many education systems therefore aim to reduce levels of absenteeism and tardiness behaviours to improve students' academic attainment, as well as other outcomes. SSES results show that, in general, similar social and emotional skills are associated with both academic success and lower levels of absence and tardiness. Cultivating these skills in students can therefore be a tool for education systems to improve students' academic outcomes.

Students with higher task performance skills and curiosity tend to achieve greater academic success

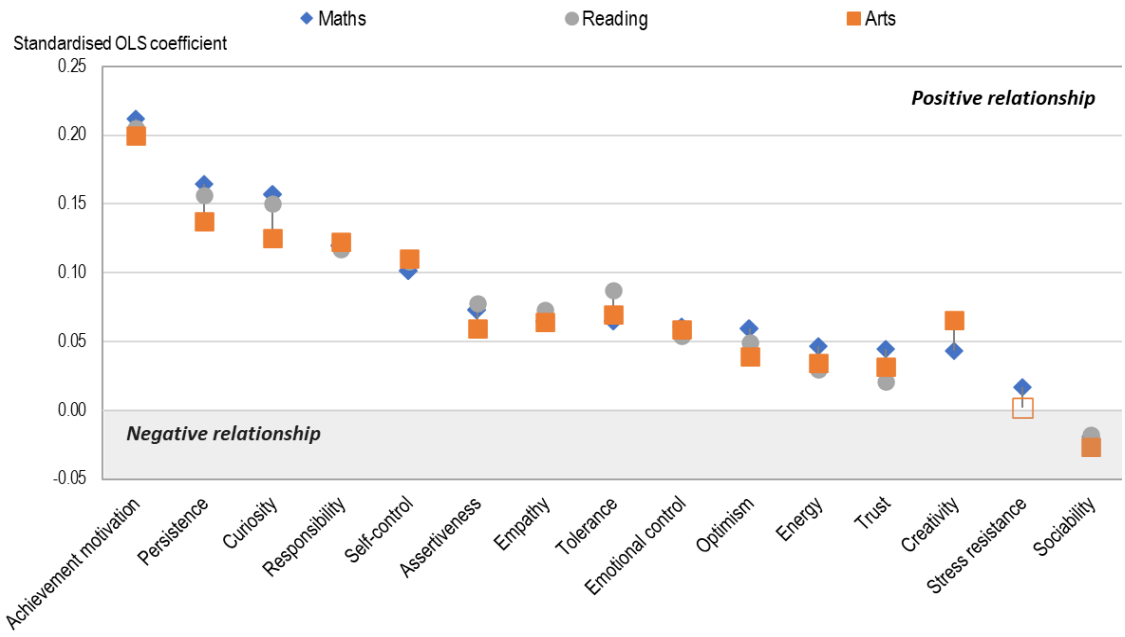
Social and emotional skills are significantly and consistently associated with academic success in all participating sites. **Task performance skills** (**achievement motivation**, **persistence**, **responsibility** and **self-control**) and **curiosity** are the skills most strongly and consistently associated with higher grades across all three subjects, as well as lower levels of absenteeism and tardiness.

Figure 4.1 presents the relationship between each social and emotional skill and students' grades on average across sites. This demonstrates that, on average across sites, higher levels of all skills except sociability and stress-resistance are associated with better grades in all subjects. Achievement motivation is the skill most strongly linked to better grades, followed by persistence, curiosity, responsibility, and self-control. Each point shape represents a different subject (maths, reading and arts) and the high overlap between these points indicates that these associations are broadly similar across subjects. Figure 4.2 shows the relationship between social and emotional skills and levels of absenteeism and tardiness, indicating that higher levels of all skills except sociability are associated with lower levels of lateness and skipping school on average across sites. Again, achievement motivation is most strongly linked to lower levels of these behaviours. These findings align with those from the Programme for International Student Assessment (PISA) 2022 (OECD, 2023[4]), which found that, across over 50 countries and economies, students with higher levels of curiosity and persistence scored around 11 points more, on average, in maths than their peers.

The relationships between these skills and academic outcomes are similar for girls and boys and students from advantaged and disadvantaged backgrounds, demonstrating that these skills can support engagement with learning in a similar way for all students (refer to Tables B4.2, B4.3, B4.5, B4.6, B4.8 and B4.9). Disparities in levels of these skills – as discussed in Chapter 2 – may explain some of the disparities in academic performance between students from these different sociodemographic groups.

Figure 4.1. Relationships between social and emotional skills and students' maths, reading and arts grades

Standardised regression coefficients of individual skills on maths, reading and arts grades, average across sites



Note: Significant coefficients at a threshold of $p < 0.05$ are coloured, non-significant coefficients are outlined. Models control for gender, socio-economic status, migrant status and school fixed effects. Academic grades for Ottawa (Canada) and arts grades for Delhi (India) are not available.
Source: OECD, SSES 2023 Database Tables B4.1, B4.4 and B4.7

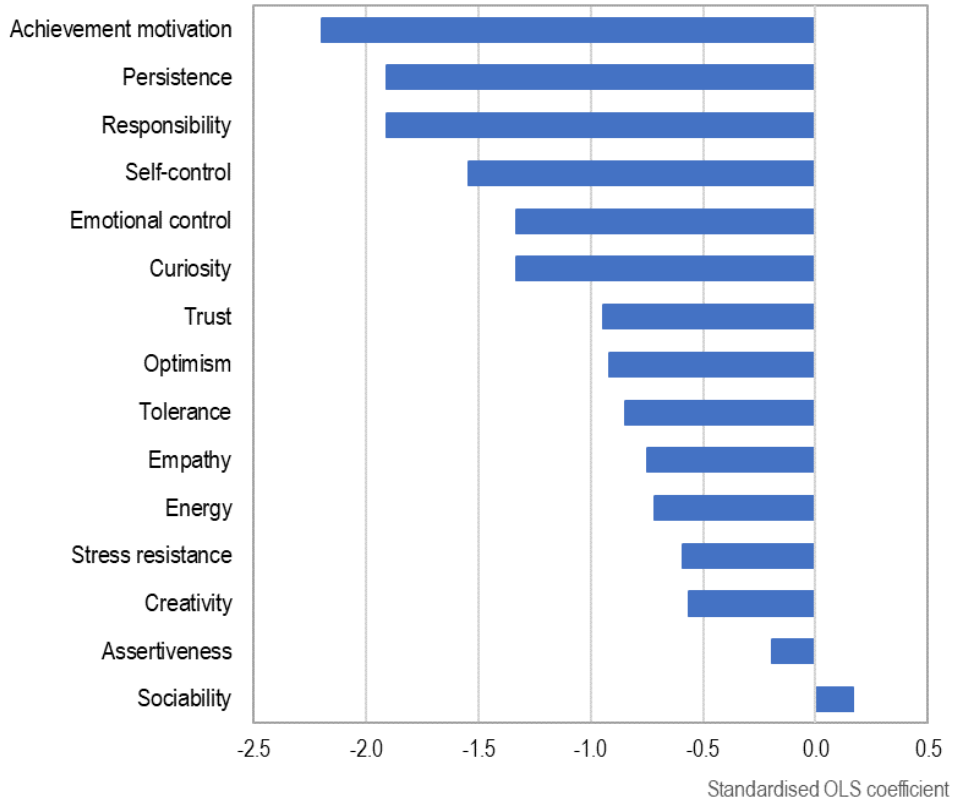
StatLink https://stat.link/whgmjx

Students with high **task performance skills** set high standards for themselves, persevere when confronted with obstacles, honour their commitments, and avoid distractions. These skills support students' success in school and beyond. Task performance skills have been repeatedly shown to be positively related to academic performance, as well as job performance across a range of occupations (von Stumm, Hell and Chamorro-Premuzic, 2011[5]). A recent OECD review found a high level of evidence that students' task performance skills, particularly self-control, can be developed in a school setting (Steponavičius, Gress-Wright and Linzarini, 2023[6]).

High levels of **curiosity** indicate an interest in ideas, a love of learning and an inquisitive mindset. Other studies have also found a strong link between this skill and academic performance, with curiosity even posed as the 'third pillar' of academic performance alongside intelligence and task performance skills[3] (von Stumm, Hell and Chamorro-Premuzic, 2011[5]). Curious individuals are more likely to persist in the face of challenges because their intrinsic motivation to understand and discover keeps them engaged and focused on their learning. Young children typically have a strong desire to learn about the world around them, asking questions and exploring their environment to understand how things work and why things are as they are. These early behaviours help to reduce uncertainty and close knowledge gaps, with higher curiosity in the early years predicting later academic achievement (Shah et al., 2018[7]). Education systems can nurture this natural interest in learning, ensuring that school environments provide opportunities for growth and mastery on which highly curious students thrive. Without these opportunities, students may become apathetic or bored, leading to disengagement. Indeed, highly curious students have been found to only outperform their less curious peers when their school provides a challenging, but non-threatening, academic environment (Kashdan and Yuen, 2007[8]).

Figure 4.2. Relationships between students' social and emotional skills and absenteeism and tardiness

Standardised regression coefficients of individual skills on students' absenteeism and tardiness, average across sites



Note: All coefficients are statistically significant with a threshold $p < 0.05$. Models control for gender, socio-economic and migrant status. See Annex A for information about how the student's absenteeism and tardiness index was calculated. Higher scores on the absenteeism and tardiness index indicate higher levels of these behaviours.
Source: OECD, SSES 2023 Database Table B4.13

StatLink https://stat.link/lbm03g

Students with higher emotional control and optimism tend to have better academic outcomes, however the relationship between stress-resistance and academic success is more complex

Students who report higher emotional control and optimism (two of the three emotional regulation skills) tend to be late and skip school less often and have stronger academic performance in almost all sites (see Figure 4.1 and Figure 4.2). Students with high levels of these skills use effective strategies for regulating anger and irritation and have positive expectations for the future. Emotional regulation skills, particularly optimism, are predictive of positive health and well-being outcomes, including life satisfaction and psychological well-being (see Chapter 3). The consistent relationships between these skills and academic outcomes illustrate how poor well-being and mental health difficulties can be a barrier to learning for some students. Students who struggle to control their emotions, or have negative expectations, can struggle to focus on their studies, engage in classroom activities, and maintain the motivation necessary for academic success.

The relationship between stress resistance, which is also an emotional regulation skill, and grades is different to that for emotional regulation and optimism. Overall, there is either no relationship or only a

small positive relationship between stress-resistance and grades across sites. When these relationships are examined separately by gender, stress-resistance is negatively associated with grades in a minority of sites among boys, meaning boys with higher stress-resistance tend to have poorer grades in these systems (refer to Tables B4.2, B4.5 and B4.8). This is seen in Helsinki (Finland) and Sintra (Portugal) for both maths and reading and in Chile for reading only. Among girls, there is either no relationship between stress-resistance and grades or a small, positive relationship. These differences reflect how students' responses to stress – which appear to differ, on average, by gender – may lead to different outcomes. Excessively high resistance to stressors, such as an upcoming deadline or exam, might result in some students making less effort for an assessment. At the same time, difficulties modulating anxiety and calmly solving problems can limit students' academic performance, as well as negatively impacting their well-being. As outlined in Chapter 3, higher stress-resistance is one of the strongest predictors of greater life satisfaction and psychological well-being among students. Examining the relationship between stress-resistance and grades may help education systems understand the impact of assessment approaches on students, including how this varies between different student groups.

Students who report higher tolerance, empathy and trust tend to have better academic outcomes

Students who report higher tolerance, empathy and trust tend to achieve higher grades and are late and skip school less often (see Figure 4.1 and Figure 4.2). Students with these skills are open to different views and values; understand and care about others; and assume others have good intentions.

Once a student has established a pattern of chronic absenteeism and poor attainment, it is challenging to intervene and turn things around (Tanner-Smith and Wilson, 2013[9]). Preventative measures should therefore be put in place by education systems. Effective interventions aimed at reducing school dropout rates and bolstering attendance have several features in common. Notably, the importance of all stakeholders - including students, teachers, and parents - being united and committed to shared goals and the establishment of an authoritative, yet supportive, school environment are key factors for promoting attendance and engagement in learning (Keppens and Spruyt, 2017[10]). Developing social and emotional skills among students, as well as teachers and other education professionals, can help build a positive school climate and sense of belonging. Within such an environment, where the school community feels safe and secure, students can better engage with learning.

Trust is the skill with the largest gap between younger (10-year-olds) and older students (15-year-olds), with older students reporting lower levels of this skill in all sites in SSES (see Chapter 2). This shift demonstrates the importance of creating a school environment that enables students to thrive during the transition from primary to secondary education. This transition happens at a key time developmentally, when students are seeking genuine and lasting relationships beyond their family, often finding these among their peers. Previous relationships are often severed, and new ones are established between students and their teachers and between students themselves. Teachers can build trust with and between their students by being clear, consistent, and fair in their practice and taking action when needed, such as intervening when a student is bullied. Schools are therefore perfect hubs for social and emotional learning: these skills can be developed through the consistent integration and modelling of them within everyday teaching, not just through dedicated programmes and interventions.

Students with higher levels of assertiveness achieve higher grades

Higher levels of **assertiveness** are associated with stronger academic performance in at least one subject in all sites except Houston (United States) – see Figure 4.4, Figure 4.5 and Figure 4.6. Students with high levels of assertiveness can confidently voice their opinions and take the lead. Assertiveness has one of the largest differences across skills by socio-economic background, where economically, socially and culturally disadvantaged students typically report lower levels of this skill than their advantaged peers (see

Chapter 2). While assertiveness may convey advantages to learning, the relationship between this skill and academic outcomes may also reflect the influence of students' demonstration of this skill on teachers' evaluations – whether intentionally or otherwise. It is not uncommon for teachers to give better assessments of students from higher economic, social and cultural backgrounds than their peers, even when their objective academic performance is the same (Batruch et al., 2023[11]). Differences in levels of assertiveness is one mechanism that could explain this trend, as teachers may give more credit to students who contribute more often and more confidently in class and within assessments. The advantage conveyed by assertiveness also extends to the workplace: employees with higher levels of this skill tend to receive higher job performance ratings (Steponavičius, Gress-Wright and Linzarini, 2023[6]). Importantly, assertiveness can be developed among students in school environments, including among disadvantaged students (Steponavičius, Gress-Wright and Linzarini, 2023[6]). Efforts should therefore be made to build students' assertiveness, but systems should also consider whether assessment outcomes are overly influenced by students' displays of confidence, which may not always reflect their ability.

