

An overview of the cognitive domains and health-related variables in the Program for the International Assessment of Adult Competencies (PIAAC)

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About PIAAC

PIAAC is an international large-scale assessment administered in 2011-12 in 23 countries

It assessed 16 - to 65-year-olds, non-institutionalized, residing in each country, irrespective of nationality, citizenship, or language status

2012 US main study sample size:

- 5,000 nationally representative

2014 US National Supplement study sample size:

- 3,600 in household: focus on young adults 16-34 & unemployed & 66-74
- 1,200 (16-74) in state, federal and private prisons

Total Sample 9,800

Assessment
was
conducted
only in English
in the U.S.:

The background survey was conducted in English or Spanish. About 4% could not complete the BQ because of language difficulties or learning or mental disabilities, and 1% could not complete it for other reasons.

Participating Countries

2012		2015
Australia	Italy	Chile
Austria	Japan	Greece
Belgium	Korea, Rep of	Indonesia
Canada	Netherlands	Israel
Cyprus	Norway	Lithuania
Czech Republic	Poland	New Zealand
Denmark	Slovak Republic	Singapore
Estonia	Spain	Slovenia
Finland	Sweden	Turkey
France	United Kingdom	
Germany	United States	
Ireland		

How is PIAAC Carried Out?

- PIAAC is administered in face-to-face interviews in the homes of nationally representative samples of adults
- The primary mode of delivery is laptop computers
- Adults who are unable to use or unwilling to take the assessment on a computer are provided with a paper and pencil assessment booklet
- Adults who took the paper and pencil assessment and those with very low literacy skills also responded to a set of reading component measures

Definitions of PIAAC direct assessment domains

Literacy is understanding, evaluating, using and engaging with written texts

*to participate in society,
to achieve one's goals, and
to develop one's knowledge and potential.*

Numeracy is the ability to access, use, interpret, and communicate mathematical information and ideas, in order to engage in and manage the mathematical demands of a range of situations in adult life.

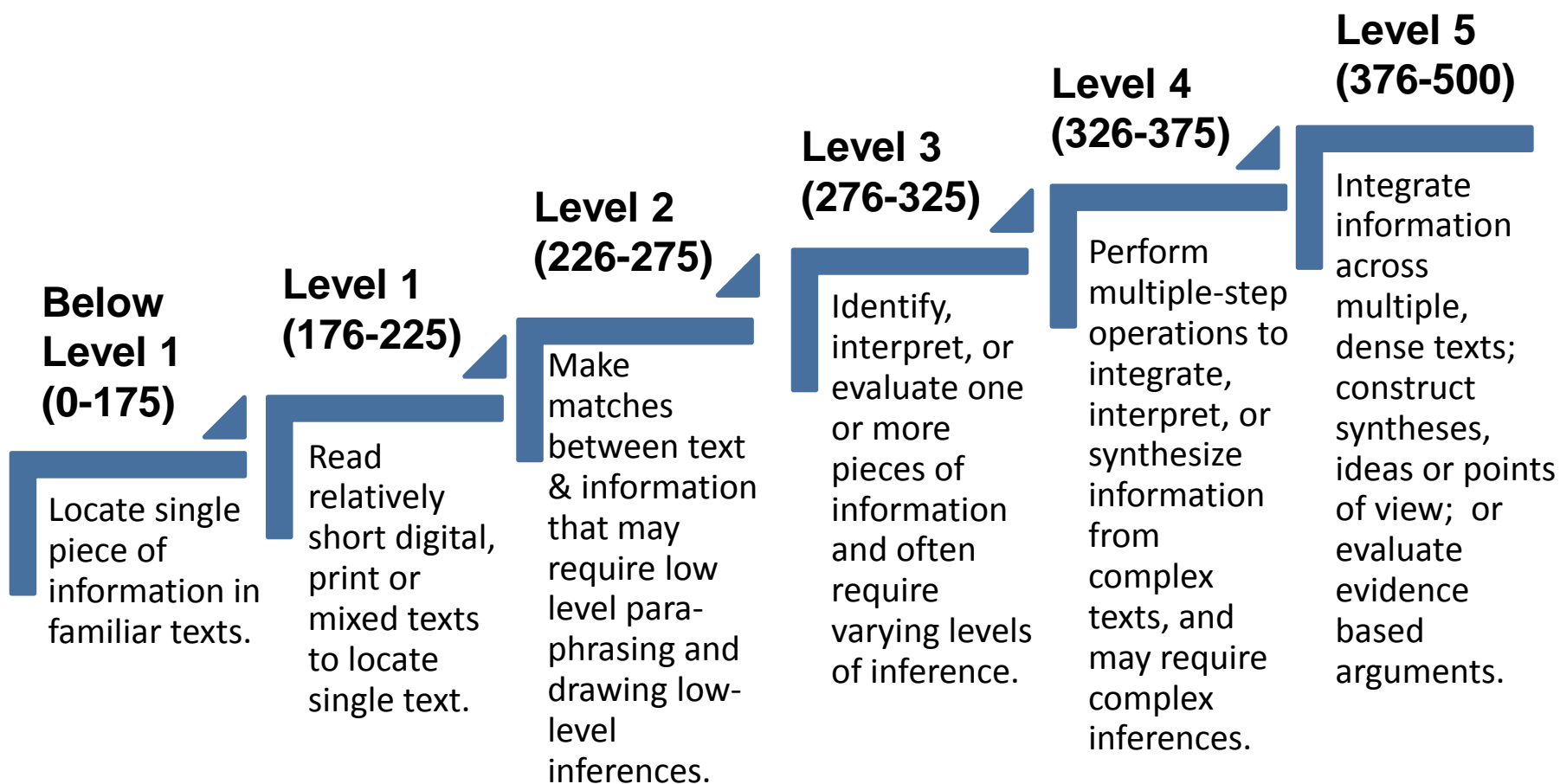
Problem solving in technology-rich environments involves using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks.

What PIAAC Reports

Average Scores: Reported on a scale of 0-500 for all domains.

Proficiency Levels: Reported as the percentages of adults scoring at six performance levels in literacy and numeracy and at four performance levels in problem solving in technology-rich environments.

These descriptions of the PIAAC Proficiency Levels for Literacy define what adults can do at each level.



Look at the job search results webpage. Click the box next to a company name to answer the question below.

Which company is looking for an employee to work at night?

Literacy item
Level = 1



URL:



Work Links

Connecting you to the BEST Jobs

Refine results

Work Type

- ☐ Full Time *only*
- ☐ Part Time *only*
- ☐ Temporary *only*
- ☐ Casual/Vacation *only*

Salary

\$0 - \$200k+ per year | *hour*



Refine

6 jobs found

Office Administrative Assistant

☐ [M.A.S.S. Media](#)

- Exciting media relations company
- Report directly to senior management
- Accounts experience required
- Salary negotiable

Join our dynamic and progressive team of professionals.

Administration & Office Support > Administrative Assistants

Client Liaison Officer

☐ [Foss & Russ Engineering Ltd](#)

Use your excellent communication skills to keep customers informed about our latest products. You will learn to send out emails with images embedded and produce targeted marketing materials. Great company training program available to all in-coming employees. Full-time position available immediately.

