

International Report on the methodology, results and recommendations of the European Health Literacy Population Survey 2019–2021 (HLS₁₉) of M-POHL

Annex

The HLS₁₉ Consortium of the WHO Action Network M-POHL

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1 Annex for Chapter 1: Background of HLS₁₉

Table A 1.1: An overview on use of HLS-EU instruments in published studies 2012–2020

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
HLS-EU-TOTAL	Q47: (HLS-EU-Consortium, 2012, Sørensen et al., 2012, Sørensen et al., 2013, Sørensen et al., 2015, Pelikan and Ganahl, 2017a, Pelikan and Ganahl, 2017b, Pelikan et al., 2019, Pelikan et al., 2020)	Q47: (Pelikan et al., 2018, Lorini et al., 2018)			Q47: Influence of HL of a country on health disparities among immigrants (Lorini et al., 2020)		Diabetes HL Project: Q6 (Vandenbosch et al., 2018)
<i>Austria</i>	See also HLS-EU-TOTAL Q47: (Pelikan et al., 2013)	Q16: (Gerich and Moosbrugger, 2018)	Q47 > Q16: (Röthlin et al., 2013, Ganahl et al., 2016, Ganahl and Pelikan, 2017) Q16: (Brandt et al., 2019)		Q16: (Ganahl et al., 2016, Ganahl et al., 2017)		
<i>Bulgaria</i>	See also HLS-EU-TOTAL		Q47 adapted: (Pesheva et al., 2018)				
<i>Germany</i>	See also HLS-EU-TOTAL Q47: (Berens et al., 2016, Schaeffer et al., 2016, Schaeffer et al., 2017a,	Q47> adaption for children (26 items): (Bollweg et al., 2020)	Q47: (Quenzel et al., 2015, Okan and Bollweg, 2018,	Q47: (Vogt et al., 2017, Schäfer et al., 2019)	Q adapted: (Biddle et al., 2019)	Q16: mothers of newborn (Brandstetter et al., 2019)	Q47: (Tschafary et al., 2018, Mantell et al., 2019, Schneider et

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
	Schaeffer et al., 2017b, Berens et al., 2018)		Domanska et al., 2018) Q16: (Rölz et al., 2018, Schricker et al., 2019) Q15: (Fretian et al., 2020) Q47: 12 items were adapted and used (Loer et al., 2020)	Q47/16 adapted: (Rasche et al., 2018) Q16: (Tiller et al., 2015)		Q16: school principals and members of the school management boards (Dadaczynski et al., 2020) Q16: parents (de Buhr and Tannen, 2020)	al., 2020), (Schneider et al., 2020) Q16: (Halbach et al., 2016, Gellert et al., 2018, Salm et al., 2018, Diederichs et al., 2018, Heuser et al., 2019, Oedekoven et al., 2019, Rathmann and Nellen, 2019, Richter et al., 2019, Atmann et al., 2019)
<i>Greece</i>	See also HLS-EU-TOTAL Q47: (Michou et al., 2019a)					Q16: parents in pediatric surgery consultations (Kampouroglou et al., 2019)	Q47: (Michou et al., 2019b)
<i>Ireland</i>	See also HLS-EU-TOTAL Q47: (Doyle et al., 2012)						Q47: (McKenna et al., 2017, McKenna et al., 2018)
<i>Netherlands</i>	See also HLS-EU-TOTAL Q47: (van der Heide et al., 2013)	Q47: (van der Heide et al., 2016) Q16: (Pander Maat et al., 2014, Storms et al., 2017)					

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
<i>Poland</i>	See also HLS-EU-TOTAL			Q47: (Słońska et al., 2015)			
<i>Spain</i>	See also HLS-EU-TOTAL Q16: Catalonia (Contel et al., 2015, Garcia-Codina et al., 2019)	Q16: (Nolasco et al., 2018)	Q47: (Chacón et al., 2019)		Q16: (Fernandez-Gutierrez et al., 2019)		Q47: (Alonso et al., 2017, Santemas-Masana et al., 2017, Fernandez-Silva et al., 2019) Q16: (Falcon Romero et al., 2017)
OTHER EU							
<i>Belgium</i>	Q16: health insured (Van den Broucke and Renwart, 2014, Vandenbosch et al., 2016, Avalosse et al., 2017)	Q16: low literate people (Storms et al., 2017)				Q16: doctors predictions of patients HL (Storms et al., 2019)	Q16: (Vandenbosch et al., 2018) Q6: (Schinckus et al., 2018)
<i>Cyprus</i>						Q16: carers of dementia patients (Efthymiou et al., 2017)	
<i>Czech Rep</i>	Q47: (Kučera et al., 2016)			Q16: (Hajduchova et al., 2017)			Q47: (Rolová et al., 2018, Rolova et al., 2020)

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
<i>Denmark</i>	Q16: (Svendsen et al., 2020)	Q16: (Fransen et al., 2014)					Q16: (Juul et al., 2018, Jandorf et al., 2019, Gabel et al., 2019, Horshauge et al., 2020)
<i>Finland</i>				Q16: (Rantanen et al., 2018, Eronen et al., 2018)			
<i>France</i>		Q16, Q6: (Rouquette et al., 2018)					
<i>Hungary</i>	Q47: (Koltai and Kun, 2016)						
<i>Iceland</i>		Q16: (Gustafsdottir et al., 2020)					
<i>Italy</i>	Q47: (Palumbo et al., 2016)	Q16, Q6: (Lorini et al., 2017) Q16, Q6: (Lorini et al., 2019)					
<i>Lithuania</i>			Q47: (Sukys et al., 2017)				

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
<i>Malta</i>	Q16: (Office of the Commissioner for Mental Health, 2014)						
<i>Portugal</i>	Q47: (Espanha and Ávila, 2016, Pedro et al., 2016) just a parish (Azevedo Alves et al., 2018)			Q47: (de Almeida and Veiga, 2020)			Q47: (de Araújo et al., 2018, Machado et al., 2019)
<i>Sweden</i>		Q16: (Wångdahl et al., 2019, Wångdahl et al., 2020)			Q16: (Wångdahl et al., 2014, Wångdahl et al., 2015, Wångdahl et al., 2018)		Q16: (Dahlman et al., 2020)
OTHER WHO-EU							
<i>Albania</i>		Q47: (Toçi et al., 2015)					
<i>Israel</i>	Q16: (Levin-Zamir et al., 2016, Levin-Zamir and Bertschi, 2018, Baron-Epel et al., 2019)			Q16 > Q13: (Hochhauser et al., 2019)			
<i>Kazakhstan</i>	<i>See also Asia 6</i> Q47: (Baisunova et al.,						Q47: (Kayupova et al., 2017)

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
	2016, Duong et al., 2017b)						
<i>Kosovo</i>				Q47>Q25: (Toci et al., 2013)			Q47: (Finbråten et al., 2020)
<i>Norway</i>		Q47: (Finbraten et al., 2017) Q12: (Finbraten et al., 2018)			Q16: (Gele et al., 2016)		
<i>Serbia</i>							Q47: (Jovanic et al., 2018)
<i>Switzerland</i>	Q47: (Bieri et al., 2016)	Q47: food literacy (Grea Krause et al., 2018)				Q47: employees (Beer-Borst et al., 2018) Q16: food literacy & workplace population (Luta et al., 2018)	Q6: (N'Goran et al., 2018)
<i>Turkey</i>		Q47: (Abacigil et al., 2019) Q16: (Emiral et al., 2018)	Q47: nursing students (Ozen et al., 2019)	Q47: (Bozkurt and Demirci, 2019)		Q47: caregivers of palliative patients: (Metin et al., 2019), factory workers: (Güner and Ekmekci, 2019)	Q47: (Cayci et al., 2018, Selcuk et al., 2018, Ture et al., 2018, Özgünay et al., 2018, Guclu et al., 2019, Ozakaraman et al., 2019, Erdogdu et al., 2019, Teleş and Kaya, 2019, Erdogdu

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
							et al., 2020, Gözlü and Kaya, 2020)
AFRICA							
<i>Egypt</i>							Q16: (Almaleh et al., 2017)
<i>Ethiopia</i>							Q47: (Gedefaw et al., 2020)
<i>Ghana</i>	Q16: Ashanti region (Amoah and Phillips, 2019)		Q16: (Evans et al., 2019)				
AMERICAS							
<i>Brazil</i>			Q47: students and lecturers (Carvalho et al., 2016)				
<i>Mexico</i>							Q47: (Doubova et al., 2019)
ASIA							
<i>Asia 6</i>	Q47: (Duong et al., 2017b)	Q12: (Duong et al., 2019a)					

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
<i>China</i>							Q16: (Lu et al., 2019)
<i>Hong Kong</i>				Q47: (Zhang et al., 2020)			
<i>Indonesia</i>	<i>See also Asia 6</i> Q47: (Duong et al., 2017b)	Q16 & HLS-EU-SQ10-IDN: (Rachmani et al., 2019)	Q16: (Nurjanah et al., 2017)				
<i>Japan</i>	Q47: (Nakayama et al., 2015)	Q47: used for validation of HL-SDHQ (Matsumoto and Nakayama, 2017)		Q16: (Uemura et al., 2018)		Q47: HL between family members: (Ishikawa and Kiuchi, 2019)	
<i>Kazakhstan</i>	<i>See also Asia 6</i> Q47: (Baisunova et al., 2016, Duong et al., 2017b)						Q47: (Kayupova et al., 2017)
<i>Malaysia</i>	<i>See also Asia 6</i> Q47: (Duong et al., 2017b)	Q18: (Mohamad et al., 2020)	Q47: (Hamzah et al., 2018)				
<i>Myanmar</i>	<i>See also Asia 6</i> Q47: (Duong et al., 2017b)						
<i>Samoa</i>		Q47: (Bollars et al., 2019)					

Country	General populations, validations and research	Specific methods, validations	Youth / students	Aged/seniors	Migrants/refugees/ asylum seekers	Other sub-populations	Patients
<i>Sri Lanka</i>						Q47: school teachers (Denuwara and Gunawardena, 2017)	
<i>Taiwan</i>	<i>See also Asia 6</i> Q47: (Duong et al., 2015, Duong et al., 2017b)	Q47: (Huang et al., 2018a) Q47 > Q12: (Duong et al., 2017c) Rasch model: (Huang et al., 2018b) Q12 > e-HDL e- healthy diet literacy: (Duong et al., 2020)		Q47: (Huang et al., 2019b, Chiu et al., 2020)		Q47: women (Duong et al., 2017a, Huang et al., 2019a)	
<i>Vietnam</i>	<i>See also Asia 6</i> Q47: (Duong et al., 2017b)	Q47 > Q12: (Duong et al., 2019b)	Q12 (&fear of COVID19): (Nguyen et al., 2020)	Q12: (Van Hoa et al., 2020)			

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2 Annex for Chapter 2: Study design

no Annex

3 Annex for Chapter 3: The HLS₁₉ Instruments

3.1 The instruments HLS-EU-Q47 and HLS₁₉-Q47 in comparison:

Table A 3.1.

The instruments HLS-EU-Q47 and HLS₁₉-Q47 in comparison, differences in HLS₁₉-Q47 are indicated in red

Introduction					
HLS-EU	No introduction				
HLS ₁₉	Introduction	<i>Interviewer: It is not always easy to get understandable, reliable and useful information on health-related topics. With the following questions we would like to find out which tasks related to handling health information are more or less easy or difficult.</i>			
Wording of Q47 response categories					
HLS-EU	Q1	On a scale from very easy to very difficult, how easy would you say it is to:			
HLS ₁₉	CORE-HL	On a scale from very easy to very difficult, how easy would you say it is:			
HLS-EU	[SHOWCARD WITH SCALE – ONE ANSWER PER ROW]				
HLS ₁₉	[SHOWCARD WITH SCALE – ONE ANSWER PER ROW]				
HLS-EU	Very easy	Fairly easy	Fairly difficult	Very difficult	DK (SPONTANEOUS)
HLS ₁₉	Very easy	Easy	Difficult	Very difficult	DK / Refusal (SPONTANEOUS)
Wording of Q47 items					
HLS-EU	1	...find information about symptoms of illnesses that concern you			
HLS ₁₉	CORE-HL1	...to find information about symptoms of illnesses that concern you?			
HLS-EU	2	...find information on treatments of illnesses that concern you?			
HLS ₁₉	CORE-HL2	...to find information on treatments of illnesses that concern you?			
HLS-EU	3	...find out what to do in case of a medical emergency?			
HLS ₁₉	CORE-HL3	...to find information about what to do in a medical emergency?			
HLS-EU	4	...find out where to get professional help when you are ill? <i>(Instructions: such as doctor, pharmacist, psychologist)</i>			
HLS ₁₉	CORE-HL4	...to find out where to get professional help when you are ill? <i>[Instructions: such as doctor, nurse, pharmacist, psychologist]</i>			
HLS-EU	5	...understand what your doctor says to you?			
HLS ₁₉	CORE-HL5	...to understand what a doctor says to you?			
HLS-EU	6	...understand the leaflets that come with your medicine?			
HLS ₁₉	CORE-HL6	...to understand the instruction leaflets that come with your medicine? <i>[Instruction: information or instructions given in the leaflets]</i>			
HLS-EU	7	...understand what to do in a medical emergency?			
HLS ₁₉	CORE-HL7	...to understand information about what to do in a medical emergency?			
HLS-EU	8	...understand your doctor's or pharmacist's instruction on how to take a prescribed medicine?			
HLS ₁₉	CORE-HL8	...to understand your doctor's or pharmacist's instruction on how to take a prescribed medicine?			
HLS-EU	9	...judge how information from your doctor applies to you?			
HLS ₁₉	CORE-HL9	...to judge how information from your doctor applies to you?			
HLS-EU	10	...judge the advantages and disadvantages of different treatment options?			
HLS ₁₉	CORE-HL10	...to judge the advantages and disadvantages of different treatment options?			

Wording of Q47 items

HLS-EU	11	...judge when you may need to get a second opinion from another doctor?
HLS19	CORE-HL11	...to judge if you may need to get a second opinion from another doctor?
HLS-EU	12	...judge if the information about illness in the media is reliable? <i>(Instructions: TV, Internet or other media)</i>
HLS19	CORE-HL12	...to judge if the information about illness in the mass media is reliable? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>
HLS-EU	13	...use information the doctor gives you to make decisions about your illness?
HLS19	CORE-HL13	...to use information your doctor gives to you to make decisions about your illness?
HLS-EU	14	...follow the instructions on medication?
HLS19	CORE-HL14	...to follow instructions on medication?
HLS-EU	15	...call an ambulance in an emergency?
HLS19	CORE-HL15	...to call an ambulance in a medical emergency?
HLS-EU	16	...follow instructions from your doctor or pharmacist?
HLS19	CORE-HL16	... to act on advice from from your doctor or pharmacist?
HLS-EU	17	...find information about how to manage unhealthy behaviour such as smoking, low physical activity and drinking too much?
HLS19	CORE-HL17	...to find information about how to handle unhealthy habits such as smoking, low physical activity or drinking too much alcohol ?
HLS-EU	18	...find information on how to manage mental health problems like stress or depression?
HLS19	CORE-HL18	...to find information on how to handle mental health problems? <i>[Instruction: stress, depression or anxiety]</i>
HLS-EU	19	...find information about vaccinations and health screenings that you should have? <i>(Instructions: breast exam, blood sugar test, blood pressure)</i>
HLS19	CORE-HL19	...to find information on recommended vaccinations for you or your family ?
HLS-EU	20	...find information on how to prevent or manage conditions like being overweight, high blood pressure or high cholesterol?
HLS19	CORE-HL20	...to find information on how to handle health risks like being overweight, having high blood pressure or high cholesterol?
HLS-EU	21	...understand health warnings about behaviour such as smoking, low physical activity and drinking too much?
HLS19	CORE-HL21	...to understand information about unhealthy habits such as smoking, low physical activity or drinking too much alcohol ?
HLS-EU	22	...understand why you need vaccinations?
HLS19	CORE-HL22	...to understand why you or your family may need vaccinations?
HLS-EU	23	...understand why you need health screenings? <i>(Instructions: breast exam, blood sugar test, blood pressure)</i>
HLS19	CORE-HL23	...to understand information about recommended health screenings or examinations ? <i>[Instructions: e.g. colorectal cancer screening, blood sugar test]</i>
HLS-EU	24	...judge how reliable health warnings are, such as smoking, low physical activity and drinking too much?
HLS19	CORE-HL24	...to judge if information on unhealthy habits , such as smoking, low physical activity or drinking too much alcohol , are reliable?
HLS-EU	25	...judge when you need to go to a doctor for a check-up?
HLS19	CORE-HL25	...to judge when you need to go to a doctor for a check- up?
HLS-EU	26	...judge which vaccinations you may need?
HLS19	CORE-HL26	...to judge which vaccinations you or your family may need?
HLS-EU	27	...judge which health screenings you should have? <i>(Instructions: breast exam, blood sugar test, blood pressure)</i>
HLS19	CORE-HL27	...to judge which health screenings or examinations you should have? <i>[Instructions: e.g. colorectal cancer screening, blood sugar test]</i>

Wording of Q47 items

HLS-EU	28	...judge if the information on health risks in the media is reliable? <i>(Instructions: TV, Internet or other media)</i>
HLS19	CORE-HL28	...to judge if the information on health risks in the mass media is reliable? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>
HLS-EU	29	...decide if you should have a flu vaccination?
HLS19	CORE-HL29	...to decide if you should have a flu vaccination?
HLS-EU	30	...decide how you can protect yourself from illness based on advice from family and friends?
HLS19	CORE-HL30	...to decide how you can protect yourself from illness using advice from family or friends?
HLS-EU	31	...decide how you can protect yourself from illness based on information in the media? <i>(Instructions: Newspapers, leaflets, Internet or other media?)</i>
HLS19	CORE-HL31	...to decide how you can protect yourself from illness using information from the mass media? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>
HLS-EU	32	...find information on healthy activities such as exercise, healthy food and nutrition?
HLS19	CORE-HL32	...to find information on healthy life styles such as physical exercise, healthy food or nutrition?
HLS-EU	33	...find out about activities that are good for your mental well-being? <i>(Instructions: meditation, exercise, walking, pilates etc.)</i>
HLS19	CORE-HL33	...to find information about activities that are good for your mental health and well-being? <i>[Instructions: e.g. relaxation, physical exercise, yoga]</i>
HLS-EU	34	...find information on how your neighbourhood could be more health-friendly? <i>(Instructions: Reducing noise and pollution, creating green spaces, leisure facilities)</i>
HLS19	CORE-HL34	...to find out how your neighborhood could become more health-friendly? <i>[Instructions: Reducing noise and pollution, creating green spaces, leisure facilities]</i>
HLS-EU	35	...find out about political changes that may affect health? <i>(Instructions: legislation, new health screening programmes, changing of government, restructuring of health services etc.)</i>
HLS19	CORE-HL35	...to find information about changes in laws that may affect your or your family's health? <i>[Instruction: new health screening programmes, restructuring of health services, tobacco pricing or smoking ban etc.]</i>
HLS-EU	36	...find out about efforts to promote your health at work?
HLS19	CORE-HL36	...to find information about how to promote health at work, at school or in the neighborhood?
HLS-EU	37	...understand advice on health from family members or friends?
HLS19	CORE-HL37	...to understand advice concerning your health from family or friends?
HLS-EU	38	...understand information on food packaging?
HLS19	CORE-HL38	...to understand information on food packaging?
HLS-EU	39	...understand information in the media on how to get healthier? <i>(Instructions: Internet, newspapers, magazines)</i>
HLS19	CORE-HL39	...to understand information in the mass media on how to improve your health? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>
HLS-EU	40	...understand information on how to keep your mind healthy?
HLS19	CORE-HL40	...to understand information on how to keep your mind healthy? <i>[Instruction: specifically on mental health and well-being from any source]</i>
HLS-EU	41	...judge how where you live affects your health and well-being? <i>(Instructions: Your community, your neighbourhood)</i>
HLS19	CORE-HL41	...to judge how your neighborhood may affect your health and well-being?
HLS-EU	42	...judge how your housing conditions help you to stay healthy?
HLS19	CORE-HL42	...to judge how your housing conditions may affect your health and well-being?
HLS-EU	43	...judge which everyday behaviour is related to your health? <i>(Instructions: Drinking and eating habits, exercise etc.)</i>
HLS19	CORE-HL43	...to judge which everyday habits affect your health? <i>[Instructions: Drinking and eating habits, exercise etc.]</i>

Wording of Q47 items

HLS-EU	44	...make decisions to improve your health?
HLS19	CORE-HL44	...to make decisions to improve your health and well-being ?
HLS-EU	45	... join a sports club or exercise class if you want to?
HLS19	CORE-HL45	...to join a sports club or exercise group if you want to be physically active ?
HLS-EU	46	...influence your living conditions that affect your health and well being? <i>(Instructions: Drinking and eating habits, exercise etc.)</i>
HLS19	CORE-HL46	...to influence your living conditions that affect your health and well-being? <i>[Instructions: job, change your housing, mobility, leisure time behaviour etc.]</i>
HLS-EU	47	...take part in activities that improve health and well-being in your community?
HLS19	CORE-HL47	...to take part in activities that improve health and well-being in your community? <i>[Instructions: Reducing noise and pollution, creating green spaces, leisure facilities]</i>

Source: HLS19 Consortium

3.2 Items in HLS-Q47, HLS-Q16 and HLS-Q12

Table A 3.2:

HLS19 instruments: core items for the measurement of HL based on HLS19-Q47 or HLS19-Q16 or HLS19-Q12

ITEM		HLS19-Q47	HLS19-Q16	HLS19-Q12
CORE-HL1	...to find information about symptoms of illnesses that concern you?	✓		
CORE-HL2	...to find information on treatments of illnesses that concern you?	✓	✓	
CORE-HL3	...to find information about what to do in a medical emergency?	✓		
CORE-HL4	...to find out where to get professional help when you are ill? <i>[Instructions: such as doctor, nurse, pharmacist, psychologist]</i>	✓	✓	✓
CORE-HL5	...to understand what a doctor says to you?	✓	✓	
CORE-HL6	...to understand the instruction leaflets that come with your medicine? <i>[Instruction: information or instructions given in the leaflets]</i>	✓		
CORE-HL7	...to understand information about what to do in a medical emergency?	✓		✓
CORE-HL8	...to understand your doctor's or pharmacist's instruction on how to take a prescribed medicine?	✓	✓	
CORE-HL9	...to judge how information from your doctor applies to you?	✓		
CORE-HL10	...to judge the advantages and disadvantages of different treatment options?	✓		✓
CORE-HL11	...to judge if you may need to get a second opinion from another doctor?	✓	✓	
CORE-HL12	...to judge if the information about illness in the mass media is reliable? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>	✓		
CORE-HL13	...to use information your doctor gives to you to make decisions about your illness?	✓	✓	
CORE-HL14	...to follow instructions on medication?	✓		
CORE-HL15	...to call an ambulance in a medical emergency?	✓		
CORE-HL16	...to act on advice from your doctor or pharmacist?	✓	✓	✓
CORE-HL17	...to find information about how to handle unhealthy habits such as smoking, low physical activity or drinking too much alcohol?	✓		

ITEM		HLS19- Q47	HLS19- Q16	HLS19- Q12
CORE-HL18	...to find information on how to handle mental health problems? <i>[Instruction: stress, depression or anxiety]</i>	✓	✓	✓
CORE-HL19	...to find information on recommended vaccinations for you or your family?	✓		
CORE-HL20	...to find information on how to handle health risks like being overweight, having high blood pressure or high cholesterol?	✓		
CORE-HL21	...to understand information about unhealthy habits such as smoking, low physical activity or drinking too much alcohol?	✓	✓	
CORE-HL22	...to understand why you or your family may need vaccinations?	✓		
CORE-HL23	...to understand information about recommended health screenings or examinations? <i>[Instructions: e.g. colorectal cancer screening, blood sugar test]</i>	✓	✓	✓
CORE-HL24	...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	✓		✓
CORE-HL25	...to judge when you need to go to a doctor for a check-up?	✓		
CORE-HL26	...to judge which vaccinations you or your family may need?	✓		
CORE-HL27	...to judge which health screenings or examinations you should have? <i>[Instructions: e.g. colorectal cancer screening, blood sugar test]</i>	✓		
CORE-HL28	...to judge if the information on health risks in the mass media is reliable? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>	✓	✓	
CORE-HL29	...to decide if you should have a flu vaccination?	✓		
CORE-HL30	...to decide how you can protect yourself from illness using advice from family or friends?	✓		
CORE-HL31	...to decide how you can protect yourself from illness using information from the mass media? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>	✓	✓	✓
CORE-HL32	...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	✓		✓
CORE-HL33	...to find information about activities that are good for your mental health and well-being? <i>[Instructions: e.g. relaxation, physical exercise, yoga]</i>	✓	✓	
CORE-HL34	...to find out how your neighborhood could become more health-friendly? <i>[Instructions: Reducing noise and pollution, creating green spaces, leisure facilities]</i>	✓		
CORE-HL35	...to find information about changes in laws that may affect your or your family's health? <i>[Instruction: new health screening programmes, restructuring of health services, tobacco pricing or smoking ban etc.]</i>	✓		
CORE-HL36	...to find information about how to promote health at work, at school or in the neighborhood?	✓		
CORE-HL37	...to understand advice concerning your health from family or friends?	✓	✓	✓
CORE-HL38	...to understand information on food packaging?	✓		
CORE-HL39	...to understand information in the mass media on how to improve your health? <i>[Instructions: e.g. Newspapers, TV or Internet]</i>	✓	✓	
CORE-HL40	...to understand information on how to keep your mind healthy? <i>[Instruction: specifically on mental health and well-being from any source]</i>	✓		
CORE-HL41	...to judge how your neighborhood may affect your health and well-being?	✓		

ITEM		HLS ₁₉ - Q47	HLS ₁₉ - Q16	HLS ₁₉ - Q12
CORE-HL42	...to judge how your housing conditions may affect your health and well-being?	✓		✓
CORE-HL43	...to judge which everyday habits affect your health? <i>[Instructions: Drinking and eating habits, exercise etc.]</i>	✓	✓	
CORE-HL44	...to make decisions to improve your health and well-being?	✓		✓
CORE-HL45	...to join a sports club or exercise group if you want to be physically active?	✓		
CORE-HL46	...to influence your living conditions that affect your health and well-being? <i>[Instructions: job, change your housing, mobility, leisure time behaviour etc.]</i>	✓		
CORE-HL47	...to take part in activities that improve health and well-being in your community? <i>[Instructions: Reducing noise and pollution, creating green spaces, leisure facilities]</i>	✓		

Source: HLS₁₉ Consortium

3.3 Categorization of the items of the HLS₁₉-Q47 to HLS-EU matrix of HL

Table A 3.3:

Positioning of the items of the HLS₁₉-Q47 in the matrix of the HLS-EU conceptual model of HL according to Sorensen et al 2012

Health Literacy	Access/obtain information relevant to health	Understand information relevant to health	Appraise/judge/evaluate information relevant to health	Apply/use information relevant to health
Health Care	CORE-HL1	CORE-HL5	CORE-HL9	CORE-HL13
	CORE-HL2	CORE-HL6	CORE-HL10	CORE-HL14
	CORE-HL3	CORE-HL7	CORE-HL11	CORE-HL15
	CORE-HL4	CORE-HL8	CORE-HL12	CORE-HL16
Disease Prevention	CORE-HL17	CORE-HL21	CORE-HL24	CORE-HL29
	CORE-HL18	CORE-HL22	CORE-HL25	CORE-HL30
	CORE-HL19	CORE-HL23	CORE-HL26	CORE-HL31
	CORE-HL20		CORE-HL27	
Health Promotion	CORE-HL32	CORE-HL37	CORE-HL41	CORE-HL44
	CORE-HL33	CORE-HL38	CORE-HL42	CORE-HL45
	CORE-HL34	CORE-HL39	CORE-HL43	CORE-HL46
	CORE-HL35	CORE-HL40		CORE-HL47
	CORE-HL36			

Source: HLS₁₉ Consortium

4 Annex for Chapter 4: Methods

No Annex

5 Annex for Chapter 5: The HLS₁₉-Q12 measure

5.1 Distributions of single items of the HL-Q12 measure

Table A 5.1:

Percentage distributions (for valid N), percentage of missing and total N for **Item 1 '... to find out where to get professional help when you are ill?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	1.2%	6.1%	50.5%	41.9%	0.3%	2967
BE	5.2%	18.4%	51.6%	24.8%		1000
BG	3.6%	21.1%	54.3%	18.6%	2.4%	864
CH	0.7%	6.7%	54.6%	38.0%	0.0%	2502
CZ	2.7%	15.1%	60.9%	21.1%	0.2%	1599
DE	2.4%	18.1%	58.6%	20.5%	0.4%	2143
DK	1.1%	11.7%	57.6%	29.5%	0.1%	3601
FR	1.1%	14.3%	56.0%	28.7%		2003
HU	2.9%	20.8%	58.7%	16.8%	0.8%	1195
IE	6.2%	14.1%	30.6%	48.8%	0.3%	4488
IL	2.1%	16.2%	54.8%	26.9%	0.1%	1314
IT	4.9%	25.9%	52.3%	16.1%	0.8%	3500
NO	1.6%	7.9%	42.1%	46.9%	1.5%	2855
PT	1.4%	12.1%	74.7%	10.1%	1.6%	1247
RU	1.4%	11.2%	72.8%	13.7%	0.8%	5661
SI	1.3%	8.4%	60.0%	30.0%	0.4%	3360
SK	2.8%	22.0%	59.3%	15.9%		2145

Source: HLS₁₉ Consortium

Table A 5.2:

Percentage distributions (for valid N), percentage of missing and total N for **Item 2 '...to understand information about what to do in a medical emergency?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	1.0%	10.4%	54.4%	33.4%	0.8%	2967
BE	3.8%	31.2%	52.0%	13.0%	–	1000
BG	1.3%	28.8%	55.4%	12.6%	2.0%	865
CH	0.9%	16.9%	63.7%	18.1%	0.4%	2502
CZ	2.0%	18.4%	62.5%	16.6%	0.5%	1599
DE	3.4%	33.5%	52.0%	10.5%	0.7%	2142
DK	1.0%	13.2%	54.5%	31.3%	0.1%	3602
FR	1.2%	20.2%	59.8%	18.8%	–	2003
HU	1.8%	16.9%	66.3%	14.0%	1.1%	1195
IE	5.0%	19.5%	40.1%	34.6%	0.8%	4486
IL	2.4%	28.4%	51.3%	17.9%	0.1%	1315
IT	4.0%	29.9%	52.2%	12.3%	1.6%	3500
NO	1.8%	18.4%	51.2%	25.2%	3.4%	2856
PT	0.8%	10.4%	79.7%	8.3%	0.8%	1247
RU	1.8%	24.4%	64.0%	8.1%	1.7%	5659
SI	0.9%	9.0%	62.6%	27.2%	0.2%	3359
SK	2.8%	25.1%	59.7%	12.4%		2145

Source: HLS₁₉ Consortium

Table A 5.3:

Percentage distributions (for valid N), percentage of missing and total N for **Item 3 '...to judge the advantages and disadvantages of different treatment options?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	3.7%	32.4%	46.8%	15.1%	2.0%	2968
BE	6.9%	43.0%	42.5%	7.6%		1000
BG	9.6%	35.3%	41.6%	9.6%	3.9%	865
CH	4.2%	41.9%	44.3%	9.1%	0.6%	2503
CZ	5.9%	40.3%	43.7%	8.6%	1.6%	1599
DE	14.1%	56.7%	24.9%	3.7%	0.6%	2144
DK	4.0%	41.4%	46.2%	8.2%	0.3%	3602
FR	4.1%	35.8%	46.8%	13.3%		2002
HU	1.9%	29.5%	56.7%	10.0%	1.9%	1195
IE	6.6%	28.1%	38.6%	24.2%	2.4%	4488
IL	5.1%	39.9%	42.9%	12.0%	0.1%	1315
IT	6.0%	39.5%	41.4%	11.1%	2.0%	3500
NO	3.7%	37.3%	42.9%	11.1%	5.1%	2855
PT	3.0%	28.5%	58.9%	3.7%	5.8%	1247
RU	3.5%	33.9%	54.3%	5.9%	2.3%	5660
SI	2.3%	23.0%	61.1%	12.6%	1.0%	3359
SK	7.5%	50.9%	36.1%	5.5%		2145

Source: HLS₁₉ Consortium

Table A 5.4:

Percentage distributions (for valid N), percentage of missing and total N for **Item 4 '... to act on advice from your doctor or pharmacist?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	0.3%	7.0%	55.9%	36.2%	0.5%	2967
BE	4.7%	9.0%	49.2%	37.1%		1000
BG	1.4%	7.6%	68.5%	22.5%		864
CH	0.4%	5.5%	67.8%	26.2%	0.2%	2503
CZ	2.3%	14.9%	59.1%	23.5%	0.3%	1599
DE	1.0%	7.9%	57.7%	32.8%	0.6%	2142
DK	0.4%	5.0%	62.0%	32.5%	0.1%	3602
FR	0.3%	3.2%	55.6%	40.8%		2003
HU	0.7%	5.9%	69.2%	23.7%	0.5%	1196
IE	1.8%	4.0%	27.1%	66.9%	0.2%	4487
IL	0.5%	7.4%	57.8%	34.3%		1315
IT	1.6%	10.0%	64.3%	23.1%	1.0%	3500
NO	1.1%	4.5%	47.9%	45.8%	0.7%	2854
PT	0.6%	2.8%	80.3%	16.3%		1247
RU	0.6%	8.4%	76.1%	14.3%	0.6%	5660
SI	0.4%	4.4%	60.9%	34.0%	0.2%	3360
SK	1.7%	15.5%	63.4%	19.4%		2145

Source: HLS₁₉ Consortium

Table A 5.5:

Percentage distributions (for valid N), percentage of missing and total N for **Item 5 '... to find information on how to handle mental health problems?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	3.3%	24.6%	43.1%	20.6%	8.4%	2967
BE	8.2%	40.4%	43.3%	8.1%		1000
BG	13.2%	35.6%	38.9%	9.5%	2.8%	864
CH	5.7%	33.8%	45.8%	11.5%	3.2%	2503
CZ	4.4%	25.8%	52.0%	14.1%	3.6%	1599
DE	10.3%	45.3%	33.3%	10.1%	1.1%	2142
DK	7.2%	34.3%	45.7%	11.4%	1.3%	3602
FR	4.7%	33.3%	48.6%	13.5%		2003
HU	4.1%	26.5%	54.1%	9.4%	5.9%	1196
IE	11.9%	23.6%	30.5%	31.4%	2.6%	4487
IL	6.3%	28.9%	46.8%	17.3%	0.7%	1315
IT	5.8%	36.4%	45.0%	10.6%	2.2%	3500
NO	4.4%	31.2%	41.8%	17.0%	5.6%	2854
PT	3.3%	23.2%	56.6%	5.5%	11.4%	1247
RU	2.8%	23.8%	60.6%	10.5%	2.3%	5660
SI	2.8%	16.0%	57.0%	22.7%	1.5%	3360
SK	6.0%	38.2%	47.0%	8.8%		2145

Source: HLS₁₉ Consortium

Table A 5.6:

Percentage distributions (for valid N), percentage of missing and total N for **Item 6 '... to understand information about recommended health screenings or examinations?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	0.7%	9.4%	56.8%	32.3%	0.7%	2967
BE	4.4%	28.3%	46.0%	21.3%		1000
BG	9.7%	28.9%	43.5%	12.5%	5.4%	864
CH	2.3%	19.0%	58.0%	20.0%	0.6%	2503
CZ	2.4%	18.0%	59.7%	19.6%	0.3%	1599
DE	1.7%	19.2%	58.3%	20.2%	0.5%	2142
DK	1.4%	14.1%	52.5%	31.4%	0.5%	3602
FR	1.6%	14.8%	58.3%	25.3%		2003
HU	0.6%	9.0%	70.0%	19.7%	0.7%	1196
IE	4.8%	14.3%	35.9%	44.4%	0.6%	4487
IL	3.7%	21.1%	52.1%	23.0%	0.1%	1315
IT	4.9%	25.3%	53.3%	15.5%	1.0%	3500
NO	1.1%	10.8%	50.4%	36.6%	1.1%	2854
PT	1.4%	15.1%	75.0%	5.4%	3.1%	1247
RU	0.8%	8.4%	75.8%	14.6%	0.5%	5660
SI	2.4%	9.2%	52.4%	34.6%	1.4%	3360
SK	2.9%	20.8%	55.3%	21.0%		2145

Source: HLS₁₉ Consortium

Table A 5.7:

Percentage distributions (for valid N), percentage of missing and total N for **Item 7 '... to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	1.0%	10.7%	53.8%	33.6%	0.8%	2967
BE	4.8%	24.1%	48.3%	22.8%		1000
BG	9.2%	21.8%	49.4%	17.6%	2.0%	864
CH	1.0%	10.9%	55.8%	32.1%	0.2%	2503
CZ	2.3%	14.1%	55.3%	27.4%	0.9%	1599
DE	4.3%	31.4%	48.6%	15.5%	0.2%	2142
DK	1.2%	10.4%	51.5%	36.8%	0.1%	3602
FR	1.9%	15.0%	56.6%	26.5%		2003
HU	0.7%	10.4%	68.3%	19.9%	0.7%	1196
IE	4.0%	11.8%	34.8%	48.7%	0.8%	4487
IL	4.4%	20.3%	51.3%	24.0%	0.1%	1315
IT	2.7%	20.3%	56.3%	19.8%	0.9%	3500
NO	1.4%	15.1%	48.4%	34.5%	0.7%	2854
PT	1.7%	8.4%	76.5%	9.8%	3.6%	1247
RU	1.5%	16.3%	67.3%	13.4%	1.5%	5660
SI	1.4%	8.8%	56.4%	32.8%	0.7%	3360
SK	2.4%	24.0%	53.5%	20.1%		2145

Source: HLS₁₉ Consortium

Table A 5.8:

Percentage distributions (for valid N), percentage of missing and total N for **Item 8 '... to decide how you can protect yourself from illness using information from the mass media?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	4.7%	20.5%	49.4%	22.5%	3.0%	2967
BE	10.5%	41.4%	40.4%	7.7%		1000
BG	10.2%	38.8%	40.4%	6.6%	4.1%	864
CH	7.0%	37.8%	45.0%	10.0%	0.3%	2503
CZ	5.7%	25.9%	54.9%	12.8%	0.8%	1599
DE	11.3%	49.3%	32.0%	6.3%	1.1%	2142
DK	4.4%	35.3%	48.0%	12.3%	0.1%	3602
FR	7.2%	33.3%	46.3%	13.2%		2003
HU	6.4%	42.0%	42.4%	7.3%	1.9%	1196
IE	10.7%	27.2%	36.1%	25.2%	0.8%	4487
IL	7.8%	35.7%	42.8%	13.7%		1315
IT	9.1%	36.2%	41.2%	9.9%	3.6%	3500
NO	5.9%	36.6%	43.0%	12.6%	1.9%	2854
PT	2.9%	23.4%	67.5%	4.5%	1.7%	1247
RU	2.1%	24.8%	61.3%	9.3%	2.5%	5660
SI	6.0%	28.0%	52.5%	12.9%	0.6%	3360
SK	5.2%	38.3%	46.3%	10.1%		2145

Source: HLS₁₉ Consortium

Table A 5.9:

Percentage distributions (for valid N), percentage of missing and total N for **Item 9 '... to find information on healthy lifestyles such as physical exercise, healthy food or nutrition?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	0.3%	5.8%	51.5%	42.3%	0.1%	2967
BE	3.4%	17.3%	54.1%	25.2%		1000
BG	2.1%	14.7%	59.4%	23.2%	0.7%	864
CH	0.7%	9.5%	60.4%	29.4%	0.0%	2503
CZ	1.4%	8.2%	55.4%	34.6%	0.4%	1599
DE	0.6%	7.7%	52.1%	39.0%	0.7%	2142
DK	0.6%	6.5%	52.1%	40.7%	0.1%	3602
FR	0.6%	9.2%	60.8%	29.4%		2003
HU	1.2%	8.5%	68.1%	21.8%	0.4%	1196
IE	2.5%	7.4%	32.1%	57.6%	0.4%	4487
IL	0.6%	7.1%	51.9%	40.3%		1315
IT	2.7%	13.5%	61.0%	21.8%	0.9%	3500
NO	1.4%	9.5%	44.2%	44.6%	0.2%	2854
PT	1.2%	5.6%	78.0%	11.1%	4.1%	1247
RU	0.8%	8.8%	70.9%	18.6%	0.8%	5660
SI	1.4%	5.6%	52.1%	40.6%	0.3%	3360
SK	1.7%	11.4%	56.5%	30.4%		2145

Source: HLS₁₉ Consortium

Table A 5.10:

Percentage distributions (for valid N), percentage of missing and total N for **Item 10 '... to understand advice concerning your health from family or friends?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	1.3%	13.2%	49.8%	34.1%	1.7%	2967
BE	4.5%	22.4%	53.9%	19.2%		1000
BG	0.8%	15.9%	67.9%	13.7%	1.6%	864
CH	1.9%	16.2%	60.6%	20.8%	0.5%	2503
CZ	2.8%	15.7%	61.6%	19.0%	0.9%	1599
DE	2.3%	17.5%	57.6%	21.5%	1.1%	2142
DK	2.0%	16.5%	58.4%	23.0%	0.2%	3602
FR	2.0%	14.1%	61.6%	22.4%		2003
HU	1.1%	10.0%	70.5%	17.0%	1.3%	1196
IE	3.3%	12.8%	41.4%	41.7%	0.8%	4487
IL	1.7%	18.0%	55.8%	24.5%		1315
IT	3.4%	20.2%	58.6%	15.4%	2.4%	3500
NO	1.5%	17.0%	56.1%	24.3%	1.1%	2854
PT	1.0%	5.5%	83.7%	8.0%	1.8%	1247
RU	0.9%	11.7%	73.4%	12.4%	1.5%	5660
SI	1.1%	8.0%	64.6%	25.7%	0.5%	3360
SK	1.5%	14.6%	63.5%	20.3%		2145

Source: HLS₁₉ Consortium

Table A 5.11:

Percentage distributions (for valid N), percentage of missing and total N for **Item 11 '... to judge how your housing conditions may affect your health and well-being?'**, by country

	very difficult	difficult	easy	very easy	missing	Total N
AT	0.6%	8.7%	52.7%	36.9%	1.0%	2967
BE	5.4%	36.7%	43.8%	14.1%		1000
BG	3.9%	17.0%	62.4%	14.0%	2.7%	864
CH	2.3%	20.5%	56.0%	20.9%	0.3%	2503
CZ	2.7%	21.0%	56.7%	18.7%	0.9%	1599
DE	11.1%	38.2%	40.9%	9.4%	0.5%	2142
DK	3.8%	22.8%	50.5%	22.7%	0.2%	3602
FR	2.7%	22.7%	53.8%	20.8%		2003
HU	0.8%	12.0%	70.7%	15.5%	1.0%	1196
IE	4.4%	13.8%	34.2%	46.9%	0.7%	4487
IL	5.9%	25.6%	49.0%	19.4%		1315
IT	4.2%	27.3%	52.4%	14.6%	1.5%	3500
NO	2.0%	14.0%	52.0%	30.9%	1.1%	2854
PT	1.1%	7.4%	82.5%	6.7%	2.2%	1247
RU	1.2%	15.6%	69.8%	11.3%	2.0%	5660
SI	1.3%	8.3%	62.2%	27.9%	0.4%	3360
SK	2.1%	24.3%	56.8%	16.7%		2145

Source: HLS₁₉ Consortium

Table A 5.12:

Percentage distributions (for valid N), percentage of missing and total N for **Item 12 '... to make decisions to improve your health and well-being?', by country**

	very difficult	difficult	easy	very easy	missing	Total N
AT	0.5%	11.3%	56.8%	30.9%	0.4%	2967
BE	5.6%	31.5%	47.1%	15.8%		1000
BG	4.0%	34.3%	48.7%	10.5%	2.4%	864
CH	1.9%	24.0%	55.4%	18.5%	0.2%	2503
CZ	5.1%	25.6%	50.7%	18.4%	0.1%	1599
DE	3.8%	26.8%	52.4%	16.6%	0.5%	2142
DK	3.9%	28.5%	46.4%	20.9%	0.3%	3602
FR	2.5%	24.8%	51.8%	20.9%		2003
HU	1.9%	24.4%	59.7%	13.9%		1196
IE	2.6%	11.9%	37.9%	47.4%	0.3%	4487
IL	5.7%	29.1%	43.6%	21.6%		1315
IT	4.7%	27.0%	52.3%	15.2%	0.8%	3500
NO	2.0%	20.0%	49.5%	28.2%	0.4%	2854
PT	0.7%	12.7%	78.7%	7.6%	0.2%	1247
RU	3.1%	22.9%	61.4%	10.4%	2.3%	5660
SI	1.5%	15.4%	59.4%	23.6%	0.1%	3360
SK	5.3%	36.8%	44.6%	13.4%		2145

Source: HLS19 Consortium

5.2 Average Difficulty of single items of the HL-Q16 and the HL-Q47 measures

Table A 5.13:

Percentages of respondents in each country who responded “very difficult” or “difficult” to the HLS19-Q16 items

	BE	BG	CZ	DE	DK	FR	HU	IE	IL	IT	NO	RU	SI	SK	Mean
2 to find information on treatments of illnesses that concern you?	32.7	30.2	22.4	32.2	16.4	17.9	19.9	29.1	16.2	35.6	20.0	20.1	16.6	26.2	23.3
4 to find out where to get professional help when you are ill?	23.6	25.3	17.9	20.7	12.8	15.4	23.8	20.4	18.3	31.0	9.7	12.7	9.7	24.8	17.7
5 to understand what a doctor says to you?	25.2	14.2	12.5	30.6	7.0	14.0	14.5	19.2	22.1	20.8	12.4	13.9	8.5	28.4	16.1
8 to understand your doctor's or pharmacist's instruction on how to take a prescribed medicine?	13.3	5.9	6.0	6.5	2.1	4.4	6.3	7.7	9.1	13.3	5.7	9.8	3.9	11.6	7.4
11 to judge if you may need to get a second opinion from another doctor?	58.0	33.1	37.7	57.0	59.9	43.8	41.2	43.3	46.9	40.8	46.0	30.4	32.3	57.2	44.1
13 to use information your doctor gives to you to make decisions about your illness?	38.8	33.6	13.4	35.5	24.5	20.7	24.2	10.6	34.8	29.9	13.9	17.3	9.6	46.3	22.0
16 to act on advice from your doctor or pharmacist?	13.7	9.1	17.2	9.0	5.4	3.6	6.5	5.9	7.9	11.7	5.6	9.1	4.8	17.2	8.5
18 to find information on how to handle mental health problems?	48.6	50.2	31.4	56.1	42.1	37.9	32.5	36.4	35.5	43.2	37.8	27.2	19.1	44.1	36.4
21 to understand information about unhealthy habits such as smoking, low physical activity or drinking too much alcohol?	18.5	16.0	6.9	11.0	4.8	9.2	11.7	9.5	8.5	17.5	5.8	9.2	5.4	10.3	9.3
23 to understand information about recommended health screenings or examinations?	32.7	40.8	20.5	21.0	15.6	16.4	9.7	19.2	24.8	30.6	12.0	9.3	11.8	23.7	17.7
28 to judge if the information on health risks in the mass media is reliable?	52.7	60.2	50.5	71.7	51.8	46.1	52.0	48.8	49.1	47.4	48.9	26.8	40.7	54.0	47.5

	BE	BG	CZ	DE	DK	FR	HU	IE	IL	IT	NO	RU	SI	SK	Mean
31 to decide how you can protect yourself from illness using information from the mass media?	51.9	51.0	31.8	61.3	39.7	40.5	49.3	38.3	43.5	47.0	43.3	27.6	34.2	43.5	40.8
33 to find information about activities that are good for your mental health and well-being?	25.8	25.9	12.3	22.4	18.5	15.4	13.5	18.1	15.3	22.9	15.6	20.1	10.3	21.4	18.0
37 to understand advice concerning your health from family or friends?	26.9	17.0	18.6	20.0	18.5	16.1	11.3	16.2	19.7	24.1	18.7	12.8	9.2	16.1	16.8
39 to understand information in the mass media on how to improve your health?	39.3	38.4	28.0	36.2	22.7	23.3	30.6	27.5	23.8	32.7	29.7	19.2	22.5	26.7	26.7
43 to judge which everyday habits affect your health?	23.1	16.5	13.9	19.8	9.3	23.3	10.0	11.4	14.5	20.9	8.2	11.9	7.3	19.8	13.9
Mean	32.8	29.2	21.3	31.9	21.9	21.8	22.3	22.6	24.4	29.3	20.8	17.3	15.4	29.5	22.9

Source: HLS₁₉ Consortium

Table A 5.14: Percentages of respondents in each country who responded “very difficult” or “difficult” to the HLS19–Q47 items

	BG	DE	IE	IT	NO	SI	Mean
1 to find information about symptoms of illnesses that concern you?	21.4	24.4	22.8	28.0	13.4	14.5	19.6
2 to find information on treatments of illnesses that concern you?	30.2	32.2	29.1	35.6	20.0	16.6	26.1
3 to find information about what to do in a medical emergency?	30.3	28.4	25.2	34.3	22.6	13.1	24.3
4 to find out where to get professional help when you are ill?	25.3	20.7	20.4	31.0	9.7	9.7	18.6
5 to understand what a doctor says to you?	14.2	30.6	19.2	20.8	12.4	8.5	16.4
6 to understand the instruction leaflets that come with your medicine?	22.6	54.4	22.3	41.2	23.5	8.6	27.1
7 to understand information about what to do in a medical emergency?	30.7	37.2	24.7	34.4	20.9	10.0	24.3
8 to understand your doctor’s or pharmacist’s instruction on how to take a prescribed medicine?	5.9	6.5	7.7	13.3	5.7	3.9	7.1
9 to judge how information from your doctor applies to you?	15.2	34.0	12.4	20.4	9.7	10.2	15.3
10 to judge the advantages and disadvantages of different treatment options?	46.7	71.2	35.6	46.5	43.2	25.6	41.4
11 to judge if you may need to get a second opinion from another doctor?	33.1	57.0	43.3	40.8	46.0	32.3	42.0
12 to judge if the information about illness in the mass media is reliable?	58.4	76.4	54.9	52.1	55.8	46.7	55.0
13 to use information your doctor gives to you to make decisions about your illness?	33.6	35.5	10.6	29.9	13.9	9.6	18.4
14 to follow instructions on medication?	15.3	6.3	8.1	22.1	10.2	4.2	9.9
15 to call an ambulance in a medical emergency?	25.6	6.7	9.1	15.4	6.3	7.3	9.7
16 to act on advice from your doctor or pharmacist?	9.1	9.0	5.9	11.7	5.6	4.8	7.1
17 to find information about how to handle unhealthy habits such as smoking, low physical activity or drinking too much alcohol?	56.2	9.3	11.2	18.1	8.2	8.6	12.6
18 to find information on how to handle mental health problems?	50.2	56.1	36.4	43.2	37.8	19.1	36.7
19 to find information on recommended vaccinations for you or your family?	49.4	30.8	28.2	33.2	28.7	18.9	27.9
20 to find information on how to handle health risks like being overweight, having high blood pressure or high cholesterol?	24.2	22.9	15.8	23.6	14.7	11.2	16.6
21 to understand information about unhealthy habits such as smoking, low physical activity or drinking too much alcohol?	16.0	11.0	9.5	17.5	5.8	5.4	9.3
22 to understand why you or your family may need vaccinations?	36.8	24.7	17.7	23.9	10.6	16.0	18.4
23 to understand information about recommended health screenings or examinations?	40.8	21.0	19.2	30.6	12.0	11.8	19.1
24 to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	31.6	35.8	15.9	23.2	16.6	10.2	18.5
25 to judge when you need to go to a doctor for a check- up?	19.2	31.5	19.8	25.4	25.8	14.6	21.7
26 to judge which vaccinations you or your family may need?	54.0	41.9	28.8	32.4	25.1	25.1	30.1
27 to judge which health screenings or examinations you should have?	53.1	36.6	29.1	36.4	28.7	19.4	29.3
28 to judge if the information on health risks in the mass media is reliable?	60.2	71.7	48.8	47.4	48.9	40.7	49.4
29 to decide if you should have a flu vaccination?	36.0	33.4	24.3	23.6	23.6	34.7	27.0
30 to decide how you can protect yourself from illness using advice from family or friends?	29.4	46.8	23.5	36.7	31.4	22.7	31.2

	BG	DE	IE	IT	NO	SI	Mean
31 to decide how you can protect yourself from illness using information from the mass media?	51.0	61.3	38.3	47.0	43.3	34.2	43.0
32 to find information on healthy life styles such as physical exercise, healthy food or nutrition?	16.9	8.3	10.0	16.4	11.0	7.0	10.2
33 to find information about activities that are good for your mental health and well-being?	25.9	22.4	18.1	22.9	15.6	10.3	17.0
34 to find out how your neighborhood could become more health-friendly?	61.0	64.9	53.0	45.3	61.0	29.3	50.4
35 to find information about changes in laws that may affect your or your family's health?	68.4	77.5	49.7	48.4	63.2	42.2	54.3
36 to find information about how to promote health at work, at school or in the neighborhood?	55.3	72.2	31.0	42.8	34.6	26.5	38.7
37 to understand advice concerning your health from family or friends?	17.0	20.0	16.2	24.1	18.7	9.2	16.9
38 to understand information on food packaging?	49.0	61.9	27.6	26.9	29.1	23.4	31.8
39 to understand information in the mass media on how to improve your health?	38.4	36.2	27.5	32.7	29.7	22.5	28.4
40 to understand information on how to keep your mind healthy?	36.8	55.1	21.4	30.0	22.4	16.3	26.3
41 to judge how your neighborhood may affect your health and well-being?	31.6	57.9	30.4	33.7	46.2	20.0	34.7
42 to judge how your housing conditions may affect your health and well-being?	21.5	49.5	18.3	32.0	16.2	9.6	22.8
43 to judge which everyday habits affect your health?	16.5	19.8	11.4	20.9	8.2	7.3	12.5
44 to make decisions to improve your health and well-being?	39.3	30.7	14.5	32.0	22.1	16.9	22.1
45 to join a sports club or exercise group if you want to be physically active?	49.1	27.3	25.5	32.1	20.9	32.7	27.5
46 to influence your living conditions that affect your health and well-being?	70.5	56.8	20.8	43.0	20.4	26.5	32.4
47 to take part in activities that improve health and well-being in your community?	52.5	65.5	30.0	45.0	23.7	37.3	38.1
Mean	35.6	38.1	23.9	31.2	23.9	18.2	25.9

Source: HLS₁₉ Consortium

5.3 Spearman Correlations of all items with each other for each country

Table A 5.15: Spearman correlations (ρ) of HLS₁₉-Q12 items, for Austria

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.439	.346	.347	.344	.364	.272	.256	.289	.276	.287	.321
2. ...to understand information about what to do in a medical emergency?	.439	1.000	.375	.336	.292	.365	.258	.272	.294	.325	.304	.310
3. ...to judge the advantages and disadvantages of different treatment options?	.346	.375	1.000	.274	.376	.331	.231	.355	.211	.272	.262	.290
4. ...to act on advice from your doctor or pharmacist?	.347	.336	.274	1.000	.271	.364	.320	.276	.337	.301	.262	.308
5. ...to find information on how to handle mental health problems?	.344	.292	.376	.271	1.000	.430	.304	.352	.313	.320	.314	.361
6. ...to understand information about recommended health screenings or examinations?	.364	.365	.331	.364	.430	1.000	.348	.344	.397	.336	.401	.382
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.272	.258	.231	.320	.304	.348	1.000	.320	.490	.336	.355	.373
8. ...to decide how you can protect yourself from illness using information from the mass media?	.256	.272	.355	.276	.352	.344	.320	1.000	.270	.302	.291	.281
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.289	.294	.211	.337	.313	.397	.490	.270	1.000	.365	.402	.379
10. ...to understand advice concerning your health from family or friends?	.276	.325	.272	.301	.320	.336	.336	.302	.365	1.000	.382	.371
11. ...to judge how your housing conditions may affect your health and well-being?	.287	.304	.262	.262	.314	.401	.355	.291	.402	.382	1.000	.476
12. ... to make decisions to improve your health and well-being?	.321	.310	.290	.308	.361	.382	.373	.281	.379	.371	.476	1.000

Source: HLS₁₉ Consortium

Table A 5.16: Spearman correlations (ρ) of HLS19–Q12 items, for Belgium

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.399	.385	.478	.355	.403	.355	.204	.431	.351	.302	.379
2. ...to understand information about what to do in a medical emergency?	.399	1.000	.436	.379	.345	.392	.298	.281	.316	.297	.338	.306
3. ...to judge the advantages and disadvantages of different treatment options?	.385	.436	1.000	.378	.429	.423	.349	.413	.277	.310	.378	.391
4. ...to act on advice from your doctor or pharmacist?	.478	.379	.378	1.000	.289	.447	.419	.239	.460	.410	.339	.405
5. ...to find information on how to handle mental health problems?	.355	.345	.429	.289	1.000	.417	.313	.324	.327	.292	.390	.365
6. ...to understand information about recommended health screenings or examinations?	.403	.392	.423	.447	.417	1.000	.503	.309	.392	.376	.470	.456
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.355	.298	.349	.419	.313	.503	1.000	.368	.447	.330	.416	.455
8. ...to decide how you can protect yourself from illness using information from the mass media?	.204	.281	.413	.239	.324	.309	.368	1.000	.344	.288	.398	.314
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.431	.316	.277	.460	.327	.392	.447	.344	1.000	.428	.433	.473
10. ...to understand advice concerning your health from family or friends?	.351	.297	.310	.410	.292	.376	.330	.288	.428	1.000	.390	.386
11. ...to judge how your housing conditions may affect your health and well-being?	.302	.338	.378	.339	.390	.470	.416	.398	.433	.390	1.000	.452
12. ... to make decisions to improve your health and well-being?	.379	.306	.391	.405	.365	.456	.455	.314	.473	.386	.452	1.000