Academic assessments can also assess students' social and emotional skills

Students' grades were collected directly from schools. The knowledge and skills that were assessed for each subject, and the methods used to assess them, therefore differed between sites. These differences may explain why some skills are more strongly related to academic performance in some sites than others (Figure 4.4, Figure 4.5 and Figure 4.6). For example, the relationship between curiosity and reading and maths grades is particularly strong in Delhi (India) and Ukraine, yet weaker in Kudus (Indonesia) and Gunma (Japan). Assertiveness is more strongly associated with higher grades in Daegu (Korea) and Peru than in most other sites. In other areas, creativity or collaboration skills are more strongly associated with academic performance. These disparities can reflect different assessment methods or differing value placed on the demonstration of certain skills within assessments across education systems. For example, assessment methods that measure students' contributions in class could benefit students with greater assertiveness, while those that require students to work together on a group project might require demonstration of collaboration skills. Some assessments also put a strong focus on knowledge recall, which require students to review and memorise information, supported by task performance skills, while others put a greater focus on assessing students' problem-solving skills that reflect their ability to think creatively. Assessments of academic performance, therefore, whether intentionally or otherwise, also indirectly measure students' social and emotional skills.

Creativity tends to be more strongly associated with better performance in reading and arts than mathematics

The relationship between skills and grades are highly consistent across different subjects, with task performance skills and curiosity the strongest predictors of higher grades across all three subjects, followed by assertiveness (see Figure 4.1). Higher levels of **creativity** tend to be more strongly associated with better performance in reading and arts than mathematics in most sites (see Figure 4.7). While reading and arts are subjects with which creative expression are more traditionally associated, many countries incorporate creative thinking into their mathematics curricula. Embedding creative thinking approaches can support the development of a deeper conceptual understanding of mathematics, as well as enabling students to apply their mathematical knowledge to new problems (Hadar and Tirosh, 2019[12]). Creativity is positively associated with mathematics performance in Bogotá (Colombia), Delhi (India), Dubai (United Arab Emirates), Helsinki (Finland), Jinan (China), Kudus (Indonesia), Peru, Sobral (Brazil) and Ukraine. The presence of this association in some sites but not others may reflect different methods of teaching and assessing mathematics between countries.

Students with higher sociability tend to achieve poorer grades and have higher levels of absenteeism and tardiness in a minority of sites

Students who reported higher levels of **sociability** tend to achieve poorer grades in at least one subject in some locations: Colombian sites (Bogotá and Manizales), Istanbul (Türkiye), Italian sites (Emilia-Romagna and Turin), Sintra (Portugal) and Spain (see Figure 4.4, Figure 4.5 and Figure 4.6). In all of these sites where data is available, this skill is also associated with higher absenteeism and tardiness (see Figure 4.7). However, in most sites, there is no relationship between sociability and these outcomes. Wider research examining the relationship between extraversion and academic performance has found similarly mixed results, with several studies finding negative associations, while others find no association or even a positive association (O'Connor and Paunonen, 2007[13]). This suggests that the relationship between sociability and academic performance is complex and unlikely to be direct: the ability to initiate and maintain social connections does not necessarily come at the expense of academic performance. Where we do see these associations, they may reflect evolving and, at times, conflicting priorities during adolescence, where peer relationships become more important (Brown and Larson, 2009[14]). An increased focus on social interactions may lead to a redistribution of time and energy, diverting attention away from academic endeavours for some students. Indeed, the opposite trend is observed among 10-year-olds, where higher levels of sociability are associated with higher grades. Students therefore need to be supported, particularly during the sensitive period of adolescence, to manage competing demands on their time and achieve a healthy balance between their social and academic lives.

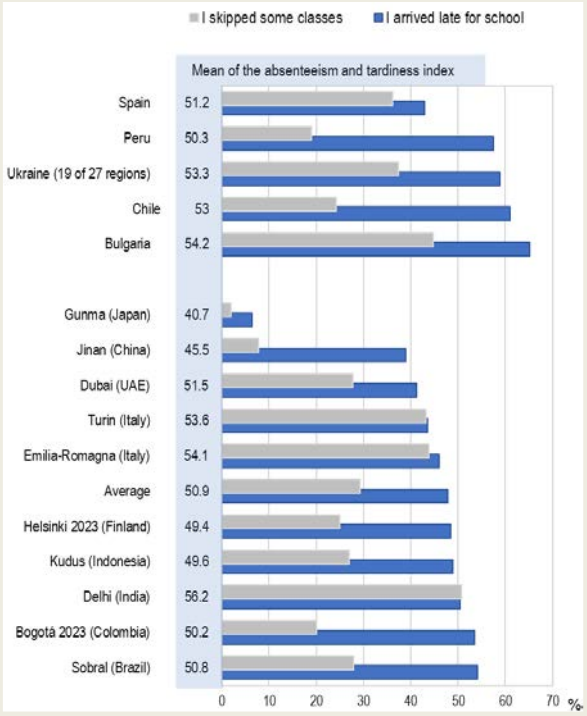
Box 4.1. Levels of absenteeism and tardiness

The better students' attendance and the more class time their teacher spends on actual teaching, the better their academic performance on average (OECD, 2021[15]). Conversely, students who are regularly truant are more likely to drop out of school, have poorly paid jobs, have unwanted pregnancies, and even abuse drugs and alcohol. Disparities in levels of absence and tardiness between sites matter because maintaining high levels of school attendance helps to maximise time for teaching and learning.

On average across sites, almost half of 15-year-old students report being late for school at least once in the previous two weeks. There is much variation between participating sites (see Figure 4.3). Students in Gunma (Japan) rarely report being late for school, while around two-thirds of students said they had been late at least once in Bulgaria. Skipping classes or an entire school day is less common than lateness, however more than three-in-ten 15-year-old students still report this at least once in the past two weeks on average across sites. A small minority of students (less than 1-in-20) in Jinan (China) and Gunma (Japan) said they had skipped a whole school day, while over half of students in Italian sites (Turin and Emilia-Romagna) said they had done so. On average, students with lower academic performance, a migrant background, lower economic, social and cultural status and boys were more likely to report these behaviours than their peers (see Tables B4.10, B4.11 and B4.12).

Figure 4.3. Rates of absenteeism and tardiness by site

Percentage of students who arrived late or skipped classes at least once in the last 2 weeks and mean of the absenteeism and tardiness index, by sites

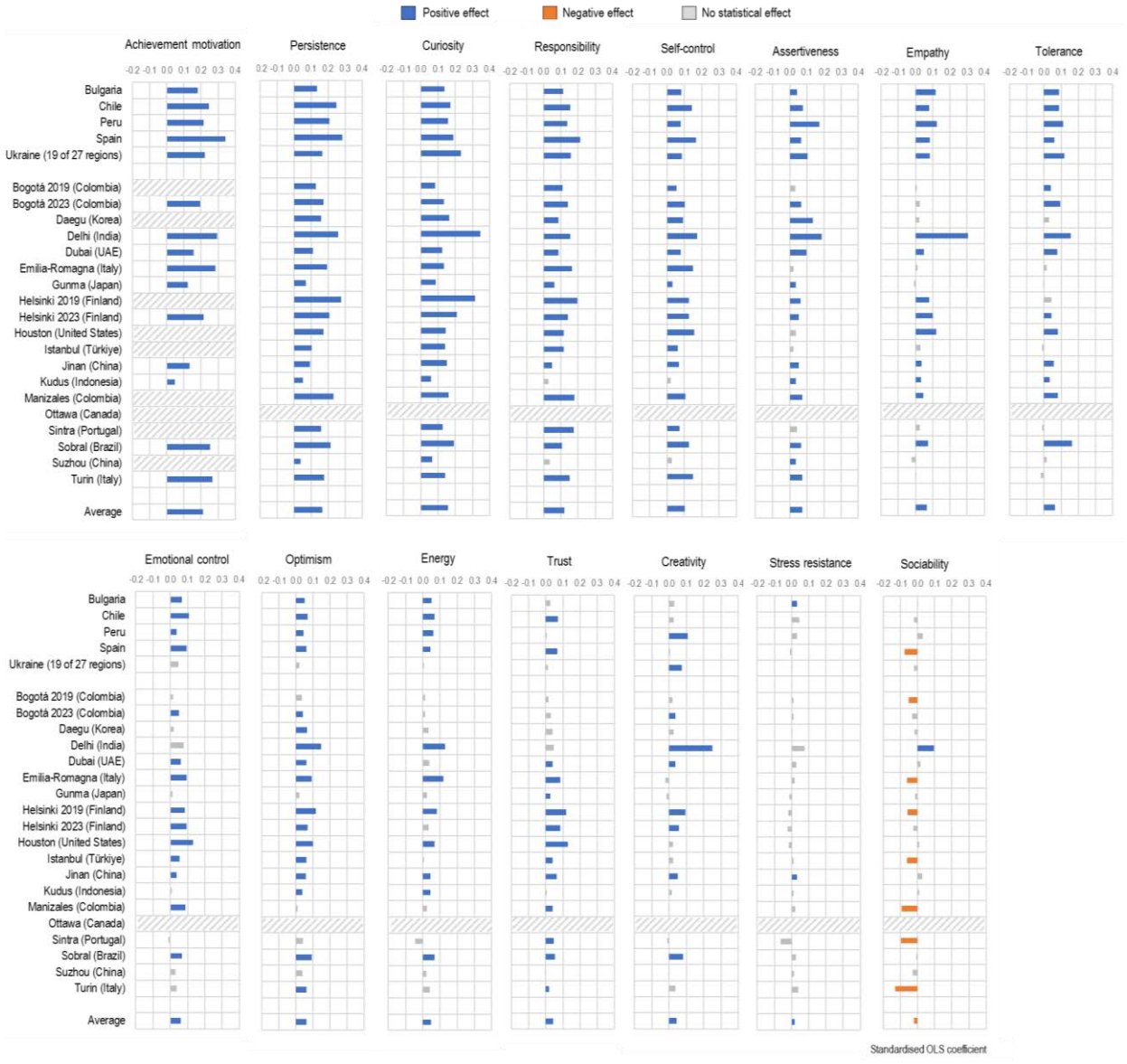


Note: Higher scores on the absenteeism and tardiness index indicate higher levels of these behaviours. See Annex A for information about how the student's absenteeism and tardiness index was calculated.
Source: OECD, SSES 2023 Database Tables B4.10 and Table B4.11

StatLink https://stat.link/4afwo8

Figure 4.4. Relationships between students' social and emotional skills and maths grades by sites

Standardised regression coefficients of 15-year-olds' individual skills on maths grades by sites

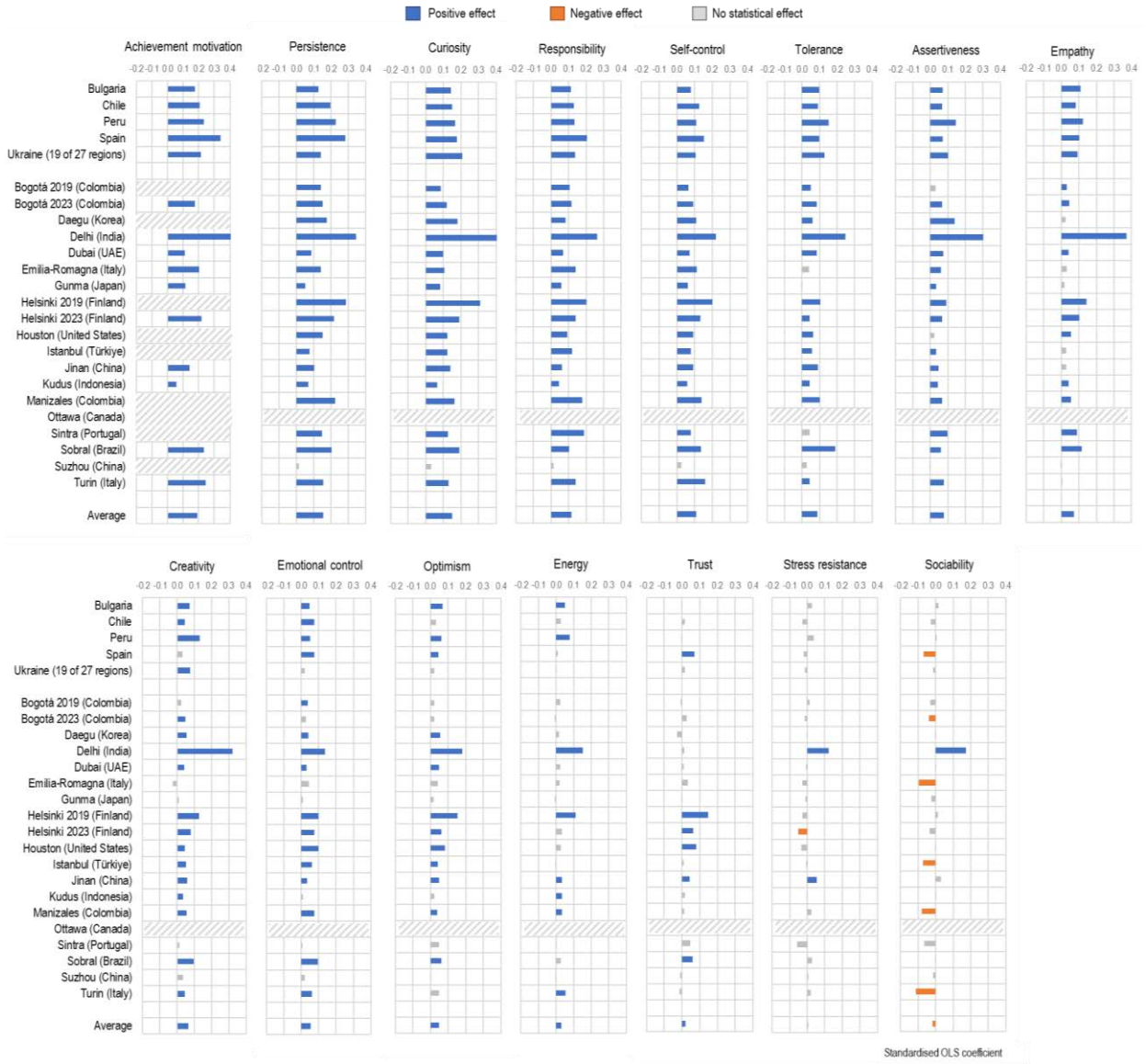


Note: Significant coefficients are at a threshold of $p < 0.05$. All models control for gender, socio-economic, migrant status and school fixed effects. Maths grades for Ottawa (Canada) are not available.
Source: OECD, SSES 2023 Database Table B4.1

StatLink https://stat.link/x1egvw

Figure 4.5. Relationships between students' social and emotional skills and reading grades by sites

Standardised regression coefficients of 15-year-olds' individual skills on reading grades by sites