Engineering > Customer Service

Look at the article about the gender gap. Highlight the sentence in the article that answers the question below.

According to the article, what has the impact of increased educational attainment been over the past 50 years?

Literacy item
Level = 4 (low)

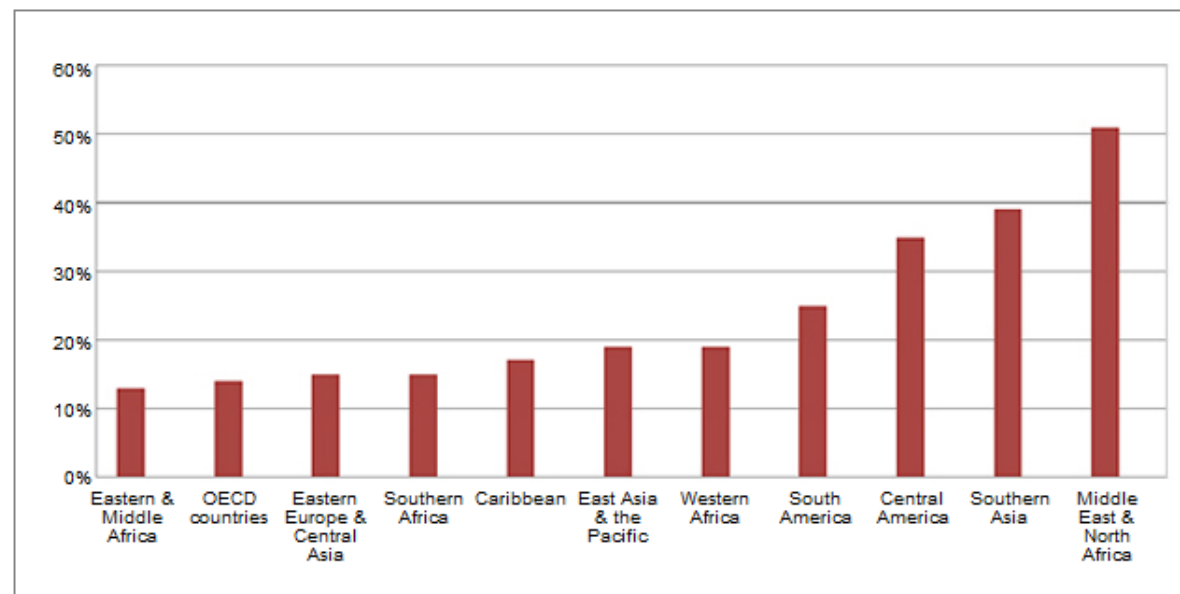
Tackle Gender Gap to Boost Growth

Breaking down barriers to gender equality in education, employment and entrepreneurship would create new sources of economic growth and help make better use of everyone's skills, according to a new report by the OECD, an organization of some 34 countries promoting policies to improve economic and social well being.

Overall, good progress has been made in education. Increased educational attainment is responsible for half of the GDP¹ growth across the OECD over the last 50 years. Every extra year of education of the population leads to an average increase of around 9% in GDP per capita, says the report. More progress will be essential for countries to benefit from the economic contributions women can make and to not waste the years of investment in the education of girls and young women. Ensuring that more girls have access to higher levels of education is also key for developing countries.

Employment rates are 13 percentage points lower for women than for men in OECD countries. As Figure 1 shows, gender differences in employment rates vary considerably in different regions of the world. Women are also much more likely to work part-time. Better and more affordable child care and more flexible work conditions are key to helping women to be in paid work or increase hours and work full time, says the report.

Figure 1: Gender gap in employment rates worldwide, 2010



Pay gaps also remain stubbornly high. On average in OECD countries women earn 16% less than men.

PIAAC Background Questionnaire

Focused on identifying:

- Skills that are critical to functioning successfully in today's society,
- How participants acquire those skills, and
- How those skills are distributed.

Areas of BQ include:

- Education and training, present and past,
- Work experience,
- Literacy, numeracy and ICT skill use at work and at home,
- Other 21st century skills used at work,
- Personal traits, and background information.

US Background Questionnaire

Countries are allowed to:

- Add up to 5 minutes of country-specific items.
- Adapt items (subject to permission)
- US additions and adaptations are related to:
 - Education (current/past/required)
 - Country of origin/language/ethnicity
 - Training courses
 - Occupation
 - **Health**
 - Economic Sector
 - Earnings

Overview of U.S. Results: Literacy, Numeracy, Digital Problem-Solving

How did we do compared to other countries?

Literacy	Numeracy	PS-TRE
Finland	Finland	Finland
Netherlands	Flanders-Belgium	Australia
Australia	Netherlands	Sweden
Sweden	Sweden	Norway
Norway	Norway	Netherlands
Estonia	Denmark	Austria
Flanders-Belgium	Slovak Rep.	Denmark
Czech Rep.	Czech Rep.	Czech Rep.
Slovak Rep.	Austria	Korea, Rep. of
Canada	Estonia	Germany
Korea, Rep. of	Germany	Canada
U.K.	Australia	Slovak Rep.
Denmark	Canada	Flanders-Belgium
Germany	Cyprus	U.K.
United States	Korea, Rep. of	Estonia
Austria	U.K.	United States
Cyprus	Poland	Ireland
Poland	Ireland	Poland
Ireland	France	Italy
France	United States	Spain
Spain	Italy	Cyprus
Italy	Spain	France

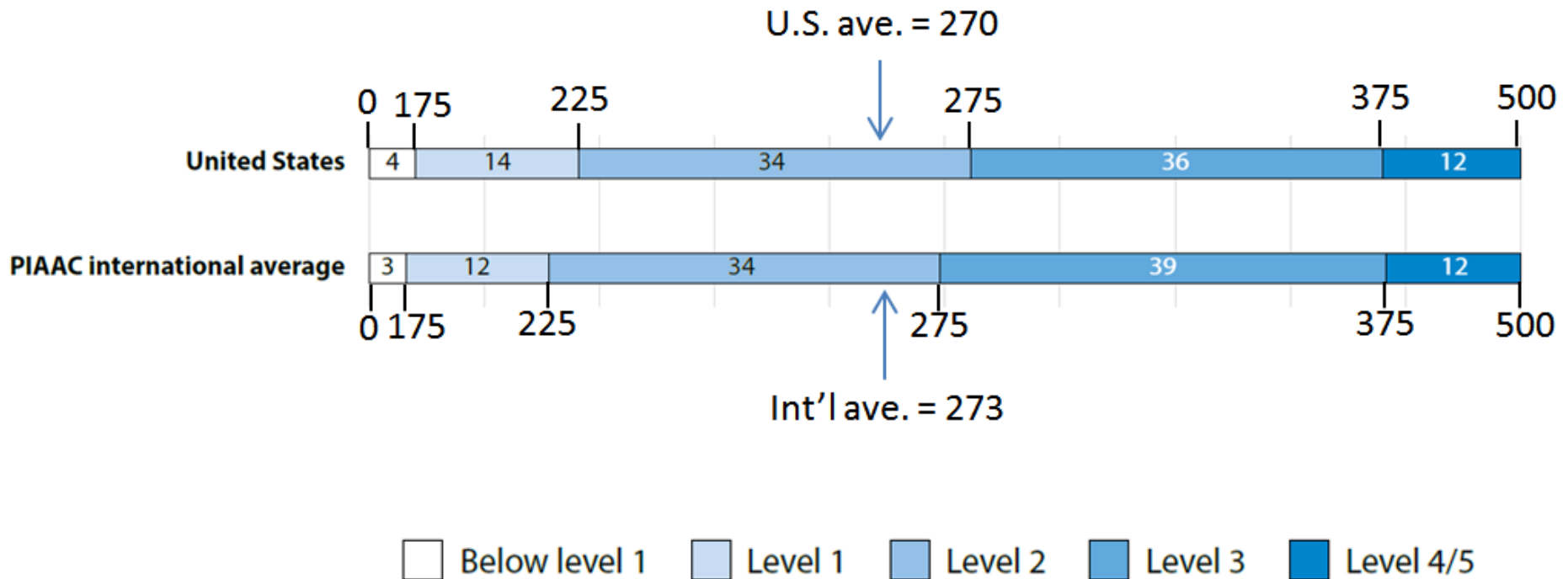
- The U.S. ranked lower than most other countries in all three domains.
- The US ranked better in Literacy than in Numeracy or Problem Solving in technology-rich environments.