Source: HLS19 Consortium

Table A 5.17: Spearman correlations (ρ) of HLS19–Q12 items, for Bulgaria

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.385	.284	.301	.250	.164	.183	.155	.198	.155	.147	.262
2. ...to understand information about what to do in a medical emergency?	.385	1.000	.429	.261	.383	.173	.300	.201	.217	.063	.211	.181
3. ...to judge the advantages and disadvantages of different treatment options?	.284	.429	1.000	.282	.422	.185	.401	.406	.311	.132	.297	.289
4. ...to act on advice from your doctor or pharmacist?	.301	.261	.282	1.000	.263	.066	.290	.244	.398	.343	.327	.249
5. ...to find information on how to handle mental health problems?	.250	.383	.422	.263	1.000	.195	.389	.205	.319	.261	.352	.343
6. ...to understand information about recommended health screenings or examinations?	.164	.173	.185	.066	.195	1.000	.148	.131	.070	.117	.064	.009
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.183	.300	.401	.290	.389	.148	1.000	.388	.389	.180	.314	.426
8. ...to decide how you can protect yourself from illness using information from the mass media?	.155	.201	.406	.244	.205	.131	.388	1.000	.313	.201	.256	.300
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.198	.217	.311	.398	.319	.070	.389	.313	1.000	.345	.437	.263
10. ...to understand advice concerning your health from family or friends?	.155	.063	.132	.343	.261	.117	.180	.201	.345	1.000	.338	.233
11. ...to judge how your housing conditions may affect your health and well-being?	.147	.211	.297	.327	.352	.064	.314	.256	.437	.338	1.000	.309
12. ... to make decisions to improve your health and well-being?	.262	.181	.289	.249	.343	.009	.426	.300	.263	.233	.309	1.000

Source: HLS19 Consortium

Table A 5.18: Spearman correlations (ρ) of HLS19–Q12 items, for Switzerland

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.360	.266	.280	.278	.286	.234	.138	.228	.159	.228	.223
2. ...to understand information about what to do in a medical emergency?	.360	1.000	.417	.315	.370	.377	.262	.260	.282	.243	.274	.280
3. ...to judge the advantages and disadvantages of different treatment options?	.266	.417	1.000	.293	.411	.331	.224	.288	.164	.225	.300	.305
4. ...to act on advice from your doctor or pharmacist?	.280	.315	.293	1.000	.307	.330	.289	.211	.306	.272	.253	.274
5. ...to find information on how to handle mental health problems?	.278	.370	.411	.307	1.000	.391	.275	.322	.309	.251	.386	.380
6. ...to understand information about recommended health screenings or examinations?	.286	.377	.331	.330	.391	1.000	.335	.234	.316	.240	.337	.278
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.234	.262	.224	.289	.275	.335	1.000	.241	.394	.247	.312	.312
8. ...to decide how you can protect yourself from illness using information from the mass media?	.138	.260	.288	.211	.322	.234	.241	1.000	.298	.280	.271	.278
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.228	.282	.164	.306	.309	.316	.394	.298	1.000	.298	.367	.349
10. ...to understand advice concerning your health from family or friends?	.159	.243	.225	.272	.251	.240	.247	.280	.298	1.000	.313	.307
11. ...to judge how your housing conditions may affect your health and well-being?	.228	.274	.300	.253	.386	.337	.312	.271	.367	.313	1.000	.504
12. ... to make decisions to improve your health and well-being?	.223	.280	.305	.274	.380	.278	.312	.278	.349	.307	.504	1.000

Source: HLS₁₉ Consortium

Table A 5.19: Spearman correlations (ρ) of HLS19–Q12 items, for Czech Republic

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.441	.334	.368	.333	.413	.296	.353	.307	.294	.362	.218
2. ...to understand information about what to do in a medical emergency?	.441	1.000	.358	.306	.346	.426	.285	.340	.271	.250	.347	.266
3. ...to judge the advantages and disadvantages of different treatment options?	.334	.358	1.000	.233	.362	.300	.268	.395	.157	.246	.346	.304
4. ...to act on advice from your doctor or pharmacist?	.368	.306	.233	1.000	.208	.297	.264	.318	.265	.259	.295	.336
5. ...to find information on how to handle mental health problems?	.333	.346	.362	.208	1.000	.342	.257	.335	.290	.276	.377	.298
6. ...to understand information about recommended health screenings or examinations?	.413	.426	.300	.297	.342	1.000	.320	.284	.289	.243	.338	.221
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.296	.285	.268	.264	.257	.320	1.000	.315	.384	.239	.310	.257
8. ...to decide how you can protect yourself from illness using information from the mass media?	.353	.340	.395	.318	.335	.284	.315	1.000	.250	.277	.351	.279
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.307	.271	.157	.265	.290	.289	.384	.250	1.000	.263	.265	.227
10. ...to understand advice concerning your health from family or friends?	.294	.250	.246	.259	.276	.243	.239	.277	.263	1.000	.282	.267
11. ...to judge how your housing conditions may affect your health and well-being?	.362	.347	.346	.295	.377	.338	.310	.351	.265	.282	1.000	.293
12. ... to make decisions to improve your health and well-being?	.218	.266	.304	.336	.298	.221	.257	.279	.227	.267	.293	1.000

Source: HLS19 Consortium

Table A 5.20: Spearman correlations (ρ) of HLS19–Q12 items, for Germany

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.365	.291	.317	.282	.317	.202	.157	.298	.113	.151	.222
2. ...to understand information about what to do in a medical emergency?	.365	1.000	.353	.231	.328	.332	.252	.216	.240	.171	.231	.221
3. ...to judge the advantages and disadvantages of different treatment options?	.291	.353	1.000	.227	.364	.273	.304	.330	.150	.094	.264	.265
4. ...to act on advice from your doctor or pharmacist?	.317	.231	.227	1.000	.191	.298	.209	.140	.270	.208	.197	.282
5. ...to find information on how to handle mental health problems?	.282	.328	.364	.191	1.000	.304	.319	.348	.294	.124	.268	.234
6. ...to understand information about recommended health screenings or examinations?	.317	.332	.273	.298	.304	1.000	.385	.224	.333	.187	.233	.254
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.202	.252	.304	.209	.319	.385	1.000	.357	.309	.185	.296	.213
8. ...to decide how you can protect yourself from illness using information from the mass media?	.157	.216	.330	.140	.348	.224	.357	1.000	.237	.264	.312	.201
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.298	.240	.150	.270	.294	.333	.309	.237	1.000	.239	.249	.300
10. ...to understand advice concerning your health from family or friends?	.113	.171	.094	.208	.124	.187	.185	.264	.239	1.000	.204	.195
11. ...to judge how your housing conditions may affect your health and well-being?	.151	.231	.264	.197	.268	.233	.296	.312	.249	.204	1.000	.340
12. ... to make decisions to improve your health and well-being?	.222	.221	.265	.282	.234	.254	.213	.201	.300	.195	.340	1.000

Source:

Table A 5.21: Spearman correlations (ρ) of HLS19–Q12 items, for Denmark

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.393	.361	.421	.372	.334	.305	.263	.339	.263	.249	.228
2. ...to understand information about what to do in a medical emergency?	.393	1.000	.327	.384	.344	.344	.310	.253	.331	.240	.238	.262
3. ...to judge the advantages and disadvantages of different treatment options?	.361	.327	1.000	.389	.435	.345	.274	.358	.279	.266	.329	.319
4. ...to act on advice from your doctor or pharmacist?	.421	.384	.389	1.000	.342	.354	.330	.253	.409	.280	.278	.302
5. ...to find information on how to handle mental health problems?	.372	.344	.435	.342	1.000	.344	.293	.306	.344	.283	.312	.305
6. ...to understand information about recommended health screenings or examinations?	.334	.344	.345	.354	.344	1.000	.425	.310	.376	.270	.353	.311
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.305	.310	.274	.330	.293	.425	1.000	.339	.443	.324	.374	.341
8. ...to decide how you can protect yourself from illness using information from the mass media?	.263	.253	.358	.253	.306	.310	.339	1.000	.344	.350	.342	.321
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.339	.331	.279	.409	.344	.376	.443	.344	1.000	.392	.370	.349
10. ...to understand advice concerning your health from family or friends?	.263	.240	.266	.280	.283	.270	.324	.350	.392	1.000	.367	.336
11. ...to judge how your housing conditions may affect your health and well-being?	.249	.238	.329	.278	.312	.353	.374	.342	.370	.367	1.000	.404
12. ... to make decisions to improve your health and well-being?	.228	.262	.319	.302	.305	.311	.341	.321	.349	.336	.404	1.000

Source: HLS19 Consortium

Table A 5.22: Spearman correlations (ρ) of HLS19–Q12 items, for France

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.413	.331	.410	.369	.379	.377	.281	.356	.266	.333	.327
2. ...to understand information about what to do in a medical emergency?	.413	1.000	.491	.342	.421	.413	.394	.405	.360	.346	.401	.397
3. ...to judge the advantages and disadvantages of different treatment options?	.331	.491	1.000	.299	.472	.422	.403	.479	.333	.317	.424	.440
4. ...to act on advice from your doctor or pharmacist?	.410	.342	.299	1.000	.293	.414	.397	.278	.411	.359	.340	.349
5. ...to find information on how to handle mental health problems?	.369	.421	.472	.293	1.000	.460	.429	.484	.371	.345	.491	.486
6. ...to understand information about recommended health screenings or examinations?	.379	.413	.422	.414	.460	1.000	.603	.374	.440	.375	.473	.434
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.377	.394	.403	.397	.429	.603	1.000	.417	.474	.394	.487	.483
8. ...to decide how you can protect yourself from illness using information from the mass media?	.281	.405	.479	.278	.484	.374	.417	1.000	.384	.395	.445	.463
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.356	.360	.333	.411	.371	.440	.474	.384	1.000	.448	.457	.472
10. ...to understand advice concerning your health from family or friends?	.266	.346	.317	.359	.345	.375	.394	.395	.448	1.000	.446	.424
11. ...to judge how your housing conditions may affect your health and well-being?	.333	.401	.424	.340	.491	.473	.487	.445	.457	.446	1.000	.550
12. ... to make decisions to improve your health and well-being?	.327	.397	.440	.349	.486	.434	.483	.463	.472	.424	.550	1.000

Source: HLS19 Consortium

Table A 5.23: Spearman correlations (ρ) of HLS19–Q12 items, for Hungary

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.357	.368	.300	.305	.252	.232	.181	.220	.220	.214	.222
2. ...to understand information about what to do in a medical emergency?	.357	1.000	.375	.360	.326	.305	.286	.196	.327	.273	.268	.254
3. ...to judge the advantages and disadvantages of different treatment options?	.368	.375	1.000	.344	.276	.309	.326	.336	.315	.288	.292	.387
4. ...to act on advice from your doctor or pharmacist?	.300	.360	.344	1.000	.232	.385	.392	.225	.412	.343	.296	.341
5. ...to find information on how to handle mental health problems?	.305	.326	.276	.232	1.000	.291	.260	.224	.317	.257	.316	.276
6. ...to understand information about recommended health screenings or examinations?	.252	.305	.309	.385	.291	1.000	.512	.264	.395	.366	.381	.374
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.232	.286	.326	.392	.260	.512	1.000	.271	.404	.379	.355	.332
8. ...to decide how you can protect yourself from illness using information from the mass media?	.181	.196	.336	.225	.224	.264	.271	1.000	.242	.259	.258	.354
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.220	.327	.315	.412	.317	.395	.404	.242	1.000	.422	.420	.300
10. ...to understand advice concerning your health from family or friends?	.220	.273	.288	.343	.257	.366	.379	.259	.422	1.000	.385	.383
11. ...to judge how your housing conditions may affect your health and well-being?	.214	.268	.292	.296	.316	.381	.355	.258	.420	.385	1.000	.393
12. ... to make decisions to improve your health and well-being?	.222	.254	.387	.341	.276	.374	.332	.354	.300	.383	.393	1.000

Source: HLS19 Consortium

Table A 5.24: Spearman correlations (ρ) of HLS19–Q12 items, for Ireland

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.355	.338	.338	.325	.336	.242	.161	.245	.279	.230	.273
2. ...to understand information about what to do in a medical emergency?	.355	1.000	.337	.277	.278	.325	.232	.181	.218	.245	.230	.271
3. ...to judge the advantages and disadvantages of different treatment options?	.338	.337	1.000	.262	.289	.326	.249	.211	.209	.285	.231	.275
4. ...to act on advice from your doctor or pharmacist?	.338	.277	.262	1.000	.326	.395	.326	.197	.310	.326	.263	.322
5. ...to find information on how to handle mental health problems?	.325	.278	.289	.326	1.000	.374	.326	.252	.317	.308	.248	.311
6. ...to understand information about recommended health screenings or examinations?	.336	.325	.326	.395	.374	1.000	.478	.257	.317	.324	.321	.305
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.242	.232	.249	.326	.326	.478	1.000	.240	.319	.299	.272	.265
8. ...to decide how you can protect yourself from illness using information from the mass media?	.161	.181	.211	.197	.252	.257	.240	1.000	.297	.287	.218	.225
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.245	.218	.209	.310	.317	.317	.319	.297	1.000	.318	.300	.376
10. ...to understand advice concerning your health from family or friends?	.279	.245	.285	.326	.308	.324	.299	.287	.318	1.000	.398	.462
11. ...to judge how your housing conditions may affect your health and well-being?	.230	.230	.231	.263	.248	.321	.272	.218	.300	.398	1.000	.461
12. ... to make decisions to improve your health and well-being?	.273	.271	.275	.322	.311	.305	.265	.225	.376	.462	.461	1.000

Source: HLS19 Consortium

Table A 5.25: Spearman correlations (ρ) of HLS19–Q12 items, for Israel

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.448	.367	.415	.437	.372	.332	.306	.380	.337	.301	.329
2. ...to understand information about what to do in a medical emergency?	.448	1.000	.465	.383	.443	.450	.332	.374	.331	.335	.381	.373
3. ...to judge the advantages and disadvantages of different treatment options?	.367	.465	1.000	.340	.421	.444	.365	.466	.264	.291	.439	.448
4. ...to act on advice from your doctor or pharmacist?	.415	.383	.340	1.000	.364	.432	.373	.325	.446	.379	.363	.396
5. ...to find information on how to handle mental health problems?	.437	.443	.421	.364	1.000	.448	.387	.428	.358	.401	.394	.432
6. ...to understand information about recommended health screenings or examinations?	.372	.450	.444	.432	.448	1.000	.521	.421	.369	.364	.427	.440
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.332	.332	.365	.373	.387	.521	1.000	.476	.384	.357	.368	.360
8. ...to decide how you can protect yourself from illness using information from the mass media?	.306	.374	.466	.325	.428	.421	.476	1.000	.284	.362	.422	.461
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.380	.331	.264	.446	.358	.369	.384	.284	1.000	.445	.332	.369
10. ...to understand advice concerning your health from family or friends?	.337	.335	.291	.379	.401	.364	.357	.362	.445	1.000	.452	.403
11. ...to judge how your housing conditions may affect your health and well-being?	.301	.381	.439	.363	.394	.427	.368	.422	.332	.452	1.000	.469
12. ... to make decisions to improve your health and well-being?	.329	.373	.448	.396	.432	.440	.360	.461	.369	.403	.469	1.000

Source: HLS19 Consortium

Table A 5.26: Spearman correlations (ρ) of HLS19–Q12 items, for Italy

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.521	.412	.393	.381	.415	.376	.319	.309	.309	.354	.357
2. ...to understand information about what to do in a medical emergency?	.521	1.000	.512	.405	.422	.499	.427	.421	.368	.388	.421	.401
3. ...to judge the advantages and disadvantages of different treatment options?	.412	.512	1.000	.349	.435	.434	.394	.443	.294	.356	.406	.402
4. ...to act on advice from your doctor or pharmacist?	.393	.405	.349	1.000	.290	.392	.439	.263	.417	.346	.321	.361
5. ...to find information on how to handle mental health problems?	.381	.422	.435	.290	1.000	.436	.374	.423	.373	.333	.427	.418
6. ...to understand information about recommended health screenings or examinations?	.415	.499	.434	.392	.436	1.000	.544	.420	.380	.381	.432	.420
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.376	.427	.394	.439	.374	.544	1.000	.364	.497	.387	.384	.406
8. ...to decide how you can protect yourself from illness using information from the mass media?	.319	.421	.443	.263	.423	.420	.364	1.000	.284	.441	.426	.412
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.309	.368	.294	.417	.373	.380	.497	.284	1.000	.383	.352	.411
10. ...to understand advice concerning your health from family or friends?	.309	.388	.356	.346	.333	.381	.387	.441	.383	1.000	.390	.431
11. ...to judge how your housing conditions may affect your health and well-being?	.354	.421	.406	.321	.427	.432	.384	.426	.352	.390	1.000	.476
12. ... to make decisions to improve your health and well-being?	.357	.401	.402	.361	.418	.420	.406	.412	.411	.431	.476	1.000

Source: HLS19 Consortium

Table A 5.27: Spearman correlations (ρ) of HLS19–Q12 items, for Norway

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.375	.260	.413	.287	.332	.314	.160	.347	.290	.251	.274
2. ...to understand information about what to do in a medical emergency?	.375	1.000	.296	.357	.333	.321	.290	.198	.286	.276	.257	.280
3. ...to judge the advantages and disadvantages of different treatment options?	.260	.296	1.000	.286	.347	.330	.279	.270	.212	.255	.263	.255
4. ...to act on advice from your doctor or pharmacist?	.413	.357	.286	1.000	.275	.431	.400	.177	.401	.339	.313	.347
5. ...to find information on how to handle mental health problems?	.287	.333	.347	.275	1.000	.352	.301	.279	.294	.287	.300	.310
6. ...to understand information about recommended health screenings or examinations?	.332	.321	.330	.431	.352	1.000	.458	.243	.398	.358	.375	.328
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.314	.290	.279	.400	.301	.458	1.000	.287	.426	.340	.330	.338
8. ...to decide how you can protect yourself from illness using information from the mass media?	.160	.198	.270	.177	.279	.243	.287	1.000	.249	.362	.219	.218
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.347	.286	.212	.401	.294	.398	.426	.249	1.000	.360	.354	.351
10. ...to understand advice concerning your health from family or friends?	.290	.276	.255	.339	.287	.358	.340	.362	.360	1.000	.345	.326
11. ...to judge how your housing conditions may affect your health and well-being?	.251	.257	.263	.313	.300	.375	.330	.219	.354	.345	1.000	.378
12. ... to make decisions to improve your health and well-being?	.274	.280	.255	.347	.310	.328	.338	.218	.351	.326	.378	1.000

Source: HLS19 Consortium

Table A 5.28: Spearman correlations (ρ) of HLS19–Q12 items, for Portugal

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.501	.382	.381	.398	.411	.412	.340	.404	.323	.380	.333
2. ...to understand information about what to do in a medical emergency?	.501	1.000	.401	.366	.334	.403	.334	.291	.371	.350	.366	.338
3. ...to judge the advantages and disadvantages of different treatment options?	.382	.401	1.000	.271	.354	.428	.362	.407	.311	.310	.338	.314
4. ...to act on advice from your doctor or pharmacist?	.381	.366	.271	1.000	.251	.319	.427	.214	.421	.442	.408	.311
5. ...to find information on how to handle mental health problems?	.398	.334	.354	.251	1.000	.505	.403	.442	.414	.388	.397	.378
6. ...to understand information about recommended health screenings or examinations?	.411	.403	.428	.319	.505	1.000	.455	.409	.427	.401	.423	.337
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.412	.334	.362	.427	.403	.455	1.000	.404	.615	.463	.538	.391
8. ...to decide how you can protect yourself from illness using information from the mass media?	.340	.291	.407	.214	.442	.409	.404	1.000	.410	.385	.370	.350
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.404	.371	.311	.421	.414	.427	.615	.410	1.000	.612	.537	.407
10. ...to understand advice concerning your health from family or friends?	.323	.350	.310	.442	.388	.401	.463	.385	.612	1.000	.508	.413
11. ...to judge how your housing conditions may affect your health and well-being?	.380	.366	.338	.408	.397	.423	.538	.370	.537	.508	1.000	.453
12. ... to make decisions to improve your health and well-being?	.333	.338	.314	.311	.378	.337	.391	.350	.407	.413	.453	1.000

Source: HLS19 Consortium

Table A 5.29: Spearman correlations (ρ) of HLS19–Q12 items, for Russia

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.455	.403	.454	.402	.385	.333	.314	.384	.309	.325	.336
2. ...to understand information about what to do in a medical emergency?	.455	1.000	.542	.377	.492	.352	.383	.425	.314	.310	.381	.374
3. ...to judge the advantages and disadvantages of different treatment options?	.403	.542	1.000	.345	.514	.332	.402	.486	.299	.282	.378	.448
4. ...to act on advice from your doctor or pharmacist?	.454	.377	.345	1.000	.396	.448	.399	.388	.433	.419	.394	.388
5. ...to find information on how to handle mental health problems?	.402	.492	.514	.396	1.000	.386	.433	.461	.439	.325	.406	.407
6. ...to understand information about recommended health screenings or examinations?	.385	.352	.332	.448	.386	1.000	.514	.396	.519	.406	.442	.411
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.333	.383	.402	.399	.433	.514	1.000	.476	.485	.393	.447	.440
8. ...to decide how you can protect yourself from illness using information from the mass media?	.314	.425	.486	.388	.461	.396	.476	1.000	.385	.409	.422	.464
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.384	.314	.299	.433	.439	.519	.485	.385	1.000	.413	.415	.390
10. ...to understand advice concerning your health from family or friends?	.309	.310	.282	.419	.325	.406	.393	.409	.413	1.000	.448	.449
11. ...to judge how your housing conditions may affect your health and well-being?	.325	.381	.378	.394	.406	.442	.447	.422	.415	.448	1.000	.491
12. ... to make decisions to improve your health and well-being?	.336	.374	.448	.388	.407	.411	.440	.464	.390	.449	.491	1.000

Source: HLS19 Consortium

Table A 5.30: Spearman correlations (ρ) of HLS19–Q12 items, for Slovenia

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.544	.390	.460	.445	.399	.427	.283	.421	.383	.389	.314
2. ...to understand information about what to do in a medical emergency?	.544	1.000	.450	.536	.471	.461	.471	.298	.439	.413	.454	.381
3. ...to judge the advantages and disadvantages of different treatment options?	.390	.450	1.000	.395	.436	.331	.368	.349	.305	.331	.351	.333
4. ...to act on advice from your doctor or pharmacist?	.460	.536	.395	1.000	.435	.469	.481	.283	.444	.419	.447	.374
5. ...to find information on how to handle mental health problems?	.445	.471	.436	.435	1.000	.468	.512	.358	.494	.423	.455	.433
6. ...to understand information about recommended health screenings or examinations?	.399	.461	.331	.469	.468	1.000	.609	.271	.469	.402	.444	.341
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.427	.471	.368	.481	.512	.609	1.000	.328	.531	.451	.496	.405
8. ...to decide how you can protect yourself from illness using information from the mass media?	.283	.298	.349	.283	.358	.271	.328	1.000	.267	.346	.281	.283
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.421	.439	.305	.444	.494	.469	.531	.267	1.000	.450	.486	.374
10. ...to understand advice concerning your health from family or friends?	.383	.413	.331	.419	.423	.402	.451	.346	.450	1.000	.489	.403
11. ...to judge how your housing conditions may affect your health and well-being?	.389	.454	.351	.447	.455	.444	.496	.281	.486	.489	1.000	.488
12. ... to make decisions to improve your health and well-being?	.314	.381	.333	.374	.433	.341	.405	.283	.374	.403	.488	1.000

Source: HLS₁₉ Consortium

Table A 5.31: Spearman correlations (ρ) of HLS19–Q12 items, for Slovakia

Item nr.	1	2	3	4	5	6	7	8	9	10	11	12
1. ...to find out where to get professional help when you are ill?	1.000	.510	.434	.397	.455	.395	.377	.331	.426	.308	.300	.287
2. ...to understand information about what to do in a medical emergency?	.510	1.000	.474	.414	.432	.408	.350	.349	.393	.310	.312	.271
3. ...to judge the advantages and disadvantages of different treatment options?	.434	.474	1.000	.339	.434	.381	.358	.376	.324	.302	.351	.374
4. ...to act on advice from your doctor or pharmacist?	.397	.414	.339	1.000	.409	.386	.352	.315	.426	.306	.270	.318
5. ...to find information on how to handle mental health problems?	.455	.432	.434	.409	1.000	.464	.344	.415	.425	.324	.374	.379
6. ...to understand information about recommended health screenings or examinations?	.395	.408	.381	.386	.464	1.000	.489	.323	.484	.356	.392	.379
7. ...to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	.377	.350	.358	.352	.344	.489	1.000	.360	.459	.345	.441	.400
8. ...to decide how you can protect yourself from illness using information from the mass media?	.331	.349	.376	.315	.415	.323	.360	1.000	.392	.343	.349	.372
9. ...to find information on healthy life styles such as physical exercise, healthy food or nutrition?	.426	.393	.324	.426	.425	.484	.459	.392	1.000	.430	.435	.375
10. ...to understand advice concerning your health from family or friends?	.308	.310	.302	.306	.324	.356	.345	.343	.430	1.000	.421	.351
11. ...to judge how your housing conditions may affect your health and well-being?	.300	.312	.351	.270	.374	.392	.441	.349	.435	.421	1.000	.463
12. ... to make decisions to improve your health and well-being?	.287	.271	.374	.318	.379	.379	.400	.372	.375	.351	.463	1.000

Source: HLS₁₉ Consortium

5.4 Item–Score Spearman Correlations of all items for each country

Table A 5.32: Item–Score Spearman Correlation for HL–Q12, by country

		AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
1.	to find out where to get professional help when you are ill?	-0.34	-0.54	-0.53	-0.29	-0.51	-0.44	-0.42	-0.42	-0.51	-0.46	-0.46	-0.58	-0.36	-0.49	-0.49	-0.42	-0.55
2.	to understand information about what to do in a medical emergency?	-0.38	-0.56	-0.53	-0.48	-0.52	-0.54	-0.43	-0.54	-0.50	-0.49	-0.58	-0.67	-0.48	-0.47	-0.66	-0.44	-0.59
3.	to judge the advantages and disadvantages of different treatment options?	-0.63	-0.62	-0.66	-0.61	-0.64	-0.56	-0.67	-0.66	-0.61	-0.56	-0.65	-0.67	-0.60	-0.66	-0.74	-0.62	-0.64
4.	to act on advice from your doctor or pharmacist?	-0.31	-0.46	-0.36	-0.29	-0.43	-0.32	-0.29	-0.24	-0.30	-0.31	-0.34	-0.41	-0.30	-0.30	-0.44	-0.32	-0.44
5.	to find information on how to handle mental health problems?	-0.60	-0.61	-0.65	-0.65	-0.57	-0.59	-0.64	-0.69	-0.54	-0.56	-0.63	-0.64	-0.60	-0.68	-0.66	-0.60	-0.66
6.	to understand information about recommended health screenings or examinations?	-0.37	-0.60	-0.42	-0.48	-0.52	-0.48	-0.43	-0.51	-0.40	-0.50	-0.58	-0.64	-0.44	-0.58	-0.47	-0.43	-0.53
7.	to judge if information on unhealthy habits, such as smoking, low physical activity or drinking too much alcohol, are reliable?	-0.39	-0.59	-0.55	-0.41	-0.46	-0.57	-0.40	-0.54	-0.40	-0.45	-0.55	-0.58	-0.47	-0.48	-0.62	-0.46	-0.55

		AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
8.	to decide how you can protect yourself from illness using information from the mass media?	-0.57	-0.57	-0.60	-0.56	-0.60	-0.58	-0.61	-0.69	-0.58	-0.51	-0.66	-0.65	-0.55	-0.66	-0.68	-0.65	-0.60
9.	to find information on healthy life styles such as physical exercise, healthy food or nutrition?	-0.31	-0.55	-0.44	-0.40	-0.36	-0.37	-0.33	-0.42	-0.40	-0.38	-0.33	-0.48	-0.37	-0.44	-0.49	-0.39	-0.49
10.	to understand advice concerning your health from family or friends?	-0.42	-0.51	-0.43	-0.40	-0.43	-0.34	-0.43	-0.45	-0.39	-0.43	-0.46	-0.53	-0.47	-0.40	-0.47	-0.40	-0.43
11.	to judge how your housing conditions may affect your health and well-being?	-0.37	-0.61	-0.48	-0.51	-0.56	-0.53	-0.53	-0.62	-0.44	-0.44	-0.55	-0.62	-0.42	-0.46	-0.60	-0.43	-0.52
12.	to make decisions to improve your health and well-being?	-0.41	-0.59	-0.52	-0.55	-0.53	-0.49	-0.54	-0.61	-0.54	-0.39	-0.60	-0.59	-0.46	-0.45	-0.62	-0.51	-0.60

6 Annex 6: Determinants and social gradient of General health literacy measured by HLS₁₉-Q12

6.1 Description of HLS₁₉ items on determinants and comparison with item use in HLS–EU

Table A 6.1:

Wording of selected correlate items and response categories on determinants used in HLS₁₉, source of the original item, and indication of changes made relating to the item used in HLS–EU

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS–EU
C–DET1	Gender Male Female	HLS–EU	NO CHANGE to HLS–EU (D1)
C–DET2	How old were you on your most recent birthday? Years: ___	HLS–EU	Slight CHANGE to HLS–EU (D2) Rephrase: In HLS–EU: How old are you?
C–DET3	In which country were you born? [To be coded into pre-specified ISO 3166-1 (2-character)] Type in ___: Refusal Don't know	ESS	EXCHANGE of original HLS–EU one item typologie D5 to 4 ESS questions, which allow to build also an index for migration background. HLS–EU D5: “Which of these proposals corresponds to your situation? 1. Your mother and your father were born in (OUR COUNTRY) 2. One of your parents was born in (OUR COUNTRY) and the other was born in another Member State of the European Union 3. Your mother and your father were born in another Member State of the European Union 4. One of your parents was born in (OUR COUNTRY) and the other was born outside of the European Union 5. Your mother and your father were born outside the European Union 6. One of your parents was born in another Member State of the European Union and the other was born outside the European Union 7. DK\ Refusal (SPONTANEOUS)”
C–DET4	In which country was your father born? [To be coded into pre-specified ISO 3166-1 (2-character)] Type in ___: Refusal Don't know		
C–DET5	In which country was your mother born? [To be coded into pre-specified ISO 3166-1 (2-character)] Type in ___: Refusal Don't know		

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
C-DET6	<p>What is the highest level of education you have successfully completed (usually by obtaining a certificate or diploma)?</p> <p>0. No formal education or below ISCED 1 1. ISCED 1 Primary education 2. ISCED 2 Lower secondary education 3. ISCED 3 Upper secondary education 4. ISCED 4 Post-secondary but non-tertiary education 5. ISCED 5 Short-cycle tertiary education; 6. ISCED 6 Bachelor's or equivalent level; 7. ISCED 7 Master's or equivalent level; 8. ISCED 8 Doctoral or equivalent level DK/Refusal</p>	EHIS (3 rd wave) – European Background Variables Module	<p>UPDATE to ISCED 2011 HLS-EU D9:</p> <p>Level 0 (Pre-primary education) Level 1 (Primary education or first stage of basic education) Level 2 (Lower secondary or second stage of basic education) Level 3 (Upper secondary education) Level 4 (Post-secondary non-tertiary education) Level 5 (First stage of tertiary education) Level 6 (Second stage of tertiary education) DK (SPONTANEOUS) Refusal (SPONTANEOUS)</p>
C-DET7	<p>What is your current "main" status of employment?</p> <p>1. Employed 2. Self-employed 3. Unemployed 4. Retired 5. Unable to work due to long-standing health problems 6. Student, trainee 7. Fulfilling domestic tasks 8. Compulsory military or civilian service 9. Other (SPECIFY) DK / Refusal (SPONTANEOUS)</p>	EHIS	<p>CHANGE to HLS-EU (D10) What is your current "main" status of employment?</p> <p>1. Carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship, etc. 2. full-time 3. part-time 4. unemployed 5. Pupil, student, further training, unpaid work experience 6. In retirement or early retirement or has given up business 7. Permanently disabled 8. In military or community services 9. Full-time homemaker, parent or career 10. Inactive 11. other 12. DK (SPONTANEOUS)</p>
C-DET8	<p>Have you ever been trained in a healthcare profession?</p> <p>1. Yes 2. No DK / Refusal (SPONTANEOUS)</p>	HLS-EU	<p>Slight CHANGE to HLS-EU (D11) Rephrase: Have you ever been trained or employed in a healthcare profession e.g. as nurse, doctor, pharmacist? And no examples are provided</p>
C-DET9	How easy or difficult is it usually for you to afford medication if needed?	HLS-EU	REPHRASE original HLS-EU items (D12, D13, D14) and change of categories (C-DET11)

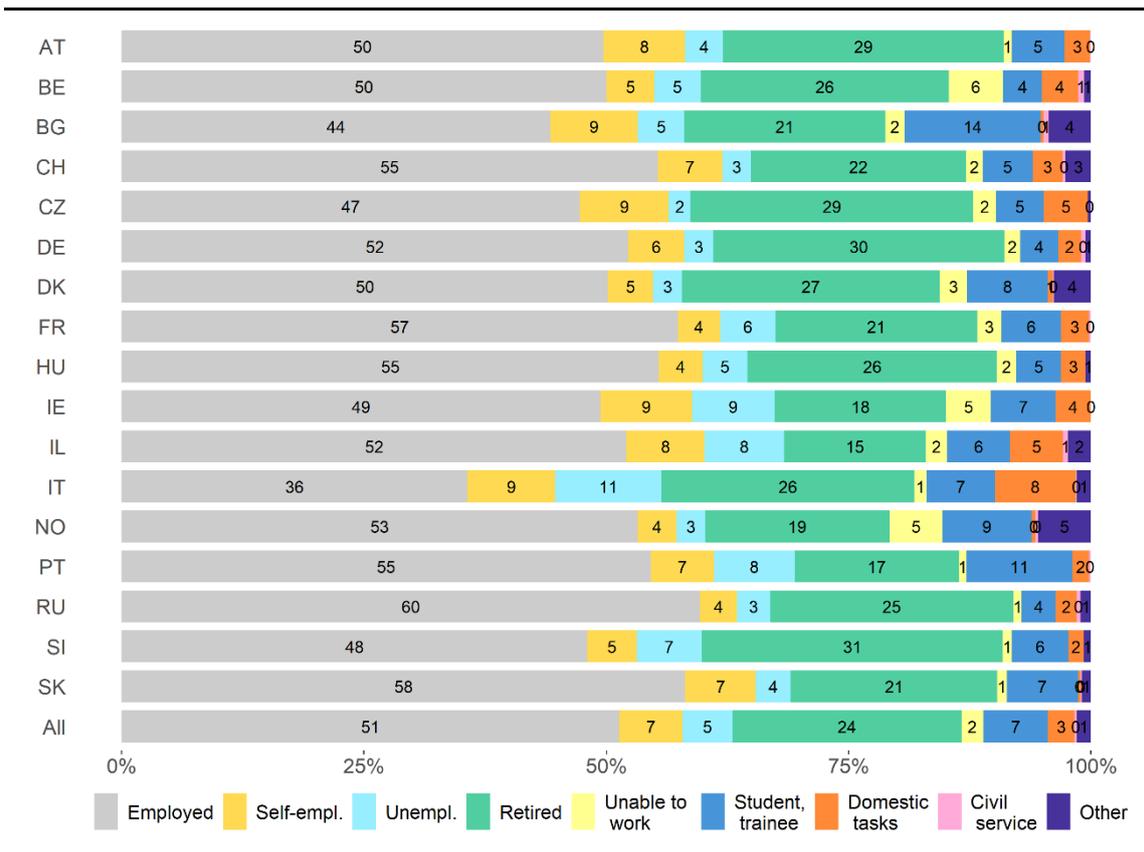
Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
	1. Very easy 2. Easy 3. Difficult 4. Very difficult DK / Refusal (SPONTANEOUS)		CALCULATION of NEW simpler INDEX for financial deprivation HLS-EU D12: Are you able to pay for medication if needed to manage your own health? Is it...? 1. Very easy
C-DET10	How easy or difficult is it usually for you to afford medical examinations and treatments, if needed? 1. Very easy 2. Easy 3. Difficult 4. Very difficult DK / Refusal (SPONTANEOUS)	HLS-EU	2. Fairly easy 3. Fairly difficult 4. Very difficult 5. DK (SPONTANEOUS) 6. Refusal (SPONTANEOUS)
C-DET11	How easy or difficult is it for you to pay all bills at the end of the month...? 1. Very easy 2. Easy 3. Difficult 4. Very difficult DK / Refusal (SPONTANEOUS)	Eurobarometer	HLS-EU D13: Are you able to afford to see the doctor? Is it...? (Instructions: time, health insurance, cost, transport) 1. Very easy 2. Fairly easy 3. Fairly difficult 4. Very difficult 5. DK (SPONTANEOUS) 6. Refusal (SPONTANEOUS) HLS-EU D14: During the last twelve months, would you say you had difficulties to pay your bills at the end of the month...? 1. Most of the time 2. From time to time 3. Almost never/never 4. Refusal (SPONTANEUS)
C-DET12	On the following scale, step '1' corresponds to "the lowest level in the society"; step '10' corresponds to "the highest level in the society". Could you tell me on which step you would place yourself? 1 the lowest level in the society 2	Eurobarometer	NO CHANGE to HLS-EU (D15)

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
	3 4 5 6 7 8 9 10 the highest level in the society Refusal		
C-HSTAT2	Do you have any long-term illness or health problem? By long-term I mean problems which have lasted, or you expect to last, for 6 months or more? 1. Yes, more than one 2. Yes one 3. No DK / Refusal (SPONTANEOUS)	EHIS (3 rd wave) MEHM Wording not 100% the same [Do you have any longstanding illness or [longstanding] health problem? [By longstanding I mean illnesses or health problems which have lasted, or are expected to last, for 6 months or more.]	NO CHANGE to HLS-EU (Q3)

Source: HLS₁₉ Consortium

6.2 Distribution of status of employment

Figure A 6.1:
Percentage distribution of status of employment, for each country and for all countries (equally weighted)



Source: HLS19 Consortium

Table A 6.2:

Means for GEN-HL by status of employment, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SK	SI	All
Employed	84.7	64.7	73.0	77.3	74.6	66.3	77.3	77.5	79.9	79.5	71.7	69.2	79.9	88.7	84.3	73.1	89.0	78.7
Self-employed	82.4	65.5	72.5	76.0	76.4	68.6	79.7	74.0	81.2	77.8	74.7	67.6	75.0	89.0	77.9	71.3	89.0	76.6
Unemployed	78.2	61.2	71.4	74.9	69.3	56.7	70.4	74.7	79.4	76.8	74.9	69.2	75.4	82.6	80.7	67.7	88.0	75.3
Retired	85.7	70.2	54.0	78.8	80.8	62.4	80.1	79.0	81.1	81.3	77.7	69.0	79.4	71.6	70.6	57.7	81.3	75.3
Unable to work due to long-standing health problems	79.0	63.9	49.9	66.8	76.1	55.7	70.5	75.6	81.4	71.3	75.2	66.6	74.5	87.5	77.2	70.6	72.5	71.4
Student, trainee	91.1	68.4	71.7	76.4	71.3	71.8	74.9	76.6	71.0	76.6	62.9	72.1	77.2	87.4	82.5	74.3	84.9	77.2
Fulfilling domestic tasks	84.3	64.6	68.4	77.9	73.4	60.4	75.9	79.0	78.7	78.9	79.4	69.4	77.0	69.6	83.2	69.4	79.8	75.5
Compulsory military or civilian service	91.6	76.4	68.4	90.2	-	66.8	64.6	93.1	-	-	62.4	54.5	78.6	91.2	82.3	79.2	-	76.3
other	-	20.2	77.3	75.4	87.7	65.0	73.2	-	77.7	-	71.0	67.1	77.1	-	85.7	82.9	81.2	75.4
Total	84.9	65.8	68.4	77.3	76.3	64.9	77.4	77.5	79.8	78.8	73.0	69.2	78.8	84.8	80.3	69.7	86.0	77.2

Source: HLS₁₉ Consortium

6.1 Results on unstandardized multivariable regressions

Table A 6.3:

Model 1: Multivariable linear regression models of GEN-HL by five social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	90.13	42.25	50.33	76.94	69.58	54.83	67.83	71.94	86.22	70.68	70.24	80.13	72.34	88.44	80.34	88.51	67.09
Gender female	2.3	1.21	1.53	0.32	4.05	3.1	2.44	1.85	-1.1	2.07	3.48	2.51	2.63	-2.85	2.22	1.16	3.54
Age in years	-0.07	0.05	-0.13	0	0.14	-0.12	0.1	0	0.13	0.33	0.14	-0.07	0	-0.19	-0.21	-0.14	-0.16
Education	-0.32	-0.84	1.25	-0.3	-1.66	1.55	0.39	-0.66	0.28	0.49	-1.67	0.2	0.42	0.81	0.56	0.37	0.45
Level in society	0.12	3.43	3.45	0.98	1.73	1.25	1.2	2.04	0.07	1.35	1.77	0.09	1.02	1.7	2.2	1.03	2.5
Financial deprivation	-4.26	1.14	-4.33	-2.5	-4.43	-3.24	-5.14	-3.37	-4.56	-4.59	-4.6	-6.47	-5.33	-3.11	-5.44	-3.04	-6.79
R ²	0.05	0.04	0.25	0.04	0.1	0.09	0.08	0.06	0.09	0.1	0.1	0.08	0.04	0.15	0.22	0.1	0.21
Valid count	2694	988	724	2020	1568	1847	3563	2003	1124	4301	1156	3248	2682	1168	5138	3187	1800
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

Table A 6.4:

Model 2: Multivariable linear regression models of GEN-HL by five social determinants and migration background (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	88.12	44.2	50.51	75.53	69.21	55.06	67.94	71.73	85.61	70.05	71.39	79.97	71.45	88.04	80.51	87.54	69.03
Gender female	2.35	1.21	1.52	0.4	4.14	3.42	2.43	2.21	-1.27	1.94	3.63	2.5	2.69	-2.87	2.23	1.28	3.48
Age in years	-0.06	0.04	-0.13	0.01	0.14	-0.13	0.09	0.01	0.13	0.36	0.18	-0.07	0	-0.19	-0.22	-0.14	-0.16
Education	-0.29	-0.85	1.25	-0.3	-1.7	1.51	0.39	-0.79	0.33	0.45	-1.51	0.2	0.4	0.8	0.44	0.39	0.46
Level in society	0.15	3.35	3.45	0.95	1.74	1.39	1.2	2.16	0.1	1.35	1.69	0.09	1.03	1.71	2.23	1.05	2.53
Financial deprivation	-4.25	1.2	-4.33	-2.69	-4.48	-3.11	-5.14	-3.44	-4.55	-4.63	-4.63	-6.47	-5.43	-3.12	-5.42	-3.02	-6.76
Migration background	0.93	-1.18	-0.13	0.88	0.21	-1.12	-0.09	-0.3	0.36	0.54	-1.27	0.16	0.6	0.31	0.4	0.35	-1.97
R ²	0.06	0.04	0.25	0.04	0.1	0.09	0.08	0.06	0.09	0.1	0.1	0.08	0.04	0.15	0.21	0.1	0.21
Valid count	2689	985	724	2009	1563	1822	3563	1969	1122	4277	1154	3248	2675	1168	5012	3164	1794
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

In BG, HU, IT, RU and SK the percentage of respondents with migration background was below 10, values on migration should be treated with caution.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Migration background: (1) no (2) one parent was born abroad (3) both parents were born abroad (4) born abroad.

Source: HLS₁₉ Consortium

Table A 6.5:

Model 3: Multivariable linear regression models of GEN-HL by five social determinants and long-term illness (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	92.68	43.26	55.22	79.37	71.41	54.98	70.34	74.25	87.48	72.28	71.97	81.67	73.81	93.9	84.25	91.25	68.7
Gender female	2.32	1.28	1.29	0.26	4.13	3.09	2.41	1.82	-0.87	2.17	3.53	2.8	2.9	-2.33	2.31	1.3	3.58
Age in years	-0.05	0.05	-0.09	0.02	0.16	-0.1	0.11	0.03	0.15	0.4	0.17	-0.06	0.01	-0.1	-0.14	-0.11	-0.13
Education	-0.37	-0.86	1.13	-0.31	-1.68	1.54	0.38	-0.64	0.3	0.46	-1.68	0.19	0.38	0.83	0.7	0.34	0.41
Level in society	0.04	3.39	3.24	0.92	1.69	1.3	1.14	2.01	0.03	1.24	1.71	0.04	0.93	1.47	1.98	1.02	2.52
Financial deprivation	-4.03	1.17	-4.31	-2.44	-4.3	-3.13	-4.86	-3.18	-4.32	-4.47	-4.47	-6.32	-5.15	-2.52	-5.16	-2.91	-6.65
Long-term illness	-1.98	-0.59	-2.19	-1.84	-1.34	-0.76	-1.74	-2.11	-1.79	-1.08	-1.5	-1.48	-1.05	-6.08	-3.8	-2.76	-1.47
R ²	0.06	0.04	0.25	0.04	0.1	0.09	0.08	0.06	0.09	0.1	0.1	0.08	0.04	0.18	0.24	0.11	0.21
Valid count	2686	988	705	2017	1568	1821	3557	2003	1121	4291	1155	3185	2663	1163	4910	3183	1774
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Source: HLS₁₉ Consortium

Table A 6.6:

Model 4: Multivariable linear regression models of GEN-HL by five social determinants and training in a health care profession (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	90.4	47.45	67.91	84.78	80.79	75.34	78.11	80.49	89.42	72.79	79.44	86.22	78.93	92.36	91.91	94.22	81.66
Gender female	2.35	1.09	0.07	-0.27	3.84	2.19	1.42	1.79	-1.1	1.99	3.42	2.6	2.04	-2.96	1.53	0.95	2.51
Age in years	-0.08	0.05	-0.11	0.01	0.13	-0.11	0.09	0.01	0.13	0.33	0.15	-0.07	0	-0.18	-0.2	-0.13	-0.16
Education	-0.33	-0.88	0.74	-0.46	-1.74	1.34	0.27	-0.75	0.27	0.47	-1.75	0.17	0.34	0.76	0.42	0.34	0.18
Level in society	0.1	3.42	3.27	0.99	1.7	1.36	1.22	1.98	0.03	1.34	1.71	0.05	1	1.66	2.23	1	2.37
Financial deprivation	-4.21	1.11	-4.32	-2.53	-4.42	-3.09	-5.17	-3.36	-4.56	-4.59	-4.67	-6.46	-5.28	-3.03	-5.49	-3	-6.67
No training in a health profession	-0.09	-2.61	-7.27	-3.6	-5.36	-10.19	-4.48	-4.35	-1.63	-1.01	-4.39	-3.25	-2.93	-2.07	-5.48	-2.77	-6.58
R ²	0.05	0.04	0.27	0.04	0.1	0.11	0.09	0.06	0.09	0.1	0.1	0.08	0.05	0.16	0.22	0.11	0.22
Valid count	2678	988	718	2020	1568	1842	3560	2003	1123	4295	1156	3248	2676	1168	5116	3184	1783
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

6.2 Results of Type 2 regression models (linear models – technically GLMs – with categorical variables encoded as dummy variables)

Table A 6.7:

Model 1: Type 2 regression models on GEN-HL by five social determinants, for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	93.05	39.65	40.55	77.1	73.53	58.95	73.25	74.88	82.08	72.4	70.81	83.44	76.86	79.63	76.19	83.97	62.6
Gender female	2.39	1.43	2.16	0.23	3.89	2.99	2.39	1.98	-1.17	2.05	3.56	2.35	2.87	-2.99	2.58	1.75	3.77
Age 26–35	-6.85	1.16	2.9	1.13	-0.04	-3.84	-2.26	0.91	3.29	2.92	2.42	1.23	0.75	1.59	-2.61	2.02	3.06
Age 36–45	-10.59	-2	1.09	-0.22	0.95	-4.49	0.61	1.57	7.09	4.03	5.84	-1.72	0.48	2.54	-2.52	3.4	3.26
Age 46–55	-10.59	0.29	2.82	0.32	0.73	-3.52	0.65	0.73	8.3	3.21	5.61	-1.9	0.39	2.79	-5.23	3.96	1.01
Age 56–65	-9.83	-0.55	4.14	-0.41	3.66	-3.79	1.78	1.81	7.09	3.67	4.49	-2.72	-0.25	0.97	-5.01	3.1	0.6
Age 66–75	-7.73	5.68	-1.01	1.3	4.84	-6.86	3.22	-0.9	9.46	6.15	6.95	-4.01	2.73	-3.81	-9.27	0.91	0.05
Age 76 and more	-4.36	2.59	-12.41	0.84	6.2	-9.93	3.65		7.73	2.87	16.79	-5.04	-1.62	-19.64	-18.15	-11.72	-13.68
Education: Higher sec.	2.27	1.45	18.29	-1.01	-4.49	5.23	-1.61	-3.88	1.13	2.59	-3.63	-1.59	-0.9	5.95	6.32	3.01	5.68
Education: Post. Sec.	1.75	2.34	16.36	2.9	3.21	11.43	1.2	-4.97	5.49	3.44	-6.86	-2.63	-0.69	6.54	8.86	1.85	11.88
Education: Bachelor or higher	1.04	-0.72	17.09	-2.4	-9.42	9.26	2.29	-5.64	0.78	1.84	-9.13	0.11	0.42	4.25	6.44	0.37	4.37
Level in the society	0.41	3.28	3.22	1.04	1.8	1.29	1.17	2	0.18	1.37	1.8	0.15	1.06	1.72	2.28	1.08	2.34
Financial deprivation	-4.14	1.17	-4.95	-2.56	-4.49	-3.01	-5.12	-3.4	-4.45	-4.64	-4.5	-6.5	-5.48	-3.11	-5.42	-3.2	-6.41
R ²	0.09	0.05	0.31	0.04	0.11	0.1	0.08	0.06	0.1	0.11	0.1	0.08	0.05	0.19	0.23	0.15	0.24
Valid count	2694	988	721	2020	1568	1847	3563	2003	1124	4301	1156	3248	2630	1161	5138	3187	1800
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Source: HLS₁₉ Consortium

Table A 6.8:

Model 2: Type 2 regression models on GEN-HL by five social determinants and migration background, for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	92.72	40.3	40.49	76.82	73.63	57.98	73.21	74.54	81.83	72.49	71.46	83.56	76.71	79.78	76.23	83.84	62.44
Gender female	2.42	1.41	2.26	0.3	4.01	3.32	2.38	2.32	-1.32	1.95	3.79	2.33	2.92	-3.02	2.6	1.84	3.72
Age 26–35	-6.95	1.17	3.38	0.61	0.28	-3.58	-2.25	0.56	3.28	2.76	2.29	1.11	0.78	1.49	-2.36	1.88	2.94
Age 36–45	-10.47	-2.01	1.29	-0.92	1.4	-3.83	0.66	1.15	6.92	4.03	6.45	-1.81	0.53	2.41	-2.38	3.4	3.01
Age 46–55	-10.26	0.18	2.9	-0.21	1.16	-3.26	0.71	1.09	8.33	3.3	6.83	-2	0.49	2.5	-5.46	3.88	0.77
Age 56–65	-9.56	-0.6	4.41	-0.79	4.53	-3.64	1.85	1.69	7.11	3.64	6.08	-2.82	-0.11	0.77	-4.84	2.94	0.55
Age 66–75	-7.44	5.6	-0.72	1.07	5.78	-6.7	3.26	-1.11	9.52	6.16	8.44	-4.1	2.91	-3.97	-9.15	0.83	0.04
Age 76 and more	-4.16	2.36	-12.18	0.39	6.53	-9.74	3.69		8.22	3.17	19.02	-5.1	-1.5	-19.72	-18.74	-11.82	-13.5
Education: Higher sec.	2.2	1.46	18.47	-0.18	-4.59	4.88	-1.59	-3.61	1.32	2.33	-2.67	-1.61	-0.97	5.91	5.78	3.11	5.97
Education: Post. Sec.	1.87	2.47	16.46	3.78	2.88	10.86	1.19	-5.05	5.57	3.31	-5.54	-2.67	-0.77	6.68	8.57	2.04	12.34
Education: Bachelor or higher	1.01	-0.79	17.12	-1.76	-9.84	8.82	2.26	-5.8	1.11	1.52	-7.96	0.07	0.27	4.21	5.84	0.5	4.66
Level in the society	0.43	3.21	3.19	0.98	1.76	1.42	1.17	2.1	0.19	1.38	1.7	0.15	1.07	1.73	2.3	1.08	2.36
Financial deprivation	-4.14	1.2	-5.01	-2.74	-4.57	-2.91	-5.12	-3.47	-4.42	-4.68	-4.53	-6.52	-5.6	-3.11	-5.39	-3.17	-6.41
Migr: one parent born abroad	-2.32	-0.34	5.37	-1.16	-4.02	1.73	0.7	-0.06	2.13	-1.15	-4.41	2.37	-1.1	-4.81	2.65	-1.71	0.47
both parents born abroad	0.55	0.94	-14	1.29	-4.85	-0.54	3.29	-1.5	-0.16	3.77	-3.62	-7	1.34	-0.22	14.91	0.02	5.52
Born abroad	2.21	-6.09	0.21	2.9	5.18	-3.43	-0.39	-0.69	0.87	1.6	-2.04	0.91	2.49	0.77	1.36	0.62	-7.46
R ²	0.1	0.05	0.31	0.04	0.12	0.1	0.08	0.06	0.1	0.11	0.11	0.08	0.05	0.19	0.23	0.15	0.24
Valid count	2689	985	721	2009	1563	1822	3563	1969	1122	4277	1154	3248	2623	1161	5012	3164	1794
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Source: HLS₁₉ Consortium

Table A 6.9:

Model 3: Type 2 regression models on GEN-HL by five social determinants and long-term illness/health problems, for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	93.55	39.93	44.94	77.57	73.87	57.76	74.51	75.17	82.42	73.09	71.74	84.36	77.57	80.88	77.96	84.37	62.82
Gender female	2.38	1.45	1.77	0.14	3.97	2.94	2.36	1.93	-1.05	2.15	3.72	2.64	3.16	-2.33	2.73	1.86	3.82
Age 26–35	-6.63	1.19	2.98	1.48	-0.06	-2.85	-2.04	1.16	3.38	3.07	2.42	0.66	0.89	1.32	-2.99	1.97	3.2
Age 36–45	-10.27	-1.9	1.29	0.12	1.08	-3.71	0.99	1.99	7.39	4.09	6.45	-1.86	0.65	3.15	-2.85	3.49	3.66
Age 46–55	-10.06	0.41	2.62	0.82	1.27	-2.59	1.14	1.32	8.87	3.75	6.18	-1.82	0.73	3.81	-4.56	4.38	1.52
Age 56–65	-9.11	-0.31	4.55	0.4	4.24	-2.52	2.71	2.73	7.99	4.16	5.58	-2.31	0.37	2.56	-3.48	3.71	1.39
Age 66–75	-6.99	5.91	-1.47	2.26	5.63	-5.35	4.16	0.32	10.63	6.82	7.88	-3.72	3.32	-0.86	-5.96	1.66	1.12
Age 76 and more	-3.35	2.87	-9.7	2.12	7.06	-7.6	4.49		9.26	3.48	17.74	-4.39	-1.19	-15.29	-14.71	-10.58	-12.05
Education: Higher sec.	2.19	1.47	17.42	-1.14	-4.4	5.48	-1.65	-3.92	1.37	2.47	-3.11	-1.54	-1.05	5.28	6.33	2.83	5.39
Education: Post. Sec.	1.65	2.36	15.12	3.18	3.3	11.69	1.07	-4.89	5.84	3.46	-6.19	-2.65	-0.77	7.23	9.68	1.68	11.24
Education: Bachelor or higher	0.86	-0.75	15.66	-2.56	-9.48	9.49	2.25	-5.54	1.09	1.72	-8.64	0.17	0.15	4.37	7.3	0.27	3.9
Level in the society	0.33	3.27	2.83	0.98	1.75	1.33	1.09	1.97	0.13	1.27	1.72	0.09	0.97	1.49	2.03	1.07	2.36
Financial deprivation	-3.92	1.19	-5.33	-2.49	-4.37	-2.89	-4.86	-3.21	-4.27	-4.52	-4.52	-6.34	-5.28	-2.54	-5.19	-3.09	-6.3
Long-term.ill.:Yes, one	-1.25	-0.87	3.18	-0.81	-0.06	0.55	-3.44	-1.91	-3.21	-1.1	-5.79	-2.57	-1.39	-3.28	-3.59	-2.4	-0.17
Yes, more than one	-4.34	-0.47	-4.05	-4.81	-2.72	-1.72	-2.81	-4.2	-2.3	-2.11	-1.11	-2.12	-2.26	-13.57	-7.61		-2.54
R ²	0.1	0.05	0.32	0.05	0.11	0.1	0.09	0.06	0.1	0.11	0.11	0.08	0.05	0.22	0.26	0.15	0.24
Valid count	2686	988	702	2017	1568	1821	3557	2003	1121	4291	1155	3185	2611	1156	4910	3183	1774
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Source: HLS₁₉ Consortium