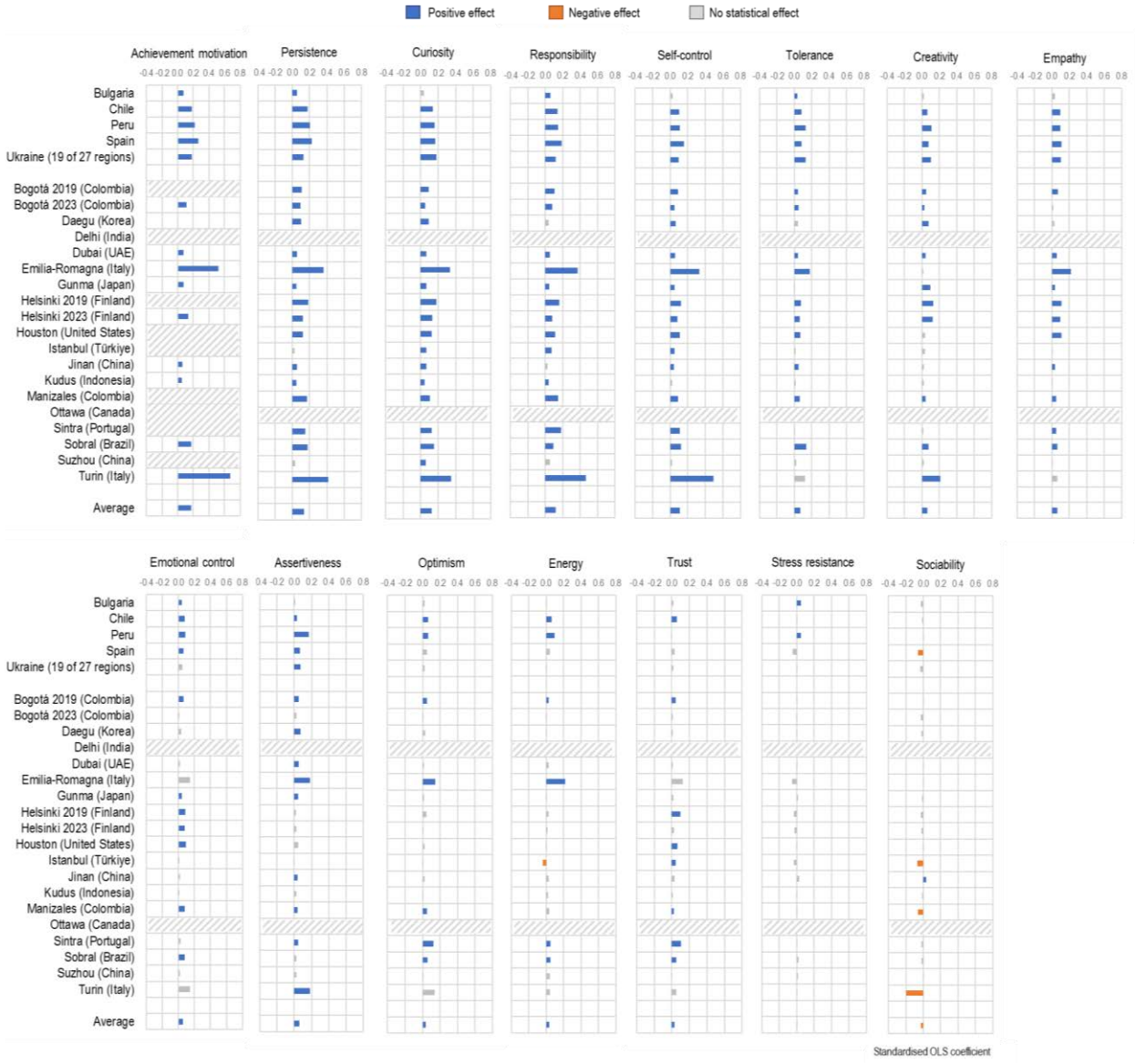


Note: Significant coefficients are at a threshold of $p < 0.05$. All models control for gender, socio-economic, migrant status and school fixed effects. Reading grades for Ottawa (Canada) are not available.
Source: OECD, SSES 2023 Database Table B4.4

StatLink https://stat.link/8y6i4h

Figure 4.6. Relationships between students' social and emotional skills and arts grades by sites

Standardised regression coefficients of 15-year-olds' individual skills on arts grades by sites

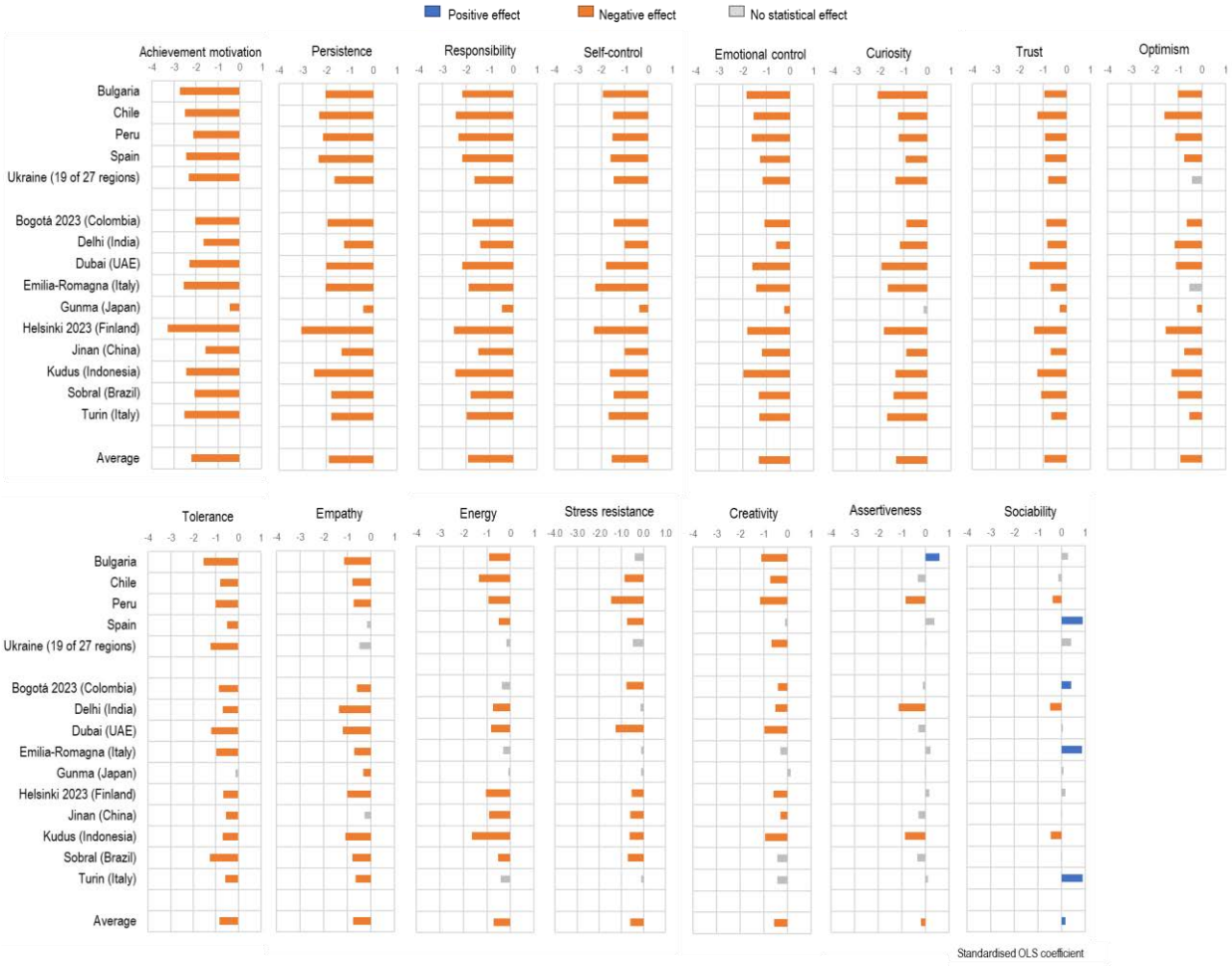


Note: Significant coefficients are at a threshold of $p < 0.05$. All models control for gender, socio-economic, migrant status and school fixed effects. Arts grades for Ottawa (Canada) and Delhi (India) are not available.
Source: OECD, SSES 2023 Database Table B4.7

StatLink https://stat.link/iu51gv

Figure 4.7. Relationships between students' social and emotional skills and absenteeism and tardiness by sites

Standardised regression coefficients of students' individual skills on absenteeism and tardiness by sites



Note: Significant coefficients are at a threshold of $p < 0.05$. Models control for gender, socio-economic and migrant status. Higher scores on the absenteeism and tardiness index indicate higher levels of these behaviours. See Annex A for information about how the student's absenteeism and tardiness index was calculated.
Source: OECD, SSES 2023 Database Table B4.13

StatLink https://stat.link/qfm0c1

Preparing for the future: take-up of career development activities

In this section, the relationships between students' social and emotional skills and their take-up of career development activities – such as researching careers and doing an internship - are discussed[4].

Transition, whether from one level of education to another or to the world of work, brings uncertainty and shifts in students' routines, expectations, and responsibilities. Some students are well equipped to seize the opportunities that accompany times of change. Other students face difficulties navigating ambiguity and pressure that can impact their later career progression and earning potential. Career exploration in schools can help students become better prepared and increase their chances of success in the labour market (Covacevich et al., 2021[16]). It is therefore important to measure whether students participate in career development activities. Previous research has found that many students, particularly those from

disadvantaged backgrounds, do not take up these opportunities. Of course, students' participation in them depends on their availability. However, as demonstrated in this section, students' social and emotional skills can also support their career exploration: supporting their interest in new pursuits, resilience in high-pressure situations and perseverance to achieve their goals.

Most students have taken part in multiple career development activities

The average number of career development activities undertaken by students was between three and four across sites, meaning that most 15-year-olds had engaged in multiple activities (see Table B4.33). Researching careers online was the most common activity (undertaken by over three-quarters of students on average across sites) followed by researching tertiary education programmes online (carried out by over three-fifths of students). High take-up of these activities indicates some degree of initiative-taking by students, as this research can be carried out with little to no support from parents or teachers. However, this also demonstrates the importance of high-quality online content being available to students to support their career exploration and directing students towards these. Without guidance, students' research may be ineffective or even counter-productive: they may not find the information they need or may consume misleading information.

There was greater variation between sites in activities that typically require coordination or organisation by their school, particularly in speaking to a career advisor, but also in doing an internship, attending job shadowing or work-site visits and visiting a job fair (see Figure 4.8). This likely reflects the different availability of these services and activities for students in different education systems, or that they are only made available to older students. For example, in Spain, most 15-year-olds had spoken to a career advisor, whereas less than 1-in-50 students had done so in Gunma (Japan). Students in Helsinki and Peru were more likely to have done an internship than students in Italian sites (Turin and Emilia-Romagna) and Gunma (Japan).

Figure 4.8. Students' participation in career development activities

Percentage of students who undertook the following career development activities, by site

Source: OECD, SSES 2023 Database Table B4.33

StatLink https://stat.link/h95cjm

Disadvantaged students are less prepared for their future education and career than their advantaged peers

Advantaged students tend to participate in more career development activities than disadvantaged students (see Table B4.34). This is particularly the case for completing questionnaires about their interests and abilities, touring tertiary education institutions and job shadowing – all activities that typically require facilitation by adults. This difference in participation exists even though disadvantaged students tend to be more in need of support with their careers, given that they and their parents have fewer economic, social and cultural resources to draw on.

As noted in other studies, a lack of career readiness is particularly associated with disadvantage, which is consistent with the fact that that two facets used in the measure of students' economic, social and cultural status are the education level and occupations of students' parents. Parents who they themselves did not attend tertiary education or have high-status careers are typically less well equipped to support their children navigate these paths. Studies have found that parental involvement in students' career exploration is particularly important, with levels and type of support either contributing to or detracting from students' decision-making (Ahn et al., 2022[17]; Watson, Nota and McMahon, 2015[18]). Some career development activities – such as job shadowing and internships – can also be more readily available to advantaged students through their family's social network (Roth, 2018[19]; Tholen et al., 2013[20]). Furthermore, living, travel and equipment costs can also be a barrier to disadvantaged students touring institutions or undertaking workplace-based opportunities.

While these results demonstrate that there is some way to go to make sure that the students who are most in need of support in developing their career plans receive it, there are exceptions that demonstrate how policy can make a difference. In Italian sites (Emilia-Romagna and Turin), disadvantaged students are more likely than advantaged students to have spoken to a career advisor and, in Helsinki (Finland), over half of both advantaged and disadvantaged students had done an internship. It is therefore important that disadvantaged students have equal access to career development activities and are encouraged and facilitated to take these up.

Students with higher levels of social and emotional skills – particularly creativity and curiosity - undertake more career development activities

In all sites, students with higher levels of open-mindedness (creativity, curiosity, tolerance), task performance (achievement motivation, persistence and responsibility) and engaging with others skills (assertiveness, energy and sociability) tend to have participated in more career development activities in all sites (see Figure 4.9 and Figure 4.10).

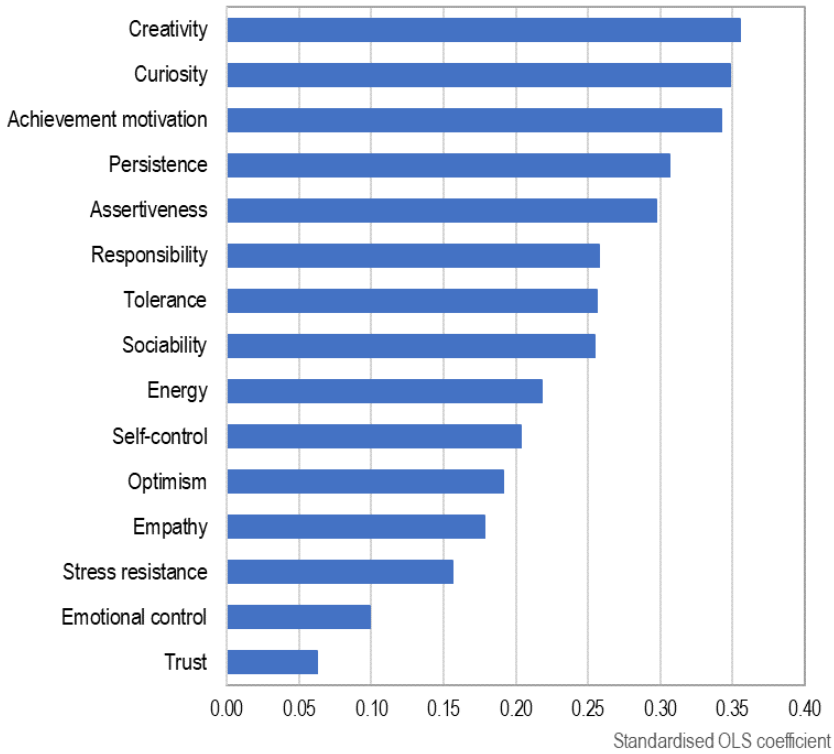
These consistent relationships demonstrate how students can draw on their social and emotional skills as resources to support their career exploration. Students with high levels of creativity and curiosity are well-equipped to navigate an increasingly uncertain labour market, exploring different career trajectories and emerging industries. Those with greater achievement motivation and persistence – the skills most strongly associated with greater academic performance – set themselves stretching objectives and persevere to meet them, which might include researching requirements to meet their goal and proactively seeking out stretching opportunities, such as internships and job shadowing. Assertive students are better equipped to meet their goals, as they can confidently voice their needs and opinions and take the lead when needed. In contrast, students with low levels of these skills may struggle with change and thinking outside established norms, which can constrain their future career options. Such students may particularly struggle in an environment where careers options are more complex and career trajectories are less linear: students and employees who do not take an active role in their careers may fall behind their peers.