The U.S. average literacy score (270) was lower than the international average (273).

Literacy	
Japan	296
Finland	293
Netherlands	291
Australia	289
Sweden	287
Norway	285
Estonia	283
Flanders-Belgium	281
Czech Rep.	279
Slovak Rep.	277
Canada	275
Korea, Rep. of	273
U.K.	271
Denmark	269
Germany	267
United States	270
Austria	265
Cyprus	263
Poland	261
Ireland	259
France	257
Spain	255
Italy	250

- Scores on literacy ranged from 296 (Japan) to 250 (Italy)
- U.S. scores were:
 - Lower than in 12 countries
 - Not significantly different than in 5 countries
 - Higher than in 5 countries

The U.S. average is low because a higher proportion of U.S. adults are at the lowest levels (level 1 and below level 1) of literacy.



PIAAC Health Information

Previous adult literacy assessments have found health literacy to be highly correlated with literacy

- In the National Assessment of Adult Literacy (NAAL), the correlations between the health scale and the 3 other scales, prose, document and quantitative, were .87, .83, and .86, respectively.
- The domains assessed for PIAAC were decided at the international level.

Health Measures in the U.S. Background Questionnaire

The U.S. Background Questionnaire included questions on:

- Health status
- Health insurance coverage
- Sources of information about health issues
- Preventive health practices

Health Status Questions

- In general, would you say your health is excellent, very good, good, fair, or poor?
- Do you have any difficulty seeing the words and letters in ordinary newspaper print even when wearing glasses or contact lenses if you usually wear them?
- Do you have any difficulty hearing what is said in a normal conversation with another person even when using a hearing aid if you usually wear one?
- Have you ever been diagnosed or identified as having a learning disability?

Health insurance coverage

- Do you have any kind of medical insurance or are you enrolled in any kind of program that helps to pay for your health care?

Sources of information about health issues

How much (a lot, some, a little, none) information about health issues do you get from ...

- newspapers?
- magazines?
- internet?
- radio?
- television?
- books or brochures?
- family members, friends, or co-workers?
- talking to health care professionals, such as doctors, nurses, therapists, or psychologists?

Preventive health practices

In the past year, have you ...

- gotten a flu shot?
- had your vision checked?
- visited a dentist?

Preventative health practices

In the past year, have you ...

- had a mammogram? (females, ages 40+)
- had a pap smear? (females, ages 18+)
- been screened for colon cancer? (all genders, ages 50+)
- been screened for prostate cancer? (males, ages 50+)
- been screened for osteoporosis? (all genders, ages 50+)

Indirect Health-related questions

Please look at this card and tell me which ONE of the statements best describes your current situation.

- Full-time employed (self-employed, employee)
- Part-time employed (self-employed, employee)
- Unemployed
- Pupil, student
- Apprentice, internship
- In retirement or early retirement
- **Permanently disabled**
- ...
- Other

Indirect Health-related questions

- In the last 4 weeks, for which of the following reasons did you not look for work?
 - I was waiting for the results of an application...
 - I was a student
 - I was looking after the family or home
 - **I was temporarily sick or injured**
 - **I have a long-term illness or disability**
 - ...
- Could you tell me the main reason you stopped working in your last job?
 - **I gave up work for health reasons**

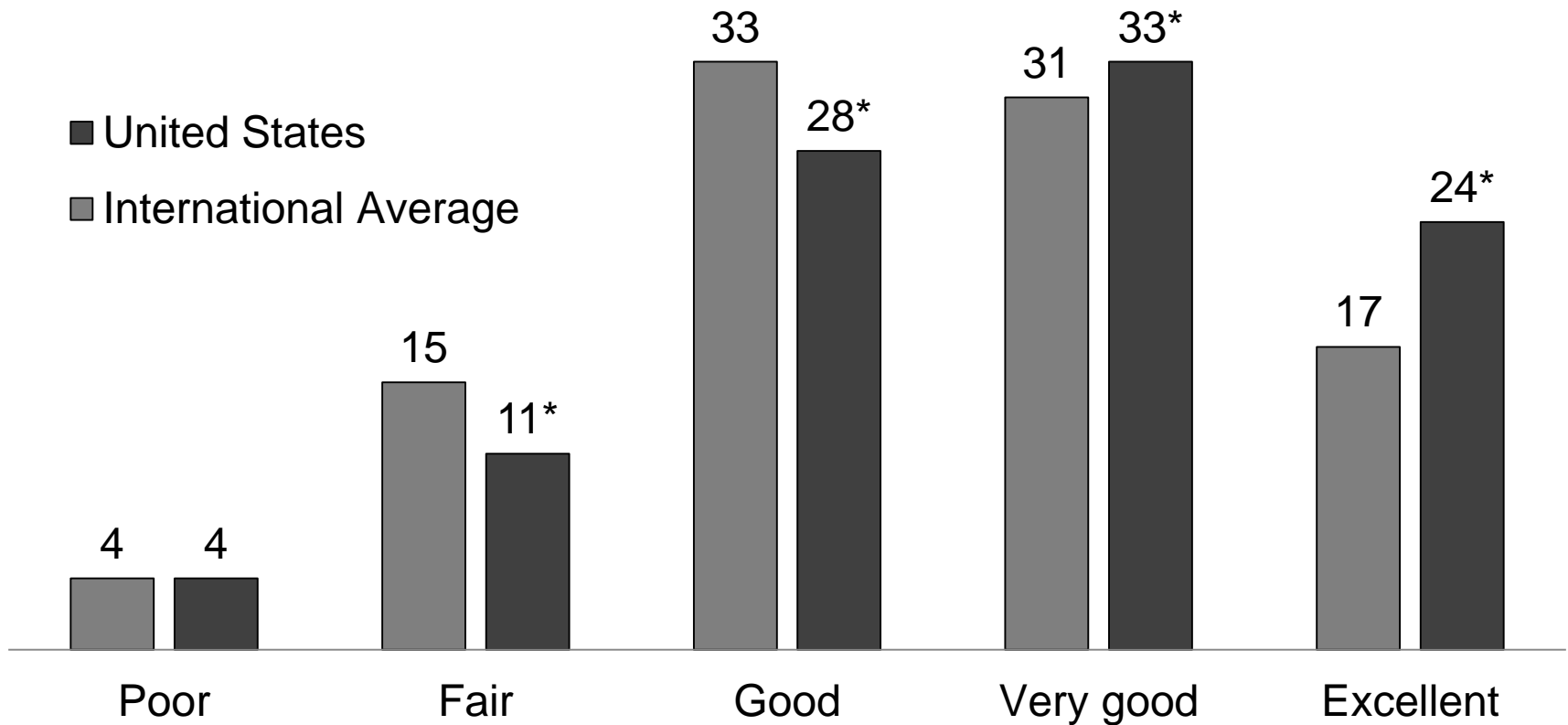
Indirect Health-related questions

Please look at this card and tell me which of the statements best describes the current situation of your spouse or partner.