Table A 6.10:

Model 4: Type 2 regression models on GEN-HL by five social determinants and training in a healthcare profession, for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	93.89	42.26	48.57	80.71	78.24	67.57	77.69	78.61	83.44	73.23	75.4	86.42	79.9	80.85	81.11	87.31	68.53
Gender female	2.39	1.31	0.65	-0.4	3.73	2.31	1.41	1.92	-1.16	1.99	3.51	2.45	2.28	-3.06	1.92	1.49	2.87
Age 26–35	-6.73	1.19	3.46	1.31	0.13	-3.95	-2.09	1.03	3.45	2.93	2.52	1.25	0.72	1.45	-2.31	2.02	3.38
Age 36–45	-10.6	-1.99	2.66	-0.1	0.94	-4.73	0.72	1.68	7.19	3.98	5.94	-1.77	0.34	2.37	-2.32	3.66	3.37
Age 46–55	-10.65	0.34	3.77	0.44	0.74	-3.7	0.78	1	8.28	3.22	5.81	-1.78	0.38	2.68	-5.23	4.21	1.18
Age 56–65	-9.9	-0.51	5.65	-0.27	3.56	-3.75	1.84	1.97	7.2	3.68	4.51	-2.53	-0.34	0.87	-4.6	3.36	0.39
Age 66–75	-7.73	5.82	0.66	1.48	4.89	-6.96	3.43	-0.66	9.48	6.15	7.03	-3.73	2.79	-3.87	-8.73	1.13	0.28
Age 76 and more	-4.39	2.72	-11.36	1.32	5.87	-9.74	3.83		7.82	2.9	17.21	-4.69	-1.66	-19.68	-17.24	-11.5	-13.06
Education: Higher sec.	2.25	1.39	17.58	-1.34	-4.53	5.41	-1.53	-3.73	1.07	2.64	-3.69	-1.48	-1.12	5.69	6.24	2.92	5.07
Education: Post. Sec.	1.59	2.13	14.57	2.55	2.52	8.65	0.56	-5.03	5.36	3.36	-6.82	-2.93	-1.05	6.22	8.28	1.72	9.94
Education: Bachelor or higher	0.93	-1.07	14.38	-3.07	-9.72	8.8	1.55	-5.95	0.75	1.79	-9.41	0.04	-0.05	4.05	5.79	0.14	3.01
Level in the society	0.38	3.27	2.96	1.05	1.77	1.36	1.19	1.95	0.14	1.36	1.74	0.11	1.04	1.7	2.3	1.04	2.23
Financial deprivation	-4.1	1.14	-4.89	-2.59	-4.48	-2.94	-5.14	-3.39	-4.45	-4.63	-4.58	-6.49	-5.43	-3.07	-5.47	-3.15	-6.32
No training in a health care profession	-0.72	-2.7	-7.58	-3.8	-4.7	-9.39	-4.36	-4.3	-1.49	-0.89	-4.6	-3.34	-2.91	-1.26	-5.12	-3.52	-5.86
R ²	0.09	0.05	0.33	0.05	0.11	0.12	0.09	0.06	0.1	0.11	0.11	0.08	0.05	0.19	0.24	0.15	0.25
Valid count	2678	988	715	2020	1568	1842	3560	2003	1123	4295	1156	3248	2624	1161	5116	3184	1783
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Source: HLS₁₉ Consortium

7 Annex for Chapter 7: General Health Literacy as a predictor of health behaviors and lifestyles

7.1 Wording of selected correlate items and response categories on health behaviors and lifestyles used in HLS₁₉, source of the original items, and indication of changes made relating to the item used in HLS–EU

Table A 7.1:

Wording of selected correlate items and response categories on health behaviors and lifestyles used in HLS₁₉, source of the original items, and indication of changes made relating to the items used in HLS–EU

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS–EU
C–HLFST1	How tall are you without shoes? (in cm)	EHIS (3rd wave) – European Health Determinants Module (EHDM)	REPHRASE HLS–EU item D3 How tall are you? (Approximately)
C–HLFST2	How much do you weigh without clothes and shoes? (in kg) <i>Interviewer instruction:</i> Check for women aged 50 or younger whether they are pregnant and ask for weight before pregnancy.	EHIS (3rd wave) – EHDM	REPHRASE HLS–EU item D4 How much do you weigh? (Approximately)

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
C-HLFST3.1	<p>In a typical week, on how many days do you smoke any tobacco products?</p> <ul style="list-style-type: none"> -1. Never 0. Less one day per week 1. 1 day 2. 2 days 3. 3 days 4. 4 days 5. 5 days 6. 6 days 7. 7 days DK / Refusal (SPONTANEOUS) 	EHIS (3rd wave) - EHDM (SK1)	<p>EXCHANGE of HLS-EU smoking items (Q7, Q8) Based on EHIS (3rd wave) with changed answer categories HLS-EU Q7: Regarding smoking cigarettes, cigars or a pipe, which of the following applies to you?</p> <ul style="list-style-type: none"> 1. You smoke at the present time 2. You used to smoke but you have stopped 3. You have never smoked 4. DK (SPONTANEOUS) <p>HLS-EU Q8: Do you use the following tobacco products every day, occasionally or not at all?</p> <p>Manufactured cigarettes</p> <ul style="list-style-type: none"> 1. Yes, every day 2. Yes, occasionally 3. No, not at all <p>Hand-rolled cigarettes</p> <ul style="list-style-type: none"> 1. Yes, every day 2. Yes, occasionally 3. No, not at all

<p>C-HLFST3.2</p>	<p>In a typical week, on how many days do you have an alcoholic drink of any kind? [Interviewer instruction: beer, wine, cider, spirits, cocktails, premixes, liquor, homemade alcohol...] -1. Never 0. Less one day per week 1. 1 day 2. 2 days 3. 3 days 4. 4 days 5. 5 days 6. 6 days 7. 7 days DK / Refusal (SPONTANEOUS)</p>	<p>EHIS (3rd wave) – EHDM (AL1)</p>	<p>EXCHANGE HLS-EU items Q9–Q13 (Eurobarometer) by EHIS (3rd wave) item with changed answer categories</p> <p>Q9 During the past 12 months, did you drink any alcoholic beverage (beer, wine, spirits, cider or other local beverages)? 1. yes 2. no 3. DK</p> <p>Q10 How often in the past 12 months have you had 5 or more drinks on one occasion? 1. several times a week 2. once a week 3. Once a month 4. Less than once a month 5. Never 6. DK</p> <p>Q11 Did you drink any alcoholic beverages (beer, wine, spirits, cider or other local beverages) in the last 30 days? 1. yes 2. no 3. DK</p> <p>Q12 In the last 30 days, how many times did you drink any alcoholic beverages? 1. Daily 2. 4–5 times a week 3. 2–3 times a week 4. Once a week 5. 2–3 times a month 6. Once 7. Don't remember</p> <p>Q13 On a day when you drink alcoholic beverages, how much do you usually drink? 1. Less than 1 drink 2. 1–2 drinks 3. 3–4 drinks</p>
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			<ul style="list-style-type: none"> 4. 5–6 drinks 5. 7–9 drinks 6. 10 or more drinks 7. It depends 8. Don't remember
C-HLFST3.3	<p>In a typical week, on how many days do you be physically active for a total of 30 minutes or longer, evoking at least a small increase in breathing or heart rate?</p> <p>[Interviewer instruction: e.g. doing sports or other leisure time activities, at work, doing household or gardening chords or commuting from one place to another]</p> <ul style="list-style-type: none"> -1. Never 0. Less one day per week 1. 1 day 2. 2 days 3. 3 days 4. 4 days 5. 5 days 6. 6 days 7. 7 days <p>DK / Refusal (SPONTANEOUS)</p>	EHIS (3rd wave) – EHDM	<p>REPHRASE HLS–EU (Q14)</p> <p>Change of wording of question and answer categories</p> <p>How often during the last month did you exercise for 30 minutes or longer e.g. running, walking, cycling?</p> <ul style="list-style-type: none"> 1. Almost every day 2. A few times a week 3. A few times this month 4. Not at all 5. I haven't been able to exercise (SPONTANEOUS) 5. DK (SPONTANEOUS)
C-HLFST3.4	<p>In a typical week, on how many days do you eat fruits, vegetables or salad excluding potatoes?</p> <p>[Interviewer instruction: excluding juice squeezed from fresh fruit or fresh vegetables or juice made from concentrate]</p> <ul style="list-style-type: none"> -1. Never 0. Less one day per week 1. 1 day 2. 2 days 3. 3 days 4. 4 days 5. 5 days 6. 6 days 7. 7 days <p>DK / Refusal (SPONTANEOUS)</p>	EHIS (3rd wave) – EHDM (DH1)	<p>NEW</p> <p>Based on EHIS (3rd wave) with changed answer categories</p>

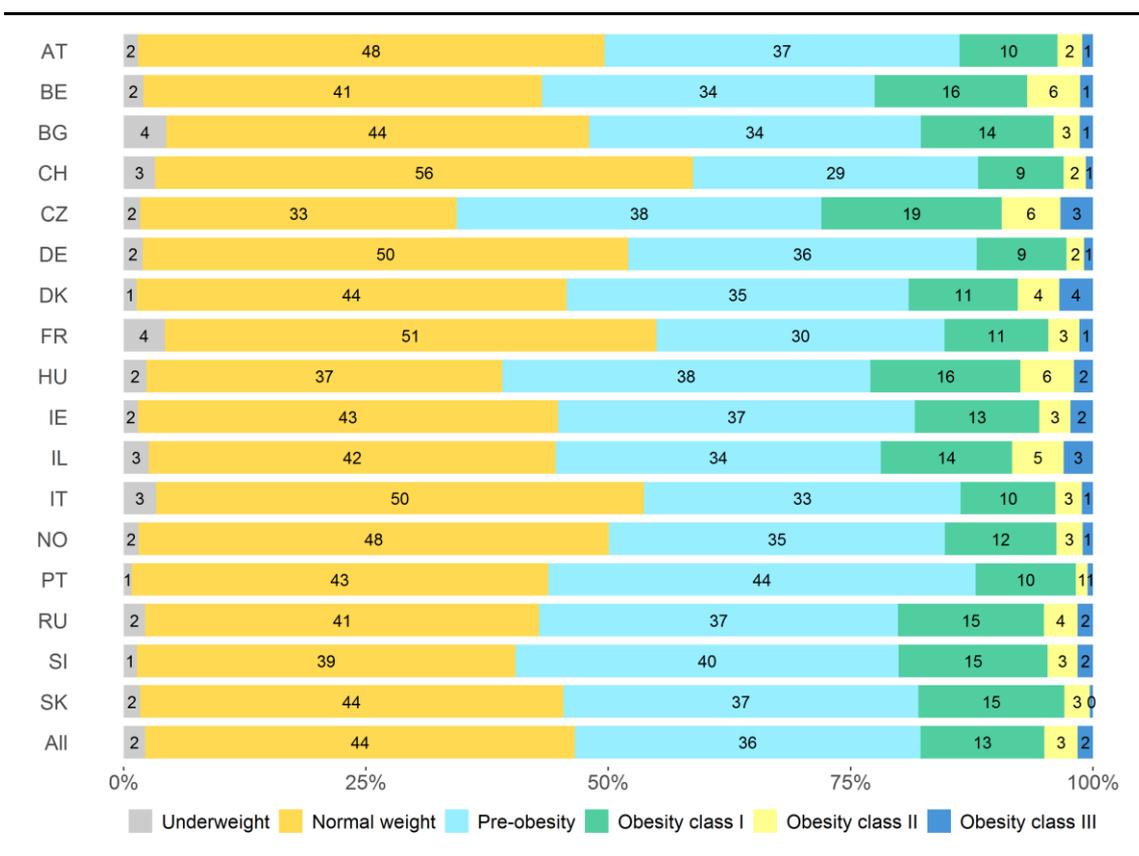
Source: HLS₁₉ Consortium

7.2 Body-Mass-Index

7.2.1 Distributions

Figure A 7.1

Percentage distribution of ranges of Body-Mass-Index (BMI), for each country and for all countries (equally weighted)

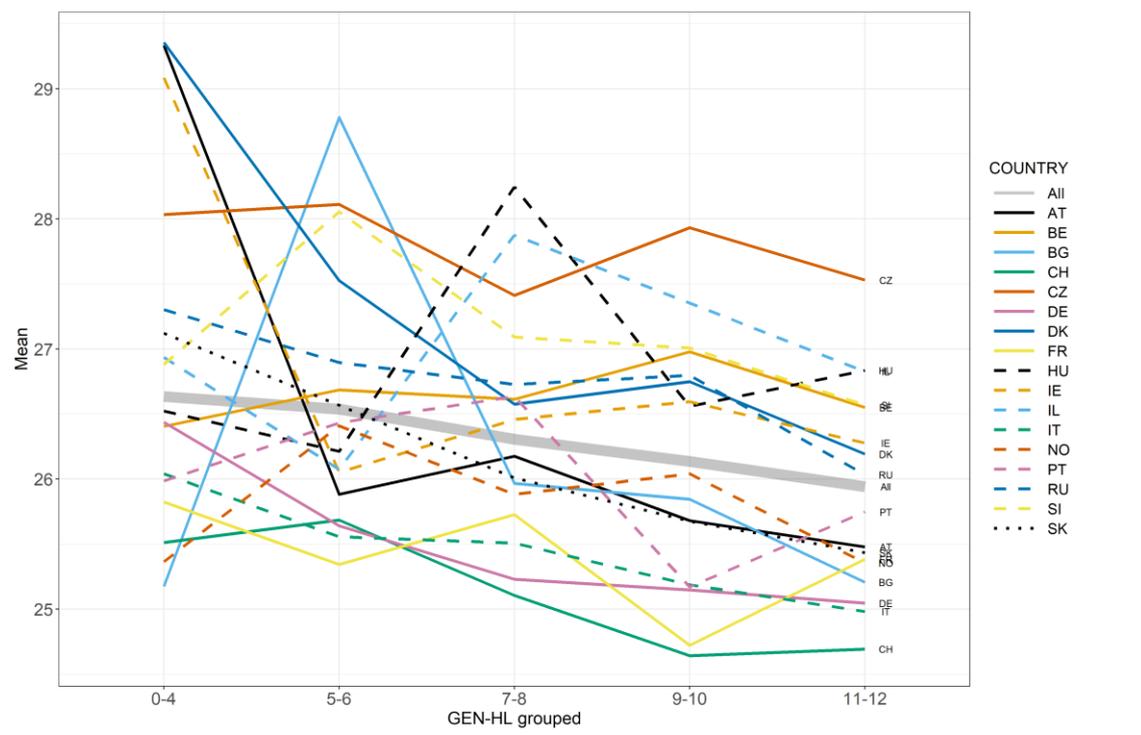


Source: HLS₁₉ Consortium

7.2.2 Association with General HL

Figure A 7.2:

BMI (mean) by GEN-HL in five groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

7.2.3 Spearman correlations

Table A 7.2

Spearman Correlations among BMI, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.05	0.02	-0.08	-0.06	0	-0.09	-0.08	-0.02	0	-0.03	0.02	-0.08	-0.07	-0.03	-0.1	-0.02	-0.12	-0.04
Gender female	-0.21	-0.06	-0.33	-0.26	-0.19	-0.24	-0.12	-0.15	-0.15	-0.16	-0.01	-0.17	-0.2	-0.17	-0.05	-0.18	-0.24	-0.17
Age in years	0.17	0.22	0.31	0.15	0.33	0.25	0.1	0.3	0.23	0.18	0.27	0.22	0.19	0.27	0.42	0.25	0.42	0.25
Education	-0.09	-0.17	-0.02	-0.09	-0.2	-0.07	-0.11	-0.14	-0.11	-0.11	-0.01	-0.1	-0.02	-0.22	-0.13	-0.21	-0.17	-0.12
Level in society	-0.06	-0.07	-0.04	-0.03	-0.09	-0.08	-0.1	-0.04	-0.07	-0.01	-0.05	-0.08	-0.07	-0.1	-0.09	-0.13	-0.08	-0.07
Financial deprivation	0.06	0.08	0.11	0.12	0.02	0.08	0.1	0.07	0.09	0.05	0.06	0.09	0.02	0.1	0.09	0.09	0.05	0.09
Migration*	-0.04	0	0.02	0.04	0.01	-0.06	-0.07	0.01	-0.04	-0.08	0.12	-0.01	-0.06	0	-0.09	0.05	0.03	-0.01
No training in a health profession	0.08	-0.02	0.13	0.11	-0.01	0.1	0.02	0.03	0.06	0.02	-0.02	0.04	0.05	-0.04	0.05	0.08	0.07	0.05

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

7.2.4 Results on unstandardized multivariable regressions

Table A 7.3:

Multivariable linear regression models of BMI by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	28.52	26.26	28.85	25.72	27.73	26.68	29.48	25.5	28.05	27.45	25.26	25.57	27.98	25.18	24.12	28.35	26.15
GEN-HL	-0.02	0	0	-0.01	-0.01	-0.01	-0.02	0	0	-0.01	-0.01	-0.01	-0.01	0.01	0	0	0
Gender female	-1.65	-0.5	-3.4	-1.81	-1.37	-1.53	-0.78	-1.14	-1.62	-1.14	1.1	-1.31	-1.25	-0.94	-0.2	-1.65	-2.07
Age in years	0.04	0.06	0.05	0.04	0.09	0.05	0.02	0.07	0.05	0.04	0.05	0.04	0.03	0.04	0.1	0.05	0.09
Education	-0.16	-0.27	-0.08	-0.2	-0.27	-0.12	-0.19	-0.2	-0.28	-0.11	-0.22	-0.04	-0.1	-0.22	-0.23	-0.34	-0.13
Level in society	-0.15	-0.18	-0.09	0.1	-0.14	-0.12	-0.23	-0.2	-0.06	0.01	-0.12	-0.14	-0.21	0.01	-0.12	-0.15	-0.03
Financial deprivation	0.5	0.35	0.7	0.58	0.19	0.24	0.99	0.31	0.2	0.21	0.18	0.41	0.34	0.19	-0.11	0.17	-0.13
R ²	0.08	0.06	0.08	0.09	0.11	0.09	0.04	0.07	0.07	0.03	0.01	0.06	0.05	0.08	0.14	0.04	0.2
Valid count	2598	973	723	2007	1459	1726	3459	1892	1111	4002	1103	3229	2572	1167	4829	3138	1747
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

BMI: used as continuous variable.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

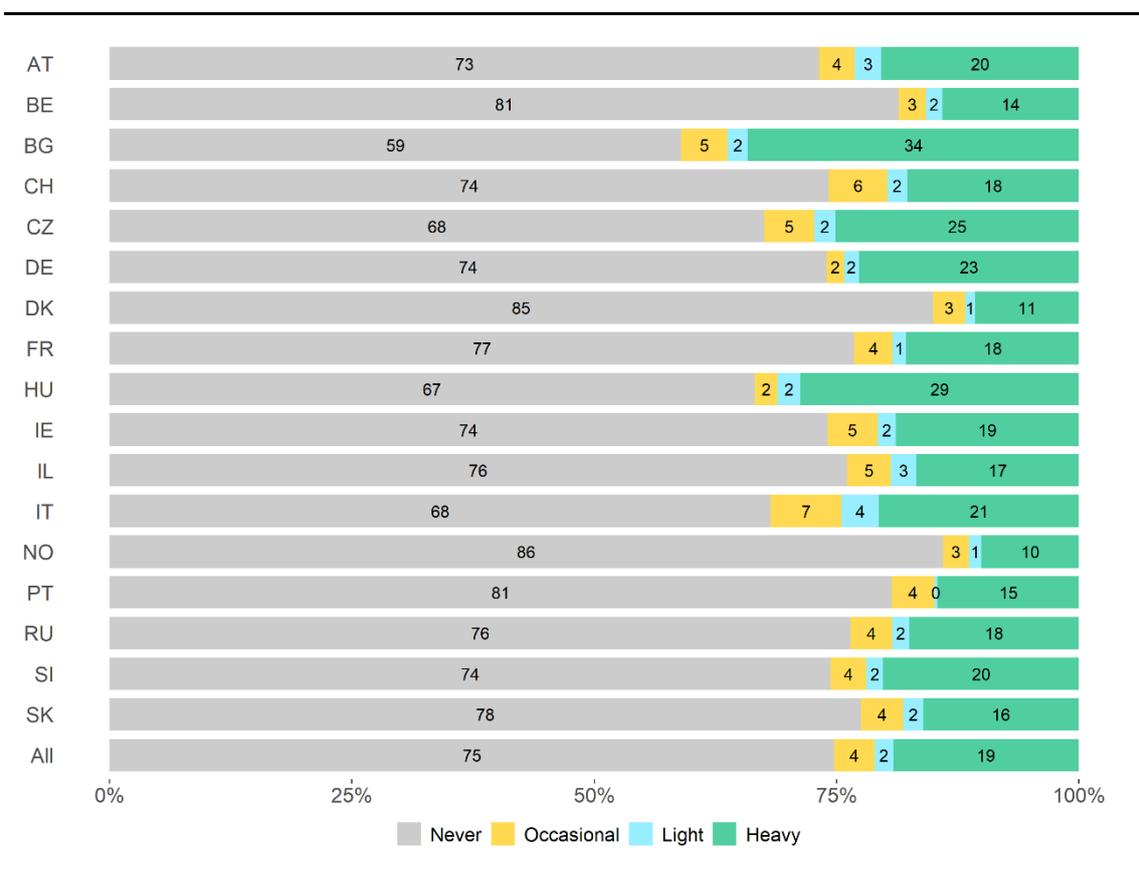
Source: HLS₁₉ Consortium

7.3 Smoking behavior

7.3.1 Distributions

Figure A 7.3

Percentage distribution of smoking behavior, for each country and for all countries (equally weighted)

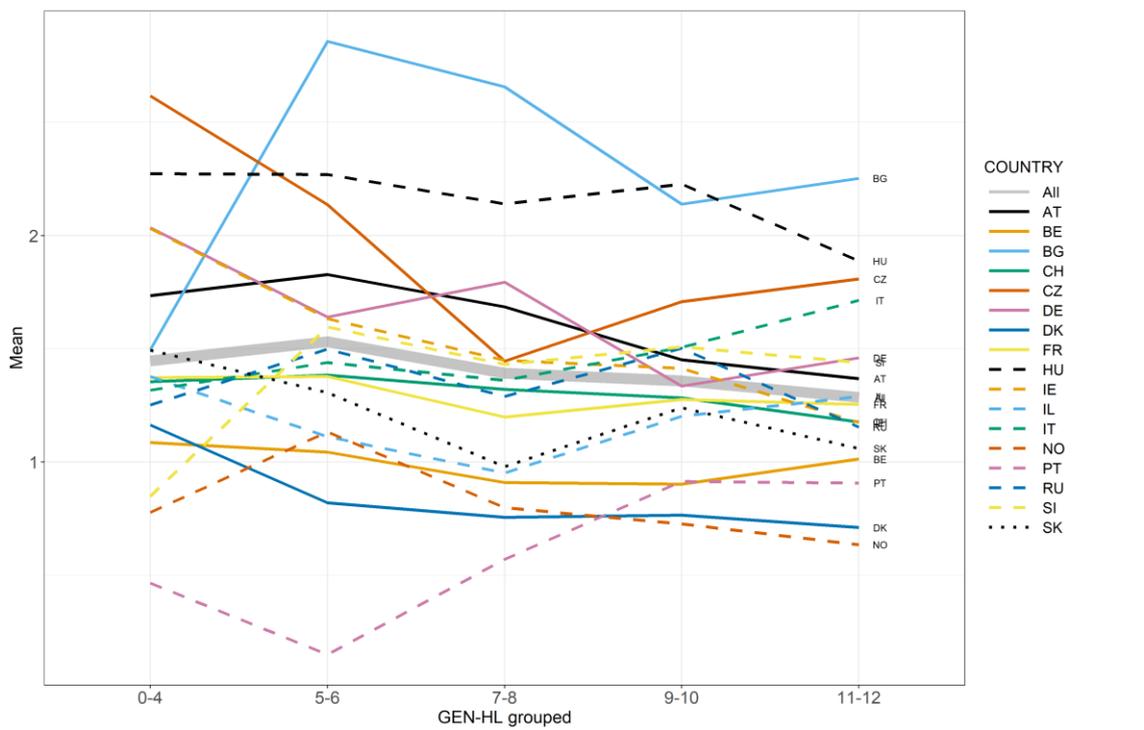


Source: HLS₁₉ Consortium

7.3.2 Association with General HL

Figure A 7.4

Smoking behavior (mean number of days per week) by GEN-HL in 5 groups, for country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

7.3.3 Spearman correlations

Table A 7.4:

Spearman Correlations among smoking behavior, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.06	-0.03	-0.01	-0.03	-0.03	-0.06	-0.05	0	-0.08	-0.07	0	0.04	-0.05	0.08	-0.04	0	-0.05	-0.03
Gender female	-0.13	-0.08	-0.02	-0.13	-0.12	-0.11	0.01	-0.03	-0.06	-0.05	-0.11	-0.08	-0.04	-0.19	-0.32	-0.09	-0.18	-0.1
Age in years	-0.13	-0.12	-0.07	-0.16	-0.07	-0.13	-0.06	-0.07	-0.17	-0.14	-0.17	-0.14	0.01	-0.08	-0.13	-0.17	-0.1	-0.11
Education	-0.05	-0.03	-0.01	-0.05	-0.15	-0.06	-0.08	-0.03	-0.08	-0.09	-0.18	0.04	-0.13	0.04	-0.08	-0.07	-0.08	-0.08
Level in society	0.05	-0.08	0	-0.07	-0.05	-0.12	-0.09	-0.06	-0.14	-0.12	-0.03	-0.03	-0.09	-0.02	-0.03	-0.05	-0.02	-0.07
Financial deprivation	0.06	0.02	0.01	0.14	0.09	0.1	0.12	0.08	0.09	0.18	0.08	0.13	0.15	0.01	0	0.08	-0.03	0.09
Migration*	0	0.11	0.06	0.04	-0.01	0.03	0.03	-0.03	-0.04	0.04	-0.09	0.02	-0.01	-0.03	-0.02	0.05	0.02	0
No training in a health profession	0.03	0.01	-0.06	0.02	0.04	-0.01	-0.02	-0.01	-0.05	0.05	-0.05	-0.13	-0.01	-0.02	0.09	0.02	0.07	-0.01

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

7.3.4 Results on unstandardized multivariable regressions

Table A 7.5:

Multivariable linear regression models of smoking behavior by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	2.76	2.55	2.45	2.45	3.31	3.33	1.52	1.79	3.67	2.72	2.92	2.16	1.59	2.3	3.99	2.67	3.14
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender female	-0.3	-0.15	-0.13	-0.29	-0.35	-0.27	0	-0.07	-0.2	-0.08	-0.2	-0.19	-0.05	-0.42	-0.75	-0.19	-0.36
Age in years	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0	0	-0.02	-0.01	-0.01	-0.01	0	-0.01	-0.01	-0.01	-0.01
Education	-0.07	-0.04	-0.01	-0.03	-0.13	-0.03	-0.03	-0.03	-0.06	-0.07	-0.16	-0.03	-0.06	0	-0.09	-0.09	-0.06
Level in society	0.06	-0.05	0.02	-0.03	-0.01	-0.08	-0.01	0	-0.1	-0.05	0.01	0	-0.03	-0.06	-0.03	-0.01	-0.01
Financial deprivation	0.07	0	0.08	0.13	0.08	0.03	0.15	0.11	0.07	0.15	0.05	0.14	0.22	0.04	0.02	0.08	-0.04
R ²	0.05	0.03	0.01	0.06	0.06	0.05	0.03	0.01	0.08	0.07	0.07	0.05	0.04	0.06	0.14	0.06	0.06
Valid count	2691	988	715	2019	1567	1842	3539	2003	1124	4301	1155	3243	2680	1168	5081	3180	1791
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Smoking behavior: from (1) never to (4) heavy.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

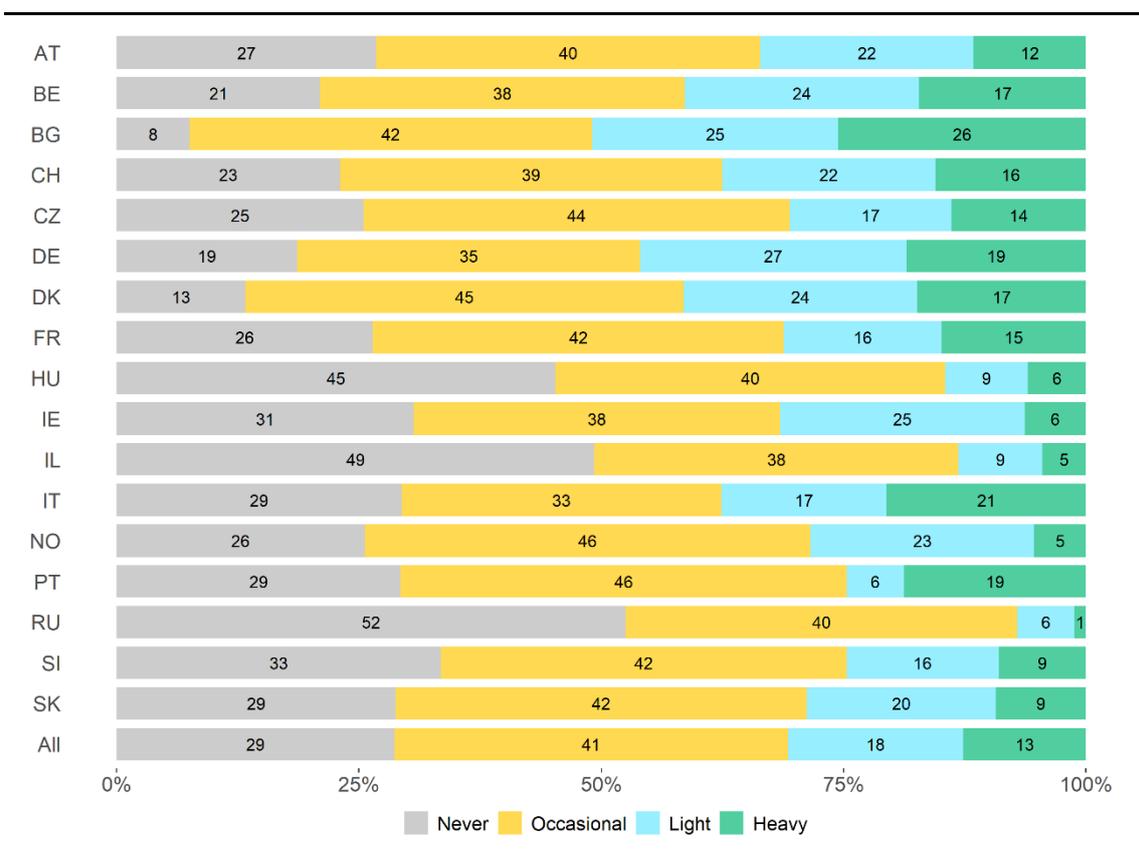
Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

7.4 Alcohol consumption

7.4.1 Distributions

Figure A 7.5:
Percentage distribution of alcohol consumption, for each country and for all countries (equally weighted)

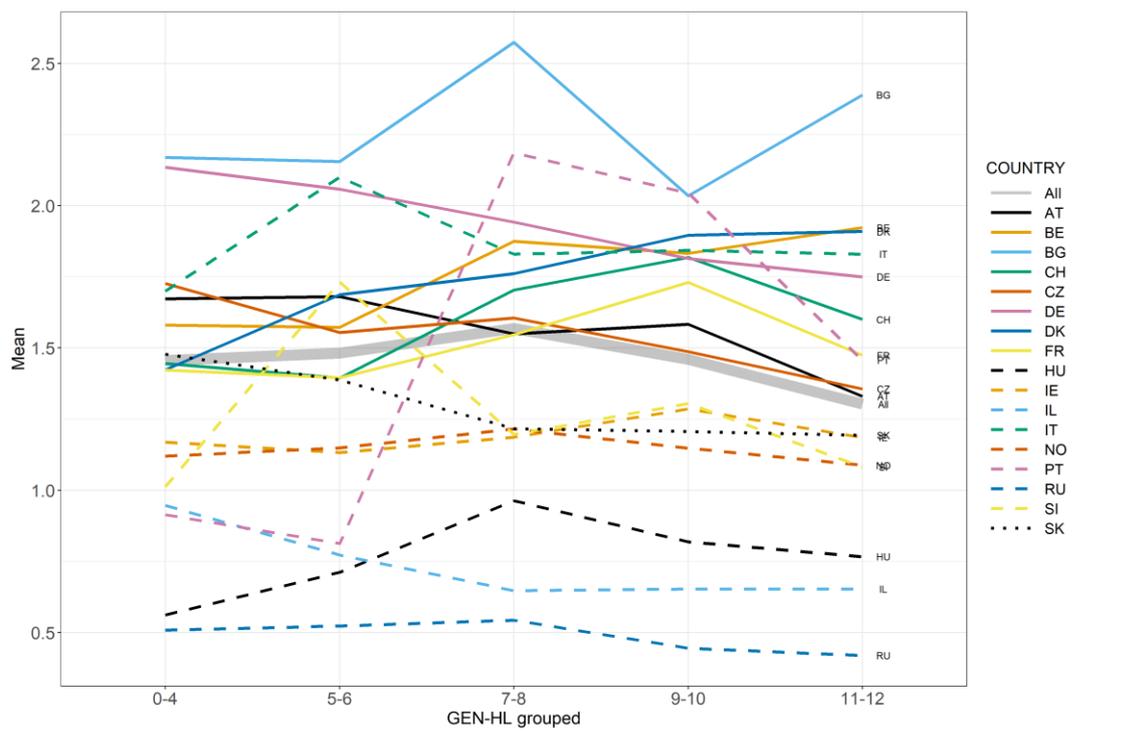


Source: HLS₁₉ Consortium

7.4.2 Association with General HL

Figure A 7.6:

Alcohol consumption (mean number of days per week) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

7.4.3 Spearman correlations

Table A 7.6:

Spearman Correlations among alcohol consumption, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.06	0.05	0.01	0	-0.09	-0.07	0.05	0.01	-0.01	0.02	-0.13	0.01	-0.02	0	-0.04	-0.03	0.02	-0.05
Gender female	-0.27	-0.15	-0.22	-0.21	-0.32	-0.25	-0.1	-0.19	-0.35	-0.07	-0.2	-0.27	-0.11	-0.36	-0.24	-0.29	-0.27	-0.22
Age in years	0.03	0.13	0.17	0.2	-0.11	0.02	0.32	0.19	-0.04	-0.01	-0.04	-0.02	0.12	0.11	-0.11	-0.09	-0.07	0.06
Education	0.13	0.13	0.19	0.18	0.14	0.06	0.17	0.04	0.08	0.19	0.13	0.12	0.16	-0.06	0.07	0.12	0.08	0.13
Level in society	0.1	0.17	0.07	0.12	0.07	0.07	0.21	0.12	0.03	0.05	-0.01	0.05	0.09	0.02	-0.01	0.08	0.11	0.1
Financial deprivation	-0.08	-0.06	-0.11	-0.16	-0.09	-0.05	-0.15	-0.09	-0.12	-0.12	-0.06	-0.06	-0.07	0.02	-0.04	-0.08	-0.1	-0.11
Migration*	-0.05	-0.06	-0.01	-0.14	-0.1	-0.03	-0.07	-0.1	0.02	-0.02	0.12	-0.03	-0.05	-0.09	-0.05	-0.09	0.01	-0.07
No training in a health profession	0.05	0.01	0.02	0.03	0.06	0.05	0.08	-0.02	0.01	0.04	0	-0.05	0.04	0.02	-0.01	0.03	0.08	0.01

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

7.4.4 Results on unstandardized multivariable regressions

Table A 7.7:

Multivariable linear regression models of alcohol consumption by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	2.69	1.45	2.55	2.15	3.53	3.02	1.41	1.83	2.86	1.9	2.18	2.93	1.8	2.42	2.47	2.8	2.83
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender female	-0.49	-0.31	-0.42	-0.41	-0.63	-0.48	-0.19	-0.35	-0.61	-0.17	-0.26	-0.55	-0.21	-0.74	-0.33	-0.56	-0.56
Age in years	0	0.01	0.01	0.01	-0.01	0	0.02	0.01	0	0	0	0	0	0.01	0	0	0
Education	0.05	0.07	0.06	0.08	0.05	0.03	0.06	0.03	0.02	0.09	0.08	0.04	0.06	-0.02	0.02	0.05	0.03
Level in society	0.03	0.08	0.02	0	0	0.03	0.06	0.04	-0.02	-0.01	-0.01	0	0.03	0.02	-0.02	0.01	0.02
Financial deprivation	-0.07	-0.03	-0.07	-0.08	-0.05	-0.02	-0.05	-0.03	-0.06	-0.06	-0.04	-0.04	-0.04	0.02	-0.01	-0.02	-0.01
R ²	0.09	0.09	0.12	0.13	0.13	0.07	0.15	0.08	0.14	0.05	0.06	0.07	0.05	0.16	0.08	0.1	0.1
Valid count	2690	988	705	2019	1565	1818	3544	2003	1123	4301	1155	3239	2673	1168	5084	3169	1789
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Alcohol consumption: from (1) never to (4) heavy.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

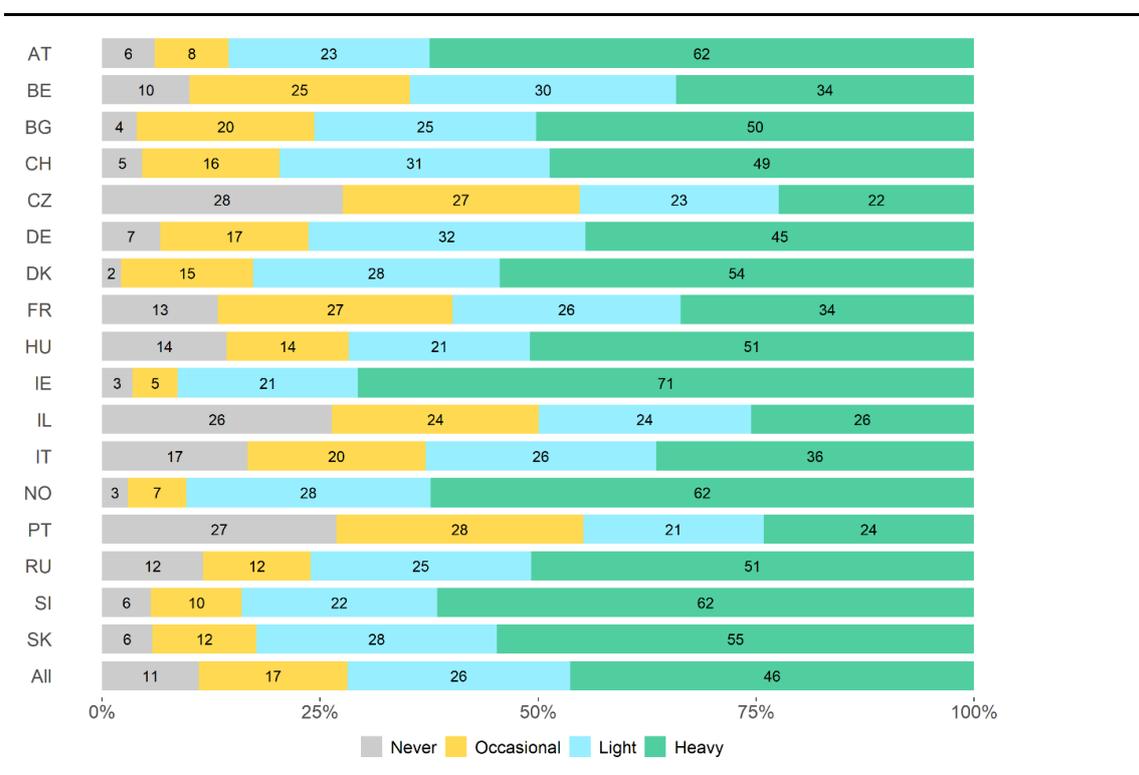
Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

7.5 Physical activity

7.5.1 Distributions

Figure A 7.7:
Percentage distribution of physical activity, for each country and for all countries (equally weighted)

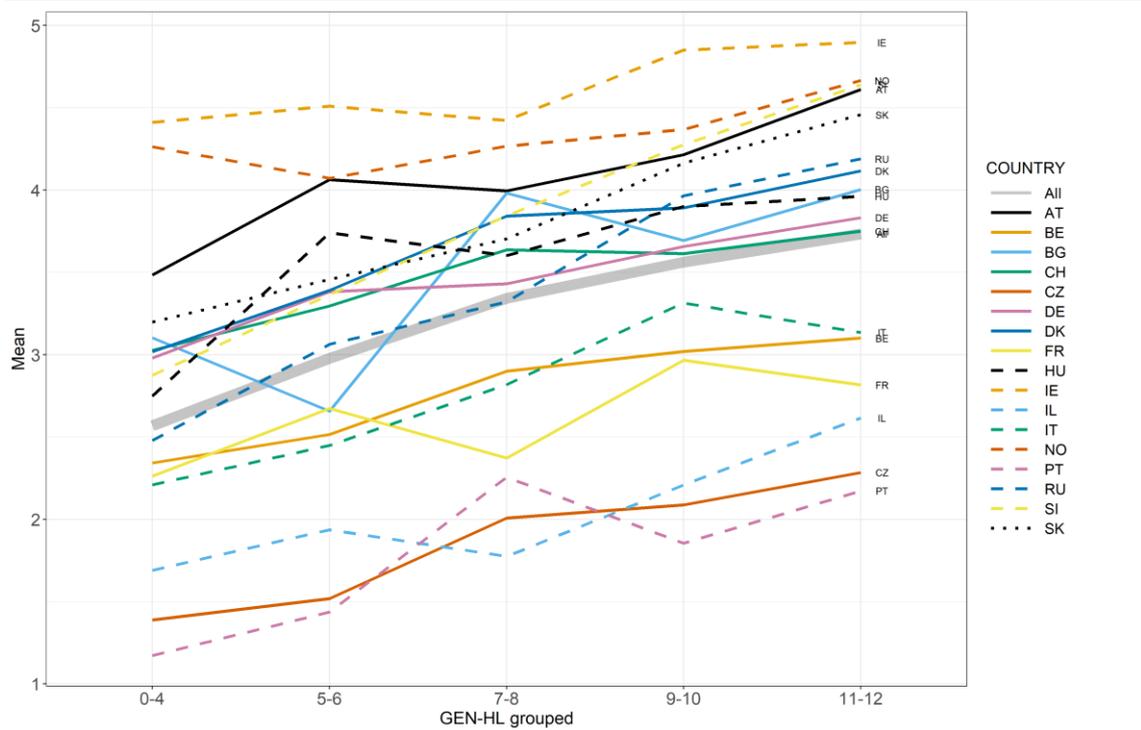


Source: HLS₁₉ Consortium

7.5.2 Association with General HL

Figure A 7.8:

Physical activity (mean number of days per week) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

7.5.3 Spearman correlations

Table A 7.8:

Spearman Correlations among physical activity, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	0.12	0.11	0.17	0.07	0.06	0.1	0.11	0.04	0.04	0.07	0.1	0.13	0.1	0.13	0.16	0.13	0.2	0.11
Gender female	0.01	-0.02	-0.05	-0.05	-0.01	-0.07	0.05	-0.02	-0.1	-0.03	-0.05	-0.04	0.05	-0.05	-0.09	-0.06	-0.1	-0.03
Age in years	-0.11	0.02	0.02	0.08	-0.14	-0.08	0.07	0.06	-0.07	0.06	0.07	-0.04	0.03	-0.17	-0.15	-0.04	-0.11	-0.02
Education	0.03	0.03	0.05	0.01	0.1	0.07	0.03	0.09	-0.02	0.01	0.04	0.08	0	0.19	0.03	0.03	0.1	0.07
Level in society	0.02	0.1	-0.03	0.04	0.11	0.06	0.04	0.1	-0.01	0.06	0.16	0.1	0.04	0.19	0.16	0.04	0.19	0.09
Financial deprivation	-0.06	-0.05	0.01	-0.1	-0.07	-0.06	-0.06	-0.08	0	-0.03	-0.17	-0.1	-0.05	-0.14	-0.15	-0.03	-0.11	-0.1
Migration*	0.06	-0.05	0.03	-0.07	-0.01	0.02	0.03	0.03	0.04	-0.06	0	0.02	-0.01	0.07	0.02	-0.1	-0.02	-0.02
No training in a health profession	-0.04	-0.01	-0.06	-0.03	-0.04	-0.02	-0.01	-0.04	-0.05	-0.03	-0.1	-0.06	-0.08	-0.22	-0.02	-0.03	-0.08	-0.05

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

7.5.4 Results on unstandardized multivariable regressions

Table A 7.9:

Multivariable linear regression models of physical activity by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	3.15	2.37	2.55	3.22	2.3	3.22	2.87	2.15	3.12	3.12	2.06	2.5	3.06	1.87	3.08	2.67	2.8
GEN-HL	0.01	0	0.01	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01
Gender female	0.06	-0.05	-0.08	-0.08	-0.06	-0.12	0.06	-0.02	-0.23	-0.06	-0.03	-0.08	0.09	-0.07	-0.15	-0.09	-0.18
Age in years	-0.01	0	0	0	-0.01	0	0	0	0	0	0	0	0	-0.01	-0.01	0	0
Education	0.02	0.02	0.02	0	0.02	0.03	0.01	0.06	0.01	0.02	-0.01	0.04	0	0.04	0	0.01	0.02
Level in society	0	0.05	-0.05	0.01	0.05	0	0	0.03	0.01	0.03	0.07	0.03	0.01	0.09	0.03	0.03	0.06
Financial deprivation	-0.03	-0.03	0.09	-0.07	-0.03	-0.04	-0.05	-0.05	0.04	0.01	-0.1	-0.05	-0.06	0	-0.03	0.04	0.02
R ²	0.03	0.02	0.07	0.02	0.04	0.03	0.02	0.02	0.02	0.01	0.04	0.04	0.02	0.07	0.06	0.04	0.09
Valid count	2685	988	698	2018	1566	1813	3543	2003	1122	4301	1155	3237	2673	1168	4873	3170	1784
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Physical activity: from (1) never to (4) heavy.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

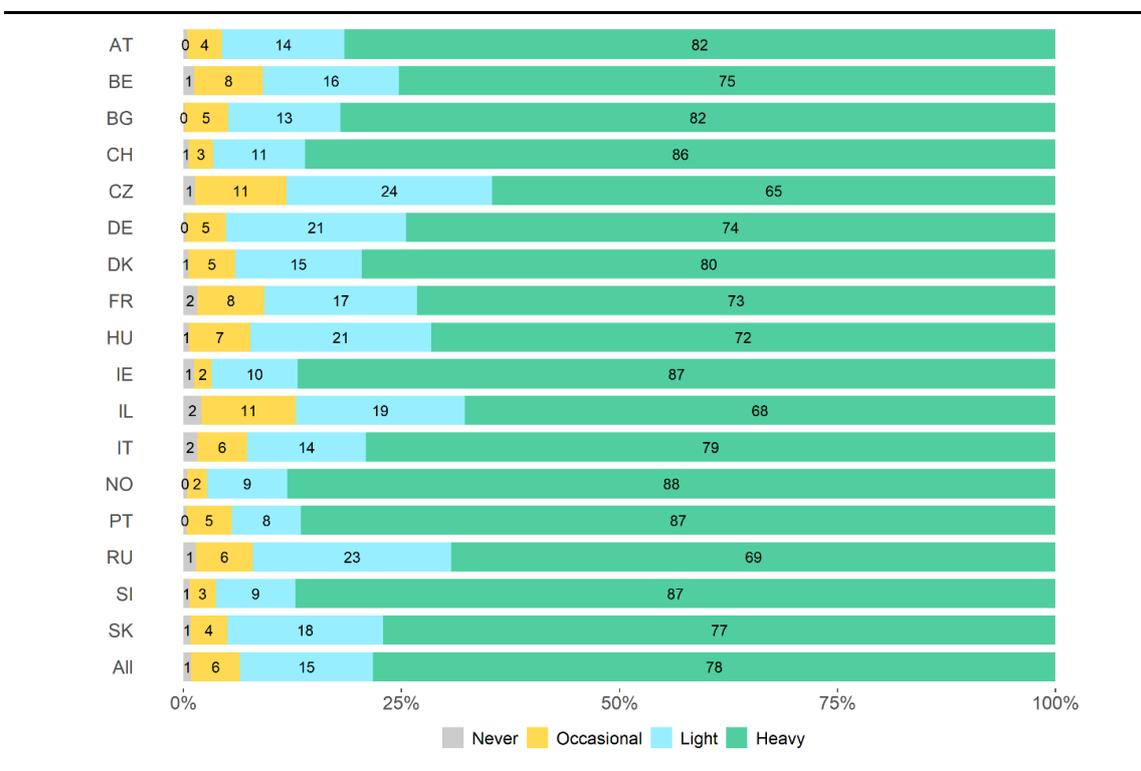
Source: HLS₁₉ Consortium

7.6 Fruit and vegetable consumption

7.6.1 Distributions

Figure A 7.9:

Percentage distribution of fruit and vegetables consumption, for each country and for all countries (equally weighted)

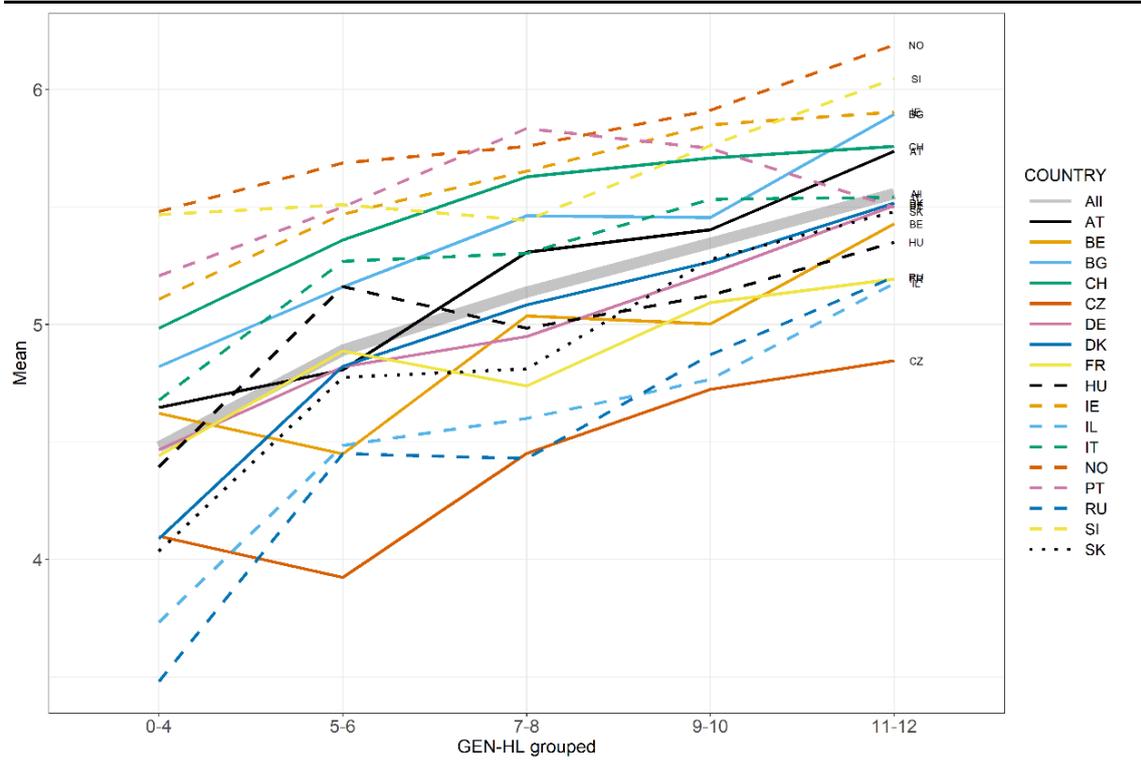


Source: HLS19 Consortium

7.6.2 Association with General HL

Figure A 7.10:

Fruit and vegetables consumption (mean number of days per week) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

7.6.3 Spearman correlations

Table A 7.10:

Spearman Correlations among fruit and vegetable consumption, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	0.13	0.12	0.12	0.07	0.06	0.12	0.12	0.07	0.09	0.05	0.11	0.12	0.09	-0.02	0.17	0.12	0.17	0.11
Gender female	0.14	0.14	0.06	0.13	0.15	0.19	0.18	0.08	0.1	0.16	0.01	0.08	0.19	0.12	0.07	0.11	0.13	0.11
Age in years	-0.09	0.1	0.06	0.13	0.07	0.06	0.03	0.15	0.13	-0.06	0.17	0.16	0.06	0.12	-0.02	0.1	-0.01	0.07
Education	0.05	0.13	0.13	0.11	0.06	0.13	0.19	0.13	0.13	0.14	0.06	-0.05	0.15	-0.01	0.14	0.04	0.14	0.08
Level in society	0.02	0.2	0.14	0.13	0.1	0.12	0.15	0.12	0.11	0.07	0.13	0.03	0.08	0.03	0.17	0.09	0.14	0.11
Financial deprivation	-0.07	-0.07	-0.03	-0.16	-0.08	-0.1	-0.1	-0.12	-0.1	-0.09	-0.12	-0.09	-0.1	-0.04	-0.2	-0.07	-0.11	-0.11
Migration*	0.1	-0.08	-0.01	-0.07	0.05	0.02	0.01	0.01	0	0.04	0.09	-0.04	0.01	0	0.03	-0.05	0.01	0.01
No training in a health profession	-0.06	0.02	-0.02	-0.06	-0.04	-0.05	-0.06	-0.01	-0.05	-0.02	-0.04	0.07	-0.04	-0.01	-0.03	-0.04	-0.08	-0.04

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

7.6.4 Results on unstandardized multivariable regressions

Table A 7.11:

Multivariable linear regression models of fruit and vegetable consumption by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	3.33	2.45	2.86	3.3	2.68	3.03	2.98	2.57	3.04	3.47	2.8	3.12	3.36	3.32	2.73	3.13	2.9
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender female	0.14	0.21	0.08	0.13	0.24	0.2	0.19	0.15	0.13	0.12	0.04	0.07	0.14	0.15	0.09	0.09	0.14
Age in years	0	0	0	0	0	0	0	0.01	0	0	0.01	0.01	0	0	0	0	0
Education	0.01	0.04	0.03	0.03	0.02	0.02	0.05	0.07	0.02	0.03	0	0.02	0.03	0	0.06	0.01	0.02
Level in society	0	0.06	0.03	0.02	0.04	0.02	0.02	0.02	0.02	0.01	0.04	-0.01	0.01	0.02	0.03	0.03	0.03
Financial deprivation	-0.03	-0.02	0.04	-0.05	-0.04	-0.03	-0.05	-0.05	-0.04	-0.01	-0.05	-0.03	-0.05	-0.02	-0.06	0	-0.01
R ²	0.05	0.08	0.05	0.07	0.05	0.06	0.08	0.07	0.04	0.04	0.06	0.05	0.06	0.04	0.07	0.04	0.09
Valid count	2692	988	716	2020	1568	1831	3555	2003	1123	4301	1156	3232	2679	1168	4884	3169	1790
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Fruit and vegetable consumption: from (1) never to (4) heavy.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

8 Annex for Chapter 8: General Health Literacy as a predictor of health status

8.1 Wording of selected correlate items and response categories on health status used in HLS₁₉, source of the original items and indication of changes made relating to the items used in HLS-EU

Table A 8.1:

Wording of selected correlate items and response categories on health status used in HLS₁₉, source of the original items and indication of changes made relating to the items used in HLS-EU