Coupled with the finding that disadvantaged students have undertaken fewer of these activities, these results suggest that students who are already better equipped to meet their career goals tend to engage

in more career exploration activities than those in most need of support. In some schools, career development activities may be more tailored towards, and taken up, by students who are interested in tertiary education, perhaps overlooking the needs of other students who would thrive in a different path. This may explain, in part, findings from earlier in this chapter that almost all students expect to take-up tertiary education in many sites.

Figure 4.9. Relationships between students' social and emotional skills and participation in career development activities

Standardised regression coefficients of students' individual skills on number of career development activities undertaken, average across sites

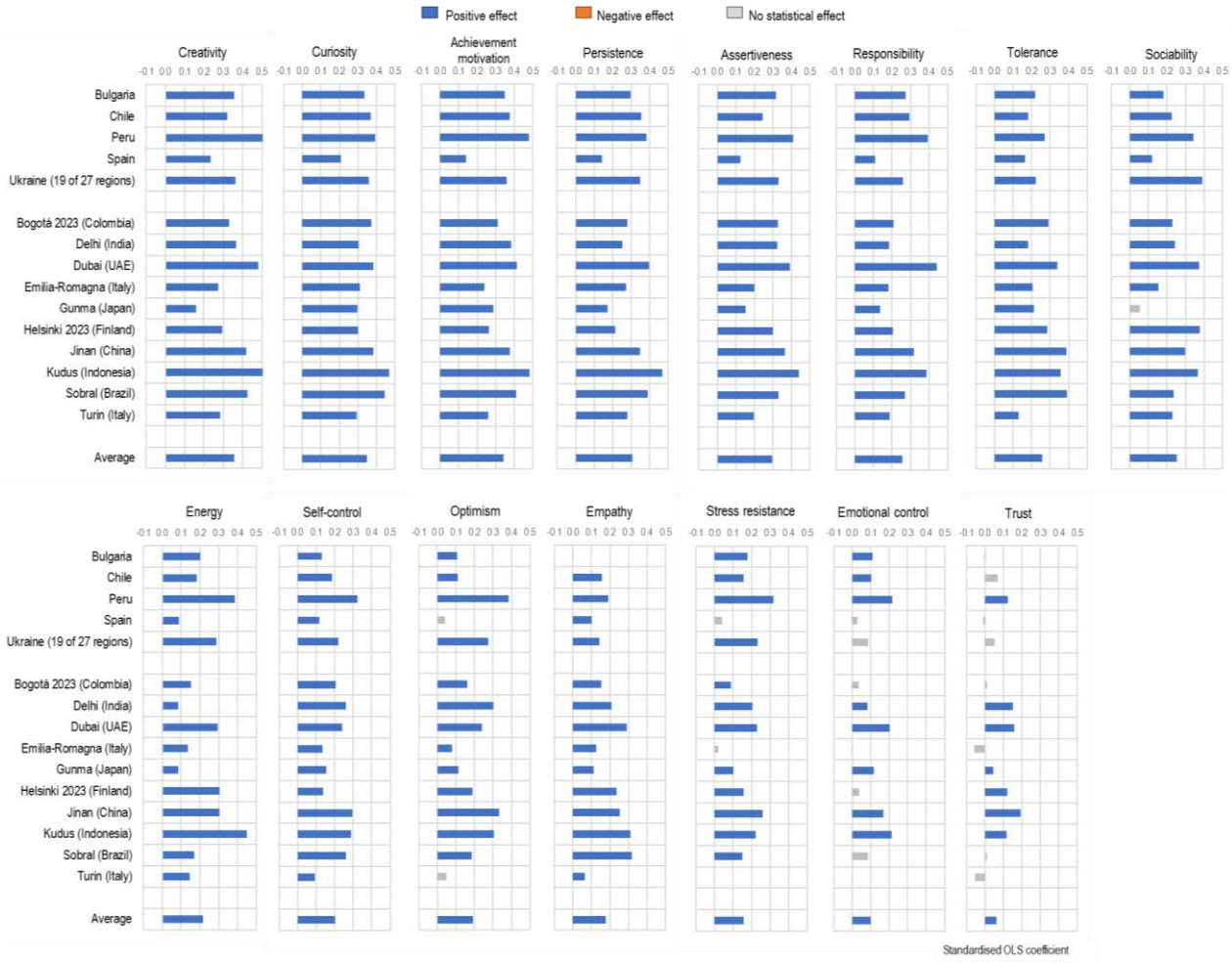


Note: All coefficients are statistically significant with a threshold $p < 0.05$. Model controls for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B4.35

StatLink https://stat.link/agjozu

Figure 4.10. Relationships between students' social and emotional skills and participation in career development activities

Standardised regression coefficients of individual skills on number of career development activities undertaken by site



Note: Significant coefficients are at a threshold of $p < 0.05$. Model controls for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B4.35.

StatLink https://stat.link/zjy6pf

Ambitions for the future: expectations to complete tertiary education and have a managerial or professional career

In this section, the relationships between students' social and emotional skills and their expectations for their future, including whether they expect to complete tertiary education[5] and if they expect to have a managerial or professional job in the future or are uncertain about their career plans[6], are discussed.

One goal of education systems is to orientate students towards education and career tracks that best align with their interests and skills. Information on students' educational and career expectations and predictors of these can support education systems to achieve this important goal. Evidence from longitudinal studies suggests that career uncertainty and lack of ambition can be indicators of concern for schools, as these are signals that a student is not thinking critically about their transitions into work. Results from SSES

indicate that students with poorer social and emotional skills, particularly lower levels of curiosity, are less ambitious for their future.

Most students are ambitious for their future education and career

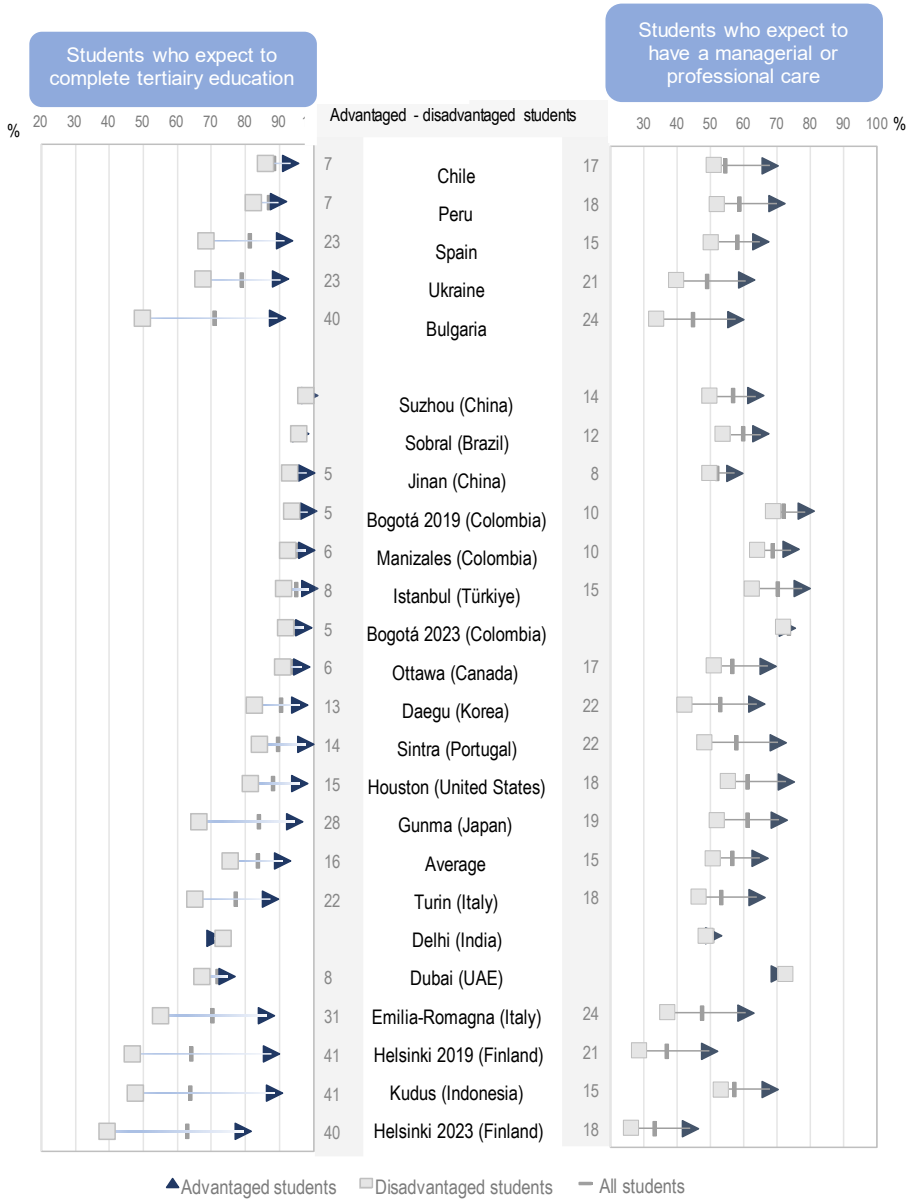
In all participating sites, most students say they expect to complete tertiary education, and in almost all sites, over half of students expect to have a managerial or professional job when they are 30 (see Figure 4.11). On average across sites, 84% of students expect to complete tertiary education and 57% expect to have a managerial of professional career. These findings indicate that students generally have high aspirations, particularly when coupled with findings later in this chapter that show high proportions of students expecting to start a business.

Although expectation to complete tertiary education and have a managerial or professional career tends to be a little lower among both disadvantaged students and those with the lowest academic grades, expectations are still relatively high among these groups (see Figure 4.11 for a comparison of these expectations among disadvantaged and advantaged students in each site). On average across sites, around three-quarters of disadvantaged students and bottom academic performers expect to complete tertiary education and around half expect to have a managerial or professional career. This suggests that much underachievement among these student groups results from gaps between students' aspirations and the knowledge and skills needed to achieve them, rather than a lack of ambition in the first place.

- Expectation to complete tertiary education is particularly high in Istanbul (Türkiye), Jinan (China), Manizales (Colombia), Sobral (Brazil) and Suzhou (China), where almost all students (over 95%) expected this. The lowest level of this expectation was in Kudus (Indonesia) and Helsinki (Finland), where around two-thirds of students expected to complete this level of education.
- The highest levels of ambitious career plans are found in Bogotá (Colombia), Dubai (United Arab Emirates) and Istanbul (Türkiye) – with over 7-in-10 students expecting managerial or professional careers - and the lowest levels in Helsinki (Finland), where around one-third of students expected this.

Figure 4.11. Students' expectations to complete tertiary education and have a managerial or professional career in the future, by socio-economic status

Difference in students' expectation to complete tertiary education and have a managerial or professional career by sites and socio-economic status



Note: Only the differences that are statistically significant are added near the site names. The target population includes only public schools in Delhi [India], Houston [United States], Ottawa [Canada] and Sobral [Brazil] and only private schools in Dubai [United Arab Emirates]. Differences by socio-economic background in these sites, including in comparison to other sites and the average across sites, should be interpreted with caution as the full range of student backgrounds in the geography is unlikely to be represented.
Source: OECD, SSES Databases (2019, 2023) Tables B4.17, B4.24 and B4.25.

StatLink https://stat.link/6s7lm4

While high aspirations can indicate that a student is ambitious and motivated, these high expectations in aggregate may represent expectations that will not be realised among a sizeable proportion of students in many sites. Indeed, rates of expectation to complete tertiary education vary widely from recent rates of completion of this level of education in many of these sites, even when considering recent increases in

tertiary education take-up in many countries. For example, despite the large variation in expectations of completing tertiary education between 15-year-old students in Istanbul (Türkiye) and Helsinki (Finland) seen in SSES (over 95% compared to around two-thirds respectively), the proportion of people who actually completed tertiary education was the same in Türkiye and Finland in 2022, at just over two-fifths (OECD, 2023[21]). Rather than less ambitious, expectations among students in Helsinki (Finland) appear more realistic than in many other sites. Indeed, not all students are best served by a tertiary degree and many students who attempt this level of education do not complete it, with only two-fifths of bachelor's students graduating within the expected timeframe for their programme in OECD countries (OECD, 2023[21]). High expectations of this outcome may therefore reflect a lack of awareness or attractiveness of more suitable options in some sites, such as vocational education and training (VET).

Girls tend to be more ambitious for their future education and career than boys

A larger proportion of girls have ambitious plans for their future compared to boys. On average across sites, 88% of girls expect to complete tertiary education compared to 80% of boys, while 61% of girls expect to have a managerial or professional career compared to 49% of boys. These expectations reflect trends in actual take-up and completion of tertiary education: women make up a small but clear majority of new entrants across OECD countries and are also more likely to complete their studies than men (OECD, 2023[21]).

- Girls are more likely to expect to complete tertiary education in all sites except Daegu (Korea), Jinan (China) and Sobral (Brazil) where there is little to no gender gap in these expectations.
- Girls are more likely to expect to have a managerial or professional career in all sites except Gunma (Japan), where there is no gender difference. The gender gap in these career plans is largest in Houston (United States) and Sobral (Brazil). In these sites, around three-quarters of girls expect managerial or professional careers, compared to around half of boys. In contrast, boys are more likely to be uncertain about their career plans in most sites, particularly in Jinan (China).