- Full-time employed (self-employed, employee),
- Part-time employed (self-employed, employee),
- unemployed,
- Pupil/student, Apprentice/internship,
- In retirement or early retirement,
- **Permanently disabled**
- Fulfilling domestic tasks or looking after children/family, Other)

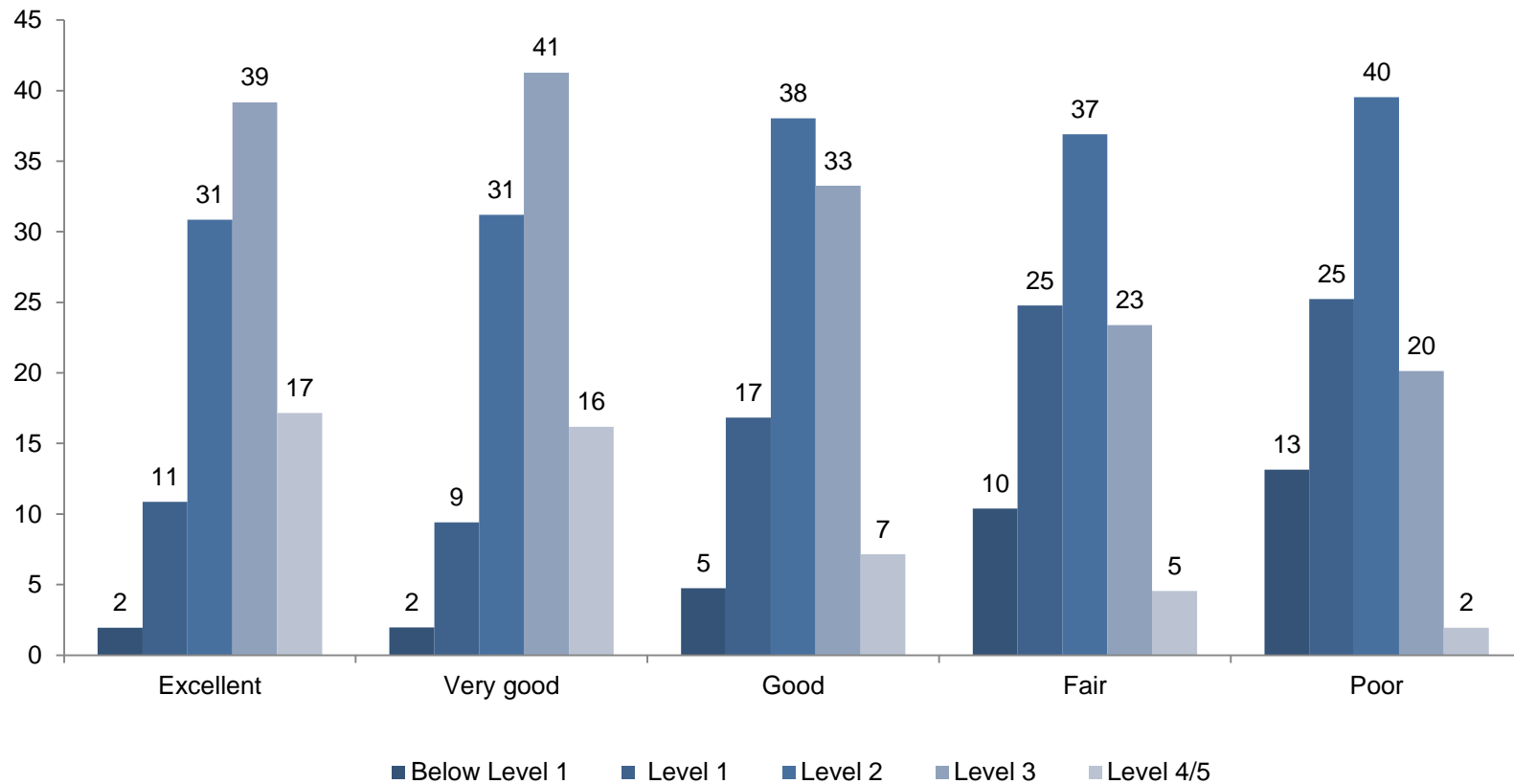
PIAAC Health Results

More U.S. adults reported having “excellent” or “very good” health and fewer reported having lower levels of health when compared to the international average

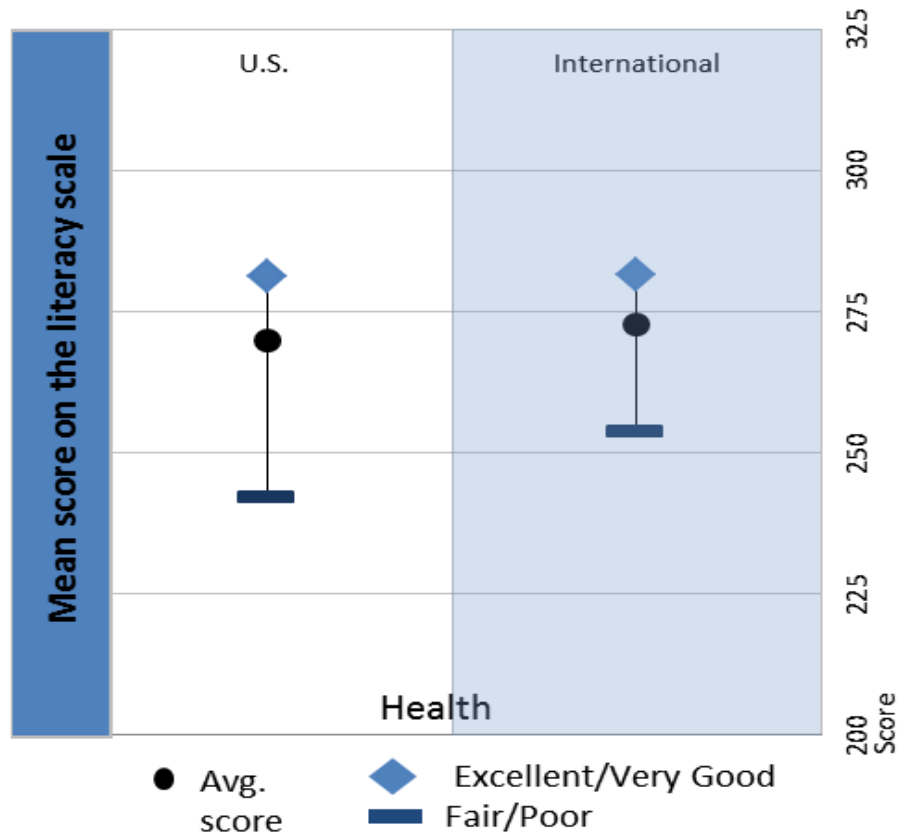


* $p < .05$. United States is significantly different from PIAAC international average.