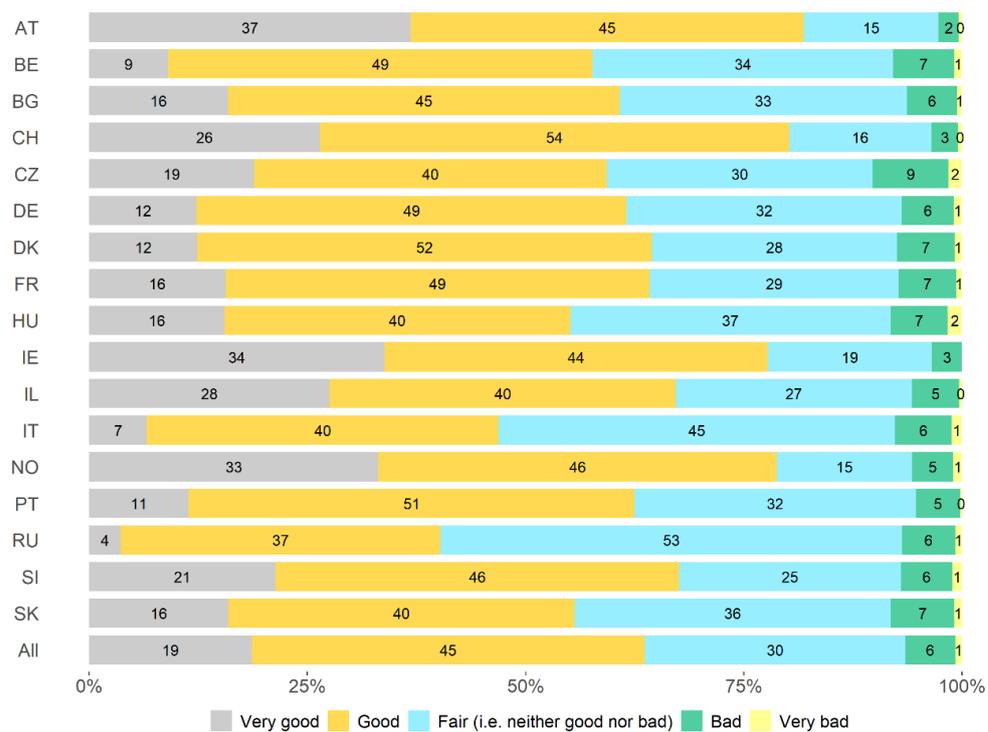
Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
C-HSTAT1	How is your health in general? It is... 1. very good 2. good 3. fair (i.e. neither good nor bad) 4. bad 5. very bad 6. DK/Refusal (SPONTANEOUS)	EHIS (3 rd wave) Minimum European Health Module (MEHM)	NO CHANGE to HLS-EU (Q2) But explanation to fair – (i.e. neither good nor bad) was added
C-HSTAT2	Do you have any long-term illness or health problem? By long-term I mean problems which have lasted. or you expect to last. for 6 months or more? 1. Yes. more than one 2. Yes one 3. No DK / Refusal (SPONTANEOUS)	EHIS (3 rd wave) MEHM Wording not 100% the same [Do you have any longstanding illness or [longstanding] health problem? [By longstanding I mean illnesses or health problems which have lasted. or are expected to last. for 6 months or more.]	NO CHANGE to HLS-EU (Q3)
C-HSTAT3	For at least the last 6 months. how much have your health problems limited the activities you would usually do? 1. severely limited 2. limited but not severely 3. not limited at all? DK / Refusal (SPONTANEOUS) Not applicable	EHIS (2 nd wave) MEHM	NO CHANGE to HLS-EU (Q4)

Source: HLS₁₉ Consortium

8.2 Self-perceived health

8.2.1 Distributions

Figure A 8.1:
Percentage distribution of self-perceived health, for each country and for all countries (equally weighted)

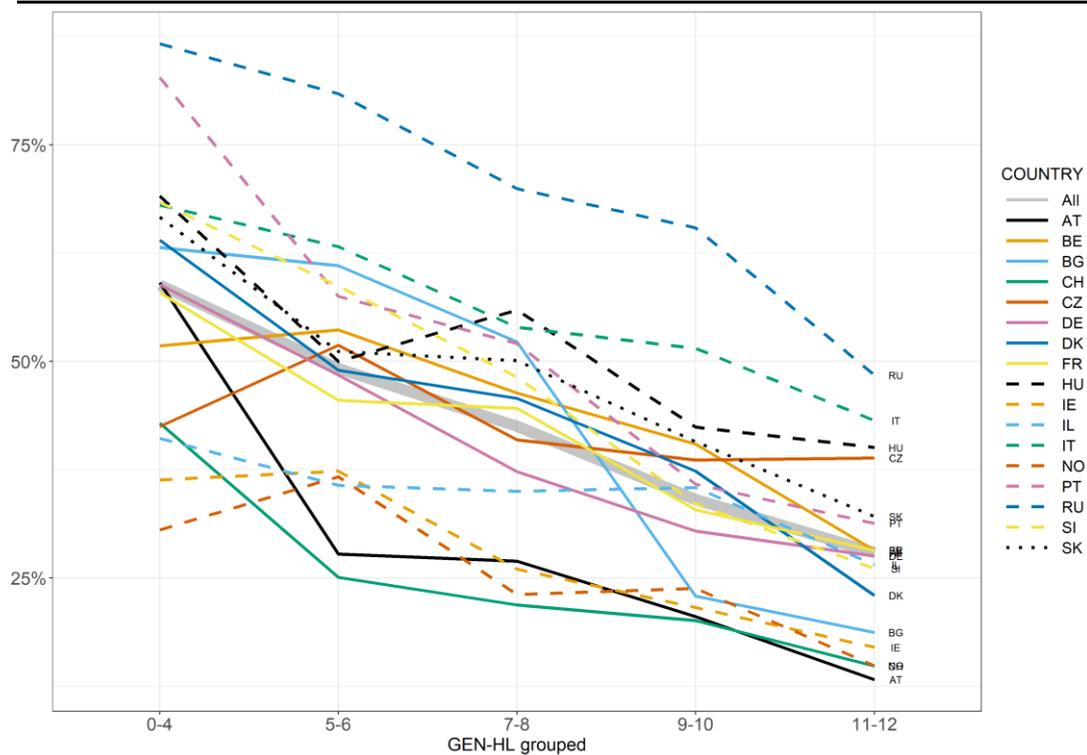


Source: HLS₁₉ Consortium

8.2.2 Associations with General HL

Figure A 8.2:

Percentage of self-perceived health (fair, bad or very bad) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

8.2.3 Spearman correlations

Table A 8.2:

Spearman Correlations among self-perceived health, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.21	-0.21	-0.38	-0.17	-0.07	-0.2	-0.27	-0.2	-0.15	-0.17	-0.15	-0.19	-0.19	-0.23	-0.31	-0.23	-0.24	-0.21
Gender female	0.02	0.06	0.03	-0.01	-0.06	0.02	-0.05	0.01	0.09	-0.04	0.02	0.03	-0.01	0.09	0.07	0.06	0.05	0.03
Age in years	0.28	0.07	0.42	0.2	0.41	0.44	0.07	0.22	0.37	0.12	0.27	0.25	0.16	0.49	0.46	0.45	0.5	0.3
Education	-0.14	-0.17	-0.28	-0.14	-0.28	-0.1	-0.15	-0.12	-0.21	-0.19	0	-0.13	-0.11	-0.41	-0.17	-0.3	-0.23	-0.16
Level in society	-0.15	-0.3	-0.39	-0.24	-0.25	-0.19	-0.25	-0.26	-0.25	-0.16	-0.21	-0.21	-0.23	-0.34	-0.27	-0.29	-0.25	-0.25
Financial deprivation	0.17	0	0.37	0.22	0.2	0.2	0.27	0.23	0.37	0.24	0.19	0.23	0.15	0.35	0.35	0.33	0.32	0.27
Migration*	-0.08	-0.01	-0.05	0.01	0.03	-0.04	-0.03	0	0.01	-0.04	0.2	-0.01	-0.07	-0.08	-0.08	0	0.02	-0.06
No training in a health profession	0.01	-0.03	0.25	0.06	0.04	0.07	0.03	0.07	0.08	0.05	0.05	0.03	0.03	0.14	0.04	0.08	0	0.05

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

8.2.4 Results of unstandardized multivariable regressions

Table A 8.3:

Multivariable linear regression models of self-perceived health by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	2.35	3.52	2.63	2.41	2.1	1.98	3.06	2.61	2.03	2.37	1.94	2.37	2.54	2	2.32	1.92	1.69
GEN-HL	-0.01	0	-0.01	-0.01	0	-0.01	-0.01	-0.01	-0.01	0	0	0	-0.01	0	0	-0.01	0
Gender female	-0.02	0.07	0.02	-0.07	-0.05	-0.03	-0.08	-0.01	0.08	-0.02	-0.02	0	0.04	0.13	0.02	0.04	0.03
Age in years	0.01	0	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.02	0.02
Education	-0.03	-0.04	-0.07	-0.02	-0.06	-0.01	-0.02	0.01	-0.02	-0.04	0	0.01	-0.04	-0.04	-0.03	-0.04	-0.02
Level in society	-0.06	-0.14	-0.05	-0.08	-0.07	-0.05	-0.07	-0.12	-0.07	-0.06	-0.08	-0.07	-0.09	-0.05	-0.02	-0.04	-0.06
Financial deprivation	0.14	-0.02	0.11	0.1	0.13	0.1	0.18	0.08	0.16	0.13	0.1	0.1	0.25	0.1	0.1	0.13	0.11
R ²	0.16	0.13	0.38	0.16	0.24	0.26	0.16	0.17	0.27	0.11	0.17	0.14	0.13	0.35	0.29	0.31	0.33
Valid count	2691	988	721	2019	1567	1845	3561	2003	1124	4301	1154	3240	2681	1168	5079	3184	1794
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Self-perceived health: from very good (1) to very bad (5).

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

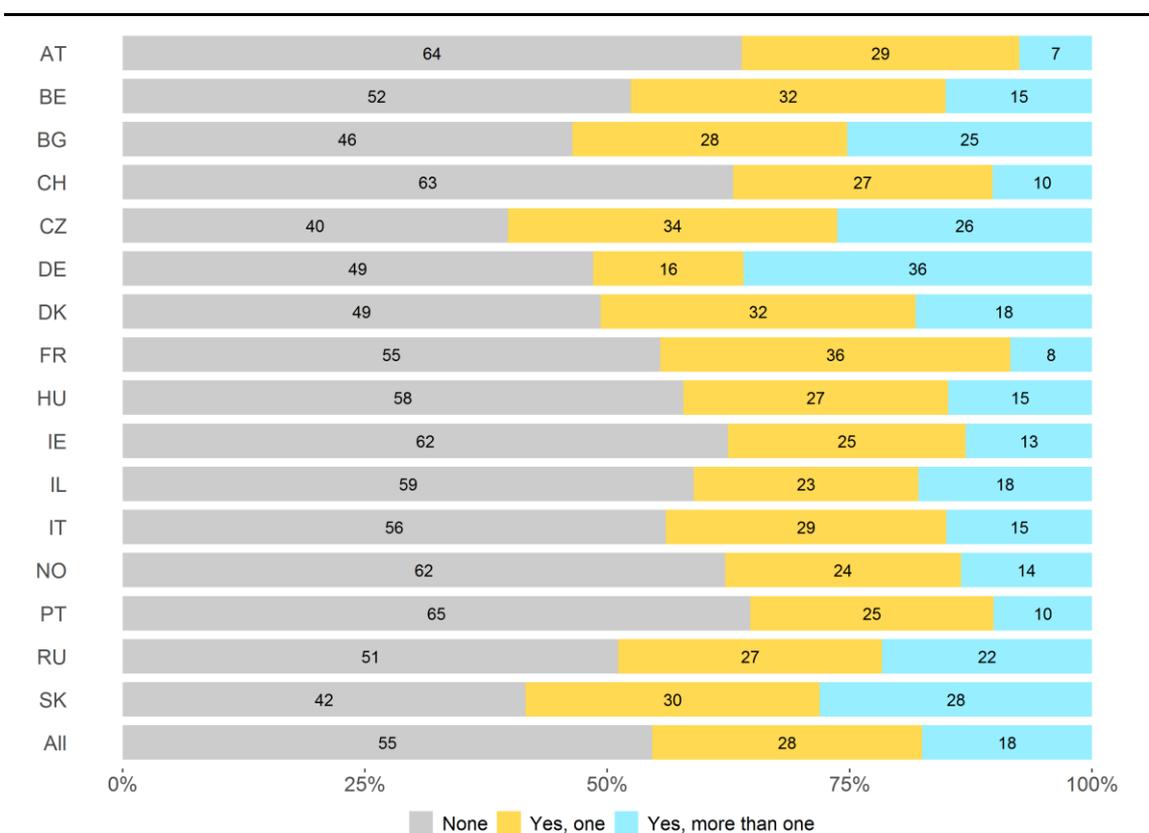
Source: HLS₁₉ Consortium

8.3 Long-term illness/health problems

8.3.1 Distributions

Figure A 8.3:

Percentage distribution of long-term illness/health problems, for each country and for all countries (equally weighted)*



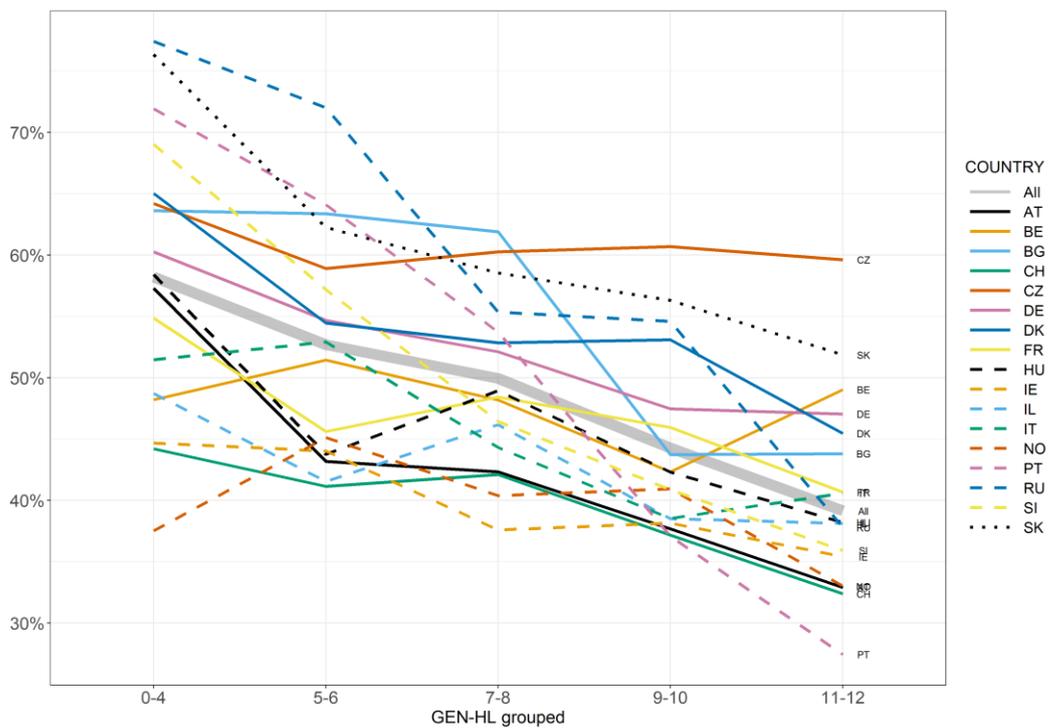
*SI was not included in Figure A 8-3 as a slightly different measure, using only 2 categories for long-term illness/health problems ((1) no and (2) one or more long-term illness/health problems), was used. In SI 60% of the respondents have no long-term illness/health problems and 40% have one or more long-term illness/health problems.

Source: HLS₁₉ Consortium

8.3.2 Associations with General HL

Figure A 8.4:

Percentage of long-term illness/health problems (one or more long-term illnesses/health problems) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

8.3.3 Spearman correlations

Table A 8.4:

Spearman Correlations among long-term illness/health problems, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.11	-0.03	-0.24	-0.09	-0.03	-0.09	-0.09	-0.08	-0.08	-0.06	-0.04	-0.09	-0.09	-0.26	-0.28	-0.12	-0.17	-0.14
Gender female	0.06	0.09	-0.02	0.02	0.01	0.06	0	-0.01	0.12	0.06	0.05	0.01	0.06	0.07	0.11	0.08	0.07	0.05
Age in years	0.29	0.23	0.58	0.28	0.31	0.47	0.19	0.29	0.41	0.27	0.32	0.26	0.2	0.4	0.45	0.35	0.49	0.34
Education	-0.14	-0.17	-0.16	-0.08	-0.16	-0.02	-0.05	-0.08	-0.11	-0.17	0.01	-0.05	-0.05	-0.25	-0.1	-0.2	-0.16	-0.09
Level in society	-0.12	-0.13	-0.28	-0.1	-0.13	-0.12	-0.11	-0.07	-0.14	-0.1	-0.1	-0.08	-0.12	-0.22	-0.27	-0.15	-0.15	-0.14
Financial deprivation	0.17	0.07	0.2	0.08	0.15	0.13	0.16	0.13	0.28	0.13	0.12	0.1	0.14	0.27	0.31	0.18	0.24	0.17
Migration*	-0.06	-0.05	-0.06	-0.05	0.02	-0.04	-0.01	0.03	-0.03	-0.06	0.21	-0.02	-0.03	-0.05	-0.02	0.01	0.01	-0.03
No training in a health profession	-0.05	-0.1	0.18	0	-0.02	-0.01	-0.02	-0.09	-0.03	-0.03	0.03	-0.06	-0.05	-0.01	0	0.03	-0.04	-0.01

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

8.3.4 Results of unstandardized multivariable regressions

Table A 8.5:

Multivariable linear regression models of long-term illness/health problems by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	1.37	1.57	1.47	1.31	1.25	0.82	1.4	1.01	0.63	1.17	1.02	0.98	1.21	1.13	1.01	1.03	0.73
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.01	0	0	0
Gender female	0.02	0.13	-0.04	-0.01	0.06	0.06	-0.01	-0.01	0.11	0.11	0.03	-0.02	0.1	0.09	0.11	0.05	0.06
Age in years	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.01	0.02	0.01	0.02
Education	-0.03	-0.04	-0.06	0	-0.02	0.02	0	0.01	0	-0.03	-0.02	0.03	-0.03	0.01	0.02	-0.01	0
Level in society	-0.04	-0.07	-0.05	-0.03	-0.02	-0.05	-0.03	-0.01	-0.02	-0.04	-0.03	-0.01	-0.03	-0.01	-0.04	0	0
Financial deprivation	0.11	0.05	0	0.04	0.09	0.07	0.16	0.08	0.13	0.07	0.07	0.07	0.21	0.08	0.08	0.04	0.08
R ²	0.13	0.1	0.37	0.09	0.13	0.23	0.09	0.1	0.25	0.12	0.16	0.08	0.08	0.23	0.28	0.15	0.27
Valid count	2686	988	705	2017	1568	1821	3557	2003	1121	4291	1155	3185	2663	1163	4910	3183	1774
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

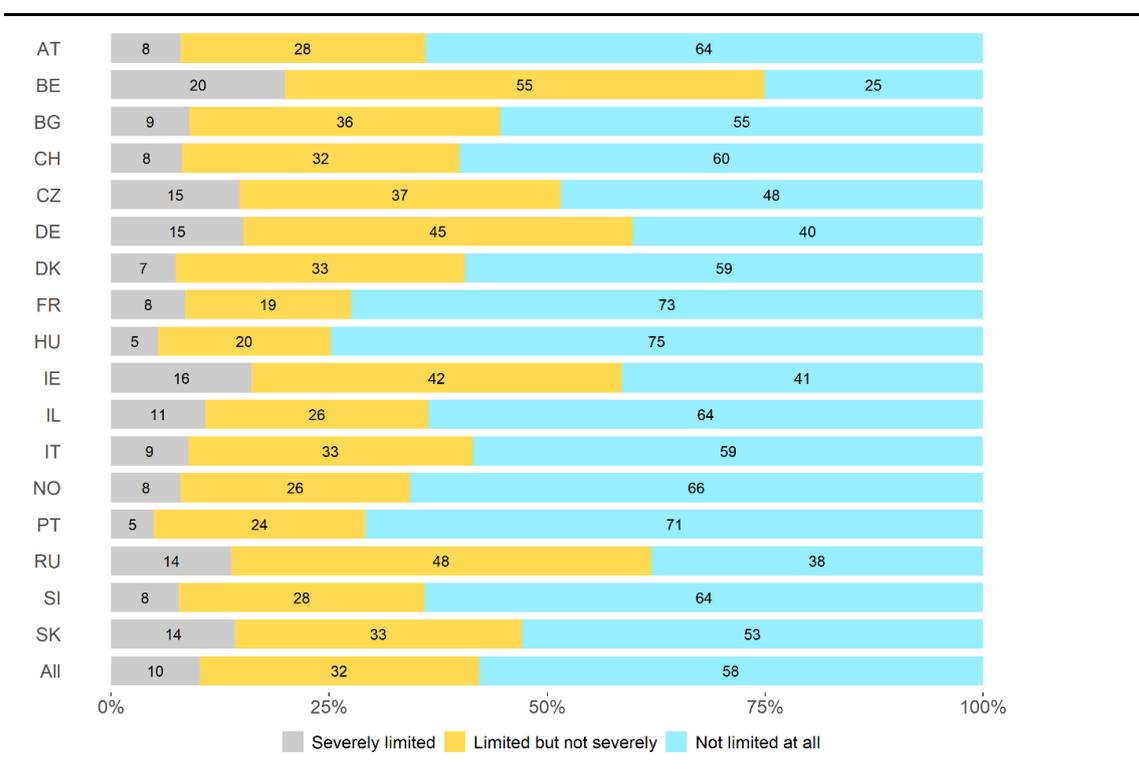
Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS19 Consortium

8.4 Limitations due to health problems

8.4.1 Distributions

Figure A 8.5:
Percentage distribution of limitations due to health problems, for each country and for all countries (equally weighted)

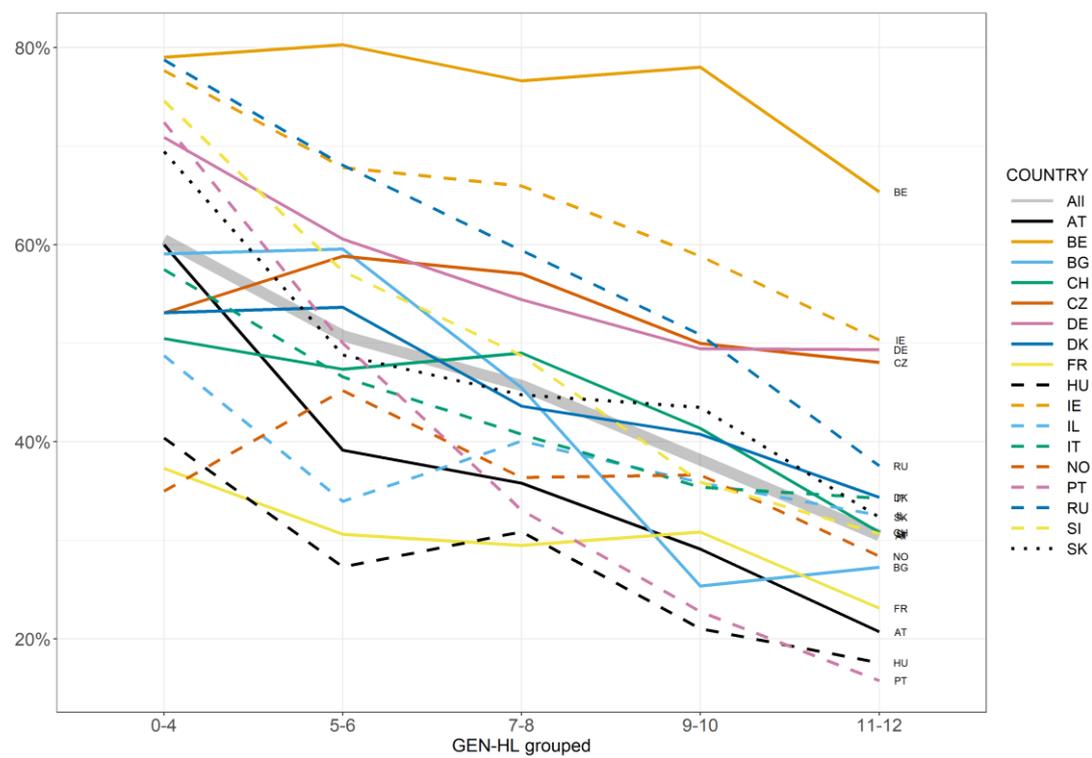


Source: HLS19 Consortium

8.4.2 Associations with General HL

Figure A 8.6:

Percentage of limitations due to health problems (limited but not severely and severely limited) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

8.4.3 Spearman correlations

Table A 8.6:

Spearman Correlations among limitations due to health problems, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)*

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	0.13	0.1	0.29	0.17	0.07	0.14	0.14	0.08	0.14	0.17	0.06	0.15	0.11	0.3	0.21	0.19	0.21	0.18
Gender female	-0.06	-0.13	-0.03	-0.06	-0.01	-0.07	0	0.01	-0.11	-0.03	-0.04	-0.04	-0.1	-0.12	-0.04	-0.07	-0.04	-0.05
Age in years	-0.18	0.05	-0.3	-0.13	-0.22	-0.38	-0.13	-0.12	-0.29	0.01	-0.05	-0.15	-0.09	-0.31	-0.34	-0.32	-0.38	-0.21
Education	0.17	0.17	0.19	0.07	0.18	0.06	0.1	0.04	0.16	0.19	0.1	0.12	0.1	0.3	0.15	0.23	0.2	0.11
Level in society	0.17	0.18	0.27	0.17	0.15	0.14	0.18	0.1	0.13	0.17	0.05	0.13	0.14	0.27	0.21	0.21	0.17	0.14
Financial deprivation	-0.18	0.1	-0.19	-0.14	-0.18	-0.16	-0.21	-0.16	-0.27	-0.26	-0.15	-0.19	-0.16	-0.31	-0.24	-0.25	-0.28	-0.19
Migration*	0.03	-0.01	0	0.03	-0.03	0.03	0.01	0	0	-0.03	0.04	0.01	0	0.02	0	0.02	-0.02	0.03
No training in a health profession	0	-0.06	-0.11	0	0.02	0	0	0.11	0.01	-0.03	0.01	0.02	0	-0.08	-0.03	-0.05	0	-0.02

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

8.4.4 Results of unstandardized multivariable regressions

Table A 8.7:

Multivariable linear regression models of limitations due to health problems by GEN-HL, and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	2.23	1.42	2	2.35	2.58	2.8	2.49	2.83	3.13	1.79	2.52	2.63	2.6	2.65	2.45	2.63	2.92
GEN-HL	0	0	0	0	0.01	0	0	0									
Gender female	-0.01	-0.17	-0.02	-0.06	-0.04	-0.05	0.01	0.04	-0.08	-0.06	-0.03	-0.02	-0.15	-0.12	-0.02	-0.06	0
Age in years	-0.01	0	-0.01	-0.01	-0.01	-0.01	-0.01	0	-0.01	0	0	0	0	-0.01	-0.01	-0.01	-0.01
Education	0.03	0.05	0.05	-0.01	0.04	0	0.01	-0.01	0.01	0.06	0.06	0.01	0.04	0.01	0.02	0.02	0.02
Level in society	0.05	0.06	0.05	0.05	0.02	0.03	0.04	0.01	0.01	0.04	-0.01	0.01	0.04	0.02	0.03	0.02	0.01
Financial deprivation	-0.12	0.05	0.01	-0.06	-0.09	-0.09	-0.15	-0.09	-0.09	-0.11	-0.07	-0.09	-0.17	-0.08	-0.06	-0.06	-0.1
R ²	0.11	0.09	0.2	0.09	0.09	0.18	0.1	0.04	0.18	0.1	0.03	0.07	0.08	0.22	0.16	0.17	0.21
Valid count	2074	472	570	2014	1565	1726	3554	2003	1007	1576	1153	3114	2637	931	3866	3184	1655
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Limitations due to health problems: from severely limited (1) to not limited at all (3).

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

9 Annex for Chapter 9: General health literacy as a predictor of health care utilization

9.1 Wording of selected correlate items and response categories on healthcare utilization, used in HLS₁₉, source of the original items, indication of changes made relating to the item used in HLS-EU

Table A 9.1

Wording of selected correlate items and response categories on healthcare utilization, used in HLS₁₉, source of the original items, indication of changes made relating to the item used in HLS-EU

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
C-HCUT1	In the last 24 months, about how many times have you used emergency services? [Interviewer instruction: meaning using emergency service on your own behalf, not for someone else, e. g. ambulance, out of hours clinic, emergency department] Number of times	HLS-EU	REPHRASE to HLS-EU (Q6.1) and no use of response categories but asking for number of times How many times have you had to contact the emergency service in the last 2 years? (Instruction: Ambulance, out of hours clinic, emergency department) 1. Never 2. 1–2 times 3. 3–5 times 4. 6 times or more 5. DK
C-HCUT2	In the last 12 months, about how many times have you been to a GP or family doctor? [Interviewer Instruction: only include the times you visited the GP for your own health problems] Number of times	Combination of HLS-EU (Q6.2) and EHIS (3rd wave) (AM3, AM4)	REPHRASE HLS-EU item Q6.2 and no use of response categories but asking for number of times How many times have you been to the doctor in the last 12 months? 1. Never 2. 1–2 times 3. 3–5 times 4. 6 times or more 5. DK
C-HCUT3	In the last 12 months, about how many times have you been to a medical or surgical specialist? [Interviewer Instruction: only include the times you visited the medical or surgical specialist for your own health problems] Number of times		
C-HCUT4	In the last 12 months, about how many times have you been to hospital as an inpatient? [Interviewer Instruction: that is overnight or longer] Number of times	EHIS (3rd wave) (HO1A, HO2A)	REPHRASE HLS-EU item Q6.3: Based on EHIS (3 rd wave) with changed answer categories. HLS-EU Q6.3:

Nb.	Question HLS ₁₉	Source	Changes made relating to the item used in HLS-EU
C-HCUT5	<p>In the last 12 months, about how many times have you been to hospital as a day patient?</p> <p>[Interviewer Instruction: that is admitted to hospital for diagnosis, treatment or other types of health care, but not required to remain overnight]</p> <p>Number of times</p>		<p>How many times have you used a hospital service in the last 12 months?</p> <ol style="list-style-type: none"> 1. Never 2. 1–2 times 3. 3–5 times 4. 6 times or more 5. DK <p>Rephrasing based on EHIS (3rd wave) – EHCM</p> <p>HO1A: In the past 12 months have you been in hospital as an inpatient, that is overnight or longer?</p> <p>HO2A: In the past 12 months have you been admitted to hospital as a day patient, that is admitted to a hospital for diagnostic, treatment or other types of health care, but not required to remain overnight?</p>

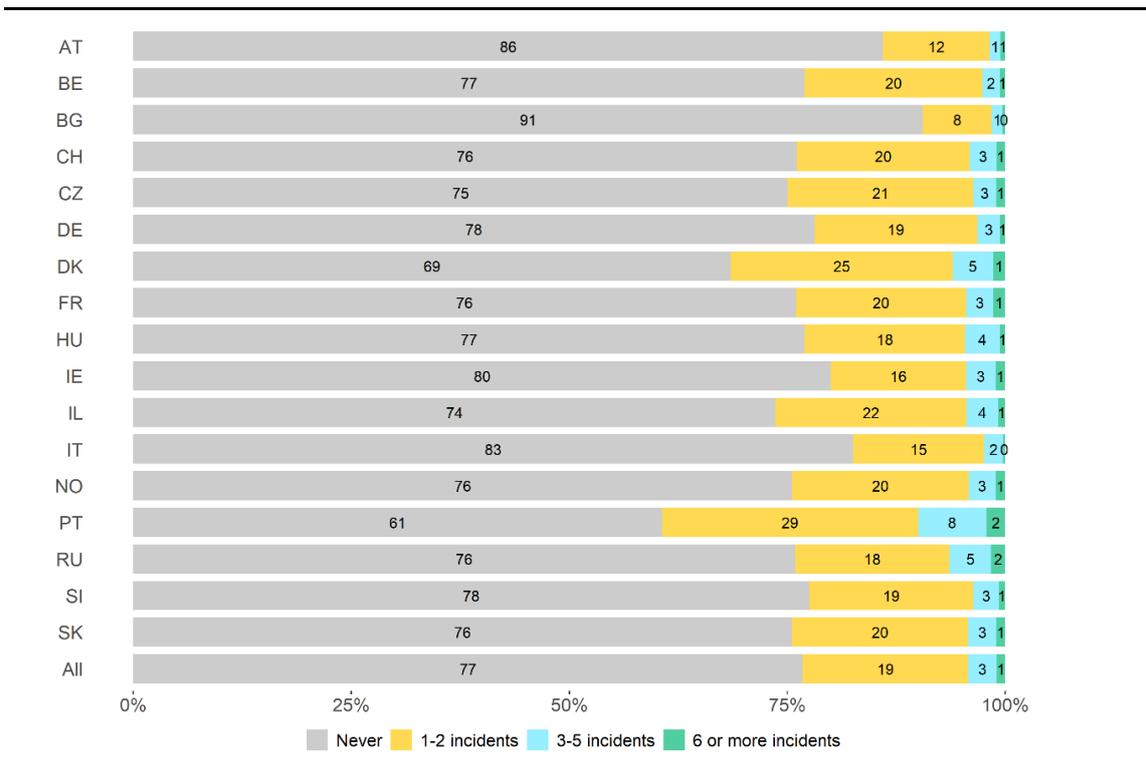
Source: HLS₁₉ Consortium

9.2 Utilization of emergency service

9.2.1 Distributions

Figure A 9.1

Percentage distribution of utilization of emergency service within last 24 month, for each country and for all countries (equally weighted)

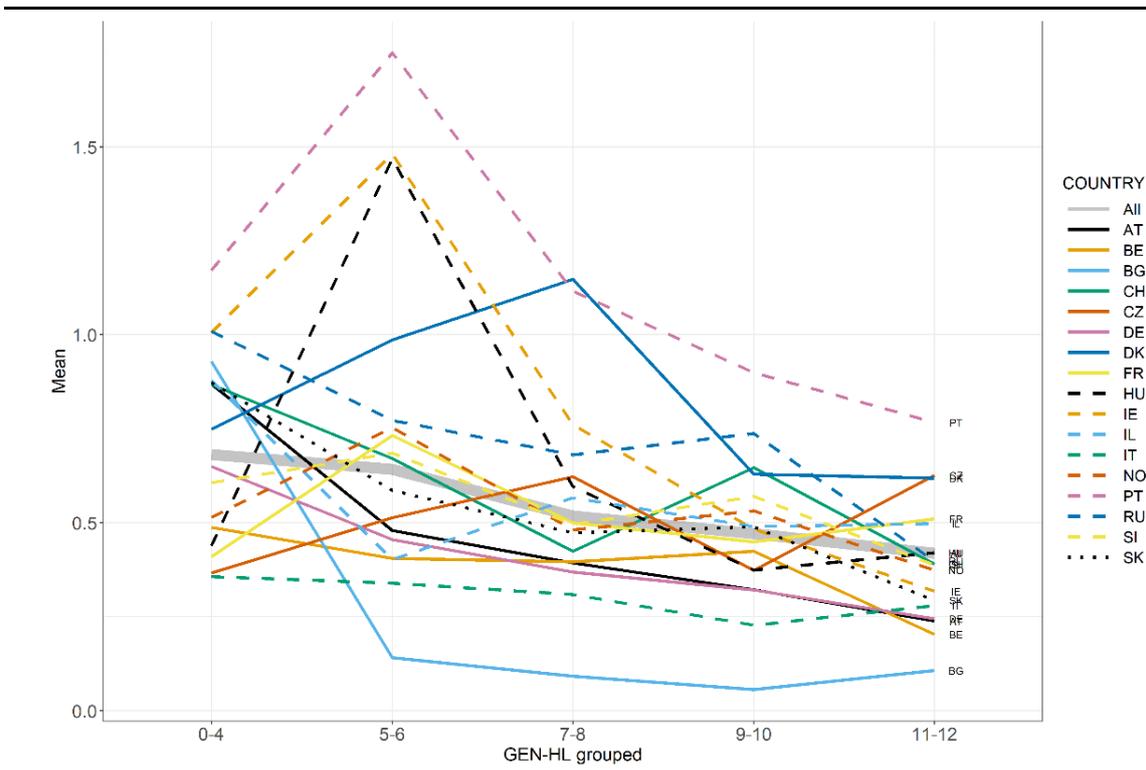


Source: HLS₁₉ Consortium

9.2.2 Association with General HL

Figure A 9.2:

Emergency service utilization within last 24 month (mean number of incidences) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

9.2.3 Spearman correlations

Table A 9.2

Spearman Correlations among utilization of emergency services, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.13	-0.12	-0.16	-0.05	-0.02	-0.06	-0.05	-0.07	-0.1	-0.08	-0.11	-0.04	-0.06	-0.16	-0.14	-0.04	-0.1	-0.07
Gender female	0.02	0.01	0.05	-0.01	-0.01	-0.01	0.01	-0.01	0.06	-0.01	0.04	0	0.04	0.1	0.11	0	0.02	0.02
Age in years	0.06	-0.12	-0.04	-0.04	-0.19	0.15	-0.02	-0.13	-0.03	-0.1	-0.05	0.01	-0.04	0.01	0.17	0.03	0.07	-0.02
Education	-0.02	-0.04	-0.13	-0.03	0.04	-0.04	-0.05	0.05	-0.06	-0.05	0.02	0	-0.06	-0.04	-0.1	-0.04	-0.09	-0.04
Level in society	-0.03	-0.12	-0.09	-0.06	0.03	-0.09	-0.08	-0.04	-0.01	-0.06	-0.09	-0.04	-0.02	-0.04	-0.13	-0.03	-0.07	-0.06
Financial deprivation	0.09	0.02	0.12	0.07	0.04	0.14	0.1	0.11	0.08	0.12	0.09	0.11	0.1	0.11	0.18	0.08	0.12	0.09
Migration*	-0.03	0.04	0.01	0.03	0.03	-0.01	-0.01	0.02	-0.04	-0.02	0.01	0.02	0.01	0.09	-0.04	0.06	-0.02	0.02
No training in a health profession	0	-0.13	0.05	0	0	0.02	-0.01	-0.13	-0.01	-0.02	-0.02	-0.07	0	0	0.02	0	0.02	-0.02

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

9.2.4 Results on unstandardized multivariable regressions

Table A 9.3

Multivariable linear regression models of utilization of emergency services by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	1.32	1.87	1.59	1.48	1.63	1.13	1.45	1.43	1.32	1.63	1.42	1.05	1.25	1.32	1.26	1.28	1.32
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender Female	0.01	0.01	0.03	-0.03	-0.06	-0.02	0.01	-0.03	0.05	0	0.06	0	0.07	0.16	0.11	0	0.04
Age in years	0	0	0	0	-0.01	0	0	0	0	0	0	0	0	0	0	0	0
Education	0	-0.02	-0.02	0	-0.01	0	-0.01	0.01	-0.02	-0.02	0.02	0.01	-0.02	0.01	-0.03	0	-0.02
Level in society	0	-0.03	-0.01	-0.02	0	-0.02	-0.01	0.01	0.01	-0.01	-0.01	0	0	0.03	-0.01	0	0
Financial deprivation	0.05	-0.01	0.02	0.03	0.02	0.05	0.07	0.05	0.04	0.05	0.03	0.05	0.13	0.1	0.04	0.03	0.03
R ²	0.03	0.04	0.11	0.01	0.04	0.04	0.01	0.02	0.02	0.03	0.02	0.01	0.02	0.05	0.07	0.01	0.04
Valid count	2681	970	724	2019	1556	1824	3556	2003	1124	4295	1150	2825	2674	1168	4990	3175	1781
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Utilization of emergency services: number of contacts in the last 24 months, from 0 to 6 or more contacts.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

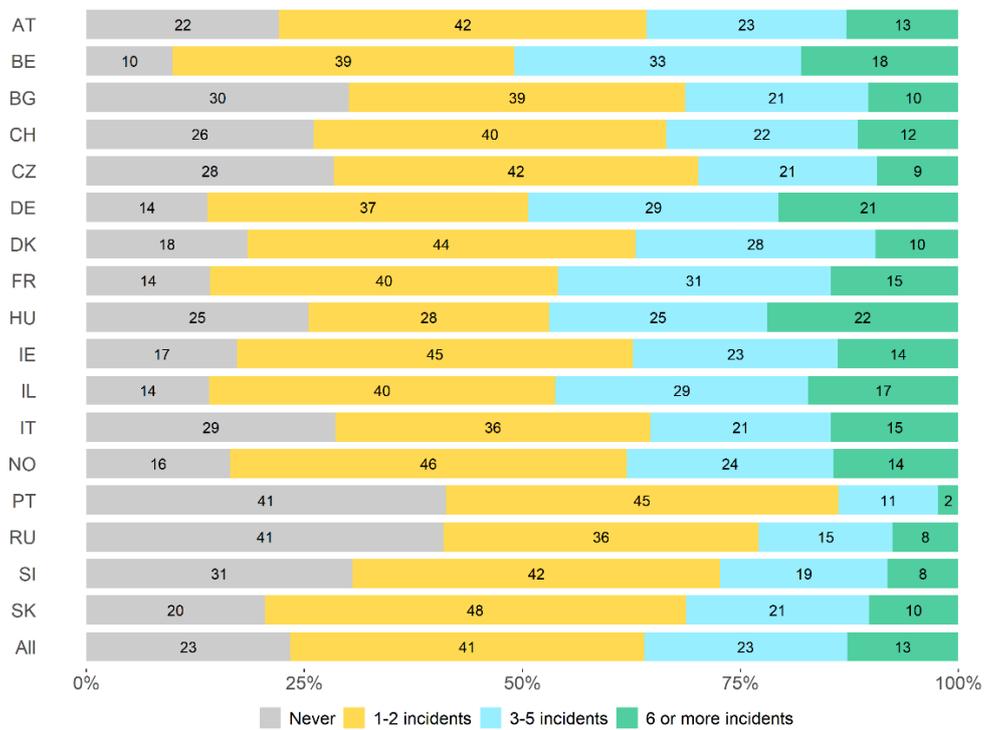
Source: HLS₁₉ Consortium

9.3 Utilization of GPs/family doctors

9.3.1 Distributions

Figure A 9.3:

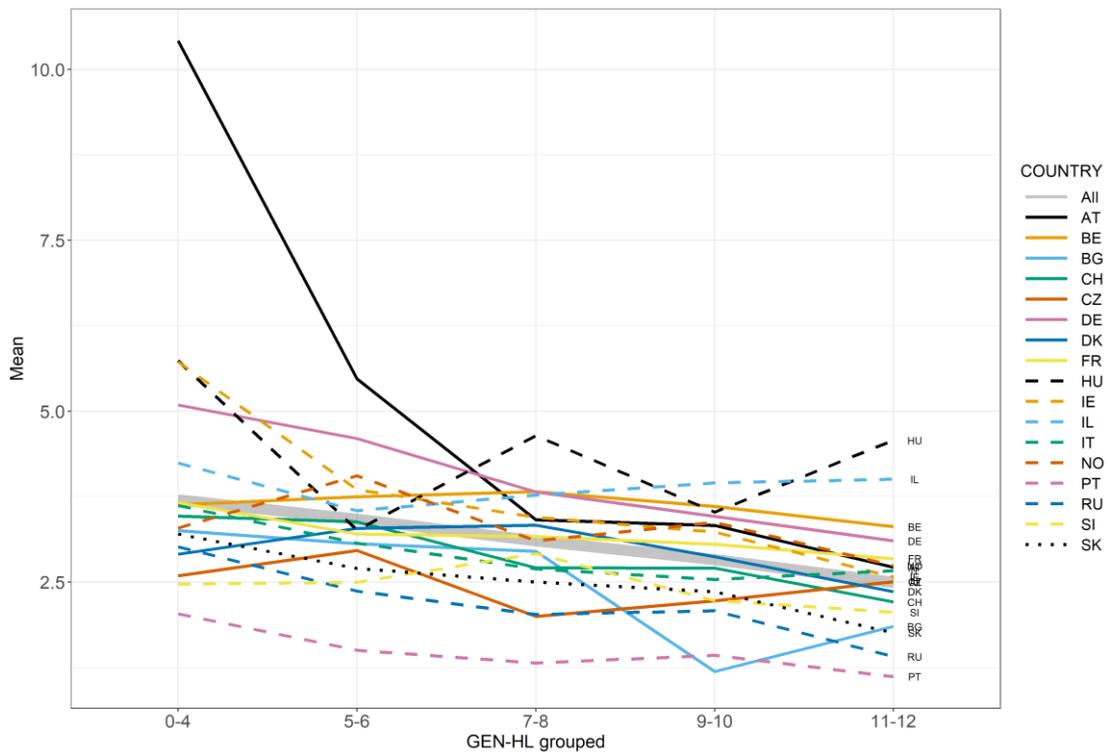
Percentage distribution of utilization of GPs/family doctors within last 12 month, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

9.3.2 Association with General HL

Figure A 9.4:
Utilization of GPs/family doctors within last 12 month (mean number of incidences) by GEN-HL
 in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

9.3.3 Spearman correlations

Table A 9.4:

Spearman Correlations among utilization of GPs/family doctors, GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.12	-0.04	-0.2	-0.08	0.03	-0.12	-0.08	-0.06	-0.02	-0.07	-0.01	-0.04	-0.07	-0.14	-0.19	-0.09	-0.16	-0.12
Gender female	0.13	0.1	0.03	0.06	-0.02	0.1	0.1	0.08	0.16	0.13	0.08	0.04	0.14	0.13	0.11	0.1	0.09	0.09
Age in years	0.25	0.2	0.22	0.18	0.2	0.33	0.08	0.19	0.28	0.14	0.02	0.24	0.05	0.18	0.31	0.2	0.26	0.19
Education	-0.04	-0.24	-0.18	-0.09	-0.17	-0.06	-0.06	-0.06	-0.05	-0.07	-0.05	-0.14	-0.09	-0.15	-0.08	-0.09	-0.15	-0.05
Level in society	0.01	-0.08	-0.12	-0.1	-0.07	-0.11	-0.12	-0.06	-0.07	-0.08	-0.07	-0.07	-0.04	-0.09	-0.17	-0.07	-0.12	-0.05
Financial deprivation	0.11	-0.04	0.07	0.1	0.11	0.14	0.09	0.09	0.16	0.11	0.15	0.08	0.12	0.11	0.23	0.12	0.25	0.09
Migration*	-0.07	-0.01	-0.04	0.01	0.03	-0.05	0.01	0.03	0	-0.07	-0.01	-0.03	0.01	-0.02	0.01	0.06	-0.03	0.02
No training in a health profession	-0.01	-0.03	0.16	0.05	0.03	0.05	-0.01	-0.05	-0.02	-0.02	0.01	0.02	0.02	-0.02	0.07	0	0.06	0.03

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

9.3.4 Results on unstandardized multivariable regressions

Table A 9.5:

Multivariable linear regression models of utilization of GP/family doctors by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	1.47	2.7	2.81	2.18	1.64	1.78	2.22	1.8	1.12	1.89	2.14	1.59	1.96	1.36	1.16	1.46	1.34
GEN-HL	0	0	-0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender Female	0.2	0.15	0.06	0.04	-0.01	0.15	0.16	0.15	0.27	0.27	0.16	0.04	0.28	0.21	0.11	0.13	0.12
Age in years	0.01	0.01	0.01	0.01	0.01	0.02	0	0.01	0.02	0.01	0	0.01	0	0.01	0.02	0.01	0.01
Education	0	-0.09	-0.08	-0.02	-0.04	-0.01	-0.01	0	0	-0.01	-0.06	-0.01	-0.05	-0.01	0.01	0	-0.02
Level in society	0.02	-0.03	-0.03	-0.04	-0.01	-0.03	-0.04	-0.01	0	-0.03	0.01	-0.03	0	0.01	-0.02	0.01	0.01
Financial deprivation	0.11	-0.01	-0.12	0.06	0.1	0.09	0.07	0.08	0.08	0.09	0.12	0.06	0.21	0.04	0.08	0.08	0.14
R ²	0.09	0.09	0.1	0.06	0.06	0.14	0.04	0.05	0.11	0.06	0.04	0.07	0.05	0.07	0.15	0.06	0.14
Valid count	2646	981	724	2019	1548	1794	3552	2003	1123	4286	1156	2931	2665	1168	4920	3177	1785
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Utilization of GPs/family doctors: number of contacts in the last 12 months, from 0 to 6 or more contacts.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

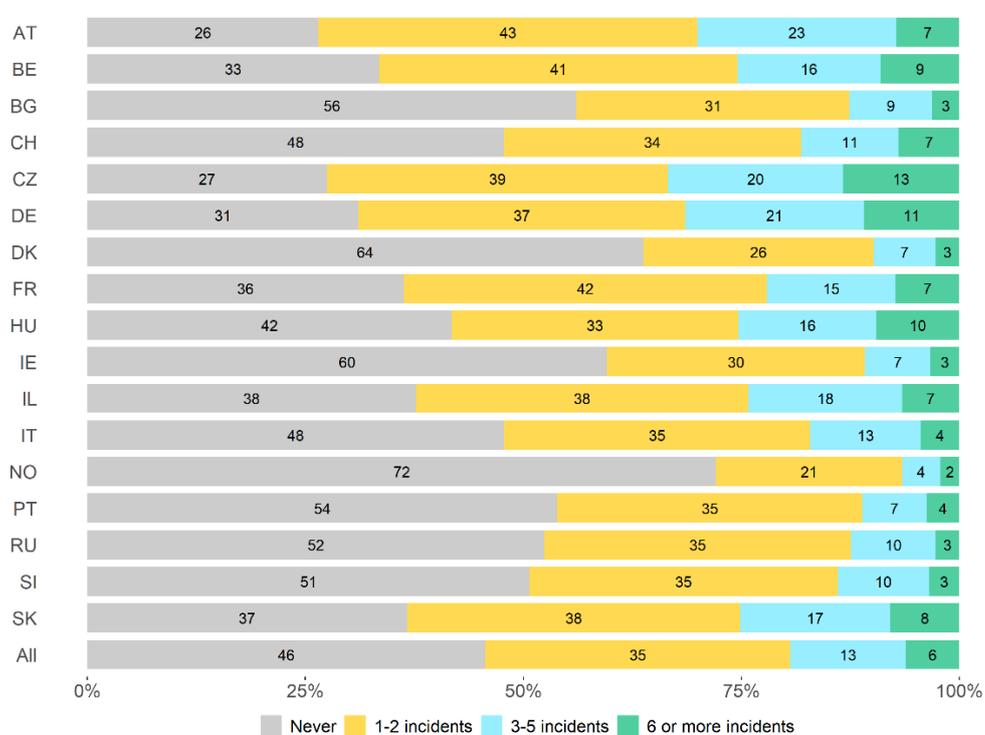
Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

9.4 Utilization of medical or surgical specialists

9.4.1 Distributions

Figure A 9.5:
Percentage distribution of utilization of medical or surgical specialist service within last 12 month, for each country and for all countries (equally weighted)

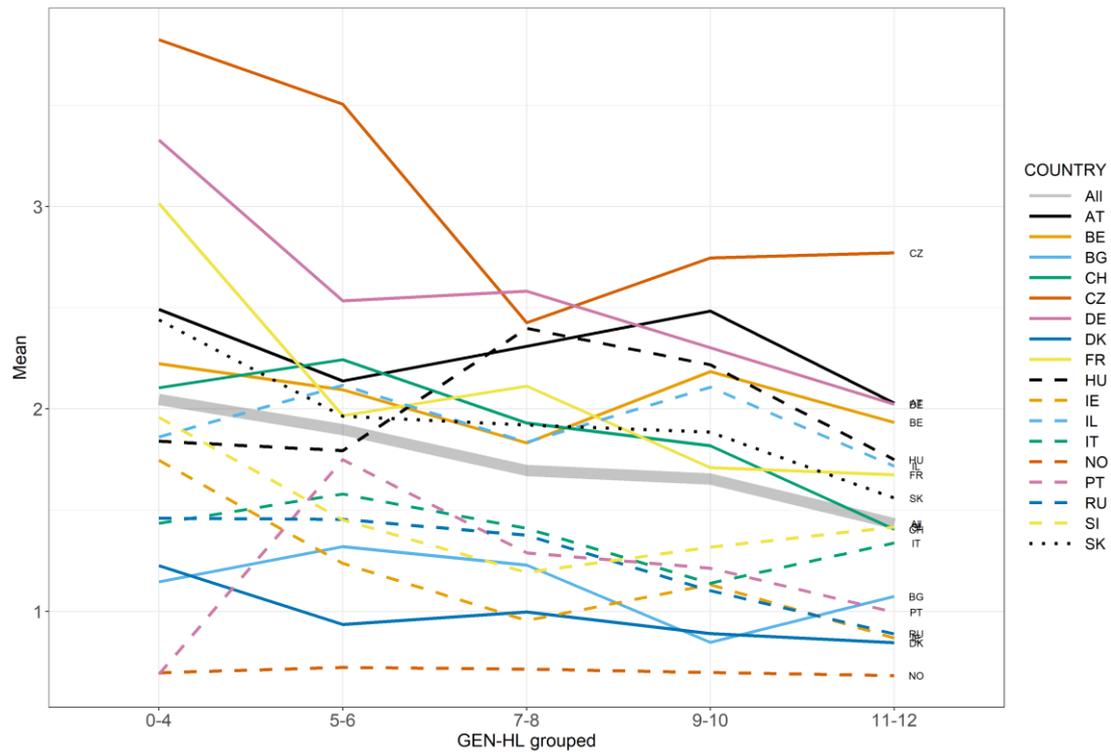


Source: HLS19 Consortium

9.4.2 Association with General HL

Figure A 9.6:

Utilization of medical or surgical specialist service within last 12 month (mean number of incidences), by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

9.4.3 Spearman correlations

Table A 9.6:

Spearman Correlations among utilization of medical and surgical specialists, and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.05	0.03	-0.03	-0.06	-0.02	-0.1	-0.05	-0.06	-0.05	-0.04	-0.07	-0.04	-0.02	-0.05	-0.16	-0.04	-0.11	-0.07
Gender female	0.21	0.16	0.12	0.1	0.11	0.12	0.05	0.13	0.13	0.04	0.11	0.06	0.03	0.15	0.07	0.08	0.12	0.1
Age in years	0.14	0.17	-0.02	0.13	0.12	0.31	0.11	0.1	0.13	0.13	0.2	0.09	0.09	0.07	0.14	0.18	0.27	0.14
Education	0.05	-0.09	-0.06	0.07	-0.01	0.04	0.04	0.06	0.11	-0.02	0.1	0.09	0.03	0.1	0.04	-0.01	-0.05	0
Level in society	0.02	-0.07	0.01	-0.06	-0.05	-0.06	0	0.01	-0.04	-0.04	-0.04	0.02	0.01	0.07	-0.12	-0.02	-0.06	-0.03
Financial deprivation	0.05	0.04	0	0.06	0.06	0.09	0.05	0.07	0.14	0.04	0.09	0.02	0.03	0	0.13	0.07	0.13	0.08
Migration*	-0.01	0.04	-0.03	0.01	-0.01	-0.06	0.02	0.01	-0.07	-0.06	0.16	0	-0.02	-0.01	0	0.05	0.01	0.02
No training in a health profession	-0.08	-0.06	-0.06	-0.04	-0.05	0	0	-0.07	-0.06	0	0.03	-0.06	-0.01	-0.08	0.01	-0.02	-0.04	-0.02

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

9.4.4 Results on unstandardized multivariable regressions

Table A 9.7:

Multivariable linear regression models of utilization of medical or surgical specialists by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	1.15	1.5	2.11	1.23	1.35	1.2	1.11	0.82	0.95	1.36	0.96	0.87	1.11	0.72	1.3	0.96	1.03
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender Female	0.37	0.26	0.13	0.15	0.24	0.19	0.09	0.25	0.2	0.03	0.17	0.11	0.04	0.22	0.08	0.1	0.17
Age in years	0.01	0.01	0	0.01	0.01	0.02	0	0.01	0.01	0.01	0.01	0.01	0	0.01	0	0.01	0.01
Education	0.05	-0.02	-0.04	0.07	0.03	0.03	0.02	0.06	0.07	0.01	0.06	0.06	0	0.06	0.05	0.04	0.01
Level in society	0	-0.06	-0.02	-0.04	-0.01	-0.03	0	0.03	-0.01	-0.03	-0.01	0.02	0	0.01	-0.03	0	0
Financial deprivation	0.06	0.04	-0.08	0.09	0.06	0.08	0.08	0.08	0.13	0.03	0.06	0.04	0.07	0.02	0.04	0.05	0.05
R ²	0.07	0.06	0.03	0.05	0.04	0.12	0.02	0.05	0.07	0.03	0.08	0.03	0.01	0.05	0.05	0.04	0.09
Valid count	2657	971	724	2017	1546	1817	3552	2003	1124	4292	1155	2932	2672	1168	4901	3172	1787
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Utilization of medical or surgical specialists: number of contacts in the last 12 months, from 0 to 6 or more contacts.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