Students with higher levels of open mindedness skills and task performance skills are more ambitious for their future education and career

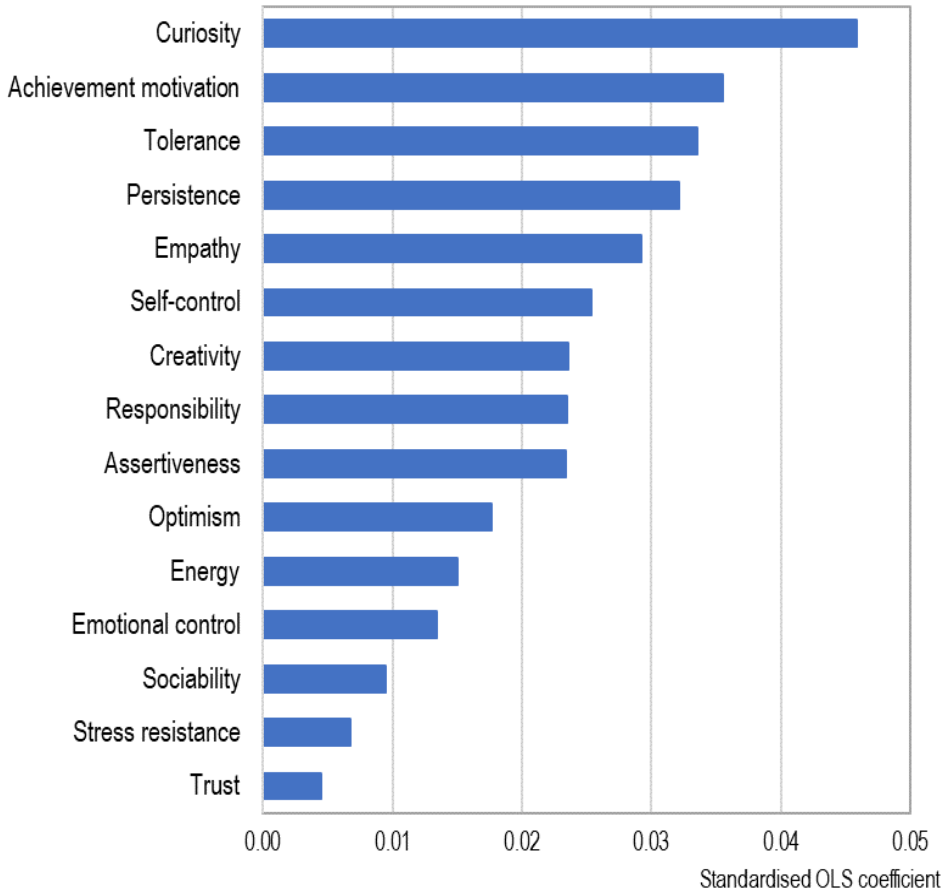
Students with higher levels of **curiosity** are more likely to expect to complete tertiary education and have a professional or managerial career, on average, in all sites (see Figure 4.12 and Figure 4.13). In addition, higher levels of other **open-mindedness skills** (**tolerance** and **creativity**), **task performance skills** (**persistence**, **achievement motivation**, **self-control**, **responsibility**) and **empathy** are associated with these expectations in most sites. See Figure 4.14 and Figure 4.15 for these relationships in each site.

As noted earlier in this chapter, students who report higher levels of curiosity and task performance skills also tend to have better academic outcomes. The fact that students with high levels of these skills are also more likely to expect to attend tertiary education and have a managerial or professional career demonstrates the close link between success at school and onward academic and career success. This also suggests some alignment between students' expectations and the skills needed to adapt to the academic demands and learning-rich environment of tertiary education. Task performance skills can support students with the increased workload and independence of study that is often required at higher levels of education, which can be a challenging transition for many students. In a small number of sites, there was little to no relationship between task performance skills and expectation to complete tertiary education, which could indicate a lack of preparedness for tertiary education among students in these areas: students with low levels of these skills who expect to attend tertiary education may be at higher risk of drop-out. High rates of student attrition – where students leave an educational program before completing it – is a problem in many countries. A review of predictors of academic performance found that only task performance skills[7] had more than a trivial positive relationship with academic performance at a tertiary level after controlling for prior academic performance at secondary education (Poropat, 2009[22]).

Programmes of study at this level are also typically more complex and require more higher order thinking skills: critical, creative, and analytical processing of information that allow individuals to go beyond memorisation and recall. Therefore, the association between higher levels of **curiosity** and **creativity** and expectation to attend tertiary education also indicate good alignment between the skills required for this endeavour and students' expectations. Students with high levels of **tolerance** are open to different points of view and values. Tertiary institutions are typically large and often diverse places, drawing staff and teachers from a wider area than a primary or secondary school. Students with higher levels of this skill will be better equipped to engage effectively with people who have a wide range of perspectives and backgrounds.

Figure 4.12. Relationships between students' social and emotional skills and expectation to complete tertiary education by sites

Standardised regression coefficients of students' individual skills on expectation to complete tertiary education by sites

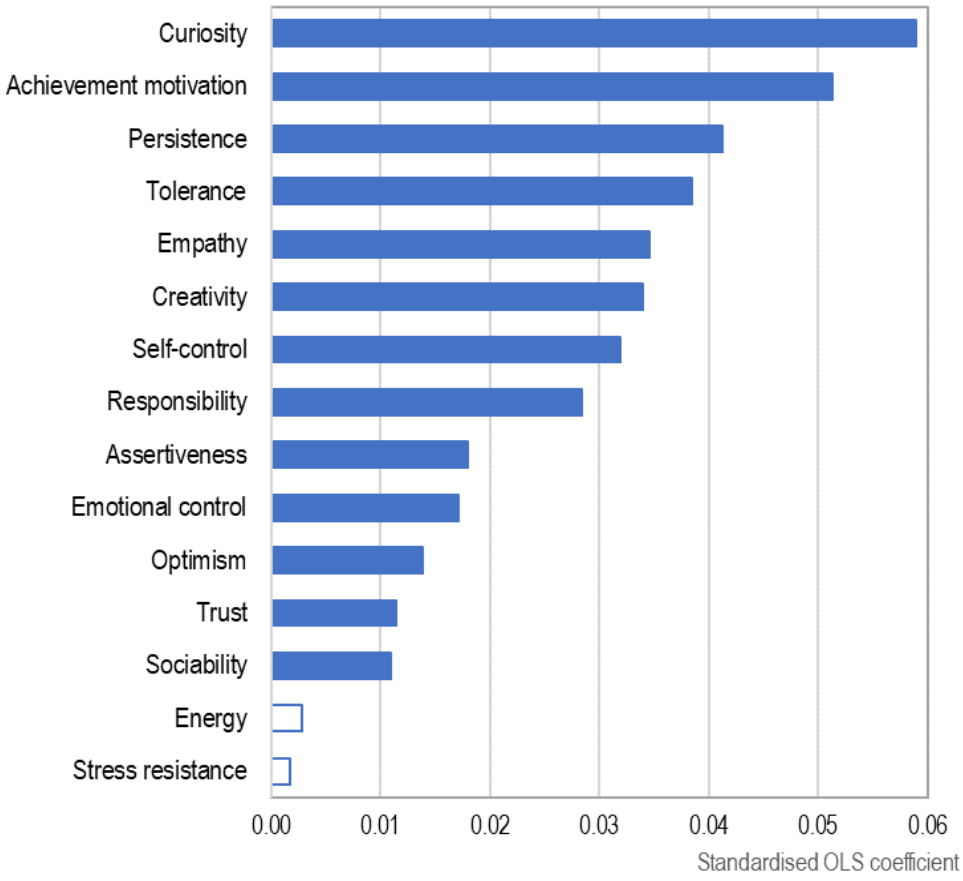


Note: Significant coefficients are at a threshold of $p < 0.05$. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B4.19.

StatLink https://stat.link/r9wzc0

Figure 4.13. Relationships between students' social and emotional skills and expectation to have a managerial or professional career

Standardised regression coefficients of individual skills on students' expectation to have a managerial or professional career, average across sites



Note: Significant coefficients at a threshold of $p < 0.05$ are coloured, non-significant coefficients are outlined. Model controls for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B4.30

StatLink https://stat.link/2xlaf4

Figure 4.14. Relationship between students' social and emotional skills and expectation to complete tertiary education by sites

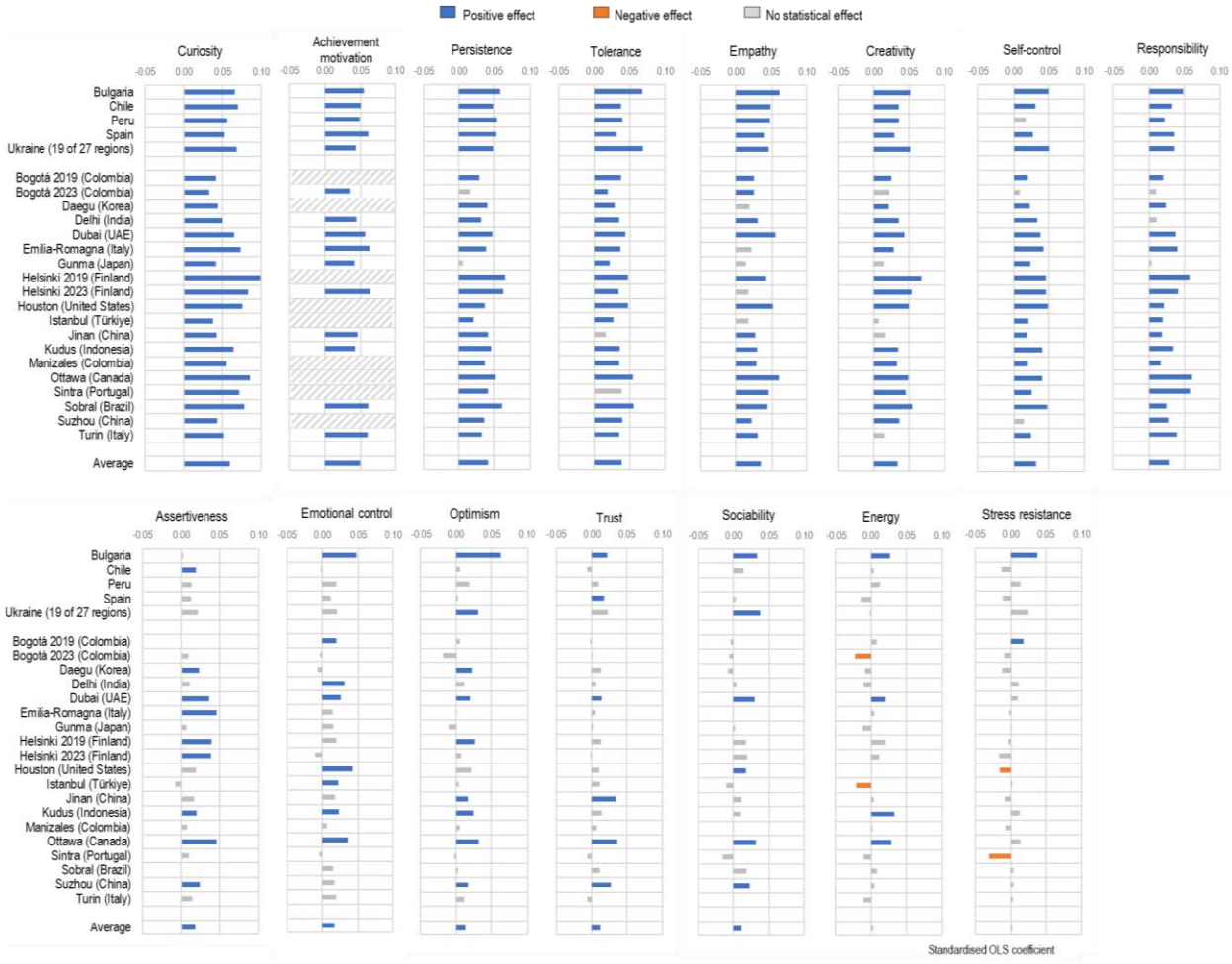
Standardised regression coefficients of individual skills on students' expectation to complete tertiary education by sites

Note: Significant coefficients are at a threshold of $p < 0.05$. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B4.19

StatLink https://stat.link/vmwhxy

Figure 4.15. Relationship between students' social and emotional skills and expectation to have a managerial or professional career by sites

Standardised regression coefficients of individual skills on students' expectation to have a managerial or professional career by sites



Note: Significant coefficients are at a threshold of $p < 0.05$. Models control for gender, socio-economic and migrant status.
Source: OECD, SSES 2023 Database Table B4.30

StatLink https://stat.link/tnbdc4

Students' career plans: expectations to have in-demand careers or start a business

In this section, relationships between students' social and emotional skills and their career plans – their expectations to have careers in specific sectors or to start their own business - are discussed.

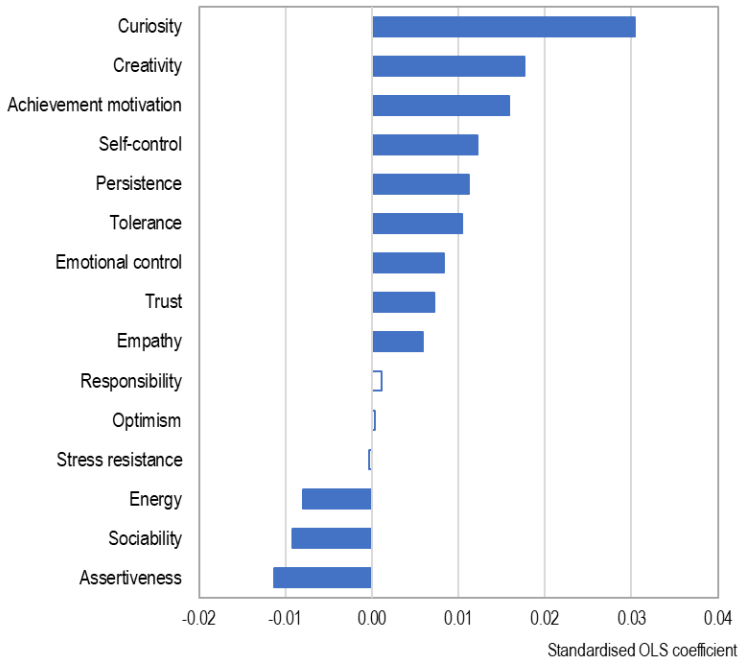
One important role of education systems is to prepare students for the future labour market. Understanding the current aspirations of students and their predictors can help education systems and economies prepare for the future. Students' alignment with a future-oriented labour market is explored through students' expectation of having one of several occupations identified as in-demand or creating their own business. Entrepreneurial activity plays a vital role in economic development through its creation of jobs, innovation, and increased market competitiveness. The results from SSES show that, even at age 15, students are selecting careers and developing entrepreneurial intention that align with their self-evaluations of their social and emotional skills.

Students with higher levels of curiosity and creativity are more likely to expect a career in the ICT, science and engineering sector

Higher levels of **curiosity** and, to a lesser extent **creativity** and **task performance skills** (**achievement motivation**, **self-control** and **persistence**), are associated with a greater expectation to take up a career in ICT, science and engineering (see Figure 4.16).

Figure 4.16. Relationships between students' social and emotional skills on expectation of a career in ICT, science and engineering, average across sites

Effect of a one standard deviation increase in a given social and emotional skill on the probability of expecting a career in ICT, science, and engineering



Note: Significant coefficients are coloured, non-significant coefficients are outlined. Model controls for gender, socio-economic, migrant status. ICT, science and engineering sector refers to ISCO codes 21, 25, 31 and 35.
Source: OECD, SSES 2023 Database Table B4.39

StatLink https://stat.link/w2shd7

The link between **curiosity** and anticipation of a career in the ICT, science and engineering suggests good alignment between students' skills and their career choice: the desire to seek out new information and understand more about a subject of phenomenon is a fundamental driver of scientific discovery and progress. The fact that this skill and task performance skills are those most strongly associated with expectation to complete tertiary education also demonstrates alignment, as high levels of education are typically a requirement of these careers.