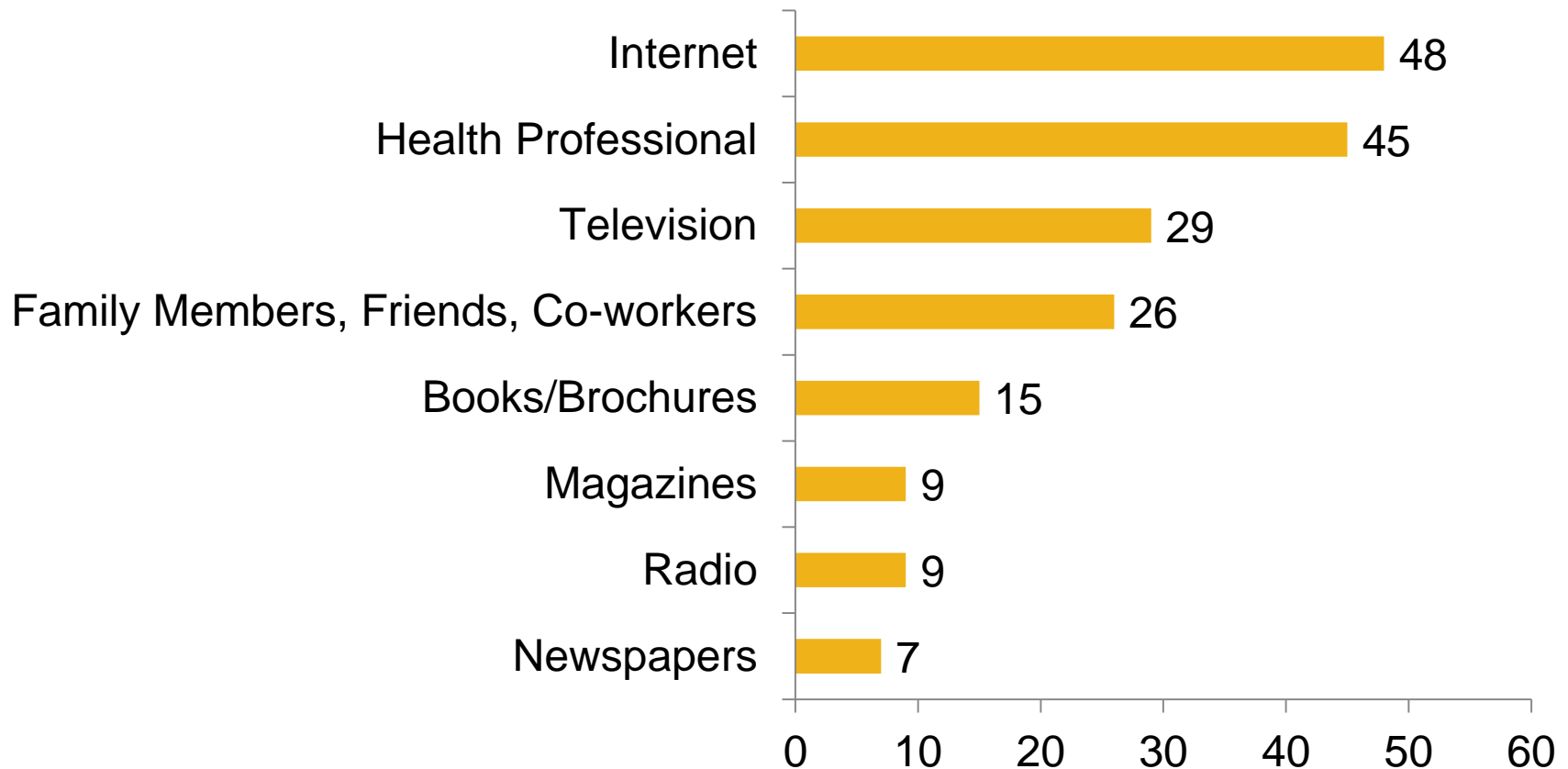
Distribution of U.S. adults by health status and proficiency in literacy



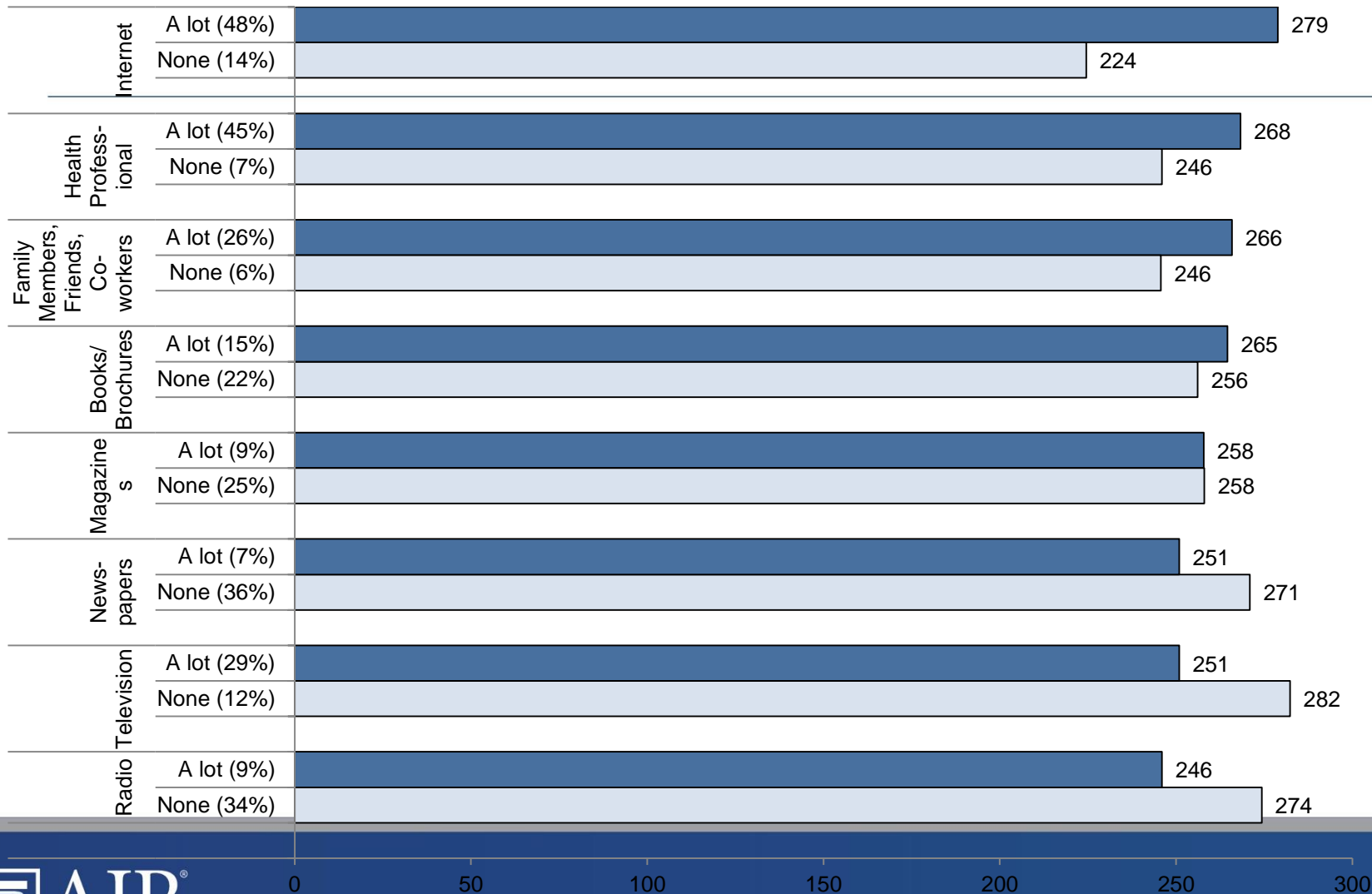
U.S. gaps in literacy scores larger than international average by health