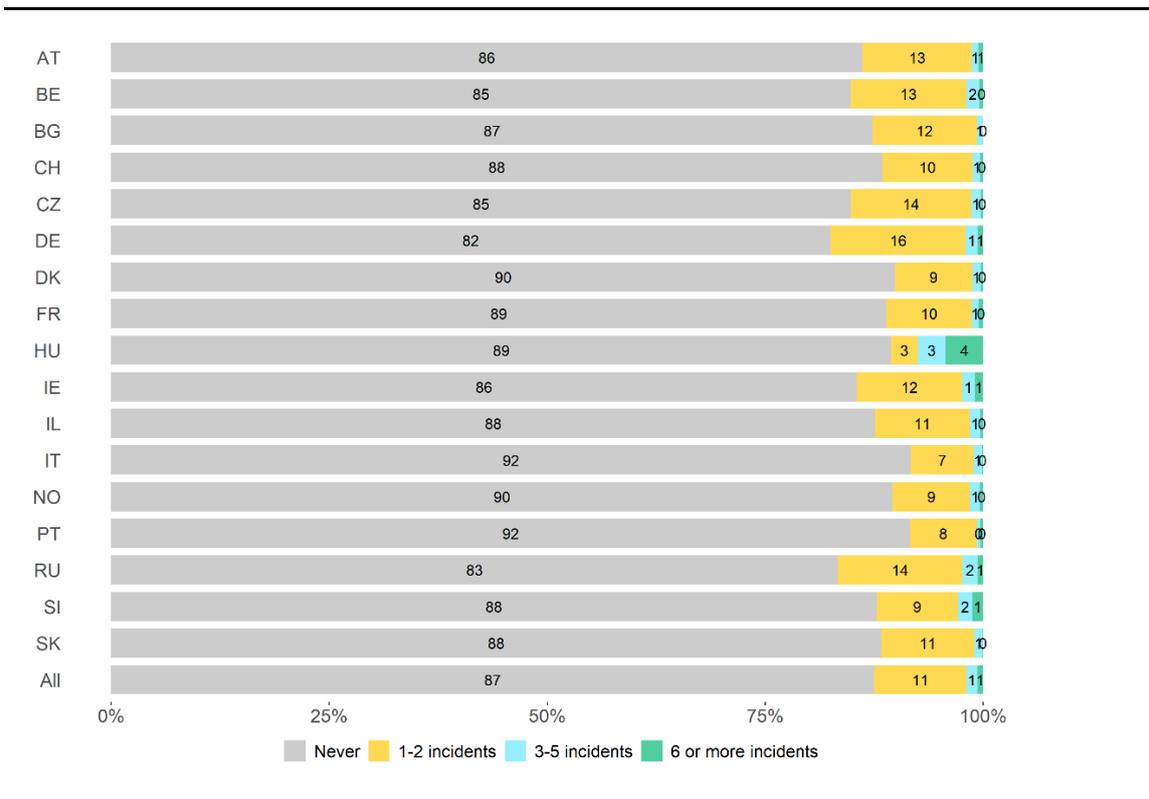
Source: HLS₁₉ Consortium

9.5 Utilization of inpatient hospital services

9.5.1 Distributions

Figure A 9.7:

Percentage distribution of utilization of inpatient hospital service within last 12 month, for each country and for all countries (equally weighted)

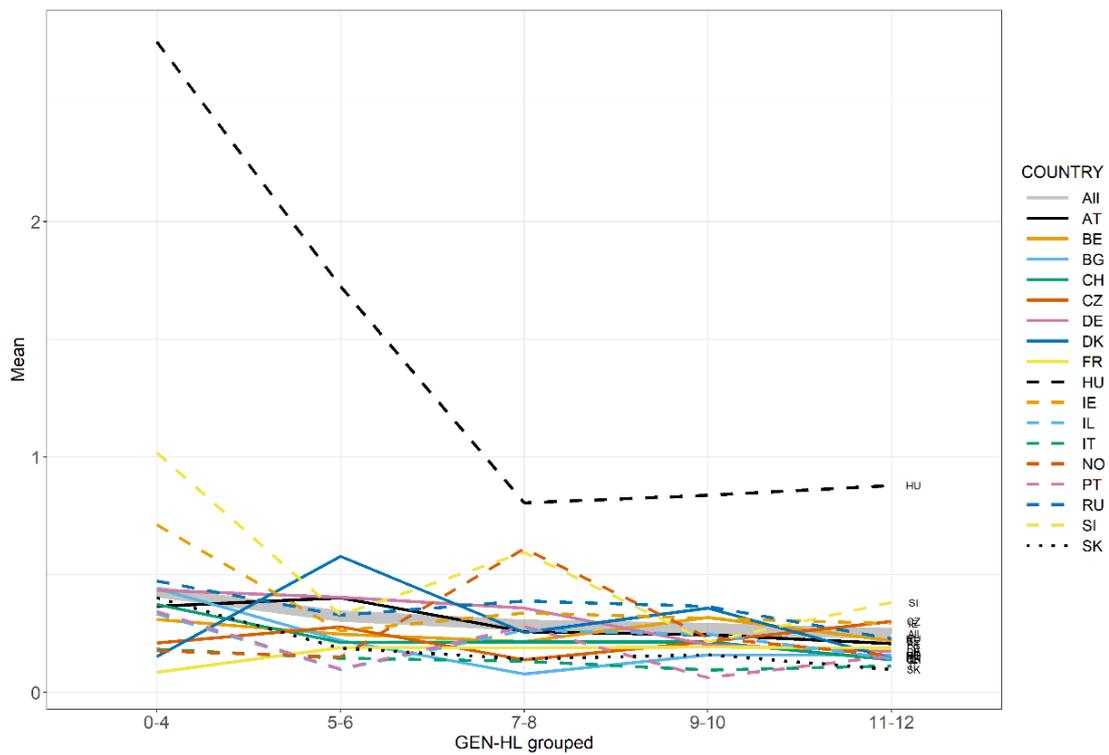


Source: HLS19 Consortium

9.5.2 Association with General HL

Figure A 9.8:

Utilization of inpatient hospital service within last 12 month (mean number of incidences) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

9.5.3 Spearman correlations

Table A 9.8:

Spearman Correlations among utilization of inpatient hospital services, GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.05	-0.03	-0.1	-0.05	0.01	-0.1	-0.02	0.01	-0.04	-0.04	-0.05	-0.02	0	-0.03	-0.09	-0.02	-0.14	-0.05
Gender female	0.03	0.06	0	0.04	0.02	0.02	0.01	-0.02	0.05	0.01	0.02	-0.04	0.06	0.09	0.04	0	0.05	0.03
Age in years	0.1	0.08	0.11	0.12	0.04	0.22	0.11	-0.01	0.15	0.07	-0.01	0.05	0.11	0.12	0.15	0.12	0.23	0.11
Education	-0.07	-0.13	-0.19	-0.07	-0.05	-0.06	-0.03	0.03	-0.1	-0.11	-0.01	-0.01	-0.04	-0.06	-0.08	-0.1	-0.15	-0.06
Level in society	-0.05	-0.08	-0.1	-0.11	-0.01	-0.09	-0.03	0.01	-0.04	-0.04	-0.05	-0.01	0	-0.01	-0.05	-0.07	-0.12	-0.05
Financial deprivation	0.03	0.05	0.09	0.06	0.04	0.09	0.08	0.04	0.08	0.1	0.04	0.08	0.04	0.02	0.12	0.08	0.19	0.07
Migration*	0.03	0.03	0	-0.03	0.01	-0.02	0	0	-0.03	-0.05	-0.03	0.05	-0.01	0.05	-0.03	-0.02	0.02	0
No training in a health profession	0.01	-0.02	0.05	0.03	-0.08	0.04	-0.02	-0.13	-0.07	0.02	-0.01	-0.1	0	0.02	0	-0.01	0.03	0

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

9.5.4 Results on unstandardized multivariable regressions

Table A 9.9:

Multivariable linear regression models of utilization of inpatient hospital services by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	1.23	1.22	1.36	1.17	1.06	1.09	0.97	0.98	1.03	1.27	1.21	0.94	0.88	0.93	1.14	1.15	0.99
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender Female	0.02	0.04	0.01	0.02	0.02	0	0	-0.02	0.03	0	0.03	-0.04	0.04	0.03	0.02	-0.02	0.01
Age in years	0	0	0	0	0	0.01	0	0	0.01	0	0	0	0	0	0	0	0
Education	-0.01	-0.03	-0.04	-0.01	-0.01	-0.01	0	0.01	-0.02	-0.02	-0.01	0	-0.01	0	-0.02	-0.01	-0.01
Level in society	-0.01	-0.01	0	-0.02	0.01	-0.01	0	0.01	0	0	0	0.01	0.01	0.01	0.01	-0.01	-0.01
Financial deprivation	0.02	0.02	-0.01	0.01	0.01	0.02	0.04	0.02	0.02	0.04	0.01	0.03	0.06	0.01	0.02	0.02	0.03
R ²	0.02	0.02	0.07	0.03	0	0.06	0.02	0.01	0.04	0.02	0.01	0.01	0.03	0.02	0.03	0.03	0.09
Valid count	2679	968	724	2020	1564	1830	3561	2003	1124	4295	1147	2947	2681	1168	5043	3173	1787
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Utilization of inpatient hospital services: number of contacts in the last 12 months, from 0 to 6 or more contacts.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

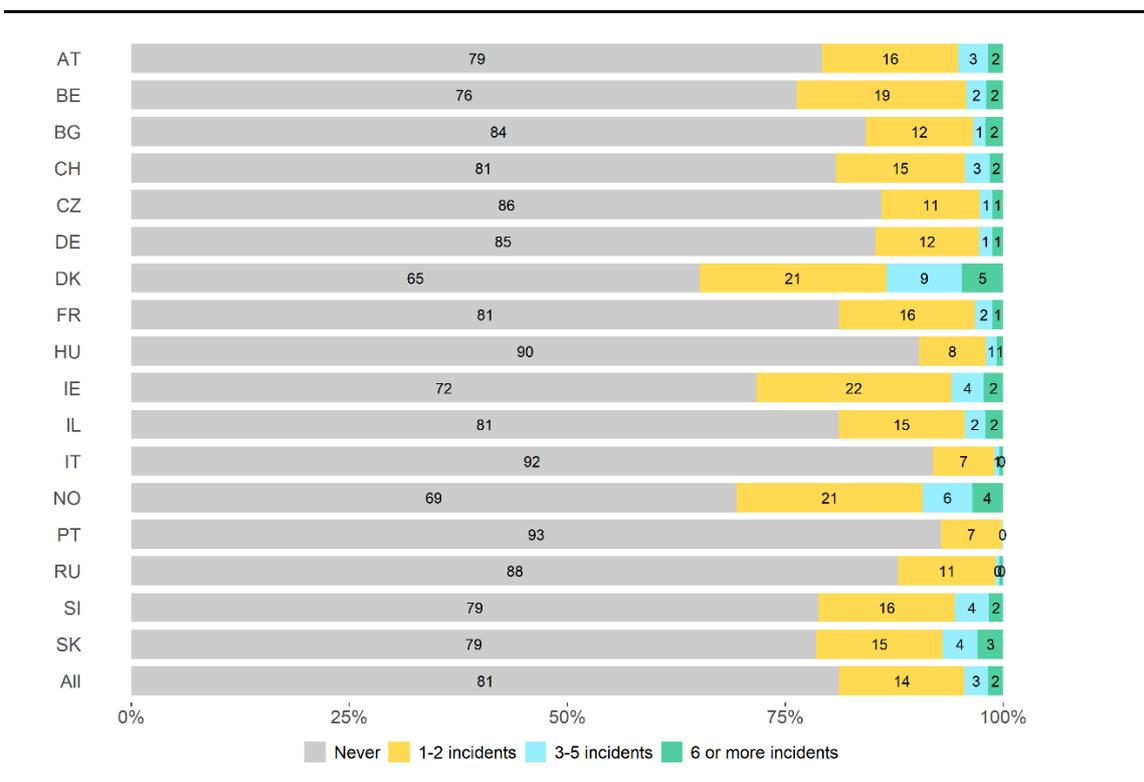
Source: HLS₁₉ Consortium

9.6 Utilization of day-patient hospital services

9.6.1 Distributions

Figure A 9.9:

Percentage distribution of utilization of day-patient hospital service within last 12 month, for each country and for all countries (equally weighted)

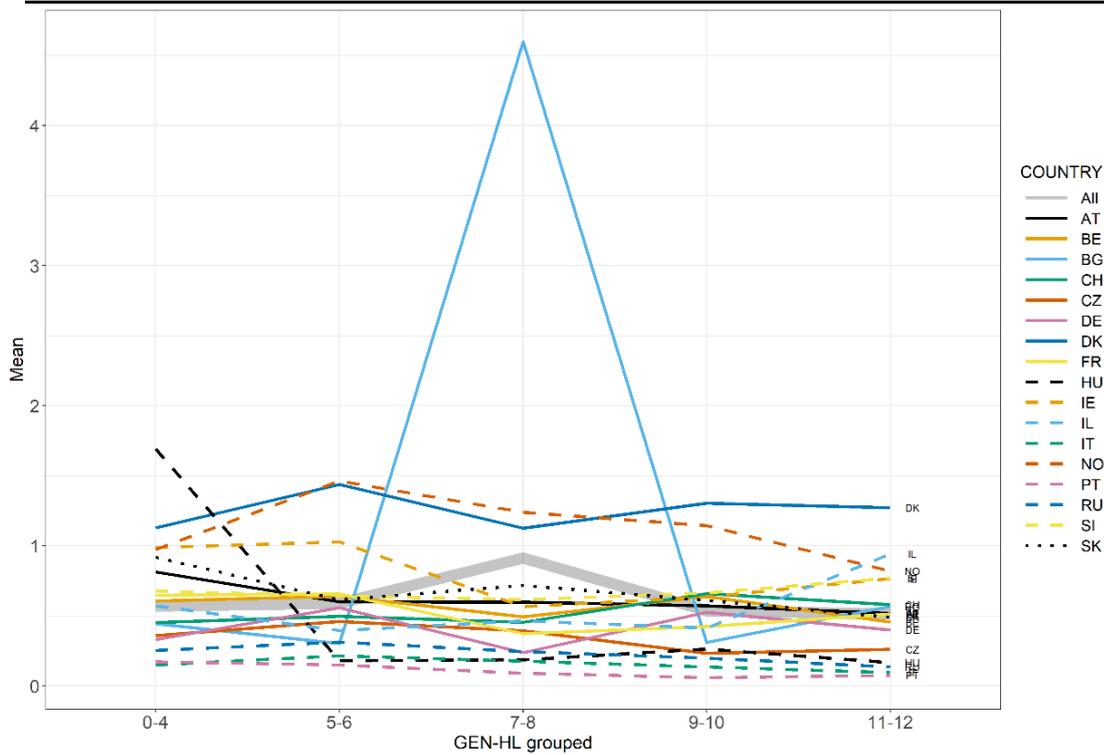


Source: HLS₁₉ Consortium

9.6.2 Association with General HL

Figure A 9.10:

Utilization of day patient hospital service within last 12 month (mean number of incidences) by GEN-HL in 5 groups, for each country and for all countries (equally weighted)



Source: HLS19 Consortium

9.6.3 Spearman correlations

Table A 9.10:

Spearman Correlations between utilization of day patient hospital services and GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK	All
GEN-HL	-0.04	-0.02	-0.06	-0.04	-0.05	-0.01	-0.02	-0.06	-0.03	-0.05	-0.02	-0.06	-0.02	-0.04	-0.11	-0.05	-0.09	-0.04
Gender female	0.03	0.05	-0.07	0	0	-0.02	0.06	-0.05	0.01	0.02	0.02	-0.04	0.07	0.01	0.1	-0.03	0.05	0.01
Age in years	0.12	0.12	0	0.09	-0.04	0.12	0.15	0.03	0.01	0.11	0.07	0.04	0.12	0.13	0.18	0.06	0.13	0.08
Education	-0.04	-0.1	-0.1	0	-0.03	0.01	-0.04	0.02	-0.01	-0.05	-0.05	-0.01	0	-0.08	-0.05	-0.03	-0.08	0.01
Level in society	0	-0.08	-0.04	-0.1	-0.03	-0.04	-0.06	-0.02	-0.02	-0.04	-0.01	-0.03	-0.02	0.02	-0.11	-0.03	-0.05	-0.01
Financial deprivation	0.09	0.04	0	0.04	0.07	0.08	0.06	0.05	0.04	0.09	0.07	0.11	0.04	0.01	0.13	0.04	0.11	0.02
Migration*	-0.04	0.02	-0.04	-0.04	0.01	0.01	-0.02	0.03	-0.01	-0.06	-0.03	0.06	-0.04	0.02	-0.02	0.05	-0.03	0.01
No training in a health profession	0.01	-0.07	0.01	0.02	0	-0.01	-0.07	-0.13	-0.03	0.01	0.03	-0.08	-0.02	0.03	-0.02	0	0	-0.01

* Values for correlations with migration should be treated with caution as in five countries (BG, HU, IT, RU, and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

9.6.4 Results on unstandardized multivariable regressions

Table A 9.11:

Multivariable linear regression models of utilization of day patient hospital services by GEN-HL and five core social determinants (unstandardized b coefficients and R²), for each country

	AT	BE	BG	CH	CZ	DE	DK	FR	HU	IE	IL	IT	NO	PT	RU	SI	SK
Intercept	1.09	1.35	1.66	1.22	1.27	0.91	1.15	1.15	1.21	1.22	1.36	0.99	1.15	0.92	1.02	1.31	1.1
GEN-HL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender Female	0.01	0.08	-0.12	-0.02	0	-0.02	0.09	-0.04	0.01	0.03	0	-0.03	0.09	0.01	0.05	-0.04	0.06
Age in years	0	0	0	0	0	0	0.01	0	0	0.01	0	0	0	0	0	0	0
Education	-0.01	-0.02	-0.04	0.02	-0.01	0.01	-0.01	0.02	0	0	-0.05	0	-0.01	-0.01	0	0.01	-0.01
Level in society	0.01	-0.04	0	-0.03	0	0	-0.02	0	0	-0.02	0	0.01	-0.01	0.02	-0.01	-0.01	0
Financial deprivation	0.05	0.02	-0.02	0.02	0.03	0.05	0.08	0.03	0.01	0.05	0.01	0.04	0.08	0.01	0.01	0.02	0.05
R ²	0.03	0.04	0.03	0.02	0.01	0.02	0.03	0.01	0.01	0.03	0.01	0.02	0.02	0.03	0.04	0.01	0.03
Valid count	2679	964	724	2018	1565	1830	3561	2003	1123	4299	1152	2957	2671	1168	5021	3173	1781
Total count	2967	1000	865	2502	1599	2143	3602	2003	1195	4487	1315	3500	2855	1247	5660	3360	2145

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Utilization of day patient hospital services: number of contacts in the last 12 months, from 0 to 6 or more contacts.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

10 Annex for Chapter 10: Navigational Health Literacy

10.1 Relative distribution of the HLS₁₉-NAV response categories

Table A 10.1:

Percentage distributions (for valid N), percentage of missing and total N for item “1 to understand information on how the health care system works?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	5.0 %	27.3 %	44.8 %	22.9 %	2903	2.2 %	2967
BE	5.2 %	34.7 %	48.7 %	11.4 %	1000	0.0 %	1000
CH	3.5 %	32.9 %	54.2 %	9.4 %	2477	1.0 %	2502
CZ	6.6 %	43.5 %	42.1 %	7.9 %	1582	1.1 %	1599
DE	8.6 %	49.1 %	35.4 %	6.9 %	2130	0.6 %	2143
FR	4.3 %	35.7 %	46.5 %	13.5 %	2003	0.0 %	2003
PT	3.7 %	33.4 %	58.7 %	4.2 %	1202	3.6 %	1247
SI	6.2 %	25.5 %	53.3 %	15.0 %	3337	0.7 %	3360
Mean	5.4 %	35.3 %	48.0 %	11.4 %	2079	1.1 %	2103

Source: HLS₁₉ Consortium

Table A 10.2:

Percentage distributions (for valid N), percentage of missing and total N for item “2 to judge which type of health service you need in case of a health problem?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	3.0 %	19.6 %	54.0 %	23.5 %	2910	1.9 %	2967
BE	4.7 %	27.3 %	53.4 %	14.6 %	1000	0.0 %	1000
CH	1.8 %	20.0 %	65.7 %	12.5 %	2480	0.9 %	2502
CZ	4.4 %	35.4 %	50.5 %	9.6 %	1580	1.2 %	1599
DE	4.6 %	45.1 %	44.5 %	5.7 %	2135	0.4 %	2143
FR	2.7 %	24.2 %	57.1 %	16.0 %	2003	0.0 %	2003
PT	1.1 %	17.5 %	75.9 %	5.5 %	1220	2.2 %	1247
SI	2.2 %	17.3 %	63.9 %	16.5 %	3343	0.5 %	3360
Mean	3.1 %	25.8 %	58.1 %	13.0 %	2084	0.9 %	2103

Source: HLS19 Consortium

Table A 10.3:

Percentage distributions (for valid N), percentage of missing and total N for item “3 to judge to what extent your health insurance covers a particular health service?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	10.7 %	32.0 %	39.4 %	17.9 %	2871	3.2 %	2967
BE	14.2 %	41.4 %	35.6 %	8.8 %	1000	0.0 %	1000
CH	11.4 %	41.3 %	41.4 %	6.0 %	2478	1.0 %	2502
CZ	10.0 %	44.5 %	38.6 %	6.9 %	1549	3.1 %	1599
DE	13.3 %	51.3 %	30.7 %	4.7 %	2135	0.4 %	2143
FR	13.7 %	41.7 %	33.5 %	11.1 %	2003	0.0 %	2003
PT	6.3 %	31.9 %	54.9 %	6.8 %	952	23.7 %	1247
SI	7.1 %	31.8 %	49.1 %	12.0 %	3316	1.3 %	3360
Mean	10.8 %	39.5 %	40.4 %	9.3 %	2038	3.1 %	2103

Source: HLS₁₉ Consortium

Table A 10.4: Percentage distributions (for valid N), percentage of missing and total N for item “4 to understand information on ongoing health care reforms that might affect your health care?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	6.6 %	33.6 %	44.1 %	15.8 %	2847	4.0 %	2967
BE	19.2 %	49.7 %	26.3 %	4.8 %	1000	0.0 %	1000
CH	11.0 %	48.5 %	35.2 %	5.3 %	2462	1.6 %	2502
CZ	12.6 %	49.0 %	33.5 %	4.9 %	1561	2.4 %	1599
DE	17.4 %	56.2 %	23.7 %	2.7 %	2136	0.3 %	2143
FR	18.2 %	47.9 %	27.4 %	6.4 %	2003	0.0 %	2003
PT	17.0 %	36.4 %	43.3 %	3.3 %	1113	10.7 %	1247
SI	11.7 %	36.9 %	42.9 %	8.6 %	3297	1.9 %	3360
Mean	14.2 %	44.8 %	34.5 %	6.5 %	2052	2.4 %	2103

Source: HLS₁₉ Consortium

Table A 10.5: Percentage distributions (for valid N), percentage of missing and total N for item “5 to find out about your rights as a patient or user of the health care system?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	7.2 %	36.6 %	39.5 %	16.8 %	2831	4.6 %	2967
BE	16.6 %	45.9 %	29.7 %	7.8 %	1000	0.0 %	1000
CH	12.7 %	51.1 %	31.5 %	4.7 %	2469	1.3 %	2502
CZ	8.7 %	42.2 %	41.2 %	7.9 %	1567	2.0 %	1599
DE	16.2 %	54.4 %	25.7 %	3.6 %	2137	0.3 %	2143
FR	8.6 %	44.7 %	36.9 %	9.7 %	2003	0.0 %	2003
PT	3.6 %	35.0 %	56.9 %	4.5 %	1179	5.5 %	1247
SI	6.6 %	31.1 %	50.9 %	11.4 %	3325	1.0 %	3360
Mean	10.0 %	42.6 %	39.0 %	8.3 %	2064	1.8 %	2103

Source: HLS₁₉ Consortium

Table A 10.6: Percentage distributions (for valid N), percentage of missing and total N for item “6 to decide for a particular health service?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	3.3 %	22.1 %	53.6 %	20.9 %	2883	2.8 %	2967
BE	9.7 %	39.2 %	39.4 %	11.7 %	1000	0.0 %	1000
CH	7.7 %	40.2 %	44.5 %	7.6 %	2475	1.1 %	2502
CZ	6.1 %	37.5 %	46.7 %	9.7 %	1572	1.7 %	1599
DE	8.5 %	39.3 %	44.9 %	7.3 %	2135	0.4 %	2143
FR	9.0 %	40.6 %	39.5 %	11.0 %	2003	0.0 %	2003
PT	1.9 %	18.8 %	73.9 %	5.4 %	1178	5.5 %	1247
SI	3.9 %	25.5 %	55.8 %	14.8 %	3310	1.5 %	3360
Mean	6.3 %	32.9 %	49.8 %	11.0 %	2070	1.6 %	2103

Source: HLS₁₉ Consortium

Table A 10.7: Percentage distributions (for valid N), percentage of missing and total N for item “7 to find information on the quality of a particular health service?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	4.4 %	31.5 %	48.1 %	16.0 %	2857	3.7 %	2967
BE	15.1 %	46.0 %	32.5 %	6.4 %	1000	0.0 %	1000
CH	9.8 %	48.2 %	36.8 %	5.2 %	2460	1.7 %	2502
CZ	7.8 %	41.4 %	43.1 %	7.6 %	1570	1.8 %	1599
DE	17.8 %	50.4 %	27.2 %	4.7 %	2136	0.3 %	2143
FR	10.6 %	41.9 %	36.9 %	10.5 %	2003	0.0 %	2003
PT	3.7 %	35.2 %	57.5 %	3.6 %	1059	15.1 %	1247
SI	6.2 %	29.6 %	53.0 %	11.2 %	3317	1.3 %	3360
Mean	9.4 %	40.5 %	41.9 %	8.2 %	2050	2.5 %	2103

Source: HLS₁₉ Consortium

Table A 10.8: Percentage distributions (for valid N), percentage of missing and total N for item “8 to judge if a particular health service will meet your expectations and wishes on health care?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	3.6 %	31.8 %	45.9 %	18.7 %	2837	4.4 %	2967
BE	14.1 %	49.7 %	30.0 %	6.2 %	1000	0.0 %	1000
CH	7.7 %	51.3 %	36.1 %	4.9 %	2455	1.9 %	2502
CZ	6.1 %	43.1 %	42.7 %	8.0 %	1571	1.8 %	1599
DE	16.5 %	52.1 %	26.3 %	5.1 %	2132	0.5 %	2143
FR	8.8 %	50.4 %	31.7 %	9.1 %	2003	0.0 %	2003
PT	3.4 %	41.2 %	52.1 %	3.3 %	1046	16.1 %	1247
SI	6.1 %	38.2 %	47.1 %	8.7 %	3298	1.8 %	3360
Mean	8.3 %	44.7 %	39.0 %	8.0 %	2043	2.8 %	2103

Source: HLS₁₉ Consortium

Table A 10.9: Percentage distributions (for valid N), percentage of missing and total N for item “9 to understand how to get an appointment with a particular health service?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	1.9 %	14.4 %	53.8 %	29.8 %	2904	2.1 %	2967
BE	3.0 %	16.1 %	53.1 %	27.8 %	1000	0.0 %	1000
CH	1.7 %	14.2 %	66.9 %	17.2 %	2473	1.2 %	2502
CZ	4.4 %	30.6 %	55.4 %	9.6 %	1589	0.6 %	1599
DE	4.8 %	22.1 %	56.5 %	16.6 %	2129	0.7 %	2143
FR	2.2 %	15.1 %	61.2 %	21.5 %	2003	0.0 %	2003
PT	1.9 %	12.8 %	78.1 %	7.2 %	1214	2.6 %	1247
SI	2.6 %	13.1 %	62.0 %	22.4 %	3344	0.5 %	3360
Mean	2.8 %	17.3 %	60.9 %	19.0 %	2082	1.0 %	2103

Source: HLS₁₉ Consortium

Table A 10.10: Percentage distributions (for valid N), percentage of missing and total N for item “10 to find out about support options that may help you to orientate yourself in the health care system?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	5.0 %	33.5 %	44.4 %	17.0 %	2832	4.6 %	2967
BE	10.6 %	46.6 %	33.9 %	8.9 %	1000	0.0 %	1000
CH	6.1 %	45.1 %	42.2 %	6.6 %	2446	2.2 %	2502
CZ	7.7 %	46.2 %	39.2 %	6.9 %	1551	3.0 %	1599
DE	13.1 %	56.3 %	26.4 %	4.1 %	2134	0.4 %	2143
FR	8.8 %	46.5 %	35.8 %	8.9 %	2003	0.0 %	2003
PT	4.1 %	34.2 %	58.5 %	3.2 %	1150	7.8 %	1247
SI	4.1 %	27.0 %	56.4 %	12.5 %	3323	1.1 %	3360
Mean	7.4 %	41.9 %	42.1 %	8.5 %	2055	2.3 %	2103

Source: HLS₁₉ Consortium

Table A 10.11: Percentage distributions (for valid N), percentage of missing and total N for item “11 to locate the right contact person for your concern within a health care institution?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	4.1 %	31.9 %	45.2 %	18.8 %	2849	4.0 %	2967
BE	9.6 %	40.8 %	39.9 %	9.7 %	1000	0.0 %	1000
CH	5.3 %	39.1 %	48.4 %	7.2 %	2449	2.1 %	2502
CZ	6.6 %	37.0 %	46.7 %	9.7 %	1568	1.9 %	1599
DE	9.3 %	43.7 %	40.7 %	6.4 %	2134	0.4 %	2143
FR	8.5 %	43.7 %	38.2 %	9.7 %	2003	0.0 %	2003
PT	5.0 %	37.3 %	53.2 %	4.5 %	1178	5.5 %	1247
SI	4.3 %	24.0 %	58.1 %	13.5 %	3324	1.1 %	3360
Mean	6.6 %	37.2 %	46.3 %	9.9 %	2063	1.9 %	2103

Source: HLS₁₉ Consortium

Table A 10.12: Percentage distributions (for valid N), percentage of missing and total N for item “12 to stand up for yourself if your health care does not meet your needs?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	4.1 %	26.2 %	48.2 %	21.5 %	2839	4.3 %	2967
BE	18.7 %	39.3 %	30.8 %	11.2 %	1000	0.0 %	1000
CH	11.4 %	42.8 %	38.4 %	7.4 %	2455	1.9 %	2502
CZ	14.3 %	42.5 %	34.6 %	8.6 %	1570	1.8 %	1599
DE	9.2 %	41.5 %	37.6 %	11.6 %	2130	0.6 %	2143
FR	24.8 %	42.9 %	24.9 %	7.4 %	2003	0.0 %	2003
PT	7.6 %	40.1 %	46.9 %	5.5 %	1097	12.0 %	1247
SI	4.8 %	25.8 %	51.0 %	18.4 %	3311	1.5 %	3360
Mean	11.9 %	37.6 %	39.0 %	11.4 %	2051	2.5 %	2103

Source: HLS₁₉ Consortium

Table A 10.13: Valid percentage of “difficult” and “very difficult” responses per task, ordered by mean values for all countries, for each country and mean of all countries

	AT	BE	CH	CZ	DE	FR	PT	SI	Mean
HLS ₁₉ -NAV4: to understand information on ongoing health care reforms that might affect your health care?	40.2	68.9	59.5	61.6	73.6	66.2	53.4	48.6	56.6
HLS ₁₉ -NAV8: “to judge if a particular health service will meet your expectations and wishes on health care?”	35.4	63.8	59.0	49.3	68.6	59.2	44.6	44.3	52.0
HLS ₁₉ -NAV5: “to find out about your rights as a patient or user of the health care system?”	43.8	62.5	63.8	50.9	70.7	53.4	38.6	37.7	51.6
HLS ₁₉ -NAV3: “to judge to what extent your health insurance covers a particular health service?”	42.8	55.6	52.7	54.5	64.5	55.3	38.2	38.9	49.2
HLS ₁₉ -NAV7: “to find information on the quality of a particular health service?”	35.9	61.1	58.0	49.2	68.2	52.5	38.9	35.8	48.8
HLS ₁₉ -NAV10: “to find out about support options that may help you to orientate yourself in the health care system?”	38.6	57.2	51.2	53.9	69.5	55.3	38.3	31.1	47.6
HLS ₁₉ -NAV12: “to stand up for yourself if your health care does not meet your needs?”	30.3	58.0	54.2	56.8	50.7	67.7	47.7	30.6	46.5
HLS ₁₉ -NAV11: “to locate the right contact person for your concern within a health care institution?”	35.9	50.4	44.4	43.6	52.9	52.2	42.3	28.3	42.2
HLS ₁₉ -NAV1: “to understand information on how the health care system works? [Interviewer Instruction: e.g., which type of health services are available]”	32.3	39.9	36.4	50.0	57.7	40.0	37.0	31.7	39.2
HLS ₁₉ -NAV6: “to decide for a particular health service?”	25.5	48.9	47.9	43.6	47.8	49.6	20.7	29.4	38.2
HLS ₁₉ -NAV2: “to judge which type of health service you need in case of a health problem?”	22.5	32.0	21.8	39.9	49.7	26.9	18.6	19.5	27.5
HLS ₁₉ -NAV9: “to understand how to get an appointment with a particular health service?”	16.3	19.1	15.9	35.0	26.9	17.3	14.7	15.6	19.5

Source: HLS₁₉ Consortium

10.2 Fit-indices for the two-factor model (CFA)

Table A 10.14: Fit-indices for HLS₁₉-NAV by country (CFA) for the two-factor model

	AT	BE	CH	CZ	DE	FR	PT	SI	Mean
Standardized Root Mean Square Residual	0.04	0.05	0.05	0.03	0.06	0.04	0.04	0.03	0.04
Root Mean Square Error of Approximation	0.04	0.05	0.06	0.02	0.06	0.05	0.04	0.04	0.04
Root Mean Square Error of Approximation (CI Lower Bound)	0.04	0.04	0.05	0.00	0.05	0.05	0.03	0.03	0.04
Root Mean Square Error of Approximation (CI Upper Bound)	0.05	0.06	0.07	0.03	0.07	0.06	0.05	0.04	0.05
Root Mean Square Error of Approximation (p Value)	0.94	0.39	0.00	1.00	0.01	0.32	0.88	1.00	0.57
Comparative Fit Index	0.99	1.00	0.99	1.00	0.98	1.00	1.00	1.00	1.00
Tucker-Lewis index	0.99	0.99	0.99	1.00	0.98	1.00	1.00	1.00	0.99
Goodness of Fit Index	0.99	0.99	0.99	1.00	0.98	1.00	1.00	1.00	0.99
Adjusted Goodness of Fit Index	0.99	0.99	0.99	1.00	0.97	0.99	1.00	1.00	0.99

Source: HLS₁₉ Consortium

10.3 Spearman correlation among HLS₁₉–NAV items

Table A 10.15: Spearman correlation among dichotomized HLS₁₉–NAV items for each country

AT	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.47	0.41	0.45	0.40	0.32	0.33	0.36	0.26	0.39	0.33	0.29
2d	0.47	1.00	0.33	0.38	0.40	0.36	0.33	0.38	0.28	0.35	0.36	0.30
3d	0.41	0.33	1.00	0.44	0.47	0.30	0.31	0.36	0.23	0.44	0.34	0.31
4d	0.45	0.38	0.44	1.00	0.51	0.34	0.36	0.37	0.20	0.45	0.35	0.33
5d	0.40	0.40	0.47	0.51	1.00	0.40	0.40	0.43	0.26	0.52	0.41	0.40
6d	0.32	0.36	0.30	0.34	0.40	1.00	0.43	0.43	0.27	0.35	0.39	0.34
7d	0.33	0.33	0.31	0.36	0.40	0.43	1.00	0.60	0.25	0.42	0.40	0.36
8d	0.36	0.38	0.36	0.37	0.43	0.43	0.60	1.00	0.30	0.45	0.43	0.39
9d	0.26	0.28	0.23	0.20	0.26	0.27	0.25	0.30	1.00	0.30	0.29	0.27
10d	0.39	0.35	0.44	0.45	0.52	0.35	0.42	0.45	0.30	1.00	0.48	0.41
11d	0.33	0.36	0.34	0.35	0.41	0.39	0.40	0.43	0.29	0.48	1.00	0.41
12d	0.29	0.30	0.31	0.33	0.40	0.34	0.36	0.39	0.27	0.41	0.41	1.00
BE	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.60	0.37	0.44	0.44	0.38	0.39	0.38	0.28	0.41	0.40	0.35
2d	0.60	1.00	0.35	0.38	0.38	0.43	0.36	0.38	0.38	0.38	0.40	0.34
3d	0.37	0.35	1.00	0.51	0.53	0.36	0.38	0.42	0.25	0.39	0.38	0.37
4d	0.44	0.38	0.51	1.00	0.60	0.42	0.46	0.51	0.22	0.47	0.38	0.48
5d	0.44	0.38	0.53	0.60	1.00	0.46	0.41	0.49	0.23	0.50	0.45	0.48
6d	0.38	0.43	0.36	0.42	0.46	1.00	0.51	0.50	0.31	0.46	0.42	0.42
7d	0.39	0.36	0.38	0.46	0.41	0.51	1.00	0.71	0.22	0.56	0.43	0.41
8d	0.38	0.38	0.42	0.51	0.49	0.50	0.71	1.00	0.22	0.52	0.45	0.45
9d	0.28	0.38	0.25	0.22	0.23	0.31	0.22	0.22	1.00	0.27	0.32	0.24
10d	0.41	0.38	0.39	0.47	0.50	0.46	0.56	0.52	0.27	1.00	0.54	0.49
11d	0.40	0.40	0.38	0.38	0.45	0.42	0.43	0.45	0.32	0.54	1.00	0.48
12d	0.35	0.34	0.37	0.48	0.48	0.42	0.41	0.45	0.24	0.49	0.48	1.00
CH	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.50	0.35	0.43	0.40	0.38	0.31	0.31	0.24	0.42	0.30	0.37
2d	0.50	1.00	0.30	0.31	0.31	0.36	0.28	0.29	0.35	0.35	0.34	0.28
3d	0.35	0.30	1.00	0.52	0.51	0.36	0.34	0.34	0.19	0.39	0.34	0.36
4d	0.43	0.31	0.52	1.00	0.56	0.41	0.38	0.40	0.21	0.47	0.37	0.47
5d	0.40	0.31	0.51	0.56	1.00	0.49	0.43	0.44	0.23	0.51	0.38	0.45
6d	0.38	0.36	0.36	0.41	0.49	1.00	0.48	0.48	0.27	0.44	0.41	0.44
7d	0.31	0.28	0.34	0.38	0.43	0.48	1.00	0.65	0.21	0.44	0.38	0.41
8d	0.31	0.29	0.34	0.40	0.44	0.48	0.65	1.00	0.25	0.49	0.42	0.44
9d	0.24	0.35	0.19	0.21	0.23	0.27	0.21	0.25	1.00	0.30	0.32	0.25
10d	0.42	0.35	0.39	0.47	0.51	0.44	0.44	0.49	0.30	1.00	0.48	0.46
11d	0.30	0.34	0.34	0.37	0.38	0.41	0.38	0.42	0.32	0.48	1.00	0.46
12d	0.37	0.28	0.36	0.47	0.45	0.44	0.41	0.44	0.25	0.46	0.46	1.00

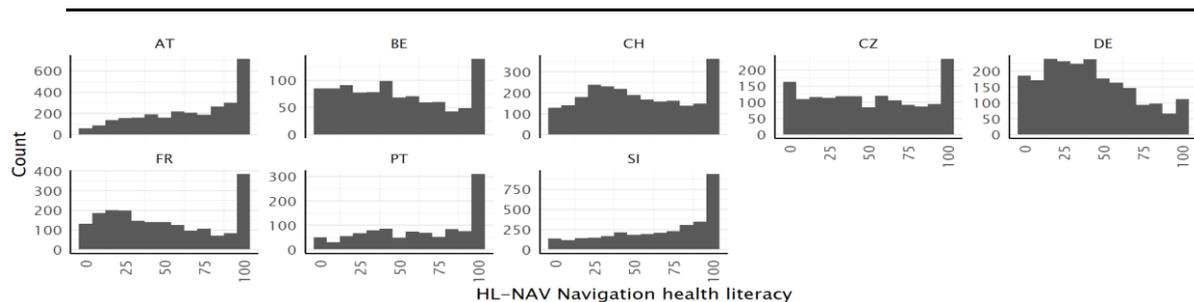
CZ	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.42	0.44	0.49	0.47	0.38	0.37	0.42	0.42	0.48	0.39	0.34
2d	0.42	1.00	0.40	0.38	0.45	0.41	0.39	0.45	0.50	0.44	0.49	0.38
3d	0.44	0.40	1.00	0.43	0.47	0.39	0.38	0.41	0.39	0.46	0.36	0.36
4d	0.49	0.38	0.43	1.00	0.46	0.37	0.40	0.44	0.38	0.48	0.36	0.41
5d	0.47	0.45	0.47	0.46	1.00	0.40	0.47	0.45	0.46	0.51	0.42	0.42
6d	0.38	0.41	0.39	0.37	0.40	1.00	0.42	0.47	0.42	0.42	0.44	0.38
7d	0.37	0.39	0.38	0.40	0.47	0.42	1.00	0.46	0.41	0.45	0.41	0.36
8d	0.42	0.45	0.41	0.44	0.45	0.47	0.46	1.00	0.44	0.49	0.43	0.42
9d	0.42	0.50	0.39	0.38	0.46	0.42	0.41	0.44	1.00	0.45	0.51	0.31
10d	0.48	0.44	0.46	0.48	0.51	0.42	0.45	0.49	0.45	1.00	0.44	0.44
11d	0.39	0.49	0.36	0.36	0.42	0.44	0.41	0.43	0.51	0.44	1.00	0.37
12d	0.34	0.38	0.36	0.41	0.42	0.38	0.36	0.42	0.31	0.44	0.37	1.00
DE	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.47	0.32	0.42	0.38	0.19	0.27	0.23	0.22	0.41	0.25	0.27
2d	0.47	1.00	0.28	0.32	0.31	0.25	0.22	0.24	0.24	0.35	0.31	0.26
3d	0.32	0.28	1.00	0.39	0.38	0.18	0.21	0.18	0.19	0.33	0.22	0.21
4d	0.42	0.32	0.39	1.00	0.49	0.20	0.32	0.25	0.23	0.47	0.27	0.27
5d	0.38	0.31	0.38	0.49	1.00	0.24	0.33	0.29	0.22	0.49	0.27	0.28
6d	0.19	0.25	0.18	0.20	0.24	1.00	0.37	0.33	0.27	0.23	0.30	0.26
7d	0.27	0.22	0.21	0.32	0.33	0.37	1.00	0.44	0.26	0.35	0.28	0.28
8d	0.23	0.24	0.18	0.25	0.29	0.33	0.44	1.00	0.26	0.30	0.28	0.31
9d	0.22	0.24	0.19	0.23	0.22	0.27	0.26	0.26	1.00	0.28	0.32	0.27
10d	0.41	0.35	0.33	0.47	0.49	0.23	0.35	0.30	0.28	1.00	0.34	0.32
11d	0.25	0.31	0.22	0.27	0.27	0.30	0.28	0.28	0.32	0.34	1.00	0.30
12d	0.27	0.26	0.21	0.27	0.28	0.26	0.28	0.31	0.27	0.32	0.30	1.00
FR	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.50	0.43	0.45	0.45	0.48	0.42	0.46	0.27	0.44	0.46	0.41
2d	0.50	1.00	0.34	0.31	0.33	0.43	0.31	0.36	0.32	0.35	0.37	0.30
3d	0.43	0.34	1.00	0.61	0.59	0.49	0.46	0.49	0.22	0.52	0.46	0.50
4d	0.45	0.31	0.61	1.00	0.58	0.53	0.50	0.55	0.20	0.56	0.51	0.61
5d	0.45	0.33	0.59	0.58	1.00	0.53	0.47	0.51	0.25	0.52	0.50	0.52
6d	0.48	0.43	0.49	0.53	0.53	1.00	0.55	0.56	0.28	0.56	0.51	0.53
7d	0.42	0.31	0.46	0.50	0.47	0.55	1.00	0.71	0.24	0.58	0.51	0.57
8d	0.46	0.36	0.49	0.55	0.51	0.56	0.71	1.00	0.22	0.61	0.56	0.63
9d	0.27	0.32	0.22	0.20	0.25	0.28	0.24	0.22	1.00	0.29	0.30	0.18
10d	0.44	0.35	0.52	0.56	0.52	0.56	0.58	0.61	0.29	1.00	0.59	0.60
11d	0.46	0.37	0.46	0.51	0.50	0.51	0.51	0.56	0.30	0.59	1.00	0.56
12d	0.41	0.30	0.50	0.61	0.52	0.53	0.57	0.63	0.18	0.60	0.56	1.00
PT	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.54	0.48	0.58	0.52	0.44	0.45	0.50	0.44	0.52	0.50	0.53
2d	0.54	1.00	0.44	0.44	0.41	0.54	0.43	0.47	0.44	0.44	0.38	0.40
3d	0.48	0.44	1.00	0.60	0.56	0.38	0.44	0.46	0.31	0.40	0.43	0.49
4d	0.58	0.44	0.60	1.00	0.64	0.47	0.59	0.62	0.35	0.53	0.56	0.57

5d	0.52	0.41	0.56	0.64	1.00	0.50	0.47	0.50	0.40	0.45	0.47	0.61
6d	0.44	0.54	0.38	0.47	0.50	1.00	0.57	0.52	0.39	0.50	0.47	0.46
7d	0.45	0.43	0.44	0.59	0.47	0.57	1.00	0.76	0.37	0.59	0.60	0.53
8d	0.50	0.47	0.46	0.62	0.50	0.52	0.76	1.00	0.37	0.61	0.60	0.55
9d	0.44	0.44	0.31	0.35	0.40	0.39	0.37	0.37	1.00	0.50	0.41	0.38
10d	0.52	0.44	0.40	0.53	0.45	0.50	0.59	0.61	0.50	1.00	0.67	0.56
11d	0.50	0.38	0.43	0.56	0.47	0.47	0.60	0.60	0.41	0.67	1.00	0.63
12d	0.53	0.40	0.49	0.57	0.61	0.46	0.53	0.55	0.38	0.56	0.63	1.00
SI	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d	11d	12d
1d	1.00	0.52	0.49	0.51	0.45	0.36	0.37	0.39	0.36	0.44	0.35	0.28
2d	0.52	1.00	0.45	0.39	0.42	0.41	0.41	0.38	0.39	0.40	0.40	0.35
3d	0.49	0.45	1.00	0.58	0.53	0.40	0.44	0.47	0.33	0.45	0.38	0.36
4d	0.51	0.39	0.58	1.00	0.55	0.39	0.44	0.47	0.30	0.46	0.36	0.36
5d	0.45	0.42	0.53	0.55	1.00	0.46	0.52	0.50	0.36	0.51	0.43	0.43
6d	0.36	0.41	0.40	0.39	0.46	1.00	0.55	0.47	0.38	0.46	0.44	0.37
7d	0.37	0.41	0.44	0.44	0.52	0.55	1.00	0.59	0.37	0.55	0.44	0.42
8d	0.39	0.38	0.47	0.47	0.50	0.47	0.59	1.00	0.35	0.52	0.44	0.42
9d	0.36	0.39	0.33	0.30	0.36	0.38	0.37	0.35	1.00	0.47	0.39	0.29
10d	0.44	0.40	0.45	0.46	0.51	0.46	0.55	0.52	0.47	1.00	0.55	0.40
11d	0.35	0.40	0.38	0.36	0.43	0.44	0.44	0.44	0.39	0.55	1.00	0.44
12d	0.28	0.35	0.36	0.36	0.43	0.37	0.42	0.42	0.29	0.40	0.44	1.00

Source: HLS₁₉ Consortium

10.4 Distribution of HL-NAV

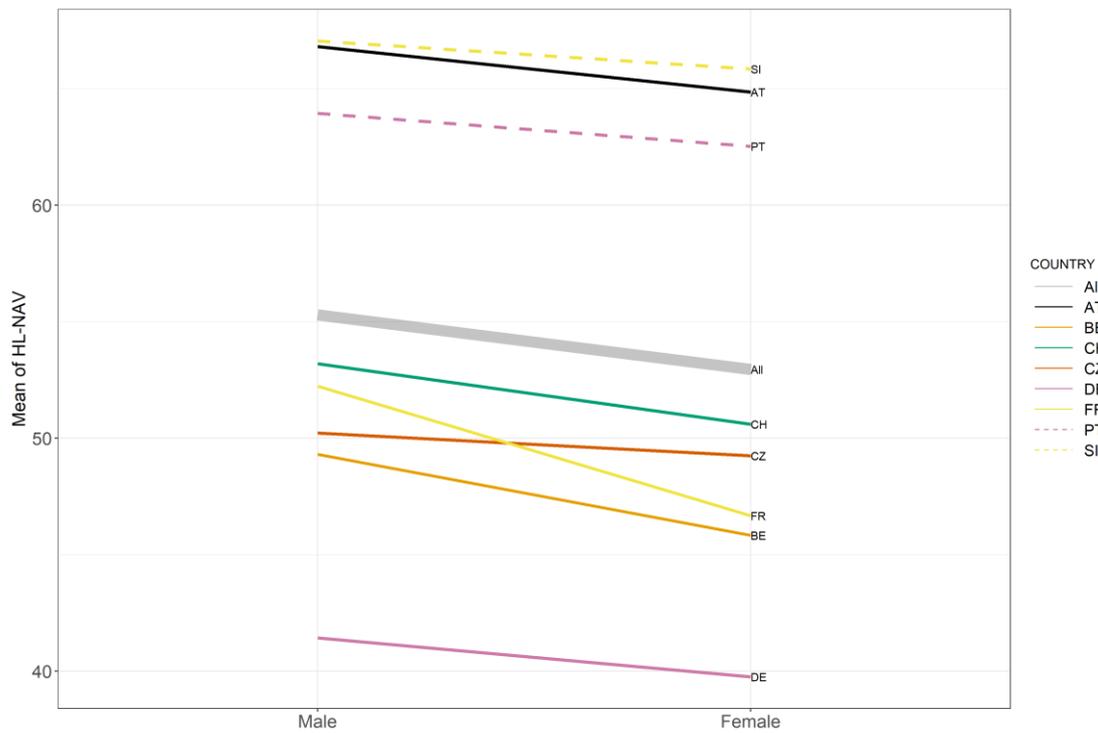
Figure A 10.1: Histogram of HL-NAV, for each country



Source: HLS₁₉ Consortium

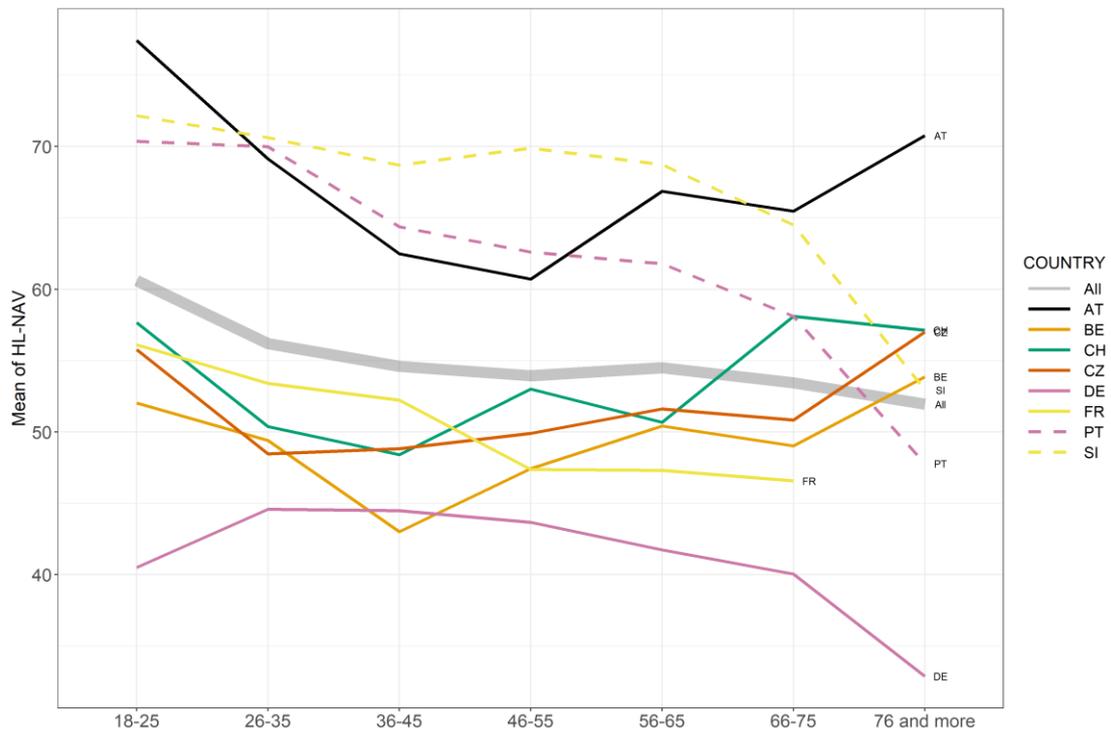
10.5 Association between socio-demographic and socio-economic determinants and HL-NAV

Figure A 10.2: Means of HL-NAV by gender, for each country and for all countries (equally weighted)



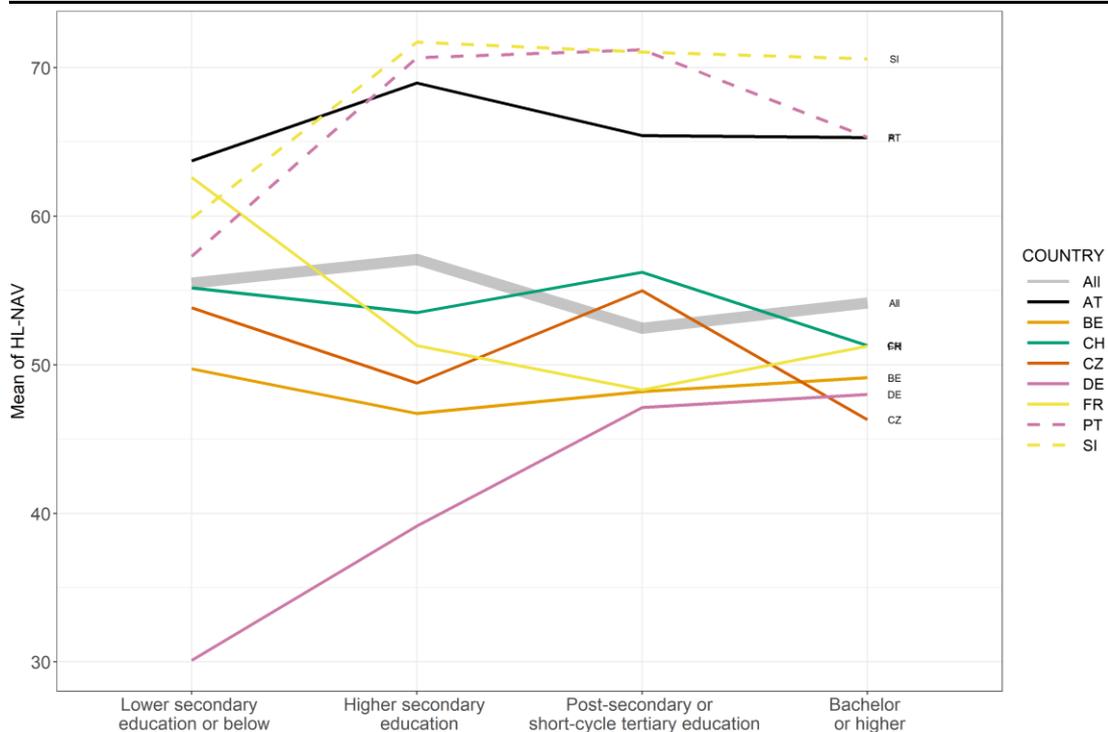
Source: HLS₁₉ Consortium

Figure A 10.3: Means of HL-NAV by age, for each country and for all countries (equally weighted)



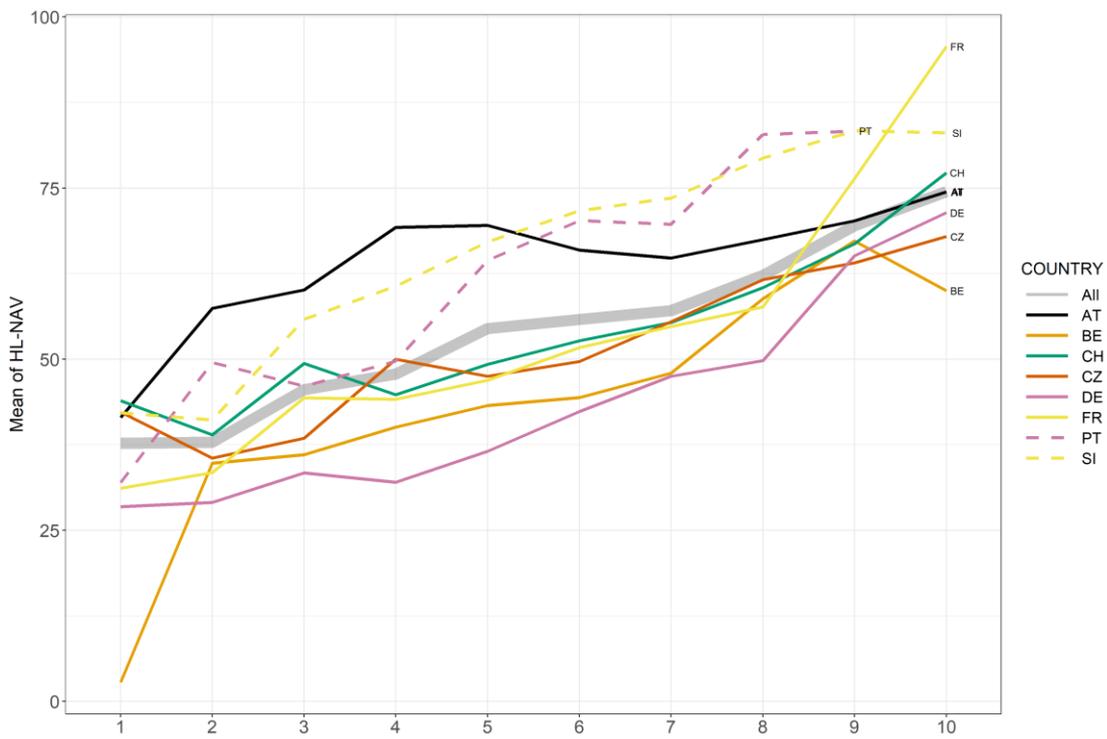
Source: HLS19 Consortium

Figure A 10.4: Means of HL-NAV by four groups of education levels, for each country and for all countries (equally weighted)