In a minority of sites, students with lower levels of engaging with others skills are more likely to expect a career in the ICT, science, and engineering sector

In some sites, lower levels of **engaging with others skills** (**assertiveness**, **sociability,** and **energy**) are associated with higher expectations of a career in ICT, science or engineering sectors. This suggests that students who tend to be more timid and less confident socially might expect a career in ICT, science or engineering to not require much interaction with others and consist mostly of independent work. While the ability to work independently is often an important element of jobs in these sectors, interpersonal skills are also often a key requirement. These skills are put into practice when collaborating with other professionals, delivering presentations, and communicating findings to funders, policymakers and the general public. These sectors need individuals with leadership skills and aspirations, particularly given the relevance of these careers to the future labour market. As demonstrated during the COVID-19 pandemic, the scientific community need to be able to engage with others to improve scientific literacy, build trust among the general public and dispel misinformation. As the capability and impact of digitalisation, including artificial intelligence, continues to grow, leadership and communication skills among experts in these areas will be invaluable.

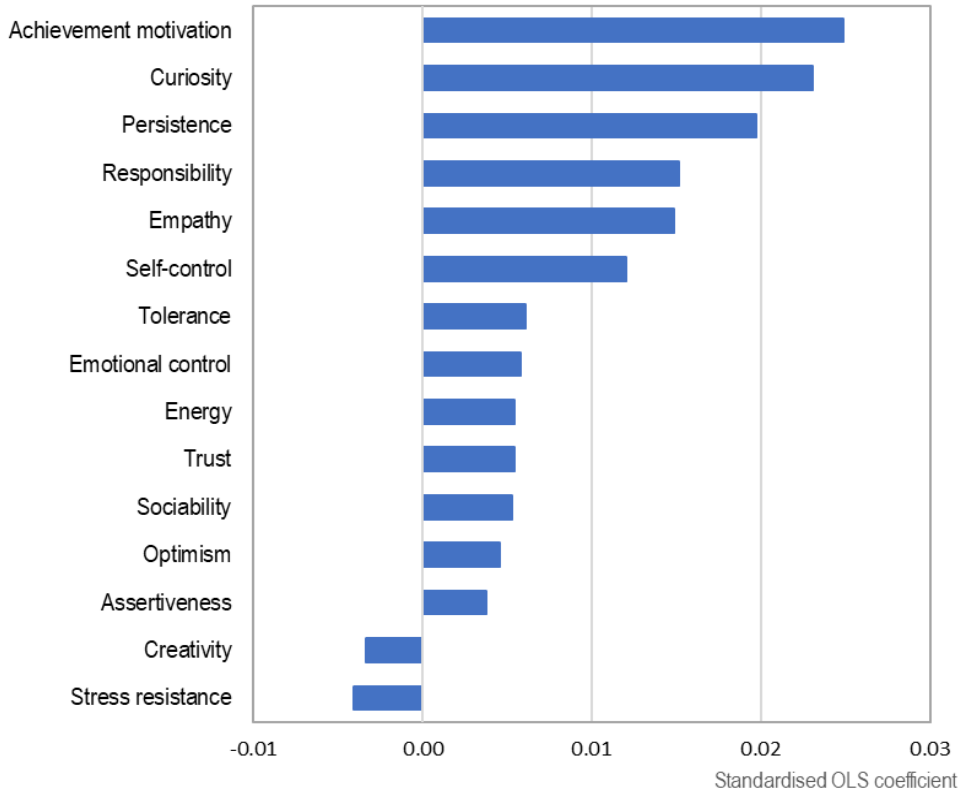
Students with higher levels of curiosity, task performance skills and empathy are more likely to expect a career in the health sector

Higher levels of **task performance skills (achievement motivation, persistence, responsibility and self-control)**, **curiosity** and **empathy** are associated with a greater expectation to take up a career in the Health sector in most sites (see Figure 4.17).

The most common job within the health sector anticipated by students is a doctor. These findings align with two of the most common motivations reported by medical students: an intellectual interest or a desire to help others (Goel et al., 2018[23]). In addition, the relationship between achievement motivation and persistence – the skills most strongly associated with academic performance – are consistent with the depth and length of study typically required for a career in medicine.

Figure 4.17. Relationships between students' social and emotional skills and expectation of a career in health, average across sites

Effect of a one standard deviation increase in a given social and emotional skill on the probability of expecting a career in health



Note: All coefficients are statistically significant with a threshold $p < 0.05$. Model controls for gender, socio-economic, migrant status. Health sector refers to ISCO codes 22,32 and 2634
Source: OECD, SSES 2023 Database Table B4.41

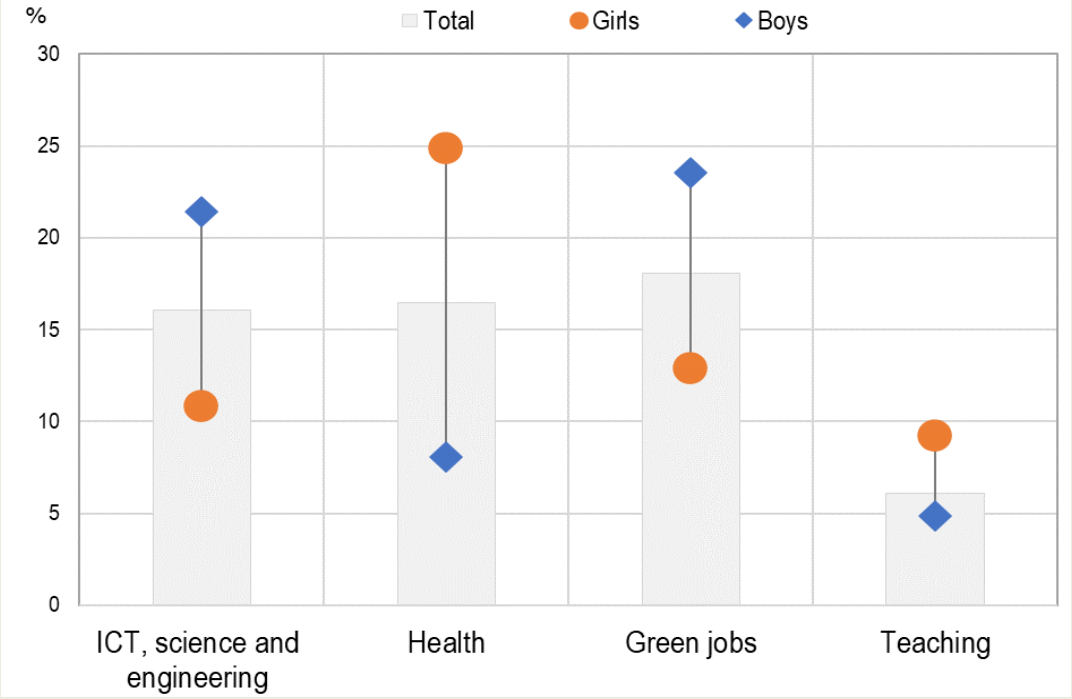
StatLink https://stat.link/2g7icq

Box 4.2. Levels of expectation of an in-demand occupation

On average across sites, careers in Information, Communication and Technology (ICT), science and engineering; health; and green jobs were similarly popular among 15-year-old students, with around 1-in-6 students expecting to work in each of these sectors in the future (see Table A4.37). A career in teaching is less attractive to 15-year-olds than other in-demand sectors, except in Delhi (India), Jinan (China) and Suzhou (China), where teaching was a similar or more popular choice compared to the other three sectors. Teaching was particularly unpopular in Dubai (United Arab Emirates), where only 1% of students expected to join this profession, as well as in Houston (United States), Bogotá (Colombia), Ottawa (Canada), Sintra (Portugal) and Sobral (Brazil). The comparative unpopularity of a career in teaching sits in the context of teaching shortages in many countries (OECD, 2023[21]).

Figure 4.18. Students expecting careers in in-demand sectors

Percentage of students who expect to work in: ICT, science and engineering; health; green jobs; teaching by gender, average across sites



Note: All differences are statistically significant with a threshold $p < 0.05$. ICT, science and engineering sector refers to ISCO codes 21, 25, 31 and 35; health to ISCO codes 22, 32 and 2634; and teaching to ISCO code 23. Green jobs refer to "environmentally friendly" occupations as classified in: Scholl, N., S. Turban and P. Gal (2023), "The green side of productivity: An international classification of green and brown occupations", OECD Productivity Working Papers, No. 33, OECD Publishing, Paris.
Source: OECD, SSES 2023 Database Tables B4.37 and B4.38

StatLink https://stat.link/7o0wnd

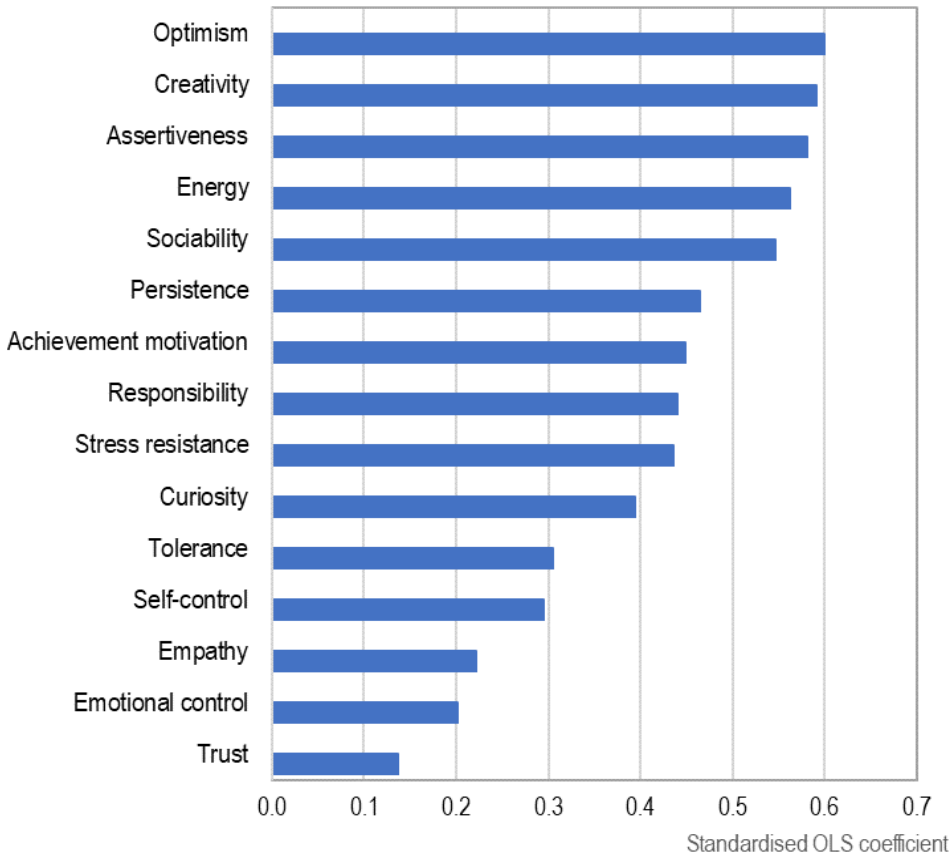
There are gender differences in expectations to take-up careers in these professions. In all sites, boys are more likely to express interest in the ICT, science and engineering and green jobs sectors than girls. In contrast, girls are more likely to express interest in careers in the health and teaching sectors. In many sites, advantaged students are more likely to expect a career in ICT, science and engineering than disadvantaged students, as well as careers in Health and green jobs in some sites.

Students with higher levels of engaging with others skills, optimism and creativity are more likely to expect to start their own business

Higher levels of most social and emotional skills are associated with an expectation to start a business in the future. These relationships are strongest and most consistent for **engaging with others skills** (**energy**, **assertiveness**, **sociability**), **optimism**, **creativity** and **task performance skills** (see Figure 4.19). See Figure 4.21 for these relationships in each site.

Figure 4.19. Relationships between students' social and emotional skills and entrepreneurial intention

Standardised regression coefficients of individual skills on students' entrepreneurial intention, average across sites



Note: All coefficients are statistically significant with a threshold $p < 0.05$. Model controls for gender, socio-economic and migrant status. Entrepreneurial intention is measured on a 0-10 scale.
Source: OECD, SSES 2023 Database Table B4.49

StatLink https://stat.link/iujz8l

As with students' career plans, these relationships show some alignment between students' career goals and their skills. Many of these social and emotional skills are associated with business creation, as well as subsequent management of the business and its success (Rauch and Frese, 2007[24]). However, it is likely from the high proportions of students who expect to start their own business - see Box 4.2- that many students' entrepreneurial intentions will either not be realised or be unsuccessful. For some students, this may be because their skills are not well-matched with their intentions. In particular, the fact that energy and optimism are more strongly related to this goal than achievement motivation – which tends to be a better predictor of success – may explain why many students with entrepreneurial intention do not start a

business or their efforts fail at an early stage. Risk-taking, energy and optimism are needed to recognise and exploit opportunities in uncertain situations, however they can also lead to unrealistic forecasts of the future. In particular, the combination of heighted risk taking and a lack of knowledge and experience is particularly associated with poor business decisions and early business failure (Korunka et al., 2010[25]; Åstebro et al., 2014[26]). In addition, while many students may have the skills needed to maximise their chances of success, these are only one factor in determining business success. Students' characteristics, personality and skills are important factors, but the environment in which a business is founded and the resources available to entrepreneurs tend to play a bigger role in avoiding failure (Korunka et al., 2010[25]).

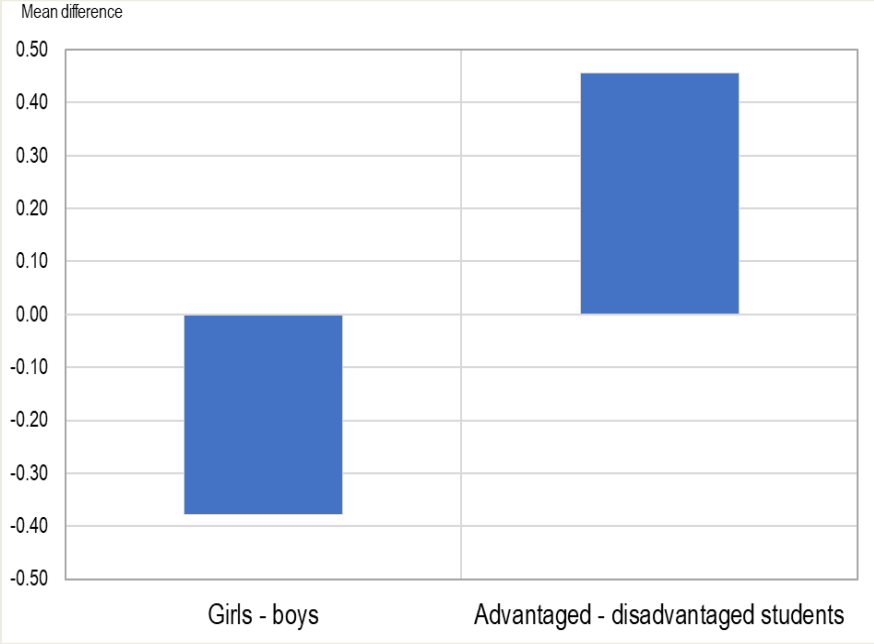
Box 4.3. Levels of expectation to start a business in participating sites

On average across sites, almost half of 15-year-old students say they are likely or very likely to start their own business. This expectation is more common in some sites than others. In Gunma (Japan) and Jinan (China), this expectation is found among fewer than 1-in-5 students whereas in Bogotá (Colombia) and Peru, around two-thirds of students have this expectation. In Kudus (Indonesia), this figure is close to three-quarters of students.