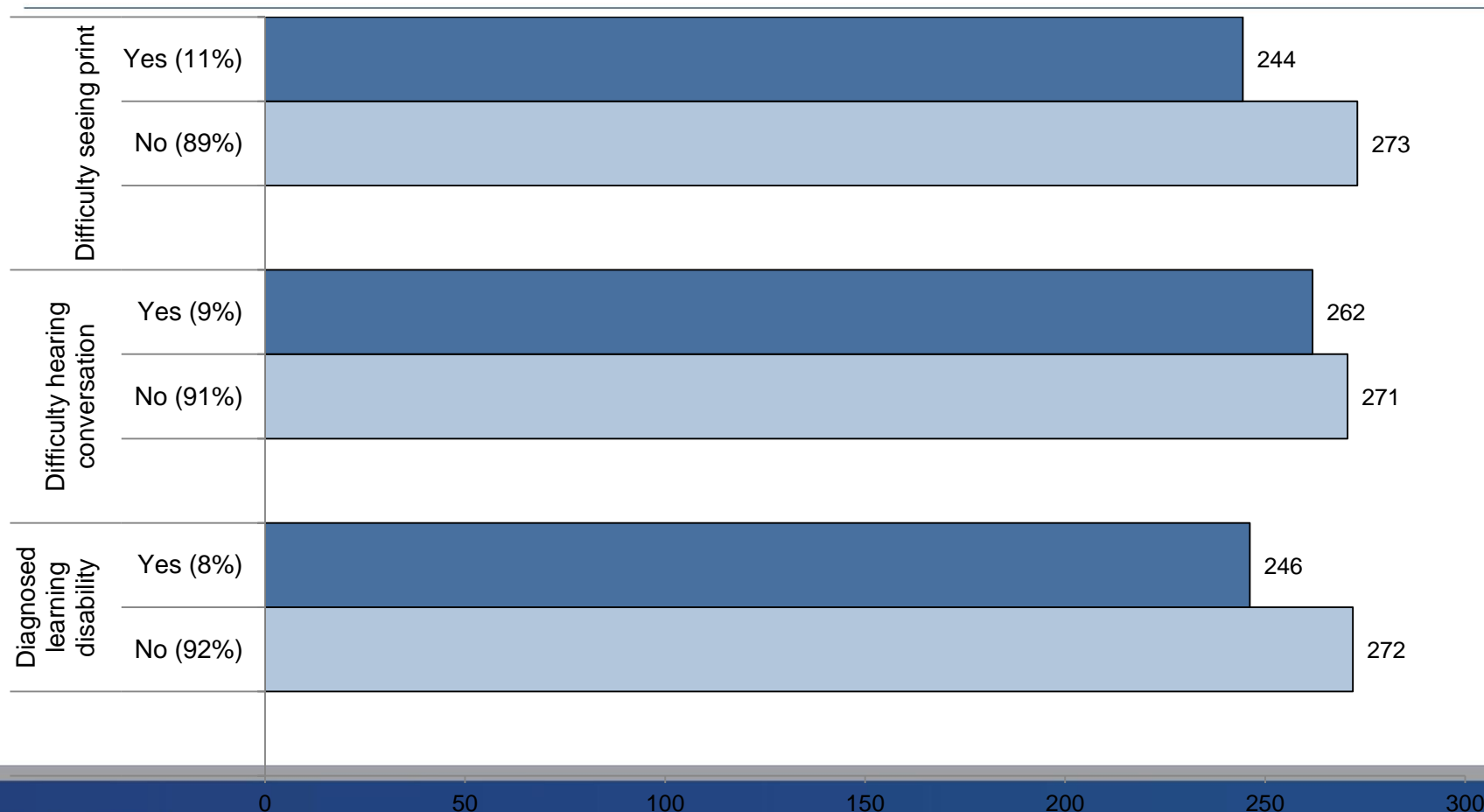
Percentage of U.S. adults reporting that they get a lot of health information from each source



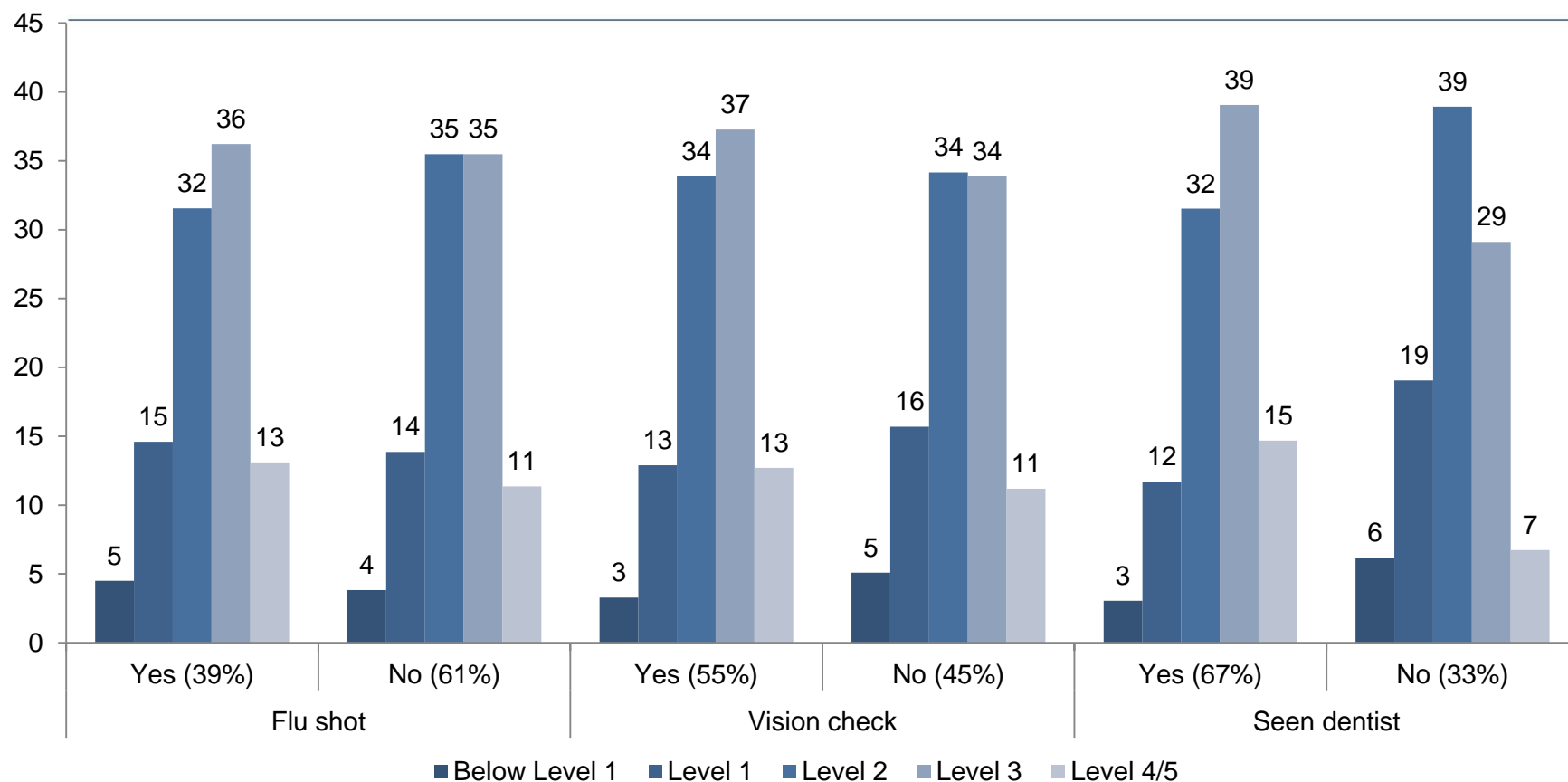
Average literacy scores of U.S. adults by amount of health information from source