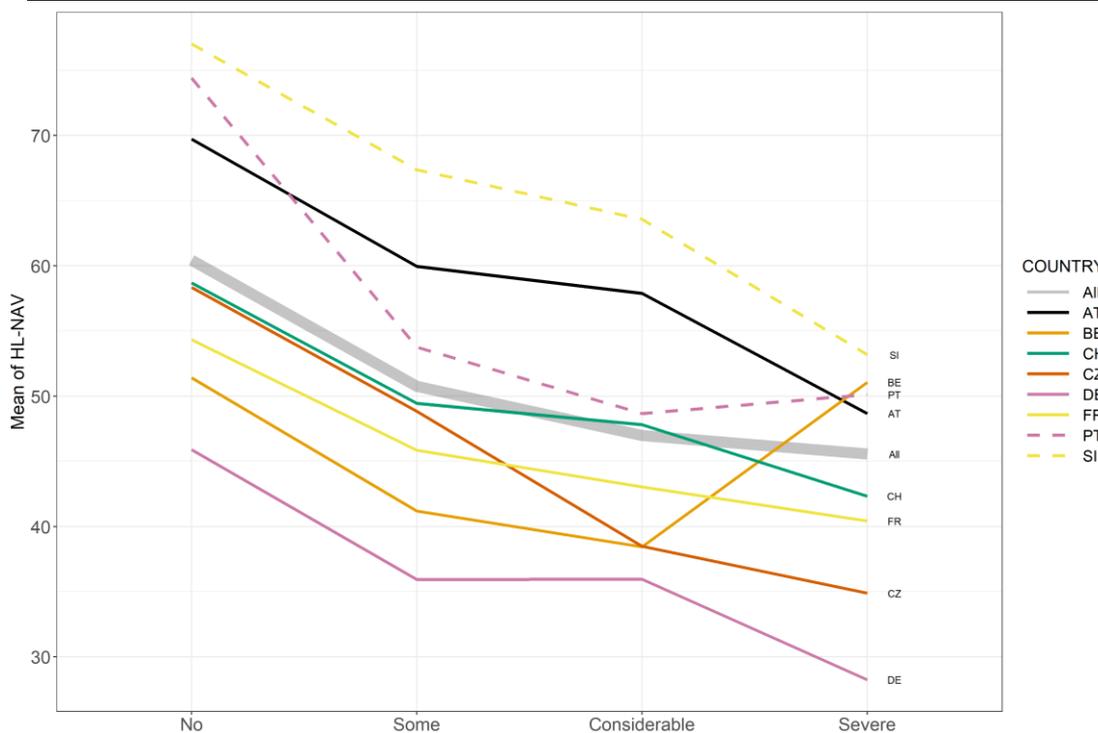
Source: HLS19 Consortium

Figure A 10.5: Means of HL-NAV by ten levels in society, for each country and for all countries (equally weighted)



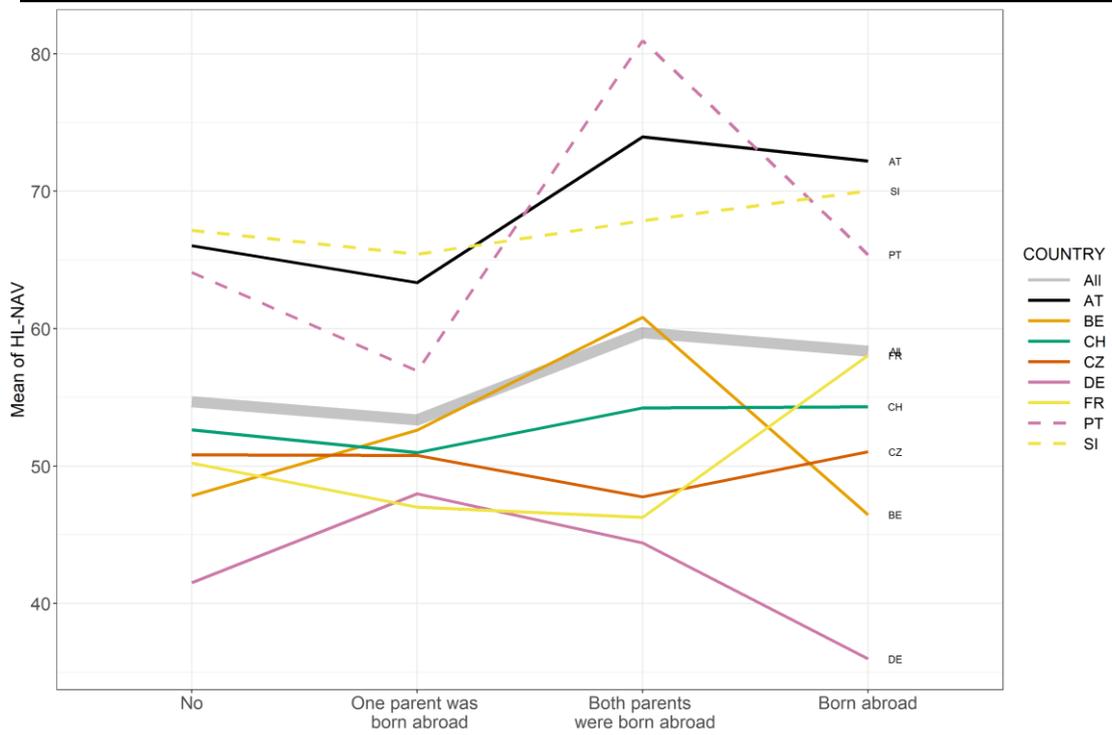
Source: HLS₁₉ Consortium

Figure A 10.6: Means of HL-NAV by financial deprivation, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

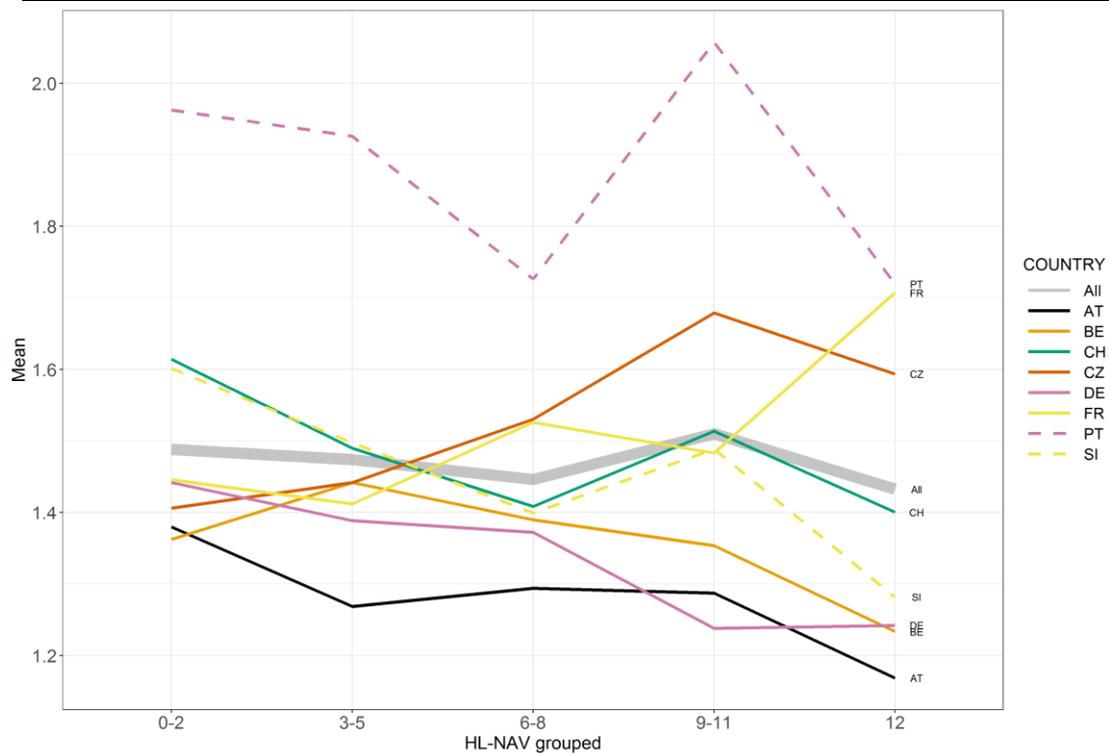
Figure A 10.7: Means of HL-NAV by migration background, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

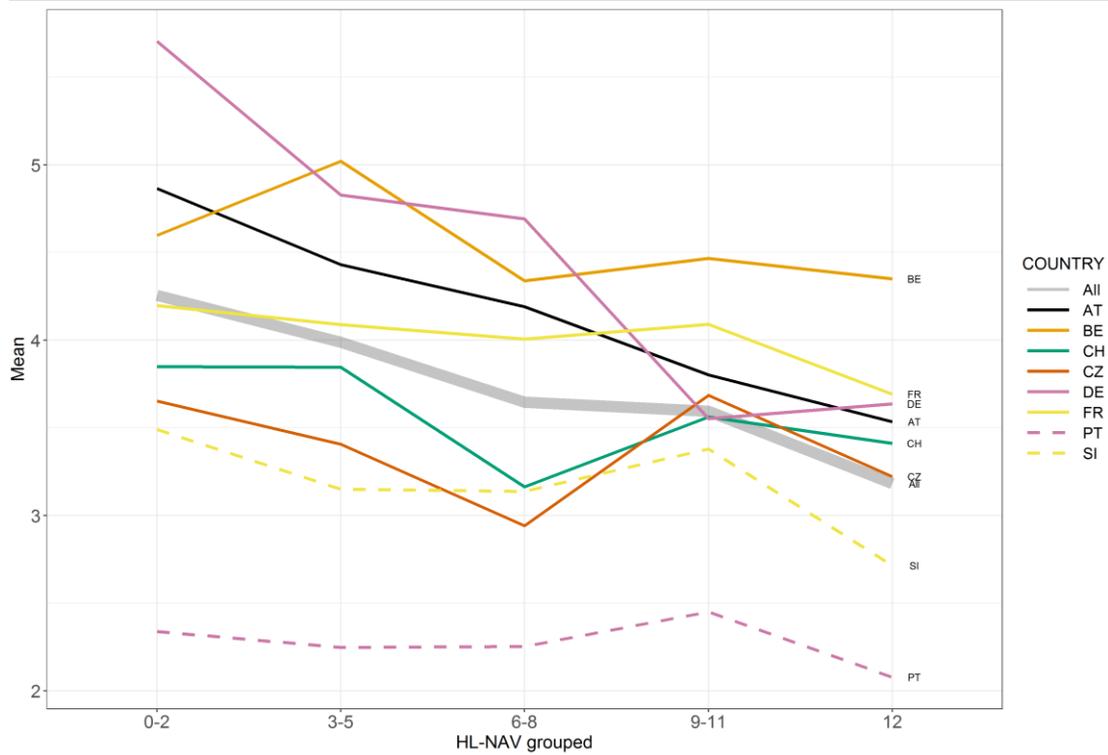
10.6 Association of HL-NAV with health care utilization

Figure A 10.8: Emergency service utilization within last 24 month (mean number of incidences) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



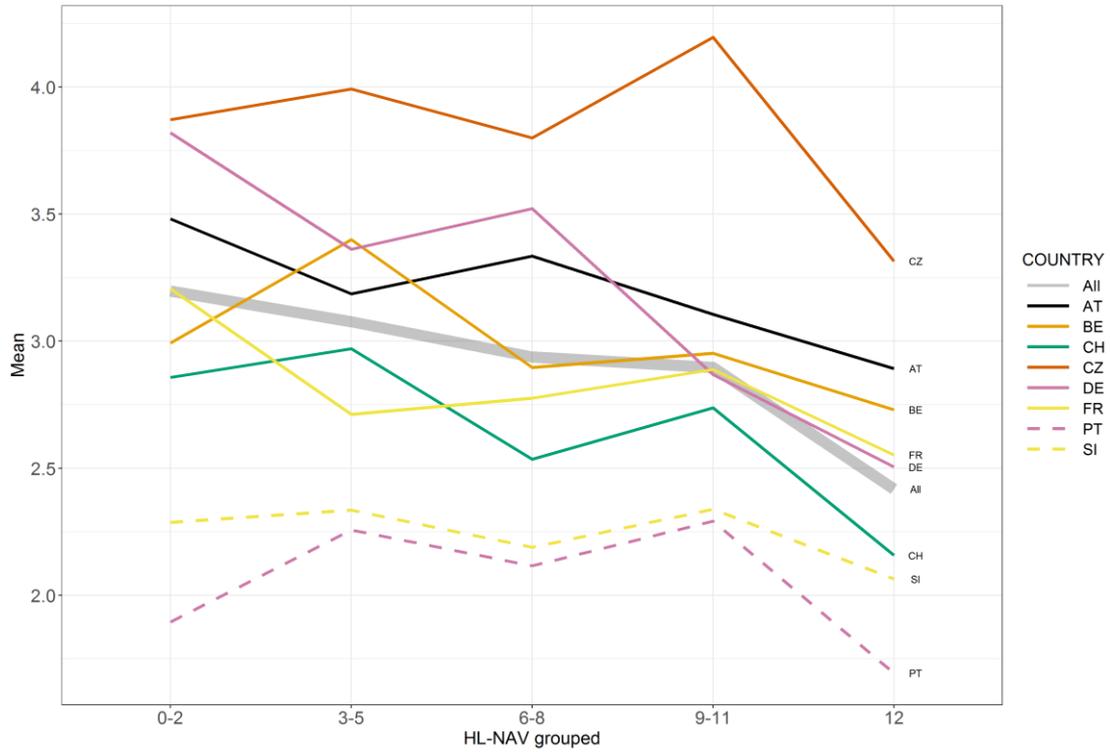
Source: HLS₁₉ Consortium

Figure A 10.9: Utilization of GPs/family doctors within last 12 month (mean number of incidences) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



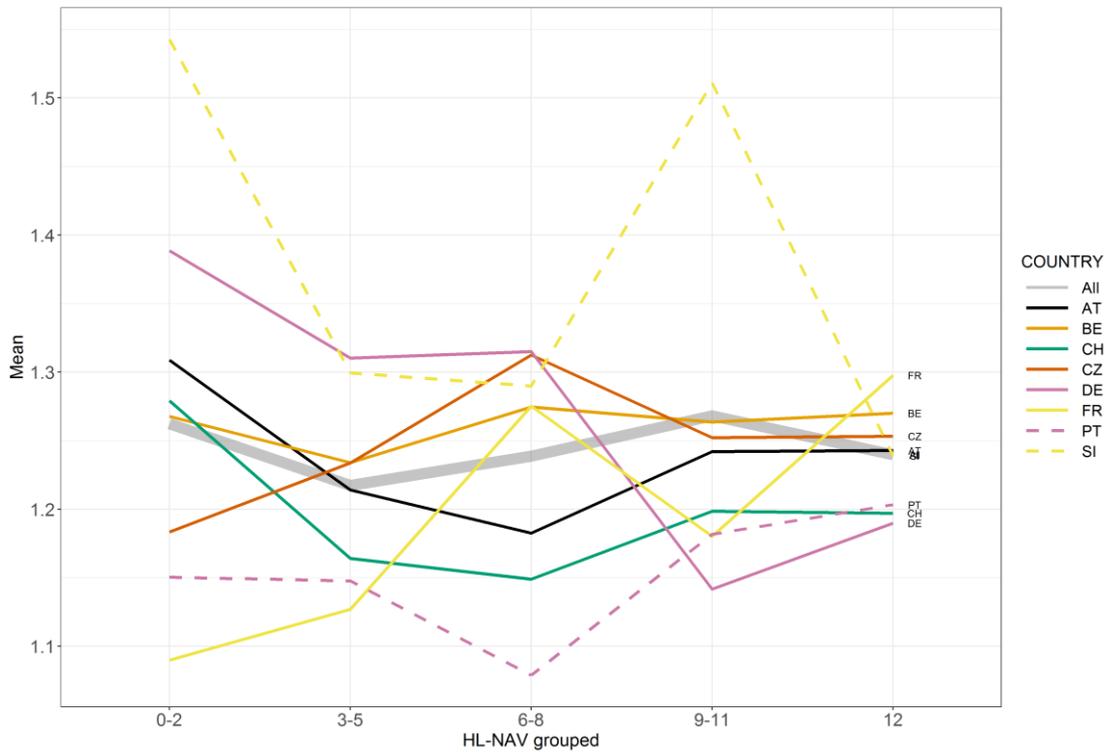
Source: HLS₁₉ Consortium

Figure A 10.10: Utilization of medical or surgical specialist service within last 12 month (mean number of incidences), by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



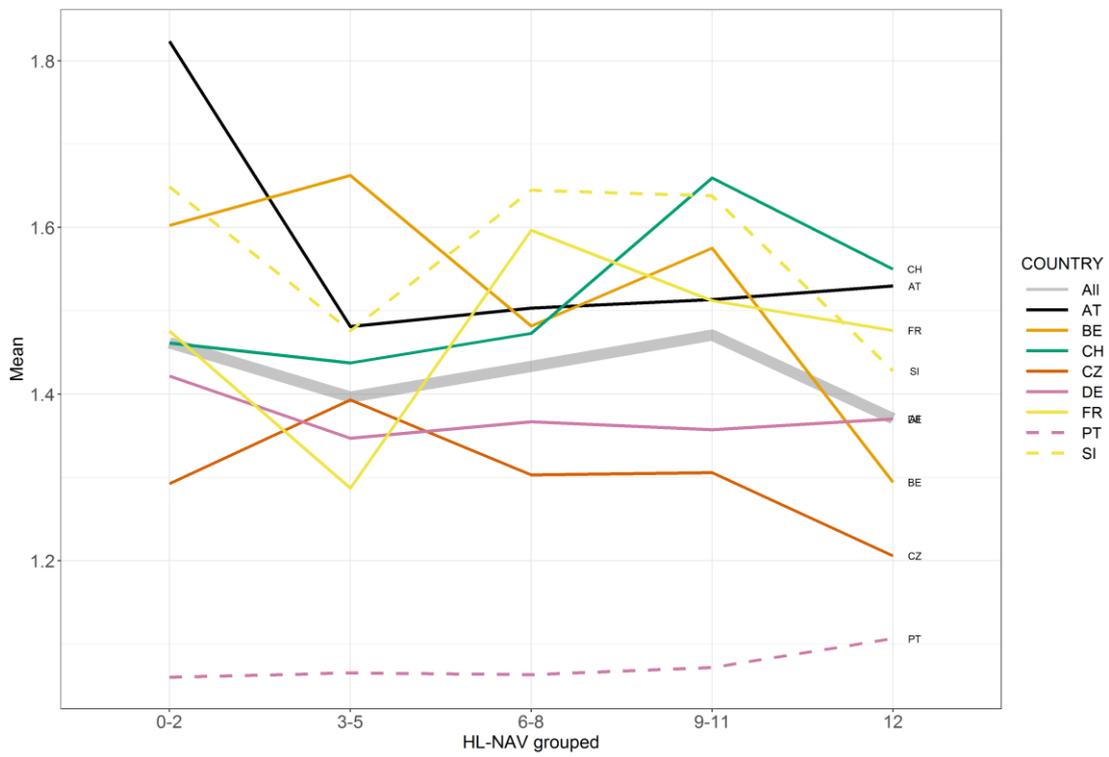
Source: HLS₁₉ Consortium

Figure A 10.11: Utilization of inpatient hospital service within last 12 month (mean number of incidences) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

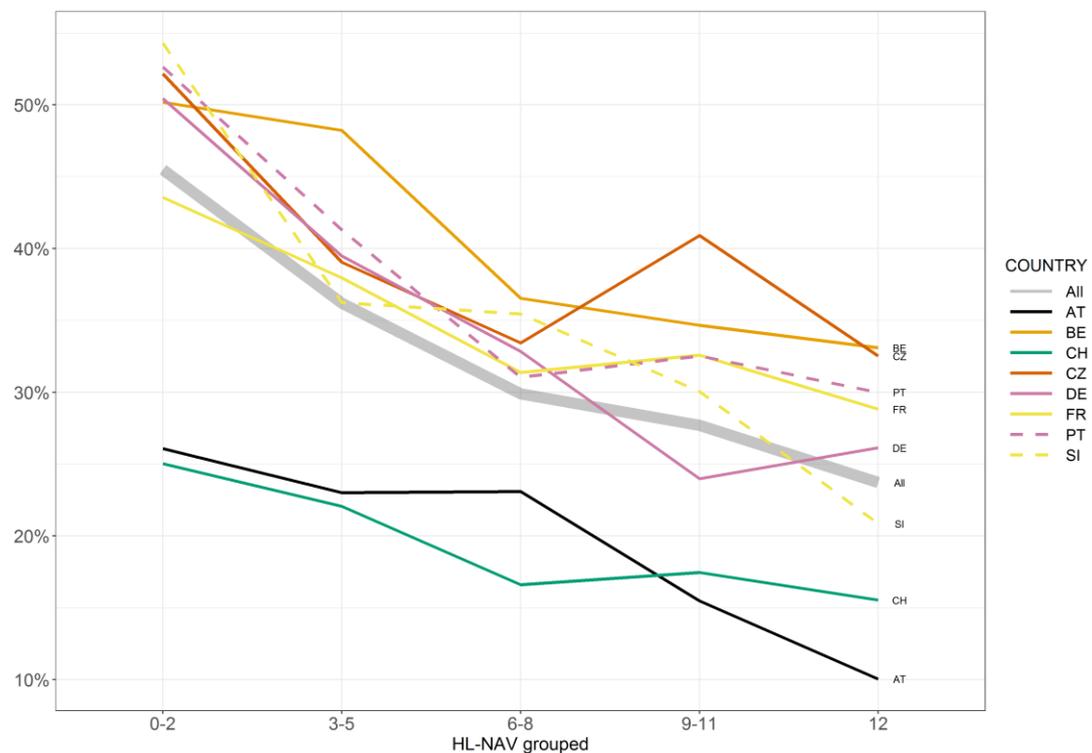
Figure A 10.12: Utilization of day patient hospital service within last 12 month (mean number of incidences) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

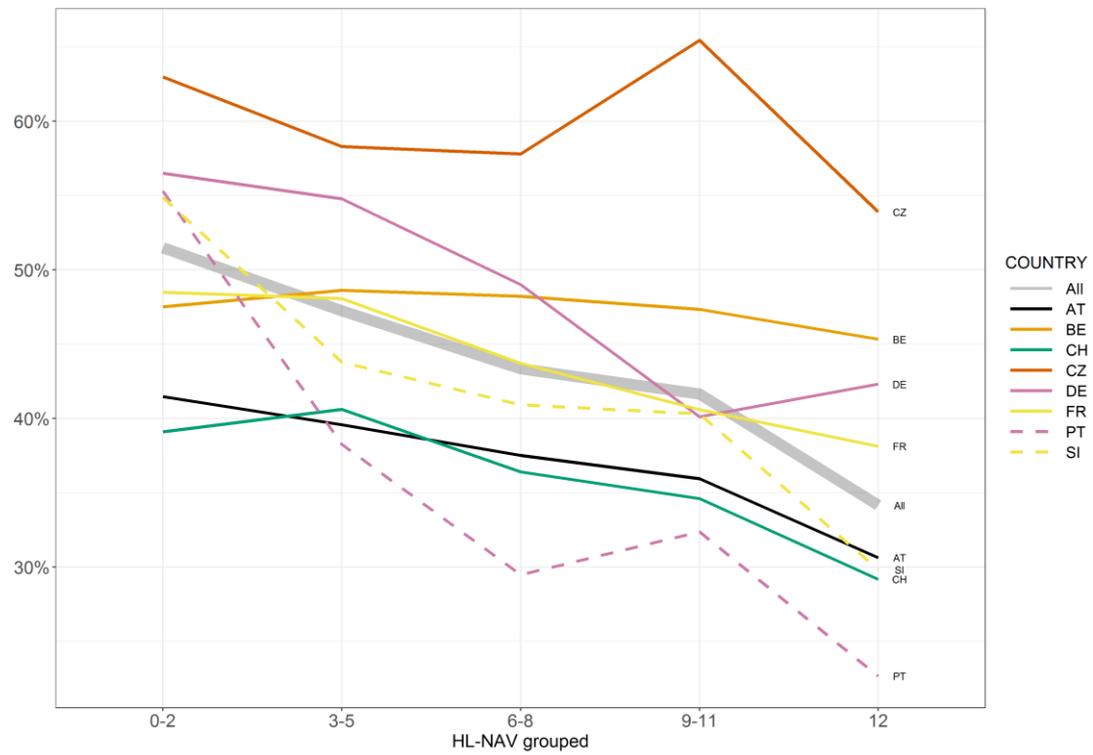
10.7 Association of HL-NAV with indicators for health

Figure A 10.13: Percentage of self-perceived health (fair, bad or very bad) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



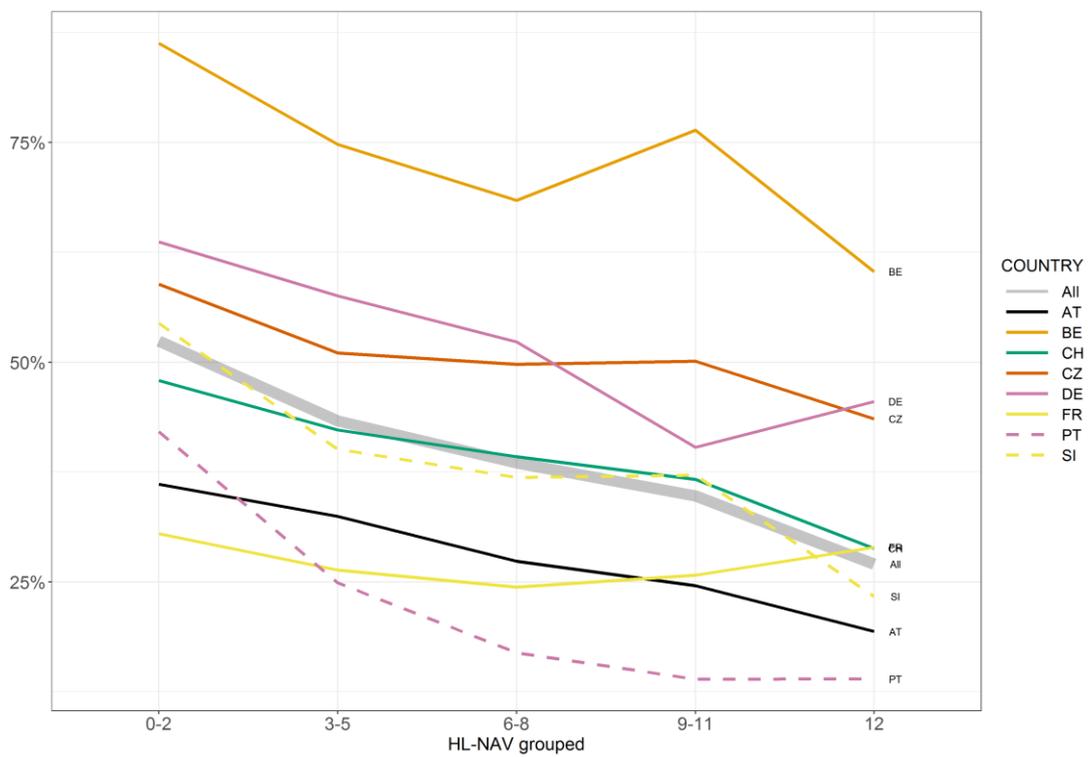
Source: HLS₁₉ Consortium

Figure A 10.14: Percentage of long-term illness/health problems (one or more long-term illnesses/health problems) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

Figure A 10.15: Percentage of limitations due to health problems (limited but not severely and severely limited) by HL-NAV score in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

10.8 Multivariable linear regression models

Table A 10.16: Multivariable linear regression models of self-perceived health by HL-NAV, GEN HL, and social core social determinants (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	FR	PT	SI	All
GEN-HL	-0.15	-0.13	-0.14	-0.05	-0.1	-0.2	-0.13	-0.12	-0.15
HL-NAV	-0.05	-0.05	-0.03	-0.04	-0.08	0.07	0.06	-0.06	-0.04
Gender female	-0.01	0.04	-0.04	-0.02	-0.02	0	0.08	0.02	0
Age in years	0.23	0.08	0.22	0.36	0.41	0.25	0.32	0.36	0.27
Education	-0.06	-0.09	-0.04	-0.11	-0.03	0.02	-0.11	-0.07	-0.04
Level in society	-0.11	-0.26	-0.18	-0.13	-0.08	-0.22	-0.11	-0.07	-0.16
Financial deprivation	0.14	-0.03	0.15	0.15	0.13	0.1	0.17	0.18	0.12
R ²	0.17	0.13	0.16	0.25	0.26	0.17	0.33	0.31	0.2
Valid Count	2584	988	1982	1523	1843	2003	1012	3157	
Total Count	2967	1000	2502	1599	2143	2003	1247	3360	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Self-perceived health: from very good (1) to very bad (5).

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-NAV score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

Table A 10.17: Multivariable linear regression models of long-term illness or health problems by HL-NAV, GEN HL, and social core social determinants (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	FR	PT	SI	All
GEN-HL	-0.06	-0.03	-0.03	-0.04	0.02	-0.04	-0.13	-0.06	-0.07
HL-NAV	-0.01	0.02	-0.03	0.03	-0.06	-0.01	-0.03	-0.03	-0.03
Gender female	0.04	0.07*	0	0.02	0.03	-0.01	0.04	0.05	0.03
Age in years	0.24	0.23	0.26	0.28	0.41	0.29	0.3	0.3	0.29
Education	-0.08	-0.08	0.01	-0.03	0.02	0.01	0.02	-0.04	-0.02
Level in society	-0.07	-0.1	-0.08	-0.04	-0.06	-0.02	-0.01	-0.01	-0.04
Financial deprivation	0.12	0.07	0.05	0.11	0.08	0.11	0.15	0.1	0.08
R ²	0.12	0.09	0.08	0.1	0.2	0.1	0.19	0.15	0.12
Valid Count	2579	988	1980	1523	1819	2003	1008	3156	
Total Count	2967	1000	2502	1599	2143	2003	1247	3360	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-NAV score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

Table A 10.18: Multivariable linear regression models of limited in activities due health problems by HL-NAV, GEN HL, and social core social determinants (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	FR	PT	SI	All
GEN-HL	0.11	0.02	0.14	0.06	0.06	0.12	0.2	0.13	0.17
HL-NAV	0.01	0.09	0.02	0	0.04	-0.11	0	0.01	0.01
Gender female	-0.01	-0.12	-0.05	-0.03	-0.03	0.02	-0.11	-0.05	-0.04
Age in years	-0.13	0.03	-0.15	-0.2	-0.34	-0.12	-0.15	-0.25	-0.2
Education	0.09	0.14	-0.02	0.1	0	-0.03	0.02	0.05	0.03
Level in society	0.12	0.14	0.14	0.04	0.07	0.03	0.03	0.06	0.04
Financial deprivation	-0.15	0.1	-0.1	-0.14	-0.13	-0.15	-0.18	-0.12	-0.11
R ²	0.11	0.09	0.09	0.1	0.18	0.05	0.19	0.17	0.11
Valid Count	1996	472	1977	1520	1724	2003	806	3157	
Total Count	2967	1000	2502	1599	2143	2003	1247	3360	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Limitations due to health problems: from severely limited (1) to not limited at all (3).

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-NAV score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

11 Annex for Chapter 11: Communicative Health Literacy with Physicians in Health Care Services

11.1 Relative distribution of the HLS₁₉-COM response categories

Table A 11.1:

Percentage distributions (for valid N), percentage of missing and total N for item “1 to describe to your doctor your reasons for coming to the consultation?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.2 %	2.2 %	38.8 %	58.8 %	2953	0.5 %	2967
DE	0.2 %	6.2 %	47.9 %	45.8 %	2127	0.7 %	2143
SI	0.5 %	4.7 %	51.3 %	43.5 %	3351	0.3 %	3360
Mean	0.3 %	4.4 %	46.0 %	49.4 %	2810	0.5 %	2823

Source: HLS₁₉ Consortium

Table A 11.2:

Percentage distributions (for valid N), percentage of missing and total N for item “2 to make your doctor listen to you without being interrupted?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	1.3 %	9.1 %	44.6 %	45.1 %	2914	1.8 %	2967
DE	2.8 %	19.9 %	54.5 %	22.9 %	2121	1.0 %	2143
SI	0.9 %	6.1 %	55.4 %	37.6 %	3345	0.4 %	3360
Mean	1.7 %	11.7 %	51.5 %	35.2 %	2793	1.1 %	2823

Source: HLS₁₉ Consortium

Table A 11.3:

Percentage distributions (for valid N), percentage of missing and total N for item “3 to explain your health concerns to your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.4 %	4.2 %	47.6 %	47.8 %	2949	0.6 %	2967
BE	1.1 %	10.4 %	49.3 %	39.2 %	1000	0.0 %	1000
BG	1.2 %	6.8 %	68.4 %	23.6 %	849	1.8 %	865
CZ	1.1 %	9.3 %	54.7 %	35.0 %	1597	0.1 %	1599
DE	0.6 %	12.8 %	54.7 %	31.9 %	2127	0.7 %	2143
DK	1.0 %	11.3 %	52.0 %	35.6 %	3600	0.1 %	3602
FR	1.1 %	9.8 %	56.5 %	32.6 %	2003	0.0 %	2003
HU	1.3 %	6.6 %	66.7 %	25.3 %	1181	1.2 %	1195
SI	1.0 %	6.5 %	55.6 %	36.9 %	3341	0.6 %	3360
Mean	1.0 %	8.6 %	56.2 %	34.2 %	2072	0.5 %	2082

Source: HLS₁₉ Consortium

Table A 11.4:

Percentage distributions (for valid N), percentage of missing and total N for item “4 to get enough time in the consultation with your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	6.6 %	15.1 %	42.5 %	35.8 %	2939	0.9 %	2967
BE	3.4 %	15.6 %	47.3 %	33.7 %	1000	0.0 %	1000
BG	5.6 %	24.3 %	55.0 %	15.0 %	838	3.1 %	865
CZ	3.2 %	20.6 %	51.9 %	24.3 %	1591	0.5 %	1599
DE	7.8 %	39.6 %	40.6 %	12.0 %	2127	0.7 %	2143
DK	7.0 %	25.8 %	47.2 %	20.0 %	3596	0.2 %	3602
FR	3.7 %	20.5 %	53.4 %	22.5 %	2003	0.0 %	2003
HU	2.8 %	18.8 %	60.7 %	17.7 %	1163	2.7 %	1195
SI	2.2 %	12.1 %	56.7 %	29.0 %	3338	0.7 %	3360
Mean	4.7 %	21.4 %	50.6 %	23.3 %	2066	0.7 %	2082

Source: HLS₁₉ Consortium

Table A 11.5:

Percentage distributions (for valid N), percentage of missing and total N for item “5 to express your personal views and preferences to your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	1.4 %	9.2 %	49.9 %	39.5 %	2896	2.4 %	2967
BE	2.2 %	14.9 %	48.6 %	34.3 %	1000	0.0 %	1000
BG	2.9 %	13.3 %	67.8 %	16.1 %	831	3.9 %	865
CZ	2.8 %	19.0 %	54.5 %	23.7 %	1587	0.8 %	1599
DE	5.2 %	26.8 %	51.8 %	16.3 %	2124	0.9 %	2143
DK	2.5 %	16.4 %	54.3 %	26.8 %	3597	0.1 %	3602
FR	3.2 %	22.8 %	53.0 %	21.0 %	2003	0.0 %	2003
HU	1.6 %	12.7 %	67.0 %	18.7 %	1149	3.8 %	1195
SI	1.5 %	9.8 %	59.5 %	29.3 %	3339	0.6 %	3360
Mean	2.6 %	16.1 %	56.3 %	25.1 %	2058	1.1 %	2082

Source: HLS₁₉ Consortium

Table A 11.6:

Percentage distributions (for valid N), percentage of missing and total N for item “6 to get the information you need from your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.8 %	10.0 %	50.7 %	38.5 %	2939	0.9 %	2967
DE	1.9 %	24.6 %	58.1 %	15.5 %	2125	0.8 %	2143
SI	1.3 %	7.3 %	59.5 %	32.0 %	3348	0.4 %	3360
Mean	1.3 %	14.0 %	56.1 %	28.7 %	2804	0.7 %	2823

Source: HLS₁₉ Consortium

Table A 11.7:

Percentage distributions (for valid N), percentage of missing and total N for item “7 to understand the words used by your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.9 %	13.7 %	53.3 %	32.0 %	2937	1.0 %	2967
DE	6.5 %	39.9 %	43.9 %	9.7 %	2126	0.8 %	2143
SI	0.7 %	6.3 %	59.7 %	33.4 %	3350	0.3 %	3360
Mean	2.7 %	20.0 %	52.3 %	25.0 %	2804	0.7 %	2823

Source: HLS₁₉ Consortium

Table A 11.8:

Percentage distributions (for valid N), percentage of missing and total N for item “8 to ask your doctor questions in the consultation?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.5 %	5.5 %	50.8 %	43.2 %	2948	0.6 %	2967
BE	1.3 %	11.3 %	43.7 %	43.7 %	1000	0.0 %	1000
BG	1.9 %	13.2 %	65.4 %	19.5 %	847	2.1 %	865
CZ	1.7 %	11.1 %	56.9 %	30.2 %	1596	0.2 %	1599
DE	2.2 %	17.3 %	59.2 %	21.3 %	2132	0.5 %	2143
DK	1.5 %	11.1 %	56.3 %	31.1 %	3597	0.1 %	3602
FR	1.2 %	10.1 %	56.9 %	31.8 %	2003	0.0 %	2003
HU	0.7 %	10.2 %	67.1 %	22.0 %	1166	2.4 %	1195
SI	0.7 %	5.8 %	57.2 %	36.3 %	3341	0.6 %	3360
Mean	1.3 %	10.6 %	57.1 %	31.0 %	2070	0.6 %	2082

Source: HLS₁₉ Consortium

Table A 11.9:

Percentage distributions (for valid N), percentage of missing and total N for item “9 to be involved in decisions about your health in dialogue with your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.5 %	9.1 %	54.4 %	35.9 %	2892	2.5 %	2967
BE	1.4 %	15.6 %	49.5 %	33.5 %	1000	0.0 %	1000
BG	2.3 %	20.1 %	62.7 %	15.0 %	831	3.9 %	865
CZ	2.8 %	21.7 %	54.6 %	20.8 %	1587	0.8 %	1599
DE	3.2 %	27.2 %	56.4 %	13.3 %	2126	0.8 %	2143
DK	2.0 %	14.1 %	55.9 %	28.1 %	3586	0.4 %	3602
FR	2.0 %	18.9 %	56.3 %	22.9 %	2003	0.0 %	2003
HU	1.1 %	14.3 %	66.7 %	17.9 %	1163	2.7 %	1195
SI	1.5 %	10.0 %	62.1 %	26.4 %	3316	1.3 %	3360
Mean	1.9 %	16.8 %	57.6 %	23.8 %	2056	1.2 %	2082

Source: HLS₁₉ Consortium

Table A 11.10:

Percentage distributions (for valid N), percentage of missing and total N for item “10 to recall the information you get from your doctor?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.3 %	7.5 %	53.3 %	38.9 %	2935	1.1 %	2967
BE	1.6 %	17.7 %	51.2 %	29.5 %	1000	0.0 %	1000
BG	4.7 %	20.5 %	62.4 %	12.3 %	719	16.9 %	865
CZ	2.5 %	18.4 %	56.2 %	22.9 %	1593	0.4 %	1599
DE	2.1 %	21.1 %	58.7 %	18.2 %	2126	0.8 %	2143
DK	2.1 %	14.5 %	58.4 %	25.1 %	3596	0.2 %	3602
FR	1.8 %	16.7 %	58.2 %	23.2 %	2003	0.0 %	2003
HU	0.8 %	8.7 %	62.2 %	28.3 %	1179	1.3 %	1195
SI	0.6 %	6.0 %	60.6 %	32.8 %	3347	0.4 %	3360
Mean	1.8 %	14.6 %	57.9 %	25.7 %	2055	1.3 %	2082

Source: HLS₁₉ Consortium

Table A 11.11:

Percentage distributions (for valid N), percentage of missing and total N for item “11 to use the information from your doctor to take care of your health?”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	0.4 %	7.6 %	58.2 %	33.7 %	2922	1.5 %	2967
DE	2.4 %	20.7 %	59.4 %	17.5 %	2118	1.2 %	2143
SI	0.8 %	5.3 %	62.6 %	31.3 %	3348	0.4 %	3360
Mean	1.2 %	11.2 %	60.1 %	27.5 %	2796	1.0 %	2823

Source: HLS₁₉ Consortium

Table A 11.12:

Valid percentages of “difficult” or “very difficult” responses combined for HLS19–COM–P–Q11 and HLS19–COM–P–Q6 items (in bold font), for each country and for all countries (equally weighted)

On a scale from very easy to very difficult, how easy would you say it is:	AT	BE	BG	CZ	DE	DK	FR	HU	SI	Mean Q11	Mean Q6
4. to get enough time in the consultation with your doctor?	21.6	19.0	29.9	23.8	47.4	32.8	24.1	21.6	14.2	25.3	26.2
7. to understand the words used by your doctor?	14.7				46.4				7.0	18.9	
5. to express your personal views and preferences to your doctor?	10.6	17.1	16.2	21.8	31.9	18.9	25.9	14.3	11.2	16.3	18.0
9. to be involved in decisions about your health in dialogue with your doctor?	9.6	17.0	22.4	24.6	30.4	16.1	20.8	15.4	11.5	15.5	16.8
6. to get the information you need from your doctor?	10.8				26.4				8.6	13.9	
2. to make your doctor listen to you without being interrupted?	10.3				22.7				7.0	12.0	
10. to recall the information you get from your doctor?	7.8	19.3	25.3	20.9	23.1	16.6	18.5	9.5	6.6	11.0	14.4
11. to use the information from your doctor to take care of your health?	8.0				23.1				6.1	10.9	

On a scale from very easy to very difficult, how easy would you say it is:	AT	BE	BG	CZ	DE	DK	FR	HU	SI	Mean Q11	Mean Q6
8. to ask your doctor questions in the consultation?	6.0	12.6	15.1	12.9	19.5	12.6	11.3	10.9	6.4	9.6	10.8
3. to explain your health concerns to your doctor?	4.6	11.5	8.0	10.3	13.4	12.3	10.8	7.9	7.5	7.8	9.2
1. to describe to your doctor your reasons for coming to the consultation?	2.4				6.4				5.2	4.4	

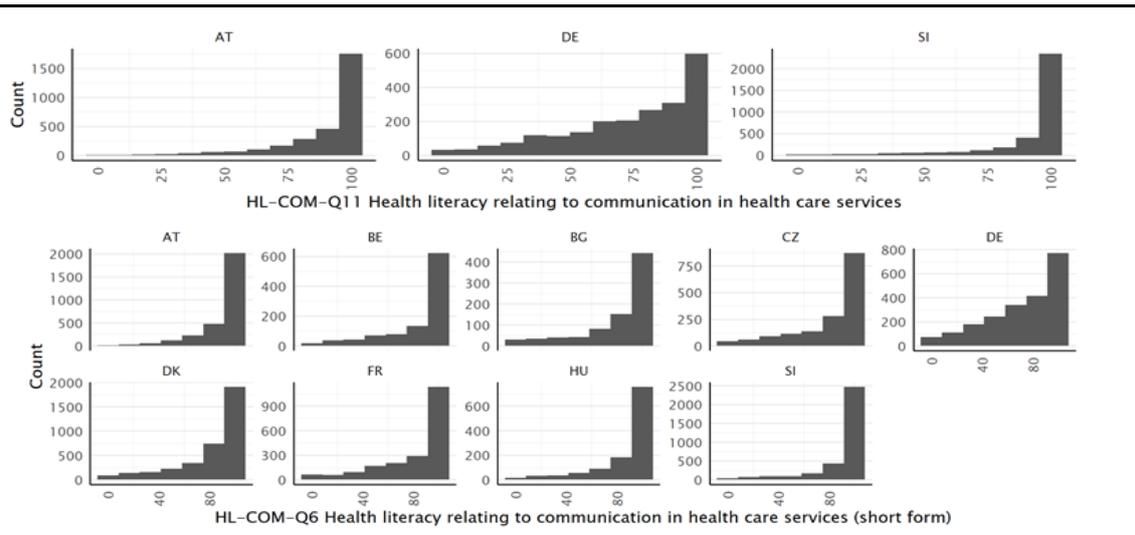
Source: HLS₁₉ Consortium

Note. The items are listed according to the extent of difficulties by mean of all countries. Items in bold font are included in the six-item version as well as the eleven-item version of the instrument.

11.2 Distribution of HL-COM

Figure A 11.1:

Histogram of the HLS₁₉-COM-P-Q11 (part a) and HLS₁₉-COM-P-Q6 (part b) score, for each country



Source: HLS₁₉ Consortium

11.3 Vulnerable sub-groups

Table A 11.13:

Number of respondents in vulnerable groups for HLS₁₉-COM-P-Q11 (left) and HLS₁₉-COM-P-Q6 (right), for each country

	Q11			Q6								
	AT	DE	SI	AT	BE	BG	CZ	DE	DK	FR	HU	SI
Total	2942	2133	3347	2935	1000	825	1592	2127	3596	2003	1165	3343
Age (76+)	279	231	318	278	28	7	86	229	331	-	103	318
Education (ISCED-0, 1)	6	25	486	6	4	29	128	24	82	15	173	485
Social Status (<= 4)	200	369	787	199	106	86	257	368	410	407	304	785
Financial Deprivation (>= 50%)	306	341	1292	303	366	122	421	341	323	395	365	1289
Self-Perceived Health (bad, very bad)	84	146	233	84	79	26	167	144	261	148	103	232
Long-Term Illness of Health Problem (1+)	1118	1099	1372	1117	476	322	968	1096	1956	900	563	1369
Limited by Health Problems	802	1194	1228	799	357	229	826	1192	1541	554	282	1226
Visits to a GP/family doctor (6+ contacts)	407	426	265	406	179	59	147	424	347	294	285	265

Source: HLS₁₉ Consortium

11.4 Multivariable linear regression models for Communicative HL with selected determinants

Table A 11.14:

Multivariable linear regression models for HLS₁₉-COM-P-Q11 (left) and HLS₁₉-COM-P-Q6 (right) by GEN-HL and five core social determinants (standardized coefficients (β) and R²), for each country and for all countries (equally weighted)

	Q11				Q6									
	AT	DE	SI	All	AT	BE	BG	CZ	DE	DK	FR	HU	SI	All
GEN-HL	0.35	0.49	0.44	0.53	0.32	0.24	0.45	0.43	0.45	0.42	0.49	0.31	0.42	0.41
Gender female	-0.05	0	-0.06	-0.04	-0.05	-0.06	-0.05	-0.07	-0.01	-0.06	-0.06	-0.04	-0.07	-0.05
Age in years	-0.01	0.08	0.05	0.05	-0.01	0.17	0.16	0.12	0.08	0.09	0.06	0.01	0.03	0.08
Education	0	-0.02	0	-0.02	-0.02	0.02	-0.23	-0.02	-0.03	0.02	-0.02	-0.01	-0.01	-0.04
Level in society	0.04	0.07	0.03	0.05	0.03	0.11	0.05	0.04	0.09	0.01	0.1	0.1	0.02	0.09
Financial deprivation	-0.07	-0.1	-0.05	-0.03	-0.05	-0.06	-0.22	-0.1	-0.1	-0.1	-0.04	-0.12	-0.04	-0.06
Long-term illness	0	-0.11	-0.07	-0.1	-0.01	-0.03	-0.14	0.01	-0.11	-0.04	0	0.03	-0.08	-0.06
R²	0.15	0.31	0.24	0.32	0.12	0.13	0.37	0.25	0.27	0.25	0.3	0.15	0.21	0.22
Valid count	2669	1812	3173		2664	988	682	1562	1807	3551	2003	1099	3169	
Total count	2967	2143	3360		2967	1000	865	1599	2143	3602	2003	1195	3360	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illnesses include 3 categories (none, one, more than one)

Source: HLS₁₉ Consortium

11.5 Potential consequences of Communicative HL

Table A 11.15:

Spearman correlation of the HL-COM-Q11 (left)/-Q6 (right) scores with potential consequences, for each country and for all countries (equally weighted)

	Q11				Q6									
	AT	DE	SI	All	AT	BE	BG	CZ	DE	DK	FR	HU	SI	All
Emergency services ^a	-0.03	-0.1	-0.04	-0.06	-0.02	-0.1	-0.11	-0.06	-0.09	-0.06	-0.06	-0.14	-0.05	-0.08
GP or family doctor ^a	-0.03	-0.1	-0.07	-0.14	-0.03	0.05	-0.04	0.04	-0.09	-0.04	0	-0.05	-0.07	-0.04
Medical or surgical specialist ^a	-0.03	-0.09	-0.07	-0.11	-0.04	-0.01	0.04	-0.04	-0.09	-0.05	-0.05	-0.08	-0.07	-0.05
Inpatient hospitalization ^a	0	-0.1	-0.04	-0.07	0.01	-0.05	-0.04	-0.03	-0.09	-0.02	0.03	-0.08	-0.04	-0.04
Day patient hospitalization ^a	-0.01	-0.04	-0.05	0	-0.01	-0.05	-0.05	-0.02	-0.03	-0.01	-0.02	-0.03	-0.05	-0.02
General self-reported health ^b	-0.18	-0.2	-0.2	-0.23	-0.15	-0.21	-0.21	0	-0.18	-0.24	-0.16	-0.13	-0.21	-0.17
Long-term illness or health problem (0/1/2+) ^c	-0.06	-0.11	-0.14	-0.17	-0.05	-0.03	-0.1	0.05	-0.12	-0.1	-0.03	-0.09	-0.15	-0.09
Limited in activity due to health problem ^d	0.11	0.16	0.18	0.23	0.11	0.16	0.11	0.03	0.15	0.17	0.07	0.17	0.18	0.15
Absence from work ^e	-0.07	-0.06	-0.02	-0.15	-0.07	-0.09	-0.04	-0.01	-0.06	-0.13	-0.03	-0.12	-0.01	-0.08
Smoking behavior ^f	0	-0.06	0.02	-0.01	0.01	-0.06	0.03	0.01	-0.04	-0.04	0.02	-0.01	0.04	0
Alcohol consumption ^f	-0.08	-0.03	0.01	-0.1	-0.09	0.05	0.05	0	0	0.1	0.01	0.03	0.02	-0.02

	Q11				Q6									
	AT	DE	SI	All	AT	BE	BG	CZ	DE	DK	FR	HU	SI	All
Physical activity ^f	0.12	0.1	0.1	0.16	0.11	0.03	0.04	-0.01	0.09	0.03	0.05	0.1	0.1	0.08
Fruit and vegetable consumption ^f	0.14	0.12	0.12	0.16	0.12	0.12	0.13	0.09	0.12	0.08	0.08	0.04	0.1	0.1
BMI ^g	0.01	-0.03	0.04	0.04	0.03	0.08	0.07	0.1	-0.03	-0.04	0.01	0.01	0.03	0.04

Rho > 0.2 and rho > 0.1 are underlined.

a) number of contact the last 12 months, exception emergency services (last 24 months). 4 ordinal values

b) self-reported health, 5 ordinal values, higher number is worse condition

c) 2-3 ordinal values, higher values are more problems

d) 3 ordinal values, higher value is less limitation

e) days absent, 4 ordinal values, higher value is more absence

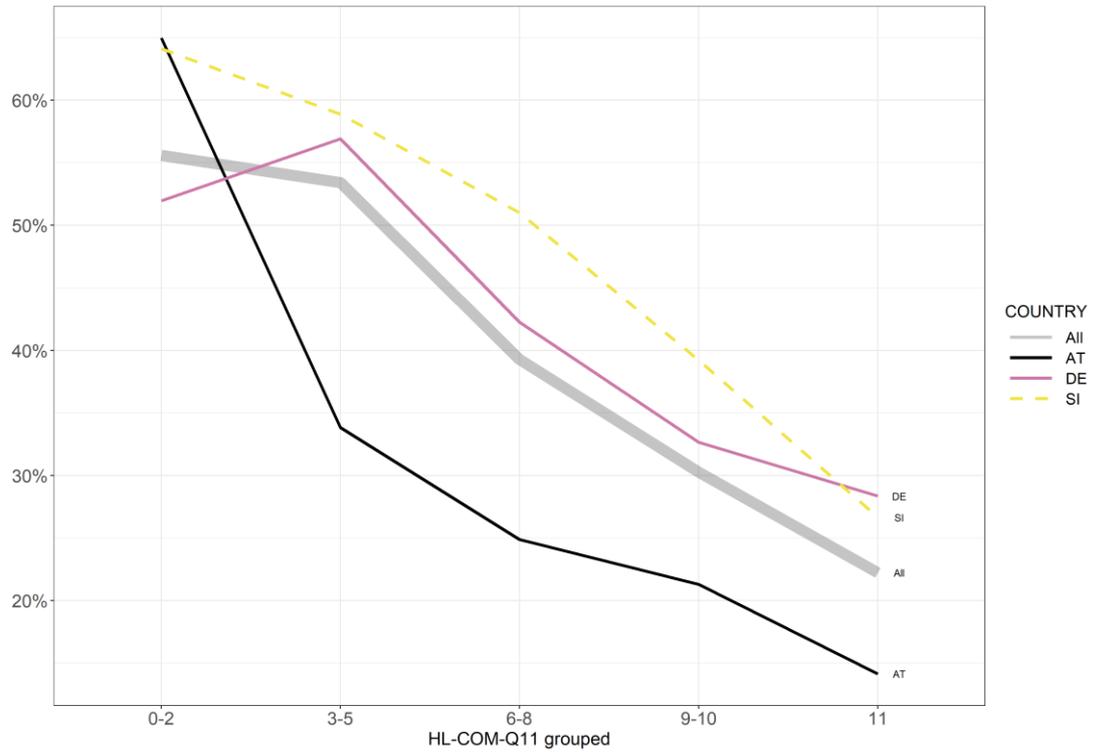
f) weekly consumption, higher value is higher consumption

g) ratio-measure, higher value is more obese

Source: HLS₁₉ Consortium

Figure A 11.2:

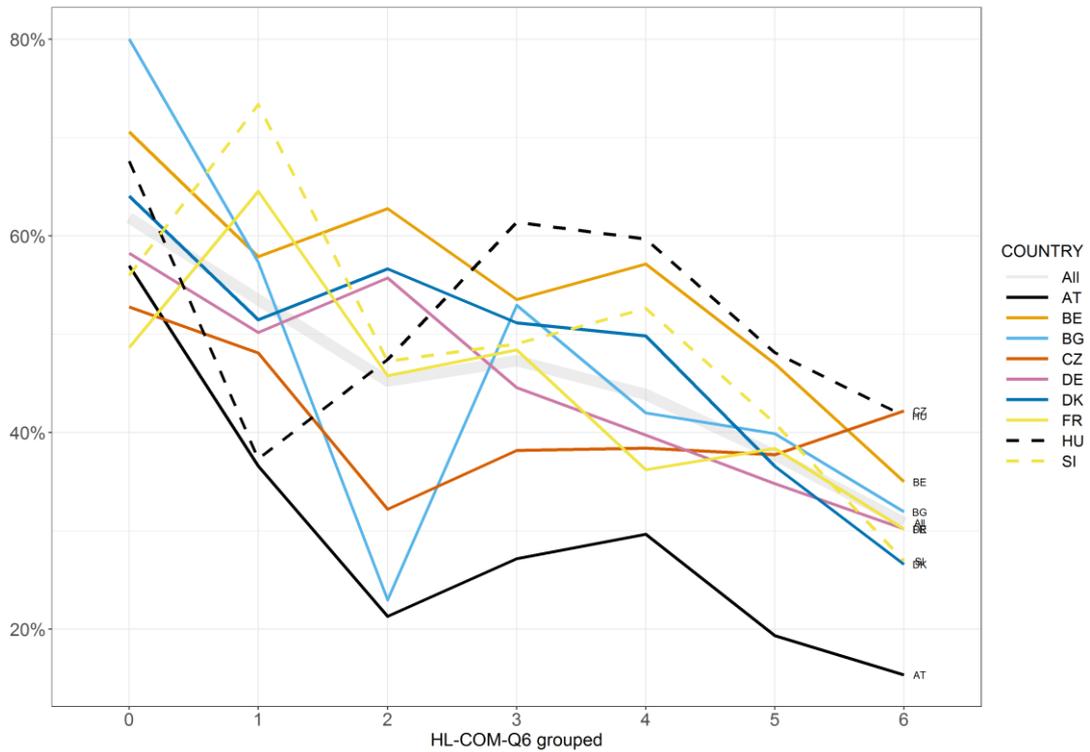
Percentage of self-perceived health (fair, bad, or very bad) by HL-COM-P-Q6 in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

Figure A 11.3:

Percentage of self-perceived health (fair, bad, or very bad) by HL-COM-P-Q11 in 5 groups, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

Table A 11.16:

Multivariable linear regression models of self-perceived health by GEN-HL, HL-COM-Q11 and five core social determinants (standardized coefficients (β) and R^2) (Results based on *HLS19-COM-P-Q11* to the left and *HLS19-COM-P-Q6* score to the right), for each country and for all countries (equally weighted)

	Q11				Q6									
	AT	DE	SI	All	AT	BE	BG	CZ	DE	DK	FR	HU	SI	All
GEN-HL	-0.16	-0.07	-0.10	-0.15	-0.17	-0.11	-0.12	-0.07	-0.08	-0.16	-0.14	-0.12	-0.10	-0.15
HL-COM-Q11	-0.06	-0.14	-0.11	-0.11	-0.05	-0.14	-0.16	-0.03	-0.11	-0.13	-0.04	0.02	-0.11	-0.08
Gender female	-0.01	-0.02	0.02	-0.01	-0.01	0.04	0.02	-0.03	-0.02	-0.06	-0.01	0.05	0.01	0.00
Age in years	0.23	0.41	0.37	0.33	0.23	0.10	0.26	0.36	0.41	0.13	0.25	0.32	0.37	0.27
Education	-0.06	-0.03	-0.07	-0.04	-0.06	-0.08	-0.23	-0.11	-0.03	-0.03	0.02	-0.06	-0.07	-0.05
Level in society	-0.11	-0.08	-0.08	-0.10	-0.11	-0.25	-0.07	-0.13	-0.08	-0.14	-0.21	-0.13	-0.08	-0.15
Financial deprivation	0.14	0.11	0.18	0.17	0.14	-0.04	0.10	0.15	0.12	0.15	0.10	0.22	0.18	0.13
R ²	0.17	0.27	0.32	0.28	0.17	0.15	0.36	0.24	0.26	0.17	0.17	0.28	0.32	0.21
Valid count	2674	1835	3174		2669	988	695	1561	1830	3555	2003	1102	3170	
Total Count	2967	2143	3360		2967	1000	865	1599	2143	3602	2003	1195	3360	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Self-perceived health: from very good (1) to very bad (5).