In most sites, boys are more likely to expect to start their own business, except in Kudus (Indonesia) and Peru, where girls were more likely, and in Bogotá (Colombia), Chile, Sobral (Brazil) and Ukraine, where there is no significant difference. Advantaged students are more likely to expect to start their own business compared to disadvantaged students, except in Peru, where disadvantaged students are more likely, and in Chile, Bogotá (Colombia) and Sobral (Brazil) where there is no significant difference.

Figure 4.20. Students' entrepreneurial intention by student characteristics

Difference in the students' entrepreneurial intention index, by gender and socio-economic status, average across sites



Note: Significant differences at a threshold of $p < 0.05$ are coloured, non-significant differences are outlined. Entrepreneurial intention is measured on a 0-10 scale.
Source: OECD, SSES 2023 Database Table B4.48

StatLink https://stat.link/ys0u1b

Figure 4.21. Relationships between students' social and emotional skills and entrepreneurial intention by sites

Standardised regression coefficients of individual skills on students' entrepreneurial intention by sites

Note: Significant coefficients are at a threshold of $p < 0.05$. Models control for gender, socio-economic and migrant status. Entrepreneurial intention is measured on a 0-10 scale.
Source: OECD, SSES 2023 Database Table B4.49

StatLink https://stat.link/zbp1e7

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Notes

1 Students' grades were collected from their schools in three subjects: reading, mathematics and arts. The relationships between social and emotional skills and students' grades are assessed in 21 sites spanning 19 countries (grade data was not available for Ottawa [Canada]).

2 Students were asked how often they had arrived late, skipped classes or a whole day of school during the past two weeks. The frequency of these behaviours and the relationships between social and emotional skills and these behaviours are assessed in 15 sites (data on these behaviours were not collected in SSES 2019).

3 In this paper, the authors refer to Conscientiousness, which is the Big 5 domain on which the Task performance skills domain is based within the SSES assessment framework.

4 15-year-old students' readiness for their future career was explored by asking them if they had undertaken any of the following career development activities: an internship, attending job shadowing or work-site visits, visiting a job fair, speaking to a career advisor, completing a questionnaire to understand their interests and abilities, researching careers online, and researching or touring a tertiary education institution. The average number of these activities undertaken and the relationships between social and emotional skills and the number of activities completed are assessed in 15 sites (data on these behaviours were not collected in SSES 2019).

5 Tertiary education builds on secondary education, providing learning opportunities in specialised fields of study. It includes what is commonly known as academic education, but also advanced vocational or professional education (OECD/Eurostat/UNESCO Institute for Statistics, 2015[27]). 15-year-old students were asked the highest level of education they expect to complete. The frequency of students' expectations to complete tertiary education and the relationships between social and emotional skills and this expectation are assessed in 22 sites.

6 15-year-old students were asked what job they expected to have at age 30. This information was used to categorise students as having:

Managerial or professional career plans: students who expect to have a managerial or professional occupation (based on the International Standard Classification of Occupations (ISCO) groups 1 and 2).

Uncertain career plans: students who did not cite a specific occupation they expect to have at age 30.

The frequency of students' expectations to have ambitious or uncertain career plans and the relationships between social and emotional skills and these expectations are assessed in 22 sites.

7 In this paper, the authors refer to Conscientiousness (the Big 5 domain on which the domain Task performance skills is based within the SSES assessment framework).

Annex A. Technical background

The OECD would like to acknowledge and thank the Ayrton Senna Institute (São Paulo, Brazil), a supporter for the development phases of the psychometric work on the assessment, and 2E Estudios y Evaluaciones, the contractor who conducted data processing and scaling for the SSES 2023 Main Survey.

Construction of social and emotional skill assessment scales

Social and emotional skill scales in SSES are scaled to fit approximately normal distributions with means around 500 and standard deviations around 100. In statistical terms, a one-point difference on a skill scale therefore corresponds to an effect size (Cohen's d) of 0.01; and a 10-point difference to an effect size of 0.10.

The SSES assessment, like all assessments, is susceptible to several possible measurement errors. Despite the extensive investments SSES makes in monitoring the process of translation, standardising the administration of the assessment, selecting questions, and analysing the quality of the data, complete comparability across countries and subpopulations cannot always be guaranteed. While self-reported questionnaires are a preferred method for measuring psychological traits, they can be affected by the respondents' interpretation of the questionnaire item. These self-reported measures are susceptible to multiple biases: social desirability bias, where students provide answers they think are more socially acceptable; reference-group bias, where students compare themselves to the group of persons around them while answering questions, and when the reference group itself can differ from one student to another, and from school to school; response style bias, where students from different cultures provide different patterns of responses, such as providing more extreme or more modest responses.

SSES acknowledges these potential biases and tries to minimize the effect of these potential biases on the variables and relations between variables presented in this report.

Acquiescent response style

Acquiescence refers to tendencies among respondents to provide their agreement or disagreement to different positively and negatively worded statements irrespective of the content, wording and direction. Such response styles may result in biased measures and calculation of acquiescence response sets (ARS) has been suggested as a way of modelling such response tendencies for Likert-type items (Primi et al., 2020[1]). One way to control for acquiescence is using a balanced set of items per scale in which positively and negatively worded items are paired within scales. One of the design features of the SSES assessment was to have both positively and negatively worded items within each item set measuring a particular construct scale. However, the items were not evenly balanced. To derive an acquiescence response set, 25 pairs of items across all scales were selected. To control for acquiescent response styles, Multiple Group Confirmatory Factor Analysis (MGCFA) models were estimated using acquiescence response sets as control variables as part of multiple indicator multiple cause (MIMIC) models, which generally showed improved model fit and higher levels of measurement invariance.

Trend scales

Some social and emotional skill assessment scale items were replaced with new items between SSES 2019 and SSES 2023. To allow skill scales to be compared between sites in SSES 2019 and 2023, a set of social and emotional skill assessment scales were constructed using only items in common between the two years. These scales are referred to as 'trend scales' and are used for all analyses that compare sites in SSES 2019 and SSES 2023 in this report. Social and emotional skill assessment scales constructed for SSES 2023 using both trend items and new items were also produced and these are referred to as 'main scales'.

Wherever possible, analyses use trend scales so that both SSES 2019 and SSES 2023 sites can be included. Where it is not possible to include SSES 2019 sites in analyses due to changes to the questionnaire between rounds – for example, levels of student absence and tardiness were not measured in SSES 2019 – main scales are used to compare between SSES 2023 sites.

Achievement motivation was measured in SSES 2019 as an 'additional skill' created from items used to evaluate other skills. In SSES 2023, achievement motivation is measured using a new set of dedicated items. For this reason, it was not possible to compute a trend scale for achievement motivation.

Cross-site comparability of social-emotional assessment scales

The SSES 2019 Technical Report (OECD, 2021[2]) and the SSES 2023 Technical Report (forthcoming) explain in detail the scaling procedures and the construct validation of all social-emotional assessment scales. This section presents a summary of the analyses carried out to validate the cross-site comparability of the social and emotional skill assessment scales used in this report. The internal consistency of scaled indices, factor analysis to assess construct dimensionality and the invariance of item parameters are the three approaches that SSES 2019 and 2023 used to examine the comparability of scaled indices across sites. Based on these three approaches, all indices examined in this report meet the reporting criteria. Internal consistency refers to the extent to which the items that make up an index are inter-related. Cronbach's Alpha was used to check the internal consistency of each scale within the sites and to compare it amongst sites. The coefficient of Cronbach's Alpha ranges from 0 to 1, with higher values indicating higher internal consistency. Similar and high values across sites are an indication of reliable measurement across sites. Commonly accepted cut-off values are 0.9 for excellent, 0.8 for good, and 0.7 for acceptable internal consistency. The reliability for each of the social and emotional skill assessment scales was higher than 0.7 in each site and for each scale (concretely in 178 of the 225) with following exceptions in SSES 2023:

- Achievement motivation: Delhi (0.65)
- Assertiveness: Bogotá (0.66), Delhi (0.42), Kudus (0.60), Sobral (0.67)
- Creativity: Delhi (0.58)
- Curiosity: Delhi (0.69), Kudus (0.66)
- Emotional control: Delhi (0.63)
- Empathy: Bogotá (0.68), Delhi (0.53), Kudus (0.60), Sobral (0.65)
- Energy: Bulgaria (0.67), Bogotá (0.68), Delhi (0.40), Kudus (0.64), Sobral (0.60), Ukraine (0.67)
- Optimism: Delhi (0.53), Kudus (0.68)
- Persistence: Delhi (0.60), Kudus (0.69)
- Responsibility: Delhi (0.59), Sobral (0.68)
- Self-control: Bulgaria (0.61), Bogotá (0.66), Delhi (0.51), Kudus (0.47), Mexico (0.69), Peru (0.69), Sobral (0.62), Ukraine (0.64)
- Sociability: Delhi (0.66), Kudus (0.68)

- Stress resistance: Bogotá (0.69), Delhi (0.42), Kudus (0.51), Sobral (0.65)
- Tolerance: Bogotá (0.64), Delhi (0.56), Kudus (0.61), Mexico (0.69), Sobral (0.66), Ukraine (0.64)
- Trust: Bulgaria (0.69), Delhi (0.50)

Exceptions for SSES 2019 are noted in the SSES 2019 Technical Report (OECD, 2021[2]).

The analyses of the SSES data involved a series of iterative modelling and analysis steps. These steps included the application of confirmatory factor analysis (CFA) to evaluate constructs and a multiple-group confirmatory factor analysis (MGCFA) to review measurement invariance across groups (gender, age cohorts and sites). In assessing measurement equivalence for SSES trend scales, comparisons were made between cycle groups (Round 1 and Round 2). In addition, MGCFA models were estimated using acquiescence response sets as control variables as part of multiple indicator multiple cause (MIMIC) models, which generally showed improved model fit and higher levels of measurement invariance.

All items had a Likert-type format with five categories and included both positively and negatively worded statements. The five categories were ‘strongly disagree’, ‘disagree’, ‘neither agree nor disagree’, ‘agree’ and ‘strongly agree’. Each item was scored from 0 to 4 for items with positively worded statements and reverse scored for the negatively worded ones.

The SSES student surveys in Delhi (India), Helsinki (Finland), Mexico and Ukraine were conducted in Autumn 2023 and were therefore not included in the data for estimating the scaling parameters for the student direct assessment.

In testing for measurement invariance, three different models were specified and compared (i.e. configural, metric and scalar models):

- Configural invariance is the least constrained model. In this model, it is assumed that the items measuring the underlying latent construct are equivalent across all groups of reference (e.g. sites). If the strength of the associations between the groups are the same, then the latent construct is assumed to have the same meaning for all groups (i.e. the structure of the construct is the same). Configural invariance would allow examining whether the overall factor structure stipulated by the measures fit well for all groups in your sample. However, for scales reaching configural invariance, neither scores nor their associations can be directly compared across groups.
- The metric level of invariance is achieved if the structure of the construct is the same across groups (i.e. configural invariance is achieved) and the strength of the association between the construct and items (factor loadings) is the same across groups. Metric invariance would allow for comparisons of within-group associations among variables across groups (e.g. correlations or linear regression), but not for the comparison of scale mean scores.
- Scalar level invariance is achieved when metric invariance has been achieved and the intercepts/thresholds for all items across groups are equivalent. When scalar invariance is achieved, it is assumed that differences in scale means across groups are free of any cross-group bias. At this level of measurement equivalence, scale scores can be directly compared across groups.

Results of the MGCFA are presented in Table A.1. Finally, IRT (Item Response Theory) Generalised Partial Credit Model (GPCM) was used to scale items and generate scores.

Table A.1. Levels of measurement invariance for social and emotional skills scales

	Age cohorts	Gender	Sites
Curiosity	Metric	Metric	Metric
Tolerance	Metric	Scalar	Metric
Creativity	Scalar	Scalar	Metric
Responsibility	Metric	Scalar	Metric
Self-control	Metric	Scalar	Metric
Persistence	Metric	Scalar	Metric
Achievement motivation	Metric	Scalar	Metric
Sociability	Metric	Scalar	Metric
Assertiveness	Scalar	Scalar	Metric
Energy	Metric	Metric	Metric
Empathy	Metric	Metric	Metric
Trust	Metric	Scalar	Metric
Stress resistance	Scalar	Metric	Metric
Optimism	Scalar	Scalar	Metric
Emotional control	Scalar	Metric	Metric

Construction of background indices

This section explains the indices derived from the SSES 2023 background questionnaires. Several SSES measures reflect indices that summarise responses from students to a series of related questions. There are two different types of indices:

- Simple indices: constructed using an arithmetic transformation or recoding of one or more items in exactly the same way across assessments. Here, item responses are used to calculate meaningful variables, such as the recoding of the four-digit International Standard Classification of Occupations (ISCO) 2008 codes into “Highest parents’ socio-economic index (HISEI)”.
- Scale indices: constructed through combining multiple items which are intended to measure an underlying latent construct. The indices were scaled using Generalised Partial Credit Model (GPCM) unless otherwise indicated. For example, the index of socio-economic status based on data from parental education, parental occupation and home possessions, was derived from component scores obtained through principal component analysis.

Student-level simple indices

Student age

Student age (Age_Std) was calculated as the age in months at the time of the questionnaire administration. It is the difference between the date the student questionnaire was administered and the student’s date of birth. Student age was derived from information about the student’s date of birth and the actual start date of the administration of the student questionnaire. Generally, data from the Student Tracking Forms (STF) were given priority over information provided by students’ when responding to the questionnaire.

Gender

A student gender variable (Gender_Std) was computed by using valid codes (i.e. not missing) from the student questionnaire variable STQM00401 STF (1 for girls, 2 for boys and 3 for other). When Gender_Std had a missing value, STF_Gender from Student Tracking Form was used.

Grades

SSES collected information on school grades in three subjects: reading (Sgrade_Read_Lang), mathematics (Sgrade_Math) and the arts (Sgrade_Arts). As different sites used different grading systems, all grades were transformed on a scale from 1 to 50.