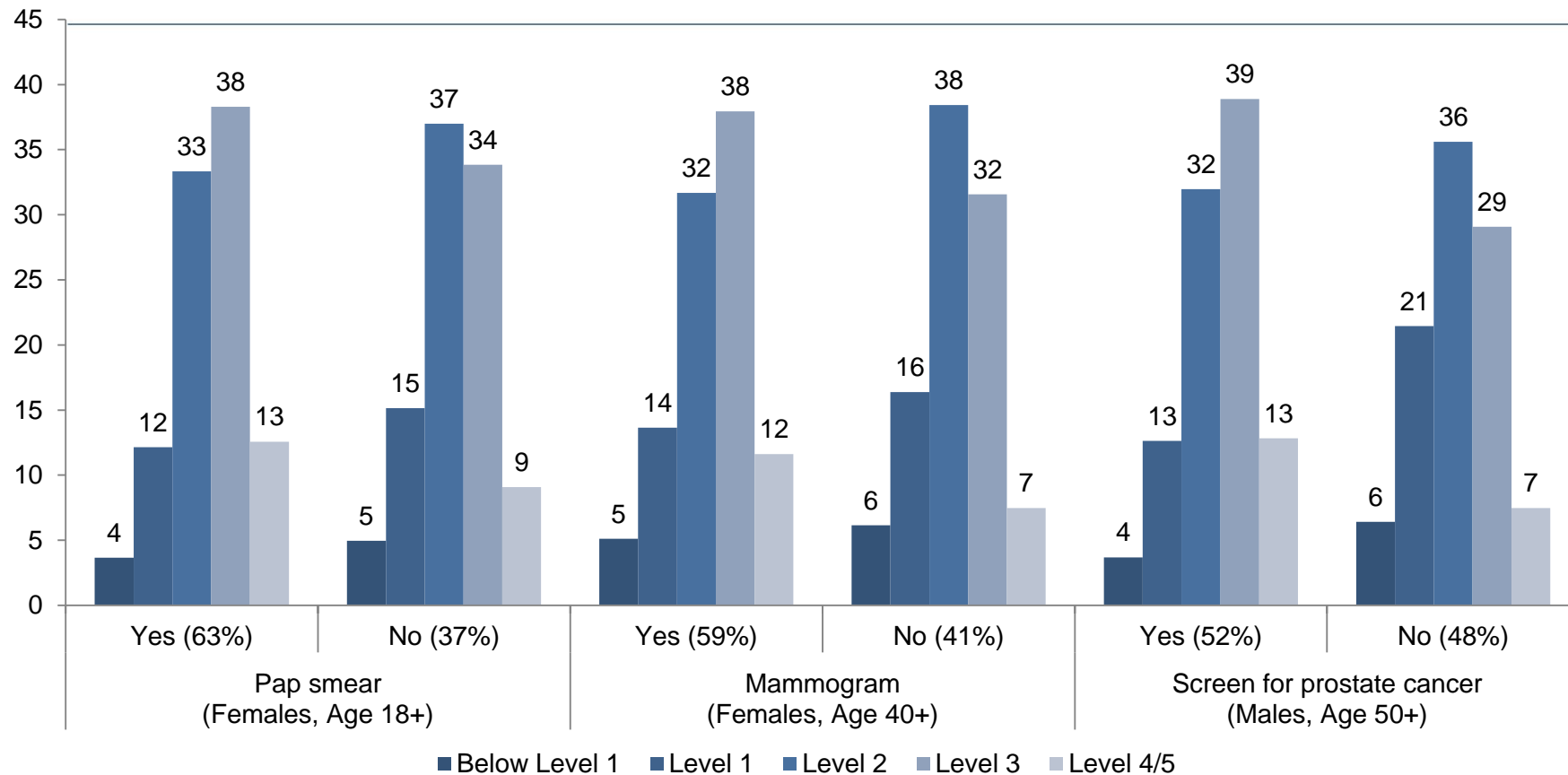
Average literacy score of U.S. adults by seeing, hearing, and learning disability status