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-COM-Q11 score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS19 Consortium

12 Annex for Chapter 12: Digital Health Literacy

12.1 Distribution of individual items on Digital HL

Table A 12.1: Percentage distributions (for valid N), percentage of missing and total N for Item 1 “to use the proper words or search query to find the information you are looking for”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	1.9 %	13.3 %	49.0 %	35.9 %	2586	12.8 %	2967
BE	6.5 %	25.8 %	50.0 %	17.7 %	1000	0.0 %	1000
CH	4.7 %	18.9 %	56.9 %	19.5 %	2369	5.3 %	2502
CZ	3.0 %	20.7 %	55.0 %	21.3 %	1336	16.4 %	1599
DE	13.2 %	25.3 %	41.4 %	20.1 %	1991	7.1 %	2143
DK	2.7 %	15.1 %	55.5 %	26.7 %	3586	0.4 %	3602
FR	2.3 %	27.0 %	57.3 %	13.4 %	1000	0.0 %	1000
HU	2.9 %	12.5 %	67.0 %	17.5 %	996	16.7 %	1195
IE	9.0 %	20.9 %	38.5 %	31.6 %	3499	22.0 %	4487
IL	2.3 %	15.7 %	51.1 %	30.8 %	1312	0.2 %	1315
NO	0.4 %	9.1 %	43.2 %	47.4 %	2410	15.6 %	2855
PT	1.2 %	9.6 %	80.4 %	8.8 %	841	32.6 %	1247
SK	5.8 %	18.2 %	54.1 %	21.9 %	1938	9.7 %	2145
Mean	4.3 %	17.9 %	53.8 %	24.0 %	1913	14.4 %	

Source: HLS₁₉ Consortium

Table A 12.2: Percentage distributions (for valid N), percentage of missing and total N for Item 2 “to find the exact information you are searching for”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	2.5 %	21.2 %	50.6 %	25.7 %	2562	13.7 %	2967
BE	7.4 %	35.2 %	46.5 %	10.9 %	1000	0.0 %	1000
CH	7.6 %	32.8 %	49.6 %	9.9 %	2358	5.8 %	2502
CZ	6.2 %	33.7 %	46.3 %	13.8 %	1349	15.6 %	1599
DE	13.7 %	45.2 %	32.9 %	8.1 %	1992	7.0 %	2143
DK	4.0 %	27.3 %	53.9 %	14.9 %	3588	0.4 %	3602
FR	5.1 %	36.6 %	50.0 %	8.3 %	1000	0.0 %	1000
HU	3.6 %	20.5 %	62.9 %	13.0 %	999	16.4 %	1195
IE	10.4 %	28.4 %	38.6 %	22.7 %	3506	21.9 %	4487
IL	4.5 %	27.1 %	49.1 %	19.2 %	1311	0.3 %	1315
NO	1.8 %	20.9 %	49.8 %	27.4 %	2405	15.8 %	2855
PT	1.2 %	27.4 %	64.7 %	6.8 %	843	32.4 %	1247
SK	6.1 %	31.6 %	47.3 %	14.9 %	1938	9.7 %	2145
Mean	5.7 %	29.8 %	49.4 %	15.0 %	1912	14.5 %	

Source: HLS₁₉ Consortium

Table A 12.3: Percentage distributions (for valid N), percentage of missing and total N for Item 3 “to understand the information”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	2.1 %	20.2 %	54.2 %	23.5 %	2555	13.9 %	2967
BE	6.5 %	29.9 %	49.7 %	13.9 %	1000	0.0 %	1000
CH	4.7 %	24.3 %	59.1 %	11.9 %	2356	5.8 %	2502
CZ	3.9 %	28.1 %	56.6 %	11.4 %	1353	15.4 %	1599
DE	11.2 %	36.3 %	44.5 %	8.0 %	1987	7.3 %	2143
DK	2.1 %	19.8 %	60.2 %	17.9 %	3588	0.4 %	3602
FR	2.9 %	32.0 %	54.9 %	10.2 %	1000	0.0 %	1000
HU	1.6 %	15.2 %	69.6 %	13.6 %	1008	15.6 %	1195
IE	5.6 %	21.6 %	44.3 %	28.5 %	3516	21.6 %	4487
IL	3.4 %	26.5 %	52.0 %	18.2 %	1312	0.2 %	1315
NO	0.9 %	13.3 %	55.9 %	29.9 %	2407	15.7 %	2855
PT	1.2 %	15.4 %	75.7 %	7.7 %	842	32.5 %	1247
SK	4.8 %	28.7 %	53.7 %	12.8 %	1938	9.7 %	2145
Mean	3.9 %	23.9 %	56.2 %	16.0 %	1912	14.4 %	

Source: HLS₁₉ Consortium

Table A 12.4: Percentage distributions (for valid N), percentage of missing and total N for Item 4 “to judge whether the information is reliable”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	8.1 %	38.9 %	36.7 %	16.4 %	2540	14.4 %	2967
BE	16.6 %	40.5 %	34.8 %	8.1 %	1000	0.0 %	1000
CH	16.6 %	49.4 %	28.5 %	5.5 %	2352	6.0 %	2502
CZ	18.6 %	47.2 %	28.1 %	6.1 %	1346	15.8 %	1599
DE	30.2 %	52.4 %	14.1 %	3.4 %	1991	7.1 %	2143
DK	5.6 %	37.5 %	45.2 %	11.8 %	3585	0.5 %	3602
FR	18.8 %	46.0 %	29.1 %	6.2 %	1000	0.0 %	1000
HU	5.6 %	48.1 %	41.9 %	4.4 %	1000	16.3 %	1195
IE	15.4 %	36.2 %	31.7 %	16.7 %	3498	22.0 %	4487
IL	11.4 %	47.2 %	30.3 %	11.1 %	1311	0.3 %	1315
NO	3.0 %	27.6 %	48.1 %	21.3 %	2394	16.1 %	2855
PT	2.5 %	38.7 %	52.9 %	5.9 %	832	33.3 %	1247
SK	11.6 %	49.6 %	31.5 %	7.3 %	1938	9.7 %	2145
Mean	12.6 %	43.0 %	34.8 %	9.6 %	1907	14.7 %	

Source: HLS₁₉ Consortium

Table A 12.5: Percentage distributions (for valid N), percentage of missing and total N for Item 5 “to judge whether the information is offered with commercial interests”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	13.2 %	36.5 %	32.8 %	17.5 %	2561	13.7 %	2967
BE	16.6 %	38.5 %	33.6 %	11.3 %	1000	0.0 %	1000
CH	16.2 %	47.0 %	29.9 %	7.0 %	2343	6.4 %	2502
CZ	14.4 %	36.9 %	37.1 %	11.6 %	1317	17.6 %	1599
DE	34.3 %	47.7 %	13.8 %	4.1 %	1986	7.3 %	2143
DK	10.2 %	46.8 %	33.9 %	9.1 %	3577	0.7 %	3602
FR	25.8 %	43.4 %	24.1 %	6.8 %	1000	0.0 %	1000
HU	8.9 %	40.1 %	45.7 %	5.2 %	998	16.5 %	1195
IE	15.8 %	35.1 %	29.2 %	19.8 %	3472	22.6 %	4487
IL	16.1 %	42.3 %	29.7 %	11.9 %	1310	0.4 %	1315
NO	2.3 %	23.5 %	47.0 %	27.2 %	2362	17.3 %	2855
PT	1.9 %	34.1 %	55.6 %	8.4 %	826	33.8 %	1247
SK	8.5 %	41.9 %	39.8 %	9.8 %	1938	9.7 %	2145
Mean	14.2 %	39.5 %	34.8 %	11.5 %	1899	15.0 %	

Source: HLS₁₉ Consortium

Table A 12.6: Percentage distributions (for valid N), percentage of missing and total N for Item 6 “to visit different websites to check whether they provide similar information about a topic”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	3.2 %	18.9 %	51.6 %	26.2 %	2466	16.9 %	2967
BE	8.3 %	28.0 %	48.1 %	15.6 %	1000	0.0 %	1000
CH	5.7 %	23.0 %	57.0 %	14.3 %	2335	6.7 %	2502
CZ	3.9 %	19.3 %	60.8 %	16.0 %	1299	18.8 %	1599
DE	14.4 %	23.4 %	47.0 %	15.2 %	1990	7.1 %	2143
DK	4.3 %	22.0 %	56.2 %	17.6 %	3574	0.8 %	3602
FR	3.2 %	18.9 %	63.2 %	14.6 %	1000	0.0 %	1000
HU	3.9 %	18.8 %	69.1 %	8.2 %	951	20.4 %	1195
IE	7.3 %	17.4 %	38.5 %	36.8 %	3433	23.5 %	4487
IL	3.7 %	19.2 %	58.4 %	18.6 %	1311	0.3 %	1315
NO	0.8 %	6.7 %	51.7 %	40.7 %	2326	18.5 %	2855
PT	1.6 %	16.1 %	73.8 %	8.5 %	821	34.2 %	1247
SK	6.8 %	24.7 %	52.8 %	15.7 %	1938	9.7 %	2145
Mean	5.2 %	19.7 %	56.0 %	19.1 %	1880	15.9 %	

Source: HLS₁₉ Consortium

Table A 12.7: Percentage distributions (for valid N), percentage of missing and total N for Item 7 “to judge whether the information is applicable to you”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	2.6 %	27.3 %	50.1 %	20.0 %	2513	15.3 %	2967
BE	11.7 %	38.0 %	40.1 %	10.2 %	1000	0.0 %	1000
CH	8.4 %	42.5 %	42.4 %	6.7 %	2345	6.3 %	2502
CZ	5.7 %	35.9 %	47.8 %	10.5 %	1326	17.1 %	1599
DE	14.2 %	42.1 %	36.4 %	7.3 %	1987	7.3 %	2143
DK	3.5 %	27.5 %	52.9 %	16.1 %	3582	0.6 %	3602
FR	10.6 %	45.1 %	37.1 %	7.2 %	1000	0.0 %	1000
HU	2.2 %	21.5 %	64.7 %	11.6 %	1004	16.0 %	1195
IE	8.1 %	28.0 %	40.3 %	23.7 %	3491	22.2 %	4487
IL	3.6 %	29.3 %	50.8 %	16.3 %	1309	0.5 %	1315
NO	2.1 %	27.6 %	51.6 %	18.7 %	2387	16.4 %	2855
PT	1.9 %	19.1 %	73.0 %	5.9 %	827	33.7 %	1247
SK	5.0 %	33.6 %	50.3 %	11.0 %	1938	9.7 %	2145
Mean	6.1 %	32.1 %	49.0 %	12.7 %	1901	15.0 %	

Source: HLS₁₉ Consortium

Table A 12.8: Percentage distributions (for valid N), percentage of missing and total N for Item 8 “to use the information to help solve a health problem”, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	3.4 %	28.4 %	50.7 %	17.5 %	2462	17.0 %	2967
BE	11.6 %	40.0 %	40.9 %	7.5 %	1000	0.0 %	1000
CH	10.1 %	42.6 %	40.9 %	6.4 %	2336	6.6 %	2502
CZ	8.4 %	39.0 %	44.2 %	8.5 %	1286	19.6 %	1599
DE	16.3 %	45.5 %	33.2 %	4.9 %	1987	7.3 %	2143
DK	3.8 %	30.5 %	53.9 %	11.7 %	3575	0.7 %	3602
FR	10.5 %	40.9 %	42.7 %	6.0 %	1000	0.0 %	1000
HU	2.7 %	20.7 %	67.1 %	9.5 %	997	16.6 %	1195
IE	12.4 %	31.6 %	36.3 %	19.6 %	3448	23.2 %	4487
IL	8.6 %	37.7 %	39.8 %	14.0 %	1310	0.4 %	1315
NO	2.4 %	29.0 %	51.2 %	17.4 %	2316	18.9 %	2855
PT	5.7 %	29.8 %	60.0 %	4.6 %	809	35.1 %	1247
SK	6.2 %	34.6 %	50.2 %	9.0 %	1938	9.7 %	2145
Mean	7.9 %	34.6 %	47.0 %	10.5 %	1882	15.8 %	

Source: HLS₁₉ Consortium

12.2 Spearman correlations of all items on Digital HL with each other for each country and for all countries

Table A 12.9: Spearman correlations (ρ) of Digital HL items, for **all countries** (equally weighted)

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.66	0.56	0.42	0.37	0.52	0.48	0.45
2 to find the exact information you are searching for	0.66	1	0.59	0.52	0.43	0.47	0.53	0.53
3 to understand the information	0.56	0.59	1	0.54	0.44	0.51	0.54	0.53
4 to judge whether the information is reliable	0.42	0.52	0.54	1	0.63	0.44	0.56	0.56
5 to judge whether the information is offered with commercial interests	0.37	0.43	0.44	0.63	1	0.46	0.51	0.49
6 to visit different websites to check whether they provide similar information about a topic	0.52	0.47	0.51	0.44	0.46	1	0.53	0.49
7 to judge whether the information is applicable to you	0.48	0.53	0.54	0.56	0.51	0.53	1	0.66
8 to use the information to help solve a health problem	0.45	0.53	0.53	0.56	0.49	0.49	0.66	1

Source: HLS₁₉ Consortium

Table A 12.10: Spearman correlations (ρ) of Digital HL items, for **Austria**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.62	0.54	0.44	0.41	0.47	0.46	0.45
2 to find the exact information you are searching for	0.62	1	0.54	0.44	0.42	0.47	0.5	0.49
3 to understand the information	0.54	0.54	1	0.48	0.43	0.5	0.5	0.49
4 to judge whether the information is reliable	0.44	0.44	0.48	1	0.65	0.48	0.55	0.54
5 to judge whether the information is offered with commercial interests	0.41	0.42	0.43	0.65	1	0.5	0.53	0.52
6 to visit different websites to check whether they provide similar information about a topic	0.47	0.47	0.5	0.48	0.5	1	0.53	0.52
7 to judge whether the information is applicable to you	0.46	0.5	0.5	0.55	0.53	0.53	1	0.64
8 to use the information to help solve a health problem	0.45	0.49	0.49	0.54	0.52	0.52	0.64	1

Source: HLS₁₉ Consortium

Table A 12.11: Spearman correlations (ρ) of Digital HL items, for **Belgium**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.67	0.67	0.37	0.27	0.61	0.5	0.41
2 to find the exact information you are searching for	0.67	1	0.64	0.56	0.4	0.55	0.58	0.56
3 to understand the information	0.67	0.64	1	0.48	0.37	0.62	0.56	0.52
4 to judge whether the information is reliable	0.37	0.56	0.48	1	0.65	0.41	0.62	0.61
5 to judge whether the information is offered with commercial interests	0.27	0.4	0.37	0.65	1	0.42	0.56	0.54
6 to visit different websites to check whether they provide similar information about a topic	0.61	0.55	0.62	0.41	0.42	1	0.58	0.52
7 to judge whether the information is applicable to you	0.5	0.58	0.56	0.62	0.56	0.58	1	0.74
8 to use the information to help solve a health problem	0.41	0.56	0.52	0.61	0.54	0.52	0.74	1

Source: HLS₁₉ Consortium

Table A 12.12: Spearman correlations (ρ) of Digital HL items, for **Switzerland**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.66	0.59	0.42	0.36	0.57	0.46	0.46
2 to find the exact information you are searching for	0.66	1	0.59	0.54	0.44	0.52	0.55	0.54
3 to understand the information	0.59	0.59	1	0.54	0.46	0.56	0.55	0.55
4 to judge whether the information is reliable	0.42	0.54	0.54	1	0.67	0.47	0.61	0.61
5 to judge whether the information is offered with commercial interests	0.36	0.44	0.46	0.67	1	0.5	0.55	0.53
6 to visit different websites to check whether they provide similar information about a topic	0.57	0.52	0.56	0.47	0.5	1	0.54	0.52
7 to judge whether the information is applicable to you	0.46	0.55	0.55	0.61	0.55	0.54	1	0.7
8 to use the information to help solve a health problem	0.46	0.54	0.55	0.61	0.53	0.52	0.7	1

Source: HLS₁₉ Consortium

Table A 12.13: Spearman correlations (ρ) of Digital HL items, for **Czech Republic**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.63	0.45	0.34	0.27	0.45	0.4	0.37
2 to find the exact information you are searching for	0.63	1	0.55	0.49	0.34	0.38	0.5	0.51
3 to understand the information	0.45	0.55	1	0.53	0.39	0.45	0.49	0.49
4 to judge whether the information is reliable	0.34	0.49	0.53	1	0.54	0.4	0.5	0.53
5 to judge whether the information is offered with commercial interests	0.27	0.34	0.39	0.54	1	0.47	0.44	0.43
6 to visit different websites to check whether they provide similar information about a topic	0.45	0.38	0.45	0.4	0.47	1	0.48	0.41
7 to judge whether the information is applicable to you	0.4	0.5	0.49	0.5	0.44	0.48	1	0.6
8 to use the information to help solve a health problem	0.37	0.51	0.49	0.53	0.43	0.41	0.6	1

Source: HLS₁₉ Consortium

Table A 12.14: Spearman correlations (ρ) of Digital HL items, for **Germany**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.68	0.57	0.45	0.45	0.61	0.52	0.5
2 to find the exact information you are searching for	0.68	1	0.58	0.54	0.46	0.55	0.56	0.54
3 to understand the information	0.57	0.58	1	0.54	0.48	0.55	0.57	0.56
4 to judge whether the information is reliable	0.45	0.54	0.54	1	0.65	0.46	0.53	0.54
5 to judge whether the information is offered with commercial interests	0.45	0.46	0.48	0.65	1	0.47	0.51	0.47
6 to visit different websites to check whether they provide similar information about a topic	0.61	0.55	0.55	0.46	0.47	1	0.57	0.54
7 to judge whether the information is applicable to you	0.52	0.56	0.57	0.53	0.51	0.57	1	0.66
8 to use the information to help solve a health problem	0.5	0.54	0.56	0.54	0.47	0.54	0.66	1

Source: HLS₁₉ Consortium

Table A 12.15: Spearman correlations (ρ) of Digital HL items, for **Denmark**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.72	0.6	0.49	0.42	0.55	0.56	0.52
2 to find the exact information you are searching for	0.72	1	0.63	0.52	0.44	0.51	0.55	0.57
3 to understand the information	0.6	0.63	1	0.57	0.46	0.56	0.6	0.57
4 to judge whether the information is reliable	0.49	0.52	0.57	1	0.67	0.51	0.6	0.57
5 to judge whether the information is offered with commercial interests	0.42	0.44	0.46	0.67	1	0.5	0.54	0.52
6 to visit different websites to check whether they provide similar information about a topic	0.55	0.51	0.56	0.51	0.5	1	0.62	0.57
7 to judge whether the information is applicable to you	0.56	0.55	0.6	0.6	0.54	0.62	1	0.71
8 to use the information to help solve a health problem	0.52	0.57	0.57	0.57	0.52	0.57	0.71	1

Source: HLS₁₉ Consortium

Table A 12.16: Spearman correlations (ρ) of Digital HL items, for **France**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.64	0.51	0.45	0.36	0.46	0.45	0.46
2 to find the exact information you are searching for	0.64	1	0.55	0.57	0.43	0.42	0.51	0.52
3 to understand the information	0.51	0.55	1	0.55	0.42	0.42	0.52	0.54
4 to judge whether the information is reliable	0.45	0.57	0.55	1	0.64	0.35	0.65	0.6
5 to judge whether the information is offered with commercial interests	0.36	0.43	0.42	0.64	1	0.29	0.59	0.53
6 to visit different websites to check whether they provide similar information about a topic	0.46	0.42	0.42	0.35	0.29	1	0.49	0.46
7 to judge whether the information is applicable to you	0.45	0.51	0.52	0.65	0.59	0.49	1	0.71
8 to use the information to help solve a health problem	0.46	0.52	0.54	0.6	0.53	0.46	0.71	1

Source: HLS₁₉ Consortium

Table A 12.17: Spearman correlations (ρ) of Digital HL items, for **Hungary**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.63	0.48	0.21	0.2	0.35	0.33	0.31
2 to find the exact information you are searching for	0.63	1	0.52	0.37	0.27	0.34	0.38	0.37
3 to understand the information	0.48	0.52	1	0.29	0.28	0.37	0.41	0.43
4 to judge whether the information is reliable	0.21	0.37	0.29	1	0.56	0.32	0.35	0.33
5 to judge whether the information is offered with commercial interests	0.2	0.27	0.28	0.56	1	0.36	0.35	0.34
6 to visit different websites to check whether they provide similar information about a topic	0.35	0.34	0.37	0.32	0.36	1	0.43	0.4
7 to judge whether the information is applicable to you	0.33	0.38	0.41	0.35	0.35	0.43	1	0.63
8 to use the information to help solve a health problem	0.31	0.37	0.43	0.33	0.34	0.4	0.63	1

Source: HLS₁₉ Consortium

Table A 12.18: Spearman correlations (ρ) of Digital HL items, for **Ireland**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.55	0.5	0.36	0.32	0.45	0.45	0.45
2 to find the exact information you are searching for	0.55	1	0.51	0.47	0.38	0.38	0.45	0.44
3 to understand the information	0.5	0.51	1	0.47	0.35	0.41	0.47	0.42
4 to judge whether the information is reliable	0.36	0.47	0.47	1	0.49	0.35	0.48	0.45
5 to judge whether the information is offered with commercial interests	0.32	0.38	0.35	0.49	1	0.38	0.39	0.34
6 to visit different websites to check whether they provide similar information about a topic	0.45	0.38	0.41	0.35	0.38	1	0.46	0.38
7 to judge whether the information is applicable to you	0.45	0.45	0.47	0.48	0.39	0.46	1	0.51
8 to use the information to help solve a health problem	0.45	0.44	0.42	0.45	0.34	0.38	0.51	1

Source: HLS₁₉ Consortium

Table A 12.19: Spearman correlations (ρ) of Digital HL items, for **Israel**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.65	0.49	0.35	0.3	0.45	0.45	0.39
2 to find the exact information you are searching for	0.65	1	0.59	0.51	0.41	0.47	0.51	0.51
3 to understand the information	0.49	0.59	1	0.57	0.44	0.47	0.5	0.54
4 to judge whether the information is reliable	0.35	0.51	0.57	1	0.61	0.41	0.5	0.57
5 to judge whether the information is offered with commercial interests	0.3	0.41	0.44	0.61	1	0.43	0.5	0.51
6 to visit different websites to check whether they provide similar information about a topic	0.45	0.47	0.47	0.41	0.43	1	0.53	0.51
7 to judge whether the information is applicable to you	0.45	0.51	0.5	0.5	0.5	0.53	1	0.62
8 to use the information to help solve a health problem	0.39	0.51	0.54	0.57	0.51	0.51	0.62	1

Source: HLS₁₉ Consortium

Table A 12.20: Spearman correlations (ρ) of Digital HL items, for **Norway**

	1	2	3	4	5	6	7
1 to use the proper words or search query to find the information you are looking for	NA						
2 to find the exact information you are searching for	0.61	NA	NA	NA	NA	NA	NA
3 to understand the information	0.53	0.58	NA	NA	NA	NA	NA
4 to judge whether the information is reliable	0.4	0.45	0.51	NA	NA	NA	NA
5 to judge whether the information is offered with commercial interests	0.32	0.36	0.42	0.54	NA	NA	NA
6 to visit different websites to check whether they provide similar information about a topic	0.41	0.34	0.41	0.38	0.47	NA	NA
7 to judge whether the information is applicable to you	0.4	0.47	0.5	0.54	0.44	0.43	NA
8 to use the information to help solve a health problem	0.38	0.42	0.47	0.5	0.39	0.37	0.61

Source: HLS₁₉ Consortium

Table A 12.21: Spearman correlations (ρ) of Digital HL items, for **Portugal**

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.58	0.58	0.42	0.38	0.41	0.52	0.37
2 to find the exact information you are searching for	0.58	1	0.49	0.46	0.41	0.41	0.5	0.5
3 to understand the information	0.58	0.49	1	0.53	0.47	0.44	0.59	0.46
4 to judge whether the information is reliable	0.42	0.46	0.53	1	0.65	0.41	0.55	0.47
5 to judge whether the information is offered with commercial interests	0.38	0.41	0.47	0.65	1	0.37	0.49	0.43
6 to visit different websites to check whether they provide similar information about a topic	0.41	0.41	0.44	0.41	0.37	1	0.42	0.35
7 to judge whether the information is applicable to you	0.52	0.5	0.59	0.55	0.49	0.42	1	0.63
8 to use the information to help solve a health problem	0.37	0.5	0.46	0.47	0.43	0.35	0.63	1

Source: HLS₁₉ Consortium

Table A 12.22: Spearman correlations (ρ) of Digital HL items, for Slovakia

	1	2	3	4	5	6	7	8
1 to use the proper words or search query to find the information you are looking for	1	0.7	0.6	0.44	0.45	0.57	0.55	0.54
2 to find the exact information you are searching for	0.7	1	0.65	0.55	0.45	0.57	0.57	0.58
3 to understand the information	0.6	0.65	1	0.59	0.48	0.56	0.57	0.61
4 to judge whether the information is reliable	0.44	0.55	0.59	1	0.61	0.53	0.6	0.6
5 to judge whether the information is offered with commercial interests	0.45	0.45	0.48	0.61	1	0.56	0.57	0.51
6 to visit different websites to check whether they provide similar information about a topic	0.57	0.57	0.56	0.53	0.56	1	0.67	0.59
7 to judge whether the information is applicable to you	0.55	0.57	0.57	0.6	0.57	0.67	1	0.71
8 to use the information to help solve a health problem	0.54	0.58	0.61	0.6	0.51	0.59	0.71	1

Source: HLS₁₉ Consortium

12.3 Distribution of individual items on interaction with digital devices

Table A 12.23: Percentage distributions (for valid N), percentage of missing and total N for Item 1 **“to clearly formulate your written message when communicating with a health provider (i.e. question or statement, add personal information)”**, for each country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	4.2 %	18.6 %	46.7 %	30.5 %	2269	23.5 %	2967
BE	7.3 %	28.4 %	44.8 %	19.5 %	1000	0.0 %	1000
CH	6.7 %	27.8 %	50.6 %	14.9 %	2287	8.6 %	2502
CZ	3.8 %	23.1 %	56.2 %	16.9 %	1160	27.5 %	1599
DE	5.4 %	30.1 %	51.1 %	13.3 %	1237	42.3 %	2143
DK	4.2 %	20.1 %	47.1 %	28.6 %	3560	1.2 %	3602
FR	2.8 %	14.9 %	54.8 %	27.6 %	147	85.3 %	1000
HU	5.8 %	18.1 %	64.4 %	11.7 %	781	34.6 %	1195
IE	7.5 %	23.5 %	37.9 %	31.2 %	3348	25.4 %	4487
IL	4.1 %	22.2 %	46.9 %	26.7 %	350	73.4 %	1315
NO	0.7 %	9.5 %	47.7 %	42.1 %	2166	24.1 %	2855
PT	1.1 %	8.5 %	78.7 %	11.7 %	709	43.1 %	1247
SK	5.4 %	40.0 %	44.5 %	10.0 %	1942	9.5 %	2145
Mean	4.5 %	21.9 %	51.6 %	21.9 %	1612	25.3 %	

Source: HLS19 Consortium

Table A 12.24: Percentage distributions (for valid N), percentage of missing and total N for Item 2 “to express your opinion, thoughts or feelings, ask a question in writing on social media including online forums”, by country and for all countries (equally weighted)

	Very difficult	Difficult	Easy	Very easy	Valid	Missing	Total
AT	7.2 %	19.8 %	47.8 %	25.2 %	1618	45.5 %	2967
BE	12.1 %	30.2 %	40.6 %	17.1 %	1000	0.0 %	1000
CH	11.2 %	32.3 %	44.5 %	12.0 %	2147	14.2 %	2502
CZ	7.3 %	23.2 %	53.4 %	16.1 %	982	38.6 %	1599
DE	10.1 %	29.1 %	48.6 %	12.2 %	1085	49.4 %	2143
DK	7.9 %	27.9 %	44.2 %	19.9 %	3512	2.5 %	3602
FR	4.3 %	19.7 %	57.8 %	18.2 %	144	85.6 %	1000
HU	5.4 %	17.5 %	65.1 %	12.0 %	748	37.4 %	1195
IE	16.5 %	26.3 %	31.4 %	25.8 %	3043	32.2 %	4487
IL	8.0 %	23.9 %	44.5 %	23.7 %	350	73.4 %	1315
NO	3.4 %	16.8 %	45.1 %	34.7 %	2017	29.4 %	2855
PT	1.8 %	12.2 %	74.0 %	12.0 %	607	51.3 %	1247
SK	6.1 %	44.5 %	40.1 %	9.3 %	1940	9.6 %	2145
Mean	7.8 %	24.9 %	49.0 %	18.3 %	1476	31.6 %	

Source: HLS₁₉ Consortium

12.4 Item wording of correlates on use of digital resources

In a typical week, how many days do you use the following digital resources for getting health related information (response categories “: Less than once per week”, “1–3 days per week”, “4–6 days per week”, “once a day”, “more than once per day”, “not relevant to me” and “DK/refusal”

1. Websites
2. Social Media including online forums
3. A digital device related to health or health care [Interviewer instruction e.g., pedometer, smart watch, fitness bracelet, etc.]
4. Health app on your mobile phone [Interviewer instruction e.g., to calculate calorie consumption, support medication intake, measure physical activity, promote healthy sleep, etc.]
5. Digital interaction with your health system [Interviewer instruction e.g., online appointments, access to personal health records, electronic delivery/transmission of medical tests, digital communication with a provider, etc.]
6. Other

12.5 Distribution of individual items on use of digital resources

Table A 12.25: Percentage distributions (for total N), percentage of missing and total N for Item **"Websites"**, for each country and for all countries (equally weighted)

	Less than once per week	1–3 days per week	4–6 days per week	Once a day	More than once per day	Not relevant / DK / Refusal	Total
AT	49.4 %	18.0 %	3.9 %	3.0 %	1.1 %	24.5 %	2967
BE	69.1 %	15.9 %	4.9 %	3.6 %	6.5 %	0.0 %	1000
CH	54.8 %	12.7 %	2.4 %	2.0 %	1.7 %	26.4 %	2502
CZ	44.7 %	16.8 %	2.8 %	5.0 %	5.7 %	25.0 %	1599
DE	50.2 %	9.8 %	1.4 %	0.7 %	0.9 %	37.0 %	2143
DK	67.0 %	14.2 %	2.5 %	1.7 %	2.2 %	12.5 %	3602
FR	78.7 %	9.9 %	2.4 %	2.0 %	1.8 %	5.2 %	1000
HU	38.9 %	20.6 %	5.0 %	6.4 %	3.1 %	26.0 %	1195
IE	37.7 %	19.8 %	2.2 %	3.2 %	0.8 %	36.2 %	4487
IL	36.6 %	25.7 %	6.8 %	7.2 %	18.8 %	4.9 %	1315
PT	46.3 %	12.0 %	2.2 %	3.2 %	1.0 %	35.3 %	1247
SK	46.6 %	20.6 %	5.6 %	4.2 %	6.9 %	16.1 %	2145
Mean	47.7 %	15.1 %	3.2 %	3.2 %	3.9 %	26.9 %	

Source: HLS₁₉ Consortium

Table A 12.26: Percentage distributions (for total N), percentage of missing and total N for Item “Social Media including online forums”, for each country and for all countries (equally weighted)

	Less than once per week	1–3 days per week	4–6 days per week	Once a day	More than once per day	Not relevant / DK / Refusal	Total
AT	26.3 %	11.2 %	3.0 %	2.1 %	1.0 %	56.5 %	2967
BE	83.4 %	7.0 %	3.4 %	2.4 %	3.8 %	0.0 %	1000
CH	28.6 %	6.7 %	1.5 %	1.1 %	1.5 %	60.7 %	2502
CZ	31.8 %	11.5 %	3.4 %	4.8 %	5.1 %	43.3 %	1599
DE	30.7 %	4.8 %	0.8 %	0.6 %	0.3 %	62.8 %	2143
DK	58.3 %	9.5 %	2.2 %	2.1 %	3.3 %	24.7 %	3602
FR	84.8 %	4.0 %	1.7 %	1.5 %	1.8 %	6.2 %	1000
HU	34.8 %	16.5 %	3.8 %	7.7 %	2.5 %	34.7 %	1195
IE	21.8 %	11.5 %	1.6 %	4.2 %	1.5 %	59.4 %	4487
IL	33.8 %	15.7 %	6.3 %	7.8 %	17.0 %	19.3 %	1315
PT	27.3 %	7.9 %	2.3 %	3.0 %	1.3 %	58.1 %	1247
SK	48.9 %	11.0 %	4.4 %	3.0 %	5.1 %	27.7 %	2145
Mean	39.3 %	9.0 %	2.6 %	3.1 %	3.4 %	42.6 %	

Source: HLS₁₉ Consortium

Table A 12.27: Percentage distributions (for total N), percentage of missing and total N for Item “A digital device related to health or health care”, for each country and for all countries (equally weighted)

	Less than once per week	1–3 days per week	4–6 days per week	Once a day	More than once per day	Not relevant / DK / Refusal	Total
AT	9.0 %	8.6 %	8.2 %	8.5 %	7.3 %	58.4 %	2967
BE	74.8 %	7.4 %	6.7 %	5.1 %	6.0 %	0.0 %	1000
CH	12.3 %	7.1 %	3.9 %	4.9 %	3.6 %	68.2 %	2502
CZ	15.6 %	6.1 %	4.0 %	8.7 %	11.2 %	54.4 %	1599
DE	9.3 %	7.7 %	4.3 %	3.4 %	6.4 %	68.8 %	2143
DK	33.2 %	10.1 %	6.3 %	9.5 %	14.5 %	26.4 %	3602
FR	72.8 %	5.2 %	4.2 %	5.4 %	6.3 %	6.1 %	1000
HU	12.3 %	5.0 %	2.6 %	8.4 %	10.9 %	60.8 %	1195
IE	9.2 %	8.6 %	2.5 %	15.4 %	6.8 %	57.5 %	4487
IL	29.1 %	11.8 %	7.5 %	10.1 %	6.9 %	34.6 %	1315
PT	5.3 %	6.2 %	3.8 %	6.2 %	3.0 %	75.5 %	1247
SK	38.1 %	8.0 %	5.7 %	5.6 %	6.0 %	36.6 %	2145
Mean	24.7 %	7.1 %	4.6 %	7.0 %	6.8 %	49.8 %	

Source: HLS₁₉ Consortium

Table A 12.28: Percentage distributions (for total N), percentage of missing and total N for Item “Health app on your mobile phone”, for each country and for all countries (equally weighted)

	Less than once per week	1–3 days per week	4–6 days per week	Once a day	More than once per day	Not relevant / DK / Refusal	Total
AT	7.9 %	5.7 %	4.7 %	8.2 %	6.3 %	67.2 %	2967
BE	75.2 %	7.4 %	5.4 %	6.5 %	5.5 %	0.0 %	1000
CH	12.1 %	7.0 %	3.1 %	5.7 %	2.4 %	69.7 %	2502
CZ	15.3 %	5.7 %	3.1 %	8.4 %	5.5 %	62.1 %	1599
DE	7.2 %	3.9 %	2.8 %	3.4 %	3.6 %	79.1 %	2143
DK	37.7 %	9.5 %	5.0 %	7.6 %	8.6 %	31.6 %	3602
FR	73.5 %	6.2 %	4.4 %	5.0 %	4.9 %	6.1 %	1000
HU	11.0 %	5.3 %	2.2 %	8.2 %	5.3 %	68.0 %	1195
IE	9.8 %	12.4 %	3.3 %	15.4 %	4.4 %	54.7 %	4487
IL	29.7 %	13.1 %	6.3 %	8.6 %	5.6 %	36.7 %	1315
PT	8.0 %	8.6 %	5.3 %	7.5 %	2.6 %	68.1 %	1247
SK	35.3 %	8.5 %	5.3 %	6.2 %	4.4 %	40.3 %	2145
Mean	24.8 %	7.2 %	3.9 %	7.0 %	4.5 %	52.6 %	

Source: HLS₁₉ Consortium

Table A 12.29: Percentage distributions (for total N), percentage of missing and total N for Item “Digital interaction with your health system”, for each country and for all countries (equally weighted)

	Less than once per week	1–3 days per week	4–6 days per week	Once a day	More than once per day	Not relevant / DK / Refusal	Total
AT	21.1 %	2.7 %	0.7 %	0.3 %	0.2 %	75.0 %	2967
BE	89.2 %	6.3 %	1.9 %	1.6 %	1.0 %	0.0 %	1000
CH	14.8 %	0.9 %	0.3 %	0.2 %	0.0 %	83.8 %	2502
CZ	46.1 %	3.2 %	1.1 %	1.6 %	2.0 %	46.0 %	1599
DE	14.3 %	0.8 %	0.2 %	0.1 %	0.2 %	84.4 %	2143
DK	78.1 %	5.5 %	1.1 %	0.7 %	1.0 %	13.8 %	3602
FR	86.7 %	3.2 %	2.8 %	1.0 %	1.4 %	4.9 %	1000
HU	30.3 %	3.8 %	0.9 %	1.4 %	1.5 %	62.0 %	1195
IE	26.9 %	8.3 %	0.7 %	1.7 %	0.4 %	62.1 %	4487
IL	57.6 %	18.9 %	4.5 %	3.9 %	3.2 %	11.8 %	1315
PT	52.7 %	3.7 %	0.6 %	0.5 %	0.2 %	42.3 %	1247
SK	52.4 %	3.6 %	1.2 %	0.8 %	0.6 %	41.5 %	2145
Mean	43.9 %	4.7 %	1.2 %	1.1 %	0.9 %	48.3 %	

Source: HLS₁₉ Consortium

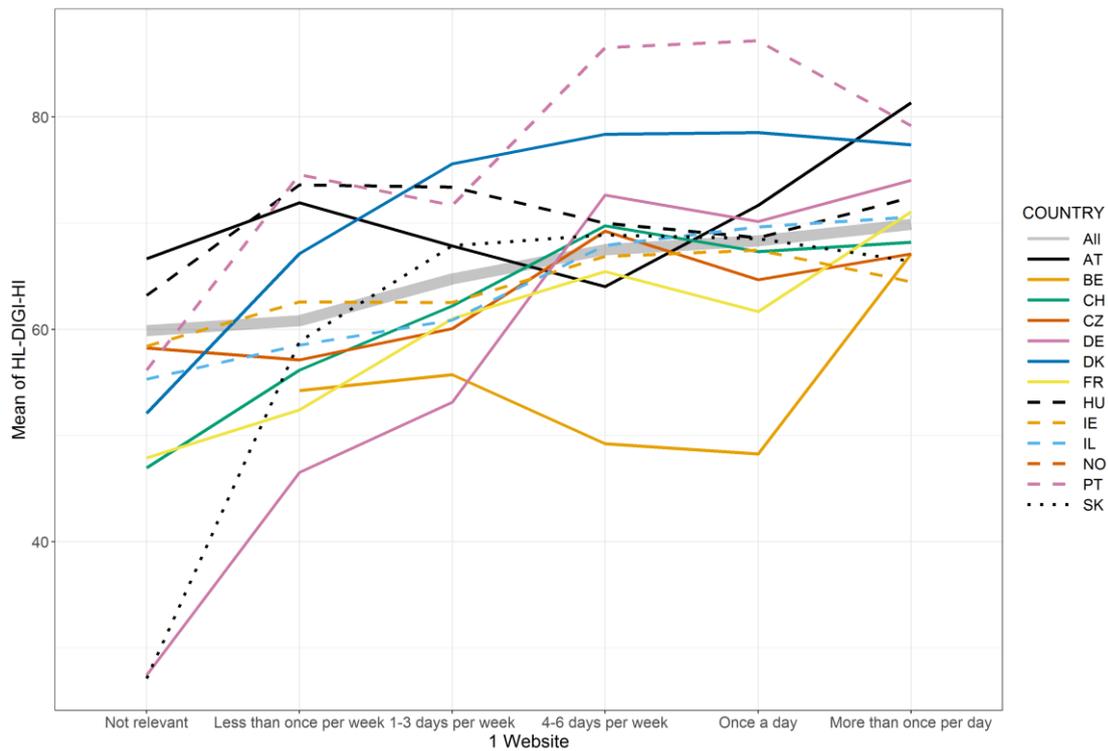
Table A 12.30: Percentage distributions (for total N), percentage of missing and total N for Item “Other”, for each country and for all countries (equally weighted)

	Less than once per week	1–3 days per week	4–6 days per week	Once a day	More than once per day	Not relevant / DK / Refusal	Total
AT	1.8 %	0.9 %	0.1 %	0.1 %	0.1 %	97.0 %	2967
BE	63.2 %	1.7 %	2.4 %	1.0 %	0.5 %	31.2 %	1000
CH	22.2 %	3.5 %	0.6 %	0.6 %	0.6 %	72.4 %	2502
CZ	16.3 %	2.3 %	1.0 %	1.4 %	1.2 %	77.7 %	1599
DE	32.8 %	4.8 %	1.0 %	0.7 %	0.3 %	60.4 %	2143
DK	13.2 %	1.0 %	0.3 %	0.5 %	0.5 %	84.5 %	3602
FR	83.6 %	3.6 %	1.7 %	1.2 %	1.2 %	8.7 %	1000
HU	16.6 %	1.7 %	0.8 %	1.3 %	1.8 %	77.7 %	1195
IE	1.3 %	1.1 %	0.3 %	1.4 %	0.5 %	95.3 %	4487
IL	28.5 %	6.5 %	3.2 %	3.1 %	3.4 %	55.3 %	1315
PT	2.6 %	0.5 %	0.2 %	0.2 %	0.2 %	96.4 %	1247
SK	32.8 %	1.5 %	1.0 %	0.6 %	0.9 %	63.1 %	2145
Mean	24.2 %	2.2 %	1.0 %	0.9 %	0.9 %	70.7 %	

Source: HLS₁₉ Consortium

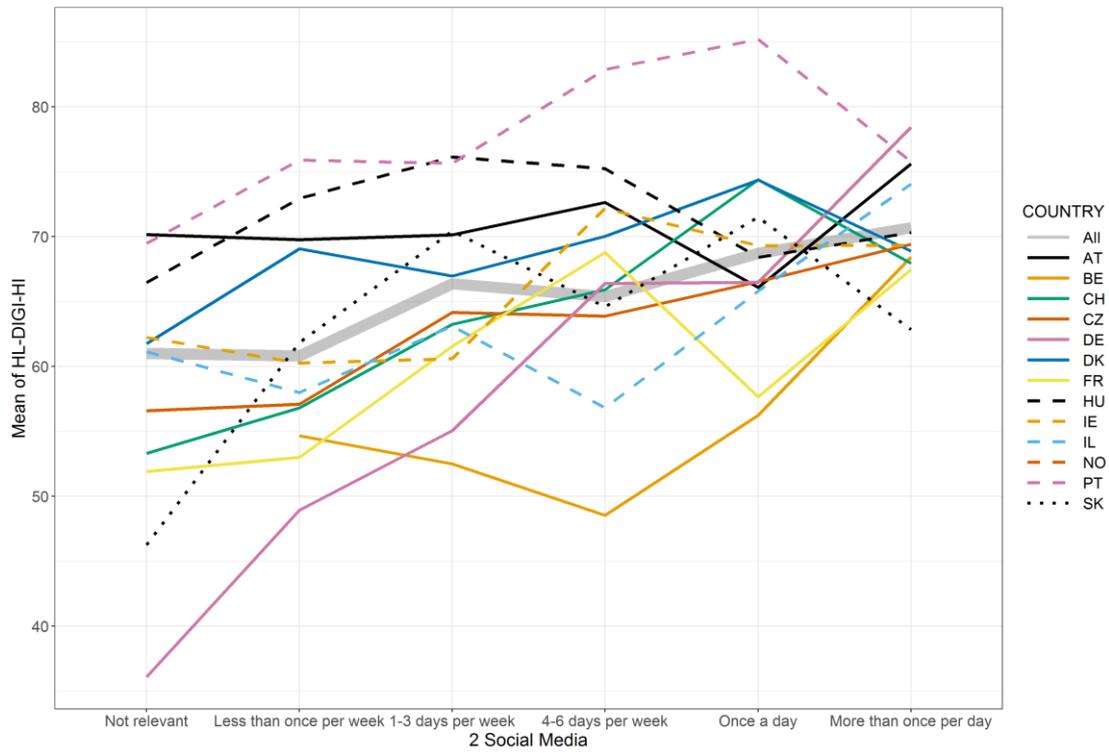
12.6 Associations of indicators for use of digital resources with Digital HL

Figure A 12.1: Means of HL-DIGI scores by use of **websites**, for each country and for all countries (equally weighted)



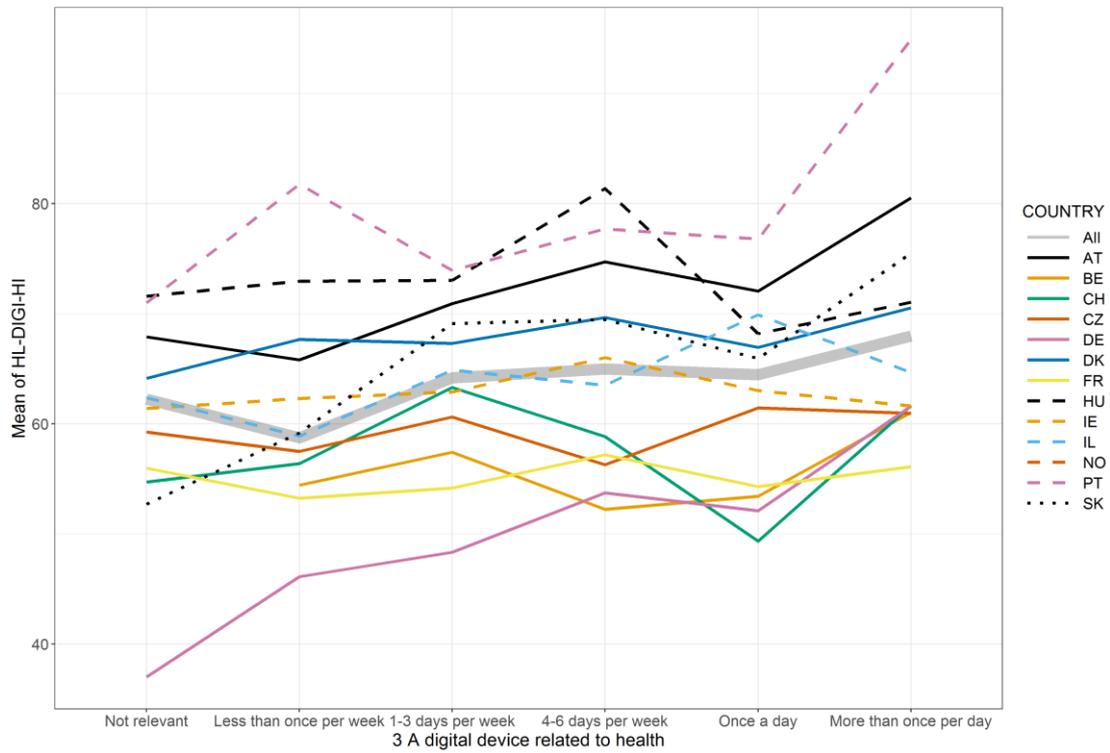
ource: HLS₁₉ Consortium

Figure A 12.2: Means of HL-DIGI scores by use **social media**, for each country and for all countries (equally weighted)



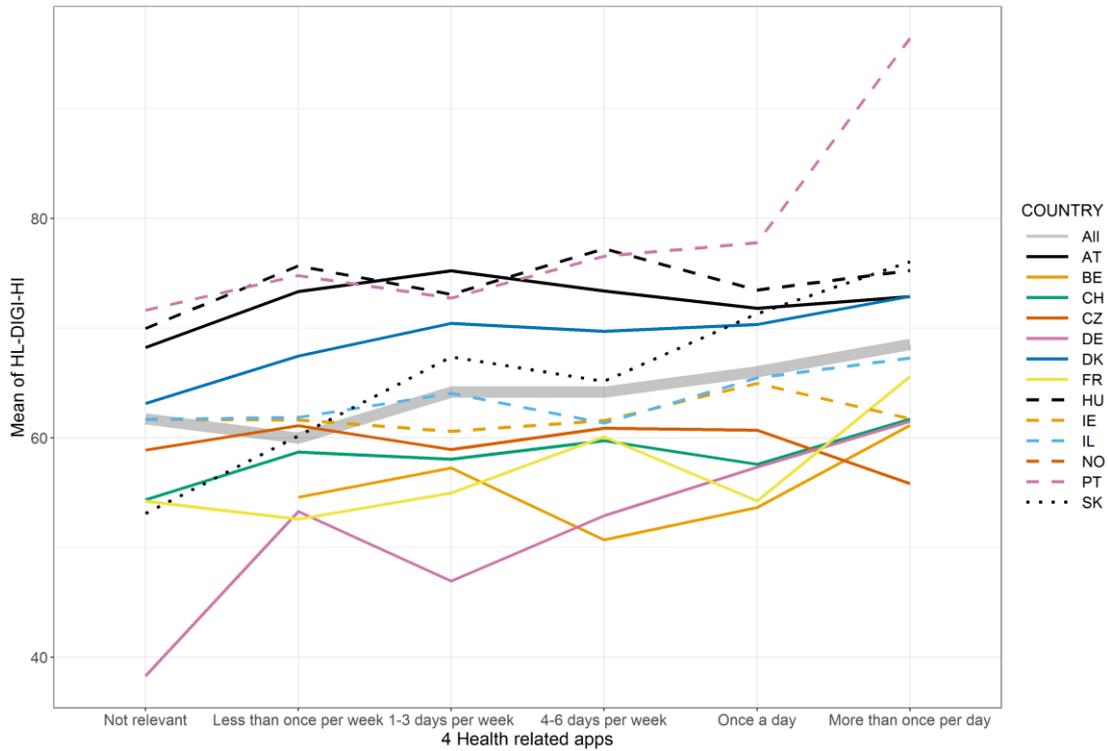
Source: HLS₁₉ Consortium

Figure A 12.3: Means of HL-DIGI scores by use of a **digital device** related to health, for each country and for all countries (equally weighted)



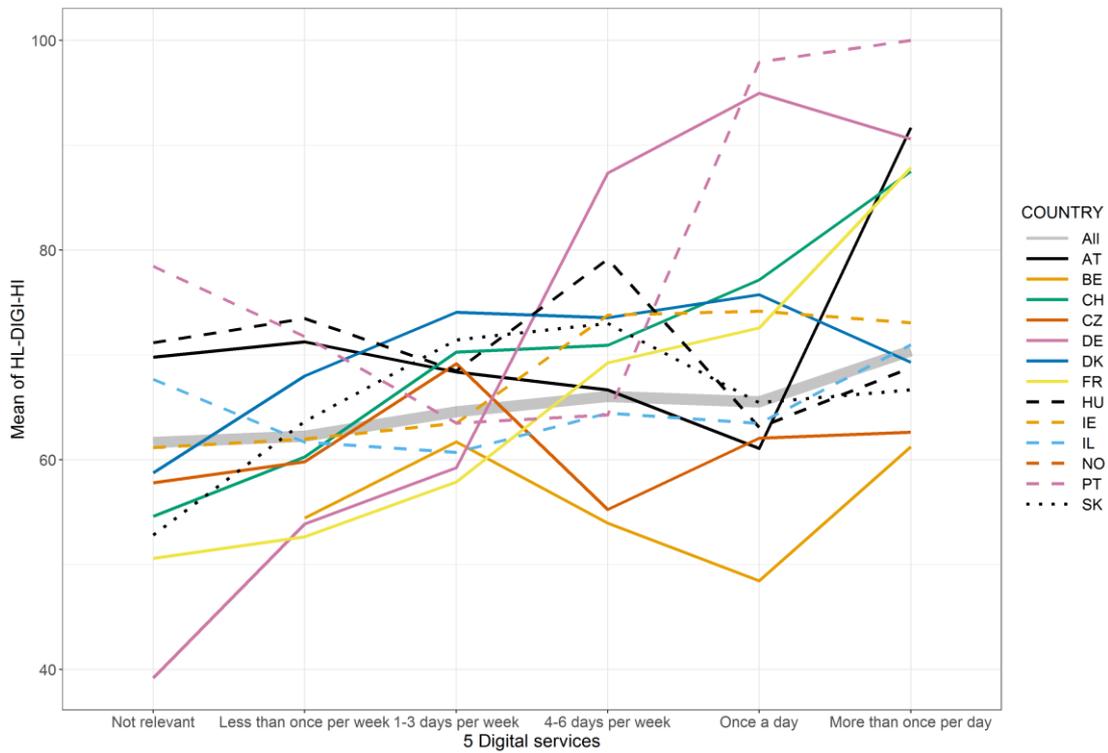
Source: HLS₁₉ Consortium

Figure A 12.4: Means of HL-DIGI scores by use of **health-related apps**, for each country and for all countries (equally weighted)



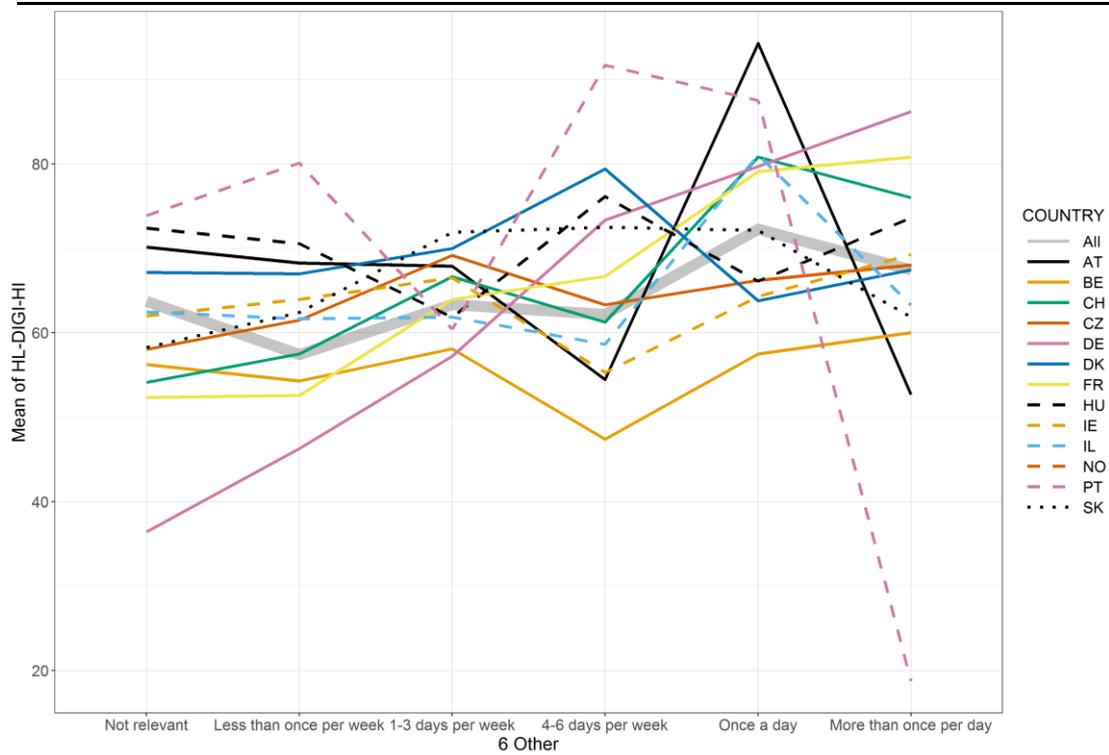
Source: HLS₁₉ Consortium

Figure A 12.5: Means of HL-DIGI scores by use of **digital services**, for each country and for all countries (equally weighted)