Parents' level of education

In the student questionnaire, respondents were asked about the highest level of education of each of their parents with questions using nationally appropriate terms according to the International Standard Classification of Education scheme (ISCED) (UNESCO, 2011[3]). Respondents were asked to select from ten levels ranging from no completion of ISCED level 1 (primary education), through to completion of ISCED level 8 (Doctoral or equivalent level). An index, HISCED, was derived by taking the highest level of education of either parent from the student questionnaire. If the data was only available for one parent, then that is used as the highest level.

Parents' highest occupational status

Occupational data was collected using open-ended questions in the student questionnaires (STQM011-STQM014). The responses were coded to four-digit ISCO codes and then mapped to the international socio-economic index of occupational status (ISEI) (Ganzeboom and Treiman, 2003[4]). The highest occupational status of parents (HISEI) corresponds to the higher ISEI score among parents or to the only available parent's ISEI score. A higher ISEI score indicates higher levels of occupational status.

Immigrant background

Information on the country of birth of students and their parents was also collected. Included in the database are three country-specific variables related to the country of birth of the student, and their mother and father (STQM11901, STQM11902 and STQM11903). The variables indicate whether the student, mother and father were born in the country of assessment or elsewhere. The index on immigrant background (IMMBACK) is calculated from these variables and has the following categories: 1) native students (students who are born in the country of assessment and students who had at least one parent born in the country of assessment), and 2) non-native students (students who are born abroad and/or parents who are born abroad). Students with missing responses for either the student or for both parents were given missing values for this variable.

Life satisfaction

SSES asked (STQM13501) students: "Overall, how satisfied are you with your life as a whole these days?". Students answered the question on a 10-point scale where 0 represents "not at all satisfied" and 10 represents "completely satisfied". The final life satisfaction index variable (ST_LIFESAT) was transformed, with 50 the score of an average student and 10 the standard deviation.

Education expectations

SSES asked students what level of education they expect to complete (STQM13901). Response categories are based on the International Standard Classification of Education (ISCED). Response categories range from ISCED level 2 (lower secondary education), through to ISCED level 8 (Doctoral or equivalent level).

Career expectations

Students were asked "'what kind of job [they] expect to have when [they] are about 30 years old" (STQM02401). This was an open-ended question and students were asked to enter a job title. Responses to this question are recoded based on the International Standard Classification of Occupations (ISCO) to a 4-digit ISCO-08 code. This variable was used to derive several indices related to career expectations:

- **Expectations of a managerial or professional career**: refers to ISCO major groups 1 and 2.
- **Uncertain expectations**: refers to students who did not cite a specific occupation they expect to have at age 30.
- **Health professionals**: refers to ISCO sub-major codes 22 and 32 and code 2634 which includes health professionals (doctors, nurses, veterinarians), health associated professionals (medical and pharmaceutical technicians, nursing and midwifery associate professionals and veterinary technicians and assistants) and psychologists.
- **ICT, science and engineering professionals**: refers to ISCO sub-major codes 21, 25, 31 and 35 which includes science and engineering professionals, information and communications technology professionals, science and engineering associate professionals and information and communications technicians.
- **Green jobs:** refers to "environmentally friendly" occupations as classified in (Scholl, Turban and Gal, 2023[5])
- **Teaching professionals**: refers to ISCO sub-major group 23 which includes university and higher education teachers, vocational education teachers, secondary education teachers and primary school and early childhood teachers.

Career development activities

SSES asked students if they have done any of the following activities to find out about future study or types of work: "attended job shadowing or work-site visits", "visited a job fair". "spoke to a career advisor", "completed a questionnaire to find out about [their] interests and abilities", "researched the internet for information about careers", "went to an organised tour in an ISCED 3-5 institution" or "researched the internet for information about ISCED 3-5 programmes". The number of activities each student had done was calculated.

Entrepreneurial intention

SSES asked (STQM14101) students: "Do you see yourself starting your own business or company in the future?". Students answered the question on a 10-point scale where 0 represents "not at all likely" and 10 represents "definitely".

Student-level scale indices

Current psychological well-being

The index of current psychological well-being (ST_WELLBEING) was constructed using students responses about how they have been feeling over the last two weeks ("At no time", "Some of the time", "More than half of the time", "Most of the time", "All of the time") in relation to the following statements: "I have felt cheerful and in good spirits", "I have felt calm and relaxed", "I have felt active and vigorous", "I have woken up feeling fresh and rested" and "My daily life was filled with things that interest me". Higher scale scores correspond to higher perceived levels of positive student well-being. The final current

psychological well-being index variable (ST_WELLBEING) was transformed, with 50 the score of an average student and 10 the standard deviation.

Test and class anxiety

The index of test and class anxiety (ST_ANXTEST) was constructed using students responses about the extent to which they agree (“strongly disagree”, “disagree, “neither agree nor disagree”, “agree”, “strongly agree”) with the following statements: “I often worry that it will be difficult for me taking a test”, “Even if I am well prepared for a test I feel very anxious”, “I get very tense when I study for a test”, “I worry that I will get poor marks in school” and “I feel anxious about failing in school”. Students received higher scores on this scale if they indicated higher levels of anxiety. The final test and class anxiety index variable (ST_ANXTEST) was transformed, with 50 the score of an average student and 10 the standard deviation.

Health behaviours

The index of health behaviours (ST_HEALTHBEH) was constructed using students responses about how often (“Never”, “Once a week or less”, “2-3 days a week”, “4-6 days a week”, “Every day”) they do the following behaviours: “Eat breakfast”, “Eat fruit and vegetables”, “Do at least 20 minutes of vigorous physical activity”, “Sleep 8 hours of more at night” and “Smoke cigarettes or drink alcohol”. Students received higher scores on this scale if they indicated healthier behaviours. The final health behaviours index variable (ST_HEALTHBEH) was transformed, with 50 the score of an average student and 10 the standard deviation.

Satisfaction with relationships

The index of students’ satisfaction with their relationships (ST_RELSATIF) was constructed using students’ responses about how satisfied they are with their relationships with their parents or guardians, friends, classmates and teachers. Students answered these question – one for each relationship - on a 10-point scale where 0 represents “not at all satisfied” and 10 represents “completely satisfied”. Students received higher scores on this scale if they were more satisfied with their relationships. The final relationship satisfaction index variable (ST_RELSATIF) was transformed, with 50 the score of an average student and 10 the standard deviation.

Body image

The index of students’ satisfaction with their body image (ST_BODYIMAGE) was constructed using students’ responses about the extent to which they (“strongly disagree”, “disagree, “neither agree nor disagree”, “agree”, “strongly agree”) with the following statements: “I like my look just the way it is”, “I consider myself to be attractive”, “I am concerned about my weight” and “I like my body”. Students received higher scores on this scale if they indicated higher levels of positive body image. The final body image index variable (ST_BODYIMAGE) was transformed, with 50 the score of an average student and 10 the standard deviation.

Bullying

The index of bullying (ST_BULLY) was constructed using students responses (STQM039) about how often (“Never or almost never”, “A few times a year”, “A few times a month”, “Once a week or more”) they experienced the following in the past 12 months: “Other students left me out of things on purpose”, ”“Other students made fun of me”, “I was threatened by other students”, “Other students took away or destroyed things that belonged to me” and “I got hit or pushed around by other students”. The bullying scale asked students how often they had experienced bullying in school over the past 12 months by reporting on the

frequency of the situations mentioned above. Students received higher scores on this scale if they indicated a higher frequency of occurrence of these situations. The final bullying index variable (ST_BULLY) was transformed, with 50 the score of an average student and 10 the standard deviation.

Absence and tardiness

The index of students' absence and tardiness (ST_DISRUP) was constructed using students' responses about how often in the past two weeks ("Never", "One or two times", "Three or four times", "Five or more times") they do the following: "Arrived late for school", "Skipped some classes" and "Skipped a whole school day". Students received higher scores on this scale if they indicated higher levels of absence and tardiness. The final absence and tardiness index variable (ST_DISRUP) was transformed, with 50 the score of an average student and 10 the standard deviation.

Scaling related to the index of socio-economic status

A measure of parental socio-economic status (SES) was derived for each site, based on three indices: highest level of parental occupation (HISEI), highest level of parental education (PARED) and household possessions (HOMEPOS). The household possessions index (HOMEPOS) consists of student-reported possessions at home, resources available at home and the number of books at home. HOMEPOS is a summary index of all household and possession items (STQM130, STQM131, and STQM1334 and STQM134). Computation of missing values for respondents with missing data for only one index variable were imputed with predicted values plus a random component based on a regression of the other two index variables within sites. If there was missing data on more than one index variable, the index was not computed for that student and a missing value was assigned. Variables with imputed values were then used for a principal component analysis at the site level. After the imputation process, each of the three indices were standardised to have a mean of 0 and a standard deviation of 1 across the participant sites. Lastly, the arithmetic mean of the three standardised indices was calculated to create the SES scale score for each student.

Cross-site comparability of background scaled indices

While the SSES 2019 Technical Report (OECD, 2021[2]) and the SSES 2023 Technical Report (forthcoming) explain in detail the scaling procedures and the construct validation of all contextual questionnaire data, this section presents a summary of the analyses carried out to validate the cross-site comparability of the main scaled indices used in this report. The internal consistency of scaled indices, factor analysis to assess construct dimensionality and the invariance of item parameters are the three approaches that SSES used to examine the comparability of scaled indices across sites. Based on these three approaches, all indices examined in this report met the reporting criteria.

Internal consistency refers to the extent to which the items that make up an index are inter-related. Cronbach's Alpha was used to check the internal consistency of each scale within the sites and to compare it amongst sites. The coefficient of Cronbach's Alpha ranges from 0 to 1, with higher values indicating higher internal consistency.

Similar and high values across sites are an indication of reliable measurement across sites. Commonly accepted cut-off values are 0.9 for excellent, 0.8 for good, and 0.7 for acceptable internal consistency. The average reliability for each of the scale indices (current psychological well-being, test and class anxiety, satisfaction with relationships, body image and bullying) described above was higher than 0.70, and by site only in the following exceptions:

- Current psychological well-being: Delhi (0.61)

- Body image: Delhi (0.49), Jinan (0.67), Kudus (0.42), Ukraine (0.63)

The average reliability for the scale indices Health behaviours and Absence and tardiness was lower, 0.58 and 0.68 respectively, being systematically low for all sites only with the following exceptions of acceptable internal consistency:

- Absence and tardiness: Bulgaria (0.76), Helsinki (0.76) and Turin and Emilia-Romagna (0.75)

Exceptions for SSES 2019 are noted in the SSES 2019 Technical Report (OECD, 2021[2]).

The analyses of the background scale indices also involved a series of iterative modelling and analysis steps. Items from all scales were initially evaluated through an exploratory factor analysis (EFA). A confirmatory factor analysis (CFA) was then carried out on the scales, with only acceptable items from the EFA, to assess the constructs. Generally, maximum likelihood estimation and covariance matrices are not appropriate for analyses of categorical questionnaire items because the approach treats items as if they are continuous. Therefore, the SSES analysis relied on robust weighted least squares estimation (WLSMV) models (Muthén, du Toit and Spisic, 1997[6]; Flora and Curran, 2004[7]) to estimate the confirmatory factor analysis.

For ease of interpretation, all negatively worded items were reverse coded, so the highest value for each item represents a higher attribute.

The SSES student surveys in Delhi (India), Helsinki (Finland), Mexico and Ukraine were conducted in Autumn 2023 and were therefore not included in the data for estimating the scaling parameters for the student background questionnaire. Furthermore, a multiple-group confirmatory factor analysis (MGCFA) was used to test measurement invariance. For the student questionnaire, the MGCFA was evaluated for the following groups; gender, age cohorts and sites. In testing for measurement invariance, three different models were specified and compared (i.e. configural, metric and scalar models):

- Configural invariance is the least constrained model. In this model, it is assumed that the items measuring the underlying latent construct are equivalent across all groups of reference (e.g. sites). If the strength of the associations between the groups are the same, then the latent construct is assumed to have the same meaning for all groups (i.e. the structure of the construct is the same). Configural invariance would allow examining whether the overall factor structure stipulated by the measures fit well for all groups in your sample. However, for scales reaching configural invariance, neither scores nor their associations can be directly compared across groups.
- The metric level of invariance is achieved if the structure of the construct is the same across groups (i.e. configural invariance is achieved) and the strength of the association between the construct and items (factor loadings) is the same across groups. Metric invariance would allow for comparisons of within-group associations among variables across groups (e.g. correlations or linear regression), but not for the comparison of scale mean scores.
- Scalar level invariance is achieved when metric invariance has been achieved and the intercepts/thresholds for all items across groups are equivalent. When scalar invariance is achieved, it is assumed that differences in scale means across groups are free of any cross-group bias. At this level of measurement equivalence, scale scores can be directly compared across groups. Results of the MGCFA are presented in Table A.2. Finally, items were scaled using the Generalised Partial Credit Model (GPCM).

Note: More detailed information on measurement invariance of the scales in the background questionnaires can be found in chapter 14 of the SSES 2019 Technical Report (OECD, 2021[2]) and in the SSES 2023 Technical Report (forthcoming).

Table A.2. Levels of measurement invariance – scales in the student background questionnaire

	Age cohorts	Gender	Sites
Current psychological well-being	Metric	Scalar	Metric
Test and class anxiety	Scalar	Scalar	Metric
Health behaviours	Metric	Scalar	Metric
Satisfaction with relationships	Metric	Scalar	Metric
Body image	Metric	Metric	Metric
Bullying	Scalar	Scalar	Metric
Absence and tardiness	Metric	Scalar	Metric

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Social and Emotional Skills for Better Lives

FINDINGS FROM THE OECD SURVEY ON SOCIAL AND EMOTIONAL SKILLS 2023

Social and Emotional Skills for Better Lives presents results from the OECD's Survey on Social and Emotional Skills (SSES) 2023. SSES is the largest international effort to collect data on these skills among 10- and 15-year-old students.

The report explores how the following skills differ by socio-demographic groups and how they relate to key life outcomes: task performance skills (persistence, responsibility, self-control and achievement motivation); emotional regulation skills (stress-resistance, emotional control and optimism); engaging with others skills (assertiveness, sociability and energy); open-mindedness skills (curiosity, creativity and tolerance); and collaboration skills (empathy and trust).

The results show that students' social and emotional skills – or 21st century skills – are linked to better life outcomes, including academic success, greater life satisfaction, healthier behaviours, less test and class anxiety, and more ambitious career plans. The Survey also finds that these skills are inequitably distributed among students by age, gender, and socio-economic background.

SSES 2023 was conducted in Bulgaria, Chile, Peru, Spain, Mexico, Ukraine, Bogotá (Colombia), Delhi (India), Dubai (United Arab Emirates), Emilia-Romagna (Italy), Gunma (Japan), Helsinki (Finland), Jinan (China), Kudus (Indonesia), Sobral (Brazil) and Turin (Italy). Results are compared to SSES 2019, which took place before the COVID-19 pandemic.

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