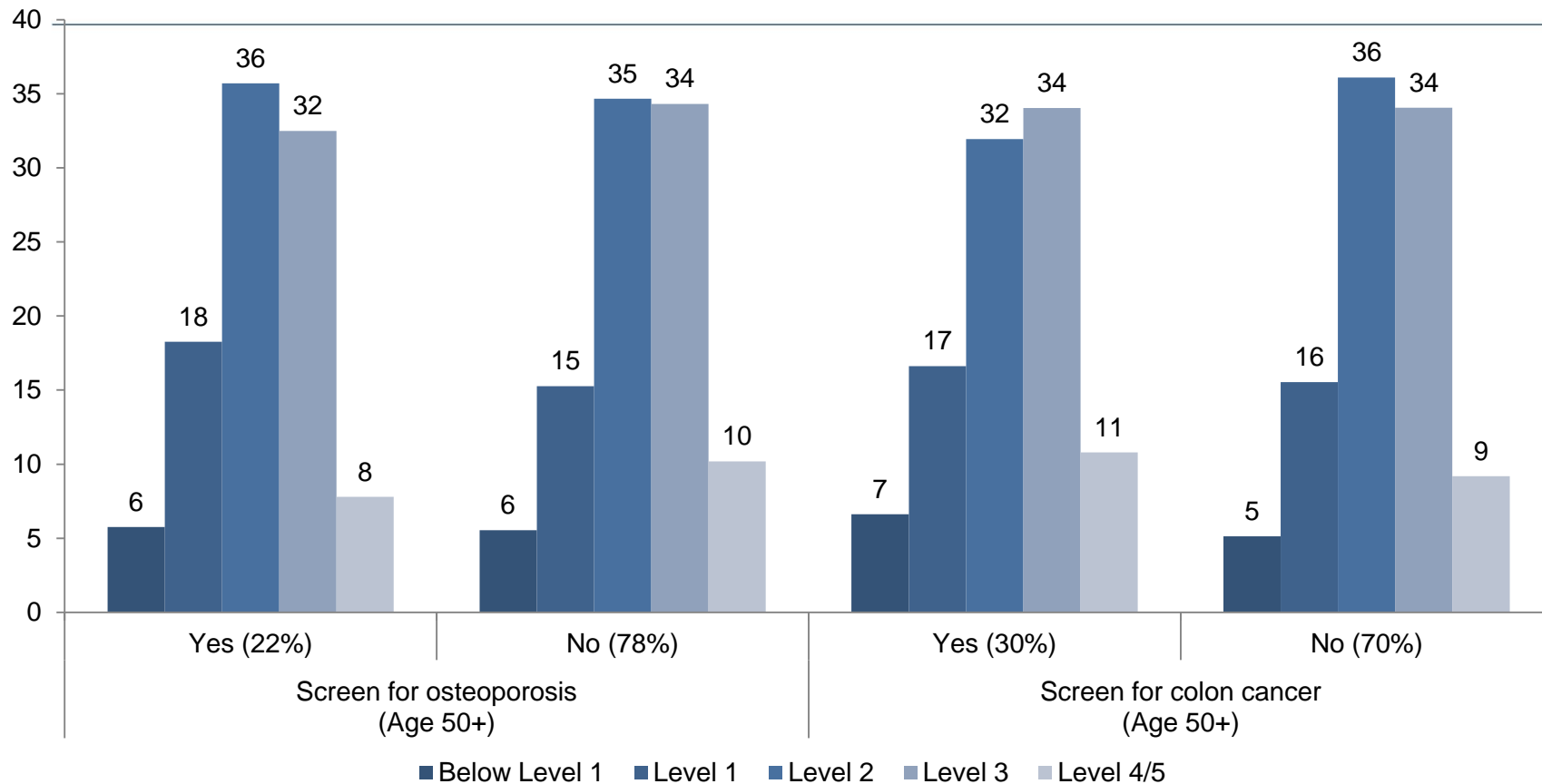
Distribution of U.S. adults by whether they practiced preventative health measures and proficiency in literacy



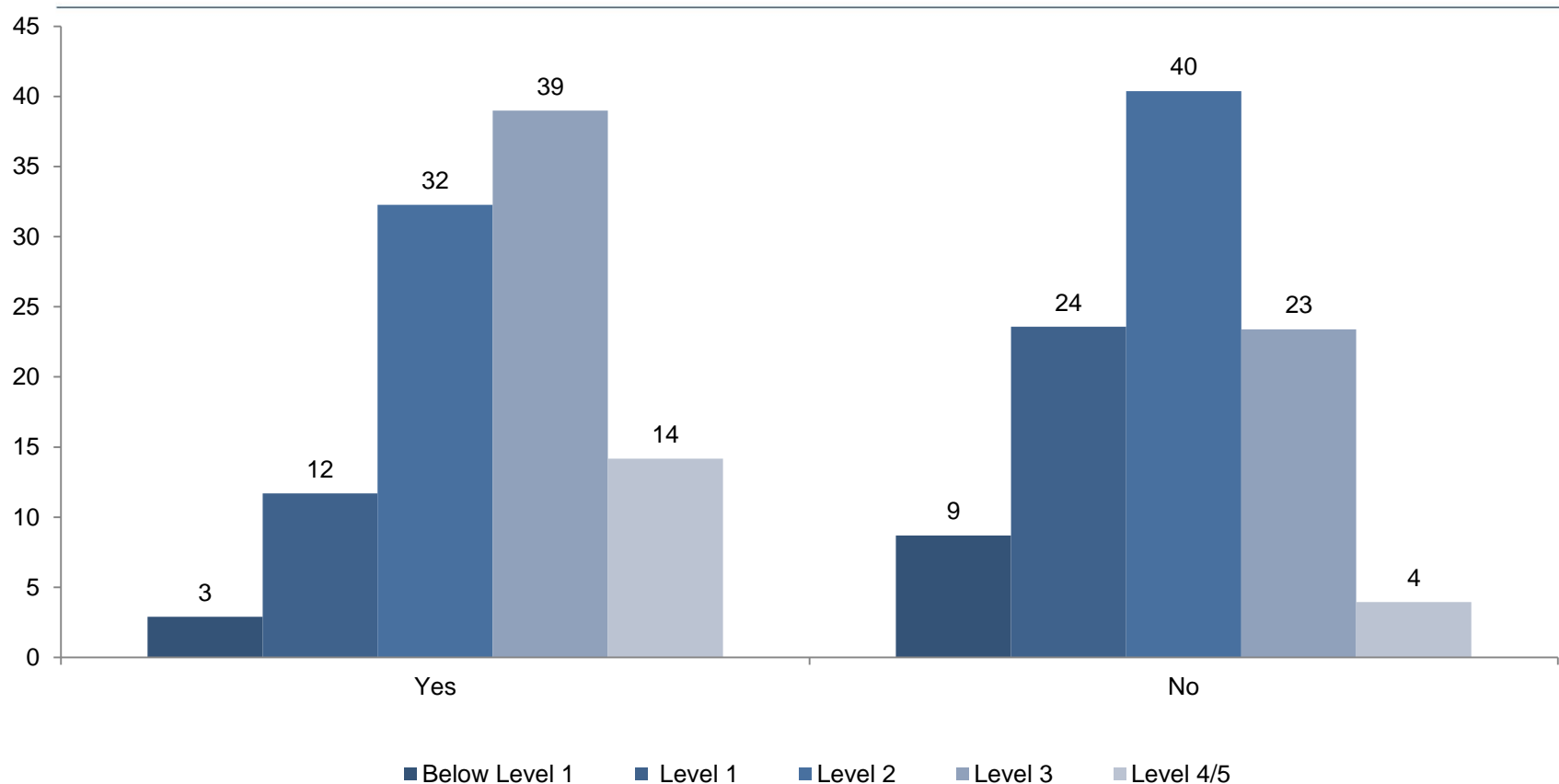
Distribution of U.S. adults by whether they practiced preventative health measures and proficiency in literacy



Distribution of U.S. adults by whether they practiced preventative health measures and proficiency in literacy



Distribution of U.S. adults by whether they have medical insurance and proficiency in literacy



U.S. PIAAC Findings Summary:

- Lower overall scores than international average in all three subjects
- Ranked better in literacy than in numeracy or problem solving in technology-rich environments
- Higher percentages of low performers than internationally
- Health status of U.S. adults better than international average
- Larger gap in U.S. than international average in literacy achievement by health status
- Those who get a lot of health information from the internet, health professionals, and family/friends have higher literacy scores, while those who get a lot of health information from radio, television, and newspapers score lower compared to those who get no information from these sources

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