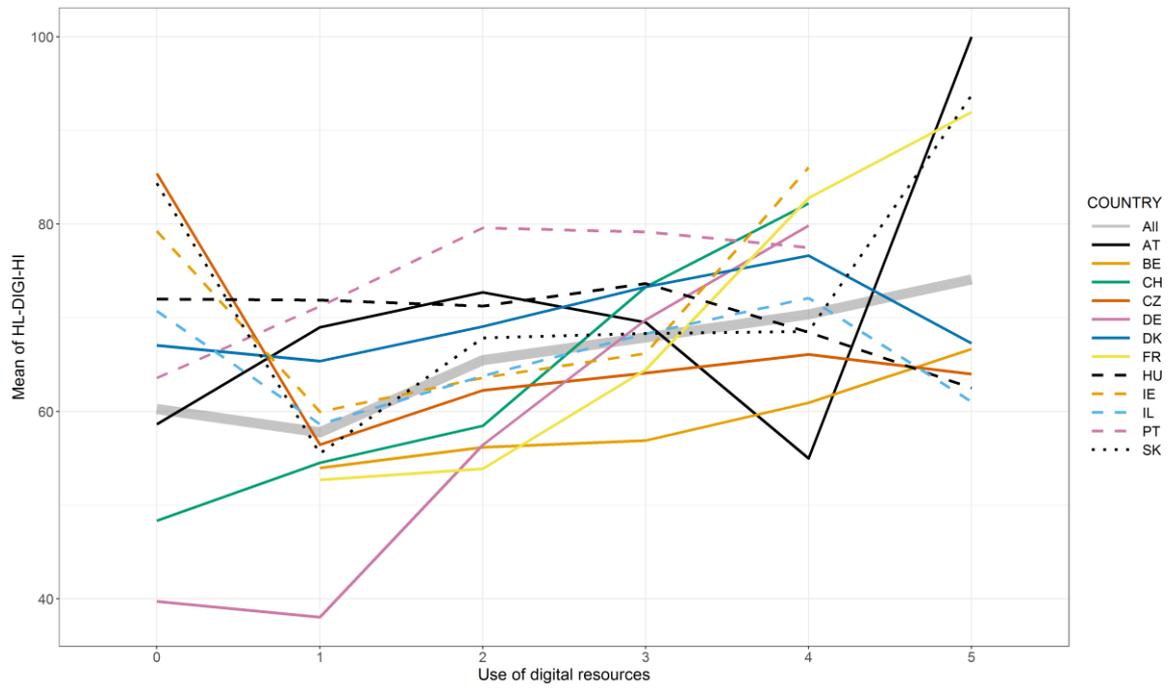
Source: HLS₁₉ Consortium

Figure A 12.6: Means of HL-DIGI scores by use of **other** digital resources, for each country and for all countries (equally weighted)



Source: HLS19 Consortium

Figure A 12.7: Means of HL-DIGI scores by the grouped score of the use of digital resources index, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

12.7 Spearman correlations of the DIGI HL with General HL, use of digital resources score and socio-demographic and socio-economic determinants

Table A 12.31: Spearman correlations (ρ) of the HLS₁₉-DIGI score with GEN-HL, use of digital resources score, gender, age, education, level in society, financial deprivation, migration background, and training in a health profession for each country and for all countries (weighted equally)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	PT	SK	All
GEN-HL	0.50	0.45	0.51	0.59	0.58	0.56	0.62	0.5	0.51	0.68	0.58	0.56	0.58
Use of digital resources score	0.07	0.04	0.10	0.09	0.31	0.10	0.06	0	0.06	0.15	0.16	0.23	0.15
Gender female	-0.02	0.02	-0.03	0.01	-0.02	0.07	0	0.04	0.06	0.01	-0.07	-0.01	0.01
Age in years	-0.17	-0.03	-0.14	-0.01	-0.25	-0.16	-0.14	-0.03	0.03	0	-0.07	-0.20	-0.11
Education	0.06	0.04	0.08	-0.03	0.24	0.18	0.05	0.10	0.11	0.02	0.06	0.31	0.07
Level in society	0	0.14	0.13	0.12	0.24	0.17	0.13	0.14	0.07	0.18	0.05	0.25	0.12
Financial deprivation	-0.15	-0.09	-0.11	-0.18	-0.18	-0.15	-0.11	-0.26	-0.16	-0.19	-0.18	-0.37	-0.17
Migration background	0.06	-0.01	0.09	-0.03	0.01	0.04	0.07	-0.02	0.04	-0.06	0.02	-0.03	0.01
No training in a health profession	-0.03	-0.09	-0.13	-0.1	-0.17	-0.16	-0.14	-0.15	-0.07	-0.11	-0.08	-0.18	-0.14

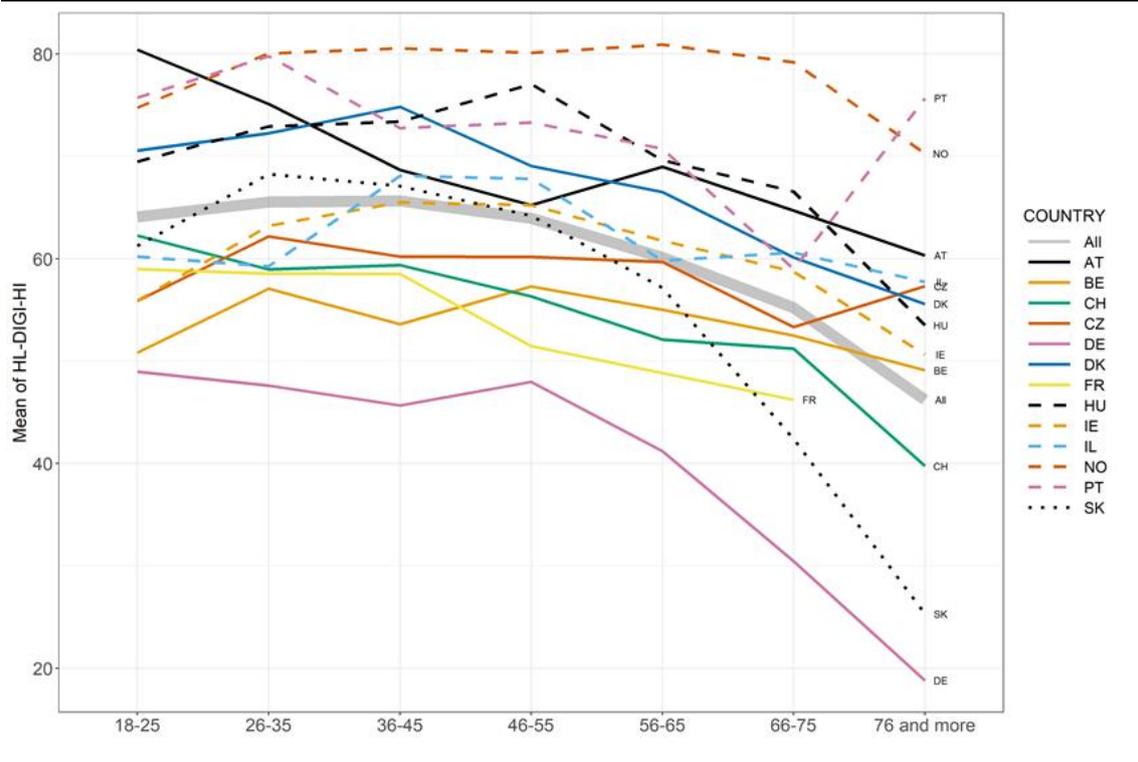
* Values for correlations with migration should be treated with caution as in two countries (HU and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).
 Level in society from 1=lowest level to 10=highest level in society.
 Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).
 Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.
 Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

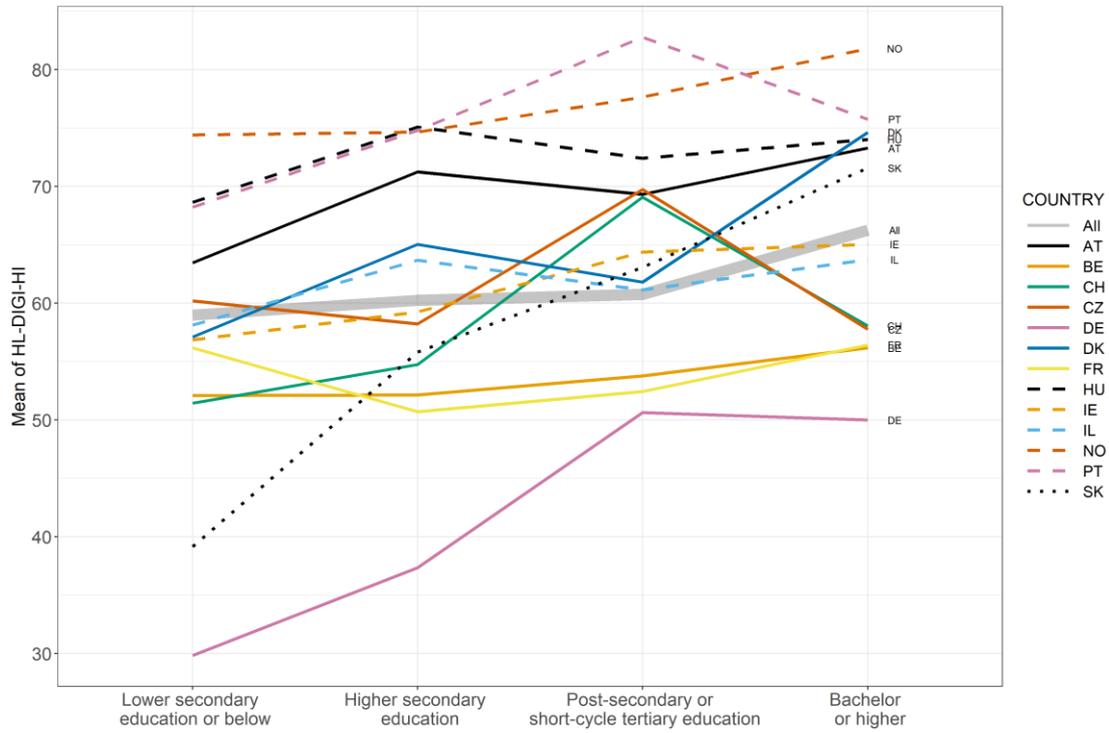
12.8 Associations of selected socio-demographic and socio-economic determinants with Digital HL

Figure A 12.8: Means of HL-DIGI-HI scores by **age in seven groups**, for each country and for all countries (equally weighted)



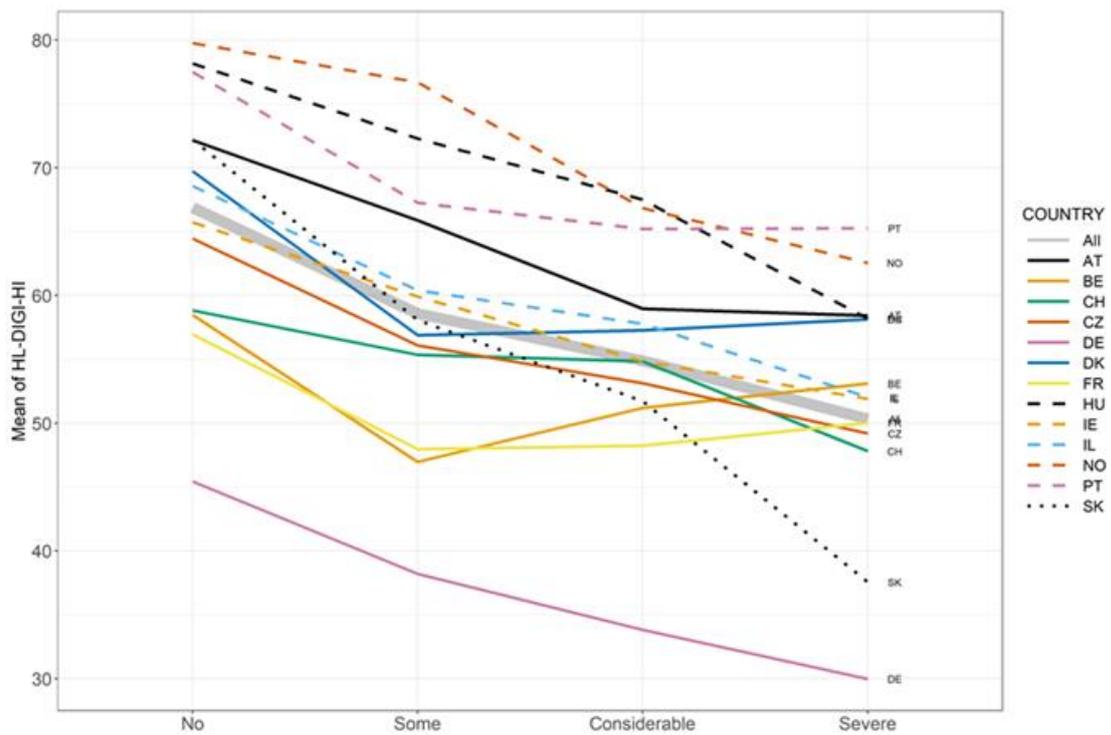
Source: HLS₁₉ Consortium

Figure A 12.9: Means of HL-DIGI-HI scores by **education levels** (four grouped categories), for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

Figure A 12.10: Means of HL-DIGI-HI scores by financial deprivation level, for each country and for all countries (equally weighted)



Source: HLS₁₉ Consortium

12.9 Multivariable linear regression models of Digital HL and selected determinants

Table A 12.32: Model 3: Multivariable linear regression models of HL-DIGI by GEN-HL and five core social determinants (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
GEN-HL	0.44	0.44	0.47	0.56	0.54	0.53	0.60	0.46	0.47	0.67	0.46	0.53	0.43	0.51
Gender female	-0.02	0.01	0	-0.02	-0.01	0.04	-0.02	0.05	0.02	-0.01	0.05	-0.06	-0.01	0
Age in years	-0.16	-0.06	-0.17	-0.08	-0.20	-0.21	-0.17	-0.11	-0.04	-0.10	-0.03	-0.10	-0.15	-0.13
Education	0.06	0.03	0.02	0.01	0.09	0.12	0.03	0	0.05	0.07	0.09	0.01	0.17	0.06
Level in society	0.01	0.03	0.05	0.03	0.07	0.05	0.04	-0.02	0.01	0.03	0.01	-0.07	0.05	0.03
Financial deprivation	-0.06	-0.09	-0.04	-0.04	0	0.01	0.03	-0.15	-0.03	0	-0.03	-0.07	-0.14	-0.06
R^2	0.25	0.21	0.27	0.33	0.41	0.38	0.39	0.29	0.25	0.46	0.24	0.31	0.38	0.33
Valid Count	2253	988	1901	1249	1735	3537	1000	892	3516	1149	2272	760	1624	
Total Count	2967	1000	2502	1599	2143	3602	1000	1195	4487	1315	2855	1247	2145	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

GEN-HL-Index: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels. from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories. from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

Table A 12.33: Model 4: Multivariable linear regression models of HL-DIGI by five core social determinants and long-term illness/health problems (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
Gender female	0.02	0.02	0	0.02	0.03	0.07	0	0.04	0.04	0.04	0.08	-0.07	0.02	0.03
Age in years	-0.19	-0.05	-0.17	-0.03	-0.25	-0.16	-0.14	-0.03	0	-0.03	-0.02	-0.03	-0.14	-0.12
Education	0.04	0.01	0.02	-0.07	0.16	0.14	-0.01	0.02	0.07	0.01	0.11	0.04	0.18	0.03
Level in society	0.01	0.12	0.08	0.1	0.13	0.1	0.11	-0.02	0.05	0.12	0.05	-0.04	0.11	0.08
Financial deprivation	-0.14	-0.07	-0.1	-0.16	-0.08	-0.09	-0.06	-0.25	-0.13	-0.14	-0.09	-0.15	-0.26	-0.15
Long-term illness	-0.03	0	-0.03	0	0.01	-0.02	-0.01	-0.10	0.01	-0.02	0	-0.16	-0.06	-0.05
R^2	0.07	0.02	0.06	0.05	0.14	0.10	0.04	0.09	0.04	0.05	0.04	0.07	0.22	0.06
Valid Count	2246	988	1900	1249	1710	3531	1000	889	3509	1148	2255	757	1599	
Total Count	2967	1000	2502	1599	2143	3602	1000	1195	4487	1315	2855	1247	2145	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

HL-DIGI score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels. from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories. from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one,

Source: HLS₁₉ Consortium

12.10 Spearman correlations on consequences of Digital HL

Table A 12.34: Spearman Correlations among self-perceived health, HL-DIGI, GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
HL-DIGI	-0.18	-0.12	-0.17	-0.12	-0.28	-0.18	-0.19	-0.12	-0.10	-0.15	-0.11	-0.11	-0.26	-0.18
GEN-HL	-0.21	-0.21	-0.17	-0.07	-0.20	-0.27	-0.20	-0.15	-0.17	-0.15	-0.19	-0.23	-0.24	-0.20
Gender female	0.02	0.06	-0.01	-0.06	0.02	-0.05	0.01	0.09	-0.04	0.02	-0.01	0.09	0.05	0.02
Age in years	0.28	0.07	0.2	0.41	0.44	0.07	0.22	0.37	0.12	0.27	0.16	0.49	0.5	0.27
Education	-0.14	-0.17	-0.14	-0.28	-0.1	-0.15	-0.12	-0.21	-0.19	0	-0.11	-0.41	-0.23	-0.15
Level in society	-0.15	-0.3	-0.24	-0.25	-0.19	-0.25	-0.26	-0.25	-0.16	-0.21	-0.23	-0.34	-0.25	-0.24
Financial deprivation	0.17	0	0.22	0.2	0.2	0.27	0.23	0.37	0.24	0.19	0.15	0.35	0.32	0.24
Migration*	-0.08	-0.01	0.01	0.03	-0.04	-0.03	0	0.01	-0.04	0.2	-0.07	-0.08	0.02	-0.04
No training in a health profession	0.01	-0.03	0.06	0.04	0.07	0.03	0.07	0.08	0.05	0.05	0.03	0.14	0	0.03

* Values for correlations with migration should be treated with caution as in two countries (HU and SK) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

Table A 12.35: Spearman Correlations among utilization of GP/family doctors, HL-DIGI, GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
HL-DIGI	-0.17	-0.04	-0.11	-0.04	-0.18	-0.10	-0.09	-0.11	-0.06	-0.06	-0.07	-0.12	-0.18	-0.12
GEN-HL	-0.12	-0.04	-0.08	0.03	-0.12	-0.08	-0.06	-0.02	-0.07	-0.01	-0.07	-0.14	-0.16	-0.1
Gender female	0.13	0.1	0.06	-0.02	0.1	0.1	0.08	0.16	0.13	0.08	0.14	0.13	0.09	0.1
Age in years	0.25	0.2	0.18	0.2	0.33	0.08	0.19	0.28	0.14	0.02	0.05	0.18	0.26	0.18
Education	-0.04	-0.24	-0.09	-0.17	-0.06	-0.06	-0.06	-0.05	-0.07	-0.05	-0.09	-0.15	-0.15	-0.03
Level in society	0.01	-0.08	-0.1	-0.07	-0.11	-0.12	-0.06	-0.07	-0.08	-0.07	-0.04	-0.09	-0.12	-0.04
Financial deprivation	0.11	-0.04	0.1	0.11	0.14	0.09	0.09	0.16	0.11	0.15	0.12	0.11	0.25	0.1
Migration*	-0.07	-0.01	0.01	0.03	-0.05	0.01	0.03	0	-0.07	-0.01	0.01	-0.02	-0.03	0
No training in a health profession	-0.01	-0.03	0.05	0.03	0.05	-0.01	-0.05	-0.02	-0.02	0.01	0.02	-0.02	0.06	0.02

* Values for correlations with migration should be treated with caution in SK as the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Source: HLS₁₉ Consortium

Table A 12.36: Spearman Correlations among utilization of medical and surgical specialists, HL-DIGI, GEN-HL, and other selected determinants, for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
HL-DIGI	-0.07	0	-0.06	-0.08	-0.10	-0.06	-0.06	-0.03	-0.01	-0.08	-0.04	-0.12	-0.12	-0.10
GEN-HL	-0.05	0.03	-0.06	-0.02	-0.1	-0.05	-0.06	-0.05	-0.04	-0.07	-0.02	-0.05	-0.11	-0.07
Gender female	0.21	0.16	0.1	0.11	0.12	0.05	0.13	0.13	0.04	0.11	0.03	0.15	0.12	0.11
Age in years	0.14	0.17	0.13	0.12	0.31	0.11	0.1	0.13	0.13	0.2	0.09	0.07	0.27	0.15
Education	0.05	-0.09	0.07	-0.01	0.04	0.04	0.06	0.11	-0.02	0.1	0.03	0.1	-0.05	0.01
Level in society	0.02	-0.07	-0.06	-0.05	-0.06	0	0.01	-0.04	-0.04	-0.04	0.01	0.07	-0.06	-0.04
Financial deprivation	0.05	0.04	0.06	0.06	0.09	0.05	0.07	0.14	0.04	0.09	0.03	0	0.13	0.1
Migration*	-0.01	0.04	0.01	-0.01	-0.06	0.02	0.01	-0.07	-0.06	0.16	-0.02	-0.01	0.01	0
No training in a health profession	-0.08	-0.06	-0.04	-0.05	0	0	-0.07	-0.06	0	0.03	-0.01	-0.08	-0.04	-0.02

* Values for correlations with migration should be treated with caution in SK as the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

12.11 Multivariable linear regression models of Digital HL and self-perceived health

Table A 12.37: Model 2: Multivariable linear regression models of self-perceived health, by GEN-HL, HL-DIGI score and five core social determinants (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
GEN-HL	-0.18	-0.15	-0.15	-0.07	-0.09	-0.23	-0.16	-0.12	-0.11	-0.1	-0.11	-0.03	-0.01	-0.15
HL-DIGI	-0.03	0.01	-0.01	-0.03	-0.08	0.03	-0.03	0.03	0	-0.04	-0.02	-0.07	-0.09	-0.01
Gender female	-0.02	0.05	-0.03	-0.02	-0.02	-0.05	-0.01	0.05	-0.02	-0.02	0.03	0.09	0.02	0
Age in years	0.24	0.08	0.22	0.35	0.38	0.12	0.21	0.32	0.12	0.31	0.16	0.3	0.38	0.25
Education	-0.07	-0.09	-0.04	-0.11	-0.02	-0.04	0	-0.05	-0.08	0.01	-0.09	-0.06	-0.03	-0.04
Level in society	-0.10	-0.27	-0.18	-0.14	-0.08	-0.14	-0.23	-0.13	-0.11	-0.16	-0.19	-0.12	-0.10	-0.16
Financial deprivation	0.13	-0.03	0.14	0.15	0.14	0.17	0.11	0.19	0.18	0.12	0.15	0.17	0.14	0.13
R^2	0.17	0.13	0.16	0.24	0.25	0.16	0.18	0.23	0.11	0.17	0.13	0.23	0.26	0.17
Valid Count	2251	988	1900	1249	1733	3535	1000	892	3516	1147	2271	760	1621	
Total Count	2967	1000	2502	1599	2143	3602	1000	1195	4487	1315	2855	1247	2145	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Self-perceived health: from very good (1) to very bad (5).

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-DIGI score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

12.12 Multivariable linear regression models of utilization of GPs/family doctors and medical and surgical specialists

Table A 12.38: Model 2: Multivariable linear regression models of utilization of GP/family doctors by GEN-HL, HL-DIGI and five core social determinants (standardized β coefficients and R^2), for each country and for all countries (equally weighted)

	AT	BE	CH	CZ	DE	DK	FR	HU	IE	IL	NO	PT	SK	All
GEN-HL	-0.07	-0.03	-0.08	0	-0.03	-0.03	0.02	0.04	-0.04	0.05	-0.02	-0.08	0	-0.07
HL-DIGI	-0.07	-0.01	-0.02	-0.01	-0.06	-0.05	-0.07	-0.11	-0.03	-0.08	-0.05	-0.02	-0.09	-0.05
Gender female	0.10	0.08	0.03	0	0.09	0.10	0.07	0.14	0.17	0.08	0.16	0.19	0.07	0.10
Age in years	0.22	0.16	0.18	0.17	0.30	0.08	0.17	0.25	0.11	0.03	0.05	0.13	0.22	0.18
Education	-0.01	-0.18	-0.03	-0.09	-0.02	-0.02	-0.01	-0.03	-0.02	-0.07	-0.09	-0.03	-0.03	-0.03
Level in society	0.05	-0.06	-0.07	-0.04	-0.05	-0.08	-0.02	0	-0.05	0.02	0	0	0.03	-0.01
Financial deprivation	0.09	-0.01	0.07	0.10	0.08	0.06	0.13	0.07	0.09	0.14	0.09	0.06	0.17	0.08
R^2	0.11	0.09	0.06	0.06	0.14	0.04	0.06	0.11	0.06	0.04	0.05	0.08	0.13	0.07
Valid Count	2209	981	1901	1233	1689	3526	1000	891	3503	1149	2258	760	1615	
Total Count	2967	1000	2502	1599	2143	3602	1000	1195	4487	1315	2855	1247	2145	

Coefficients with p-values lower than 0.01 in bold.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Utilization of GPs/family doctors: number of contacts in the last 12 months, from 0 to 6 or more contacts.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-DIGI score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

13 Annex for Chapter 13: Vaccination Health Literacy

13.1 Distributions of single items of the Vaccination HL measure

Table A 13.1:

Item VAC1 Have you, your children or has someone in your family had any vaccinations in the last five years?

	Yes	No	Valid	Missing	Total
AT	80.5 %	19.5 %	2802	5.6 %	2967
BE	71.3 %	28.7 %	1000	0.0 %	1000
CZ	69.4 %	30.6 %	1589	0.6 %	1599
HU	54.4 %	45.6 %	1171	2.0 %	1195
IE	73.7 %	26.3 %	4433	1.2 %	4487
PT	92.0 %	8.0 %	1210	3.0 %	1247
SI	60.8 %	39.2 %	3277	2.5 %	3360
Mean	71.7 %	28.3 %	2212	2.4 %	2265

Source: HLS₁₉ Consortium

Table A 13.2:

Item VAC21 Vaccines overload and weaken the immune system

	True	False	Valid	Missing	Total
AT	22.6 %	77.4 %	2627	11.5 %	2967
BE	14.0 %	86.0 %	1000	0.0 %	1000
CZ	27.6 %	72.4 %	1544	3.4 %	1599
HU	29.0 %	71.0 %	1027	14.1 %	1195
IE	19.4 %	80.6 %	4271	4.8 %	4487
PT	9.0 %	91.0 %	1100	11.8 %	1247
SI	36.9 %	63.1 %	2875	14.4 %	3360
Mean	22.6 %	77.4 %	2063	8.9 %	2265

Source: HLS₁₉ Consortium

Table A 13.3:

Item VAC22 Vaccines can cause the diseases against which they protect

	True	False	Valid	Missing	Total
AT	27.8 %	72.2 %	2696	9.1 %	2967
BE	38.2 %	61.8 %	1000	0.0 %	1000
CZ	42.2 %	57.8 %	1559	2.5 %	1599
HU	42.6 %	57.4 %	1062	11.1 %	1195
IE	25.6 %	74.4 %	4348	3.1 %	4487
PT	19.3 %	80.7 %	1088	12.8 %	1247
SI	39.6 %	60.4 %	2959	11.9 %	3360
Mean	33.6 %	66.4 %	2102	7.2 %	2265

Source: HLS₁₉ Consortium

Table A 13.4:

Item VAC23 Vaccines often produce serious side effects (other than the normal and temporary reactions in the first few days)

	True	False	Valid	Missing	Total
AT	29.8 %	70.2 %	2625	11.5 %	2967
BE	22.5 %	77.5 %	1000	0.0 %	1000
CZ	39.2 %	60.8 %	1544	3.4 %	1599
HU	45.2 %	54.8 %	1063	11.0 %	1195
IE	35.7 %	64.3 %	4357	2.9 %	4487
PT	10.9 %	89.1 %	1095	12.2 %	1247
SI	34.5 %	65.5 %	2969	11.6 %	3360
Mean	31.1 %	68.9 %	2093	7.6 %	2265

Source: HLS₁₉ Consortium

Table A 13.5:

Item VAC31 Vaccinations are important to protect myself and my children

	Strongly agree	Agree	Disagree	Strongly disagree	Valid	Missing	Total
AT	62.4 %	29.2 %	6.3 %	2.0 %	2917	1.7 %	2967
BE	59.4 %	33.1 %	6.7 %	0.8 %	1000	0.0 %	1000
CZ	37.2 %	54.1 %	7.2 %	1.5 %	1594	0.3 %	1599
HU	41.9 %	47.7 %	9.1 %	1.2 %	1173	1.8 %	1195
IE	76.5 %	15.7 %	4.5 %	3.3 %	4465	0.5 %	4487
PT	43.9 %	54.9 %	1.2 %	0.0 %	1235	1.0 %	1247
SI	33.6 %	56.2 %	8.5 %	1.6 %	3241	3.5 %	3360
Mean	50.7 %	41.6 %	6.2 %	1.5 %	2232	1.5 %	2265

Source: HLS₁₉ Consortium

Table A 13.6:

Item VAC32 Overall I think vaccinations are safe

	Strongly agree	Agree	Disagree	Strongly disagree	Valid	Missing	Total
AT	56.3 %	31.9 %	9.2 %	2.6 %	2920	1.6 %	2967
BE	39.2 %	47.4 %	10.5 %	2.9 %	1000	0.0 %	1000
CZ	24.6 %	61.2 %	11.7 %	2.4 %	1590	0.6 %	1599
HU	37.2 %	50.0 %	11.7 %	1.1 %	1146	4.1 %	1195
IE	62.8 %	24.8 %	7.8 %	4.5 %	4447	0.9 %	4487
PT	24.6 %	72.7 %	2.7 %	0.0 %	1215	2.6 %	1247
SI	22.8 %	60.0 %	14.6 %	2.6 %	3191	5.0 %	3360
Mean	38.2 %	49.7 %	9.7 %	2.3 %	2216	2.2 %	2265

Source: HLS₁₉ Consortium

Table A 13.7:

Item VAC33 Overall I think vaccinations are effective

	Strongly agree	Agree	Disagree	Strongly disagree	Valid	Missing	Total
AT	58.4 %	32.3 %	7.3 %	1.9 %	2895	2.4 %	2967
BE	43.1 %	48.2 %	7.6 %	1.1 %	1000	0.0 %	1000
CZ	27.4 %	62.0 %	8.9 %	1.6 %	1594	0.3 %	1599
HU	37.7 %	51.9 %	9.7 %	0.7 %	1150	3.8 %	1195
IE	64.5 %	26.2 %	6.2 %	3.2 %	4455	0.7 %	4487
PT	23.8 %	73.2 %	3.0 %	0.0 %	1216	2.5 %	1247
SI	24.1 %	62.0 %	12.6 %	1.4 %	3225	4.0 %	3360
Mean	39.9 %	50.8 %	7.9 %	1.4 %	2219	2.0 %	2265

Source: HLS₁₉ Consortium

Table A 13.8:

Item VAC34 Vaccination is compatible with my religious beliefs

	Strongly agree	Agree	Disagree	Strongly disagree	Valid	Missing	Total
AT	80.2 %	14.4 %	1.6 %	3.8 %	2793	5.9 %	2967
BE	56.1 %	23.2 %	6.8 %	13.9 %	1000	0.0 %	1000
CZ	29.0 %	44.8 %	13.8 %	12.4 %	1530	4.3 %	1599
HU	52.9 %	33.3 %	10.5 %	3.3 %	1139	4.7 %	1195
IE	66.6 %	15.0 %	6.1 %	12.3 %	4188	6.7 %	4487
PT	26.8 %	71.2 %	1.9 %	0.1 %	1133	9.1 %	1247
SI	31.9 %	50.0 %	10.4 %	7.7 %	3190	5.1 %	3360
Mean	49.1 %	36.0 %	7.3 %	7.6 %	2139	5.6 %	2265

Source: HLS₁₉ Consortium

Table A 13.9:

Item VAC35 Vaccinations are important to prevent the spread of (severe) diseases

	Strongly agree	Agree	Disagree	Strongly disagree	Valid	Missing	Total
AT	68.0 %	25.9 %	4.6 %	1.6 %	2918	1.7 %	2967
BE	61.9 %	32.2 %	4.9 %	1.0 %	1000	0.0 %	1000
CZ	40.3 %	51.4 %	6.7 %	1.6 %	1593	0.4 %	1599
HU	49.7 %	44.7 %	4.6 %	0.9 %	1166	2.4 %	1195
IE	77.1 %	16.1 %	4.2 %	2.6 %	4468	0.4 %	4487
PT	30.7 %	68.5 %	0.8 %	0.0 %	1222	2.0 %	1247
SI	39.5 %	52.8 %	6.2 %	1.4 %	3274	2.6 %	3360
Mean	52.5 %	41.7 %	4.6 %	1.3 %	2234	1.3 %	2265

Source: HLS₁₉ Consortium

Table A 13.10:

Item VAC4 In general, how high do you estimate the risk of developing a disease that you can be vaccinated against, if you are not vaccinated?

	Very high	High	Low	Very low	Valid	Missing	Total
AT	8.6 %	40.2 %	42.7 %	8.5 %	2772	6.6 %	2967
BE	6.2 %	43.9 %	43.0 %	6.9 %	1000	0.0 %	1000
CZ	9.5 %	45.7 %	38.7 %	6.0 %	1572	1.7 %	1599
HU	7.4 %	45.6 %	43.1 %	4.0 %	1102	7.8 %	1195
IE	21.6 %	47.2 %	24.5 %	6.7 %	4326	3.6 %	4487
PT	21.0 %	65.4 %	12.5 %	1.1 %	1137	8.8 %	1247
SI	14.2 %	45.5 %	33.2 %	7.1 %	3180	5.4 %	3360
Mean	12.6 %	47.6 %	34.0 %	5.8 %	2156	4.8 %	2265

Source: HLS₁₉ Consortium

Table A 13.11:

Item 19 (HLS₁₉-Q47) to find information on recommended vaccinations for you or your family?

	Very difficult	Difficult	Easy	Very Easy	Valid	Missing	Total
AT	2.0 %	16.5 %	53.4 %	28.1 %	2920	1.6 %	2967
BE	5.8 %	28.4 %	49.7 %	16.1 %	1000	0.0 %	1000
BG	8.4 %	41.0 %	42.3 %	8.3 %	817	5.5 %	865
CZ	3.3 %	20.8 %	56.9 %	18.9 %	1580	1.2 %	1599
DE	3.4 %	27.4 %	50.7 %	18.5 %	2132	0.5 %	2143
HU	2.8 %	16.5 %	67.6 %	13.1 %	1139	4.7 %	1195
IE	8.4 %	19.8 %	34.3 %	37.5 %	4377	2.5 %	4487
IT	4.5 %	28.7 %	53.2 %	13.5 %	3436	1.8 %	3500
NO	3.4 %	25.3 %	47.0 %	24.4 %	2708	5.1 %	2855
PT	1.0 %	14.7 %	78.5 %	5.8 %	1071	14.1 %	1247
SI	3.2 %	15.7 %	58.9 %	22.2 %	3328	1.0 %	3360
Mean	4.2 %	23.2 %	53.9 %	18.8 %	2228	2.8 %	2293

Source: HLS₁₉ Consortium

Table A 13.12:

Item 22 (HLS₁₉-Q47) to understand why you or your family may need vaccinations?

	Very difficult	Difficult	Easy	Very Easy	Valid	Missing	Total
AT	1.9 %	14.1 %	52.7 %	31.3 %	2920	1.6 %	2967
BE	6.4 %	23.2 %	45.5 %	24.9 %	1000	0.0 %	1000
BG	7.4 %	29.4 %	47.6 %	15.6 %	834	3.6 %	865
CZ	3.6 %	13.3 %	61.1 %	22.0 %	1588	0.7 %	1599
DE	3.2 %	21.6 %	54.8 %	20.5 %	2137	0.3 %	2143
HU	1.3 %	9.2 %	71.5 %	18.0 %	1178	1.4 %	1195
IE	5.9 %	11.8 %	30.7 %	51.6 %	4425	1.4 %	4487
IT	4.0 %	20.0 %	54.1 %	22.0 %	3465	1.0 %	3500
NO	1.7 %	8.9 %	38.7 %	50.7 %	2838	0.6 %	2855
PT	0.3 %	4.8 %	84.3 %	10.6 %	1220	2.2 %	1247
SI	3.0 %	13.0 %	55.6 %	28.4 %	3330	0.9 %	3360
Mean	3.5 %	15.4 %	54.2 %	26.9 %	2267	1.1 %	2293

Source: HLS₁₉ Consortium

Table A 13.13:

Item 26 (HLS₁₉-Q47) to judge which vaccinations you or your family may need?

	Very difficult	Difficult	Easy	Very Easy	Valid	Missing	Total
AT	2.3 %	18.1 %	51.7 %	27.8 %	2913	1.8 %	2967
BE	5.9 %	30.6 %	44.2 %	19.3 %	1000	0.0 %	1000
BG	10.7 %	43.4 %	36.6 %	9.4 %	835	3.5 %	865
CZ	4.4 %	25.3 %	54.5 %	15.9 %	1583	1.0 %	1599
DE	5.3 %	36.6 %	44.9 %	13.2 %	2132	0.5 %	2143
HU	1.5 %	19.6 %	64.9 %	14.0 %	1165	2.5 %	1195
IE	8.2 %	20.6 %	32.3 %	38.9 %	4413	1.6 %	4487
IT	5.3 %	27.1 %	52.9 %	14.6 %	3430	2.0 %	3500
NO	2.7 %	22.3 %	44.7 %	30.2 %	2807	1.7 %	2855
PT	1.1 %	20.8 %	72.7 %	5.4 %	1108	11.1 %	1247
SI	3.0 %	22.0 %	54.0 %	20.9 %	3328	1.0 %	3360
Mean	4.6 %	26.0 %	50.3 %	19.1 %	2247	2.0 %	2293

Source: HLS₁₉ Consortium

Table A 13.14:

Item 29 (HLS₁₉-Q47) to decide if you should have a flu vaccination?

	Very difficult	Difficult	Easy	Very Easy	Valid	Missing	Total
AT	2.4 %	18.8 %	44.3 %	34.4 %	2900	2.3 %	2967
BE	7.4 %	22.0 %	38.0 %	32.6 %	1000	0.0 %	1000
BG	8.6 %	27.4 %	48.5 %	15.5 %	823	4.9 %	865
CZ	5.4 %	21.8 %	46.5 %	26.3 %	1587	0.8 %	1599
DE	6.6 %	26.8 %	42.2 %	24.4 %	2134	0.4 %	2143
HU	2.8 %	16.7 %	58.5 %	22.0 %	1176	1.6 %	1195
IE	8.6 %	15.7 %	25.6 %	50.2 %	4454	0.7 %	4487
IT	3.8 %	19.8 %	55.0 %	21.4 %	3422	2.2 %	3500
NO	2.7 %	20.9 %	44.3 %	32.1 %	2809	1.6 %	2855
PT	0.7 %	8.1 %	71.4 %	19.8 %	1210	3.0 %	1247
SI	7.5 %	27.2 %	43.5 %	21.9 %	3327	1.0 %	3360
Mean	5.1 %	20.5 %	47.1 %	27.3 %	2258	1.5 %	2293

Source: HLS₁₉ Consortium

Table A 13.15:

Percentages of respondents in each country who responded “very difficult” or “difficult” to the Vaccination HL items (ordered by the row mean), for each country and the mean of all countries (equally weighted)

	AT	BE	BG	CZ	DE	HU	IE	IT	NO	PT	SI	Mean
26 to judge which vaccinations you or your family may need?	20.5	36.5	54.0	29.6	41.9	21.2	28.8	32.4	25.1	21.9	25.1	28.4
19 to find information on recommended vaccinations for you or your family?	18.5	34.2	49.4	24.2	30.8	19.4	28.2	33.2	28.7	15.7	18.9	25.8
29 to decide if you should have a flu vaccination?	21.3	29.4	36.0	27.2	33.4	19.5	24.3	23.6	23.6	8.8	34.7	25.2
22 to understand why you or your family may need vaccinations?	16.0	29.6	36.8	16.9	24.7	10.5	17.7	23.9	10.6	5.2	16.0	17.4
Mean	19.1	32.4	44.0	24.5	32.7	17.6	24.8	28.3	22.0	12.9	23.7	24.2

Source: HLS₁₉ Consortium

13.2 Spearman correlation of the items of the Vaccination HL score

Table A 13.16:
Spearman Correlation of the items of the Vaccination HL score for Austria

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.56	0.51	0.30
22 to understand why you or your family may need vaccinations?	0.56	1.00	0.65	0.29
26 to judge which vaccinations you or your family may need?	0.51	0.65	1.00	0.34
29 to decide if you should have a flu vaccination?	0.30	0.29	0.34	1.00

Source: HLS₁₉ Consortium

Table A 13.17:
Spearman correlation of the items of the Vaccination HL score for Belgium

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.65	0.66	0.46
22 to understand why you or your family may need vaccinations?	0.65	1.00	0.66	0.52
26 to judge which vaccinations you or your family may need?	0.66	0.66	1.00	0.54
29 to decide if you should have a flu vaccination?	0.46	0.52	0.54	1.00

Source: HLS₁₉ Consortium

Table A 13.18:
Spearman correlation of the items of the Vaccination HL score for Bulgaria

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.34	0.39	0.16
22 to understand why you or your family may need vaccinations?	0.34	1.00	0.48	0.42
26 to judge which vaccinations you or your family may need?	0.39	0.48	1.00	0.45
29 to decide if you should have a flu vaccination?	0.16	0.42	0.45	1.00

Source: HLS₁₉ Consortium

Table A 13.19:
Spearman correlation of the items of the Vaccination HL score for Czech Republic

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.48	0.50	0.32
22 to understand why you or your family may need vaccinations?	0.48	1.00	0.52	0.30
26 to judge which vaccinations you or your family may need?	0.50	0.52	1.00	0.43
29 to decide if you should have a flu vaccination?	0.32	0.30	0.43	1.00

Source: HLS₁₉ Consortium

Table A 13.20:

Spearman correlation of the items of the Vaccination HL score for Germany

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.44	0.50	0.26
22 to understand why you or your family may need vaccinations?	0.44	1.00	0.51	0.30
26 to judge which vaccinations you or your family may need?	0.50	0.51	1.00	0.31
29 to decide if you should have a flu vaccination?	0.26	0.30	0.31	1.00

Source: HLS₁₉ Consortium

Table A 13.21:

Spearman correlation of the items of the Vaccination HL score for Hungary

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.39	0.42	0.27
22 to understand why you or your family may need vaccinations?	0.39	1.00	0.47	0.33
26 to judge which vaccinations you or your family may need?	0.42	0.47	1.00	0.35
29 to decide if you should have a flu vaccination?	0.27	0.33	0.35	1.00

Source: HLS₁₉ Consortium

Table A 13.22:

Spearman correlation of the items of the Vaccination HL score for Ireland

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.42	0.40	0.24
22 to understand why you or your family may need vaccinations?	0.42	1.00	0.39	0.25
26 to judge which vaccinations you or your family may need?	0.40	0.39	1.00	0.36
29 to decide if you should have a flu vaccination?	0.24	0.25	0.36	1.00

Source: HLS₁₉ Consortium

Table A 13.23:

Spearman correlation of the items of the Vaccination HL score for Italy

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.45	0.46	0.39
22 to understand why you or your family may need vaccinations?	0.45	1.00	0.47	0.45
26 to judge which vaccinations you or your family may need?	0.46	0.47	1.00	0.42
29 to decide if you should have a flu vaccination?	0.39	0.45	0.42	1.00

Source: HLS₁₉ Consortium

Table A 13.24:

Spearman correlation of the items of the Vaccination HL score for Norway

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.32	0.47	0.23
22 to understand why you or your family may need vaccinations?	0.32	1.00	0.41	0.25
26 to judge which vaccinations you or your family may need?	0.47	0.41	1.00	0.32
29 to decide if you should have a flu vaccination?	0.23	0.25	0.32	1.00

Source: HLS₁₉ Consortium

Table A 13.25:

Spearman correlation of the items of the Vaccination HL score for Portugal

	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.33	0.52	0.16
22 to understand why you or your family may need vaccinations?	0.33	1.00	0.40	0.08
26 to judge which vaccinations you or your family may need?	0.52	0.40	1.00	0.15
29 to decide if you should have a flu vaccination?	0.16	0.08	0.15	1.00

Source: HLS₁₉ Consortium

Table A 13.26:

Spearman correlation of the items of the Vaccination HL score for Slovenia

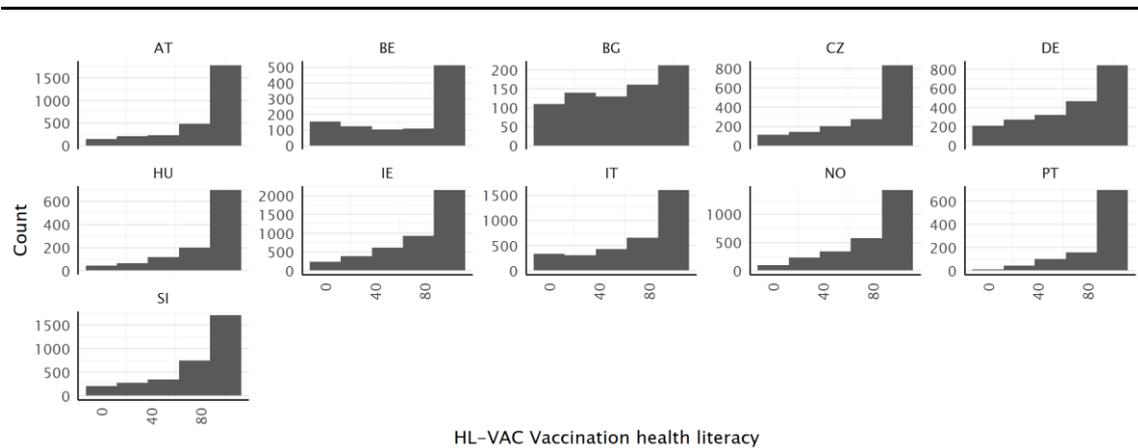
	19	22	26	29
19 to find information on recommended vaccinations for you or your family?	1.00	0.43	0.48	0.28
22 to understand why you or your family may need vaccinations?	0.43	1.00	0.47	0.30
26 to judge which vaccinations you or your family may need?	0.48	0.47	1.00	0.42
29 to decide if you should have a flu vaccination?	0.28	0.30	0.42	1.00

Source: HLS₁₉ Consortium

13.3 Distributions of the scores of additional Vaccination HL measures

Figure A 13.1:

Histogram of the VHL Score “Vaccination Health Literacy” by country



Source: HLS₁₉ Consortium

Table A 13.27:

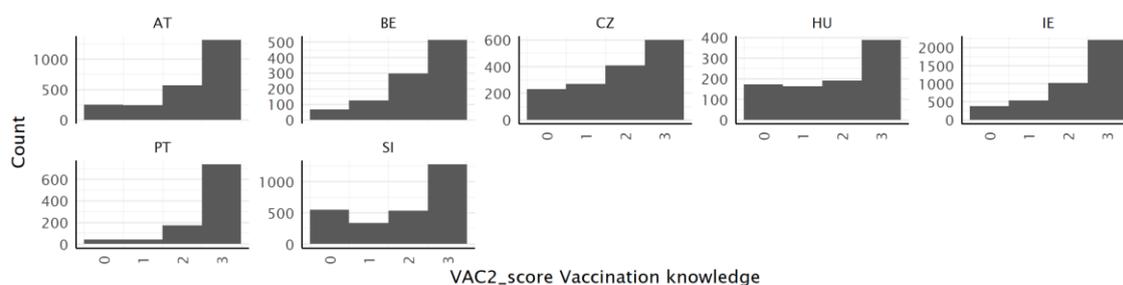
Distribution of the VAC2 Score “Vaccination knowledge risks” by country

	Min	Q25	Median	Mean	Q75	Max	SD
AT	0	1	2	2.0	3	3	1.1
BE	0	2	3	2.3	3	3	0.9
CZ	0	1	2	1.8	3	3	1.1
HU	0	0	2	1.6	3	3	1.2
IE	0	1	2	2.1	3	3	1.0
PT	0	2	3	2.3	3	3	1.0
SI	0	0	2	1.7	3	3	1.3
All	0	0	1	1.2	3	3	1.3

Source: HLS₁₉ Consortium

Figure A 13.2:

Histogram of the VAC2 Score “Vaccination knowledge risks” by Country



Source: HLS₁₉ Consortium

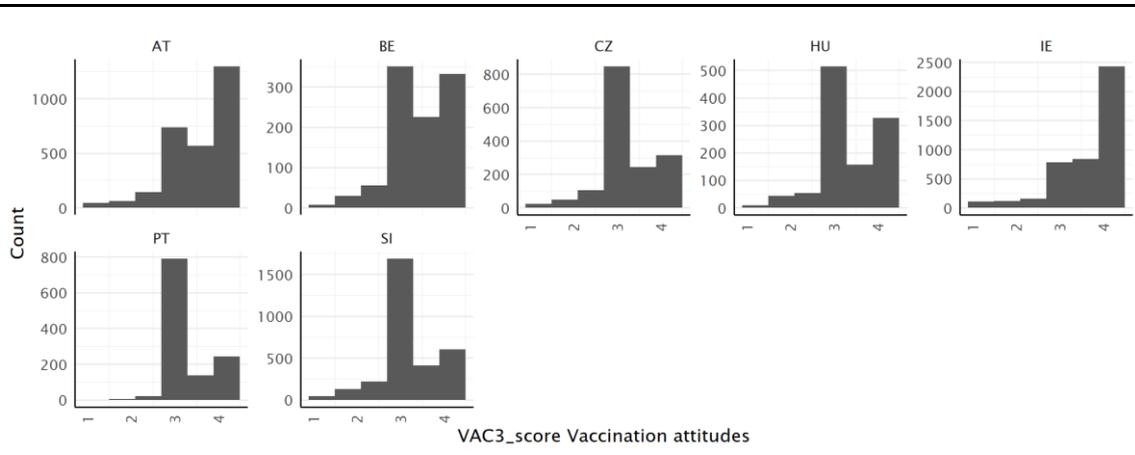
Table A 13.28:

Distribution of the VAC3 Score “Vaccination confidence” by country

	Min	Q25	Median	Mean	Q75	Max	SD
AT	1	3.2	3.8	3.5	4.0	4	0.6
BE	1	3.0	3.5	3.4	4.0	4	0.6
CZ	1	3.0	3.0	3.2	3.8	4	0.6
HU	1	3.0	3.2	3.3	4.0	4	0.6
IE	1	3.2	4.0	3.6	4.0	4	0.6
PT	2	3.0	3.0	3.3	3.5	4	0.4
SI	1	3.0	3.0	3.2	3.5	4	0.6
All	1	3.0	3.2	3.4	4.0	4	0.6

Source: HLS₁₉ Consortium

Figure A 13.1:
Histogram of the VAC3 Score “Vaccination confidence” by country



Source: HLS19 Consortium

13.4 Confirmative Factor Analysis of the Vaccination HL Score

Table A 13.29:

Fit indices for the two-factor confirmatory factor model with the four Vaccination HL items (factor 1) and the HLS₁₉-Q12 items (factors 2) as indicators by country

	AT	BE	BG	CZ	DE	HU	IE	IT	NO	PT	SI
SRMR	0.07	0.07	0.08	0.05	0.07	0.06	0.06	0.04	0.07	0.07	0.05
RMSEA (CI Lower Bound)	0.02	0.04	0.03	0.02	0.03	0.01	0.03	0.03	0.03	0.00	0.02
RMSEA	0.03	0.04	0.04	0.03	0.04	0.02	0.04	0.03	0.03	0.01	0.03
RMSEA (CI Upper Bound)	0.03	0.05	0.05	0.03	0.04	0.03	0.04	0.03	0.04	0.02	0.03
RMSEA (p Value)	1.00	0.95	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CFI	0.99	0.99	0.98	0.99	0.98	0.99	0.97	0.99	0.98	1.00	0.99
TLI	0.98	0.99	0.98	0.99	0.97	0.99	0.97	0.99	0.98	1.00	0.99
GFI	0.99	0.98	0.97	0.99	0.98	0.99	0.99	0.99	0.99	0.99	0.99
AGFI	0.99	0.98	0.97	0.99	0.97	0.98	0.98	0.99	0.98	0.99	0.99

AGFI=Adjusted Goodness of Fit Index; CFI=Comparative Fit Index; CI=Confidence interval; GFI=Goodness of Fit Index; RMSEA=Root Mean Square Error of Approximation; SRMR= Standardized Root Mean Square Residual; TLI=Tucker-Lewis Index

Source: HLS₁₉ Consortium

Table A 13.30:

Fit indices for the one-factor confirmatory factor model with the four Vaccination HL items and the HLS₁₉-Q12 items as indicators by country

	AT	BE	BG	CZ	DE	HU	IE	IT	NO	PT	SI
SRMR	0.10	0.14	0.09	0.10	0.08	0.09	0.07	0.05	0.08	0.09	0.06
RMSEA (CI Lower Bound)	0.05	0.10	0.05	0.06	0.05	0.04	0.04	0.03	0.04	0.04	0.03
RMSEA	0.05	0.11	0.06	0.07	0.05	0.05	0.04	0.04	0.04	0.04	0.04
RMSEA (CI Upper Bound)	0.05	0.11	0.06	0.07	0.06	0.05	0.04	0.04	0.05	0.05	0.04
RMSEA (p Value)	0.52	0.00	0.09	0.00	0.15	0.66	1.00	1.00	1.00	0.98	1.00
CFI	0.96	0.93	0.97	0.94	0.96	0.96	0.97	0.99	0.97	0.99	0.99
TLI	0.95	0.92	0.96	0.94	0.95	0.95	0.96	0.99	0.96	0.99	0.99
GFI	0.98	0.94	0.96	0.96	0.97	0.97	0.98	0.99	0.98	0.99	0.99
AGFI	0.97	0.92	0.95	0.95	0.96	0.96	0.98	0.99	0.97	0.98	0.99

AGFI=Adjusted Goodness of Fit Index; CFI=Comparative Fit Index; CI=Confidence interval; GFI=Goodness of Fit Index; RMSEA=Root Mean Square Error of Approximation; SRMR= Standardized Root Mean Square Residual; TLI=Tucker-Lewis Index

Source: HLS₁₉ Consortium

13.5 Spearman correlation between Vaccination HL and selected determinants

Table A 13.31:

Spearman correlation between Vaccination HL and selected determinants: GEN-HL, gender, age, education, perceived social status, financial deprivation, being trained in a health profession, for each country and for all countries (equally weighted)

	AT	BE	BG	CZ	DE	HU	IE	IT	NO	PT	SI	All
GEN-HL	0.45	0.42	0.51	0.42	0.52	0.41	0.53	0.68	0.51	0.40	0.57	0.49
Gender female	0.01	0.03	-0.04	-0.02	0.03	-0.05	0.09	0.00	0.05	-0.03	0.01	0.01
Age in years	0.04	0.11	0.00	0.08	0.01	0.01	0.14	0.04	0.09	-0.09	-0.01	0.04
Education	-0.02	-0.03	0.12	-0.08	0.14	0.08	0.06	0.05	0.14	0.04	0.12	0.06
Level in society	0.02	0.15	0.19	0.08	0.14	0.11	0.08	0.14	0.12	0.17	0.16	0.12
Financial deprivation	-0.13	-0.12	-0.20	-0.21	-0.13	-0.24	-0.23	-0.24	-0.14	-0.19	-0.24	-0.19
Migration*	0.04	-0.02	0.02	-0.02	-0.05	0.02	-0.04	-0.02	-0.03	0.00	-0.06	-0.01
No training in a health profession	0.00	-0.01	-0.12	-0.05	-0.10	-0.08	-0.07	-0.05	-0.13	-0.02	-0.10	-0.07

* Values for correlations with migration should be treated with caution as in three countries (BG, HU and IT) the percentage of respondents with migration background was below 10% and the HLS₁₉ survey as such was not adjusted to targeting migrants specifically (e.g., by offering translations of the instrument into migrant languages).

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Long-term illness: 3 categories: (1) none, (2) one, (3) more than one, except for SI where 2 categories were used (1) none, (2) one or more.

Migration background: 0=none, 1=one parent born abroad, 2=both parents born abroad, 3=born abroad.

Source: HLS₁₉ Consortium

13.6 Regression Models: Determinants of Vaccination Health Literacy

Table A 13.32:

Model 2: Multivariable linear regression models of Vaccination HL by five core social determinants and being trained in a health profession as determinants, standardized β coefficients and R^2 , for each country and for all countries (equally weighted)

	AT	BE	BG	CZ	DE	HU	IE	IT	NO	PT	SI	All
Gender female	0.00	0.02	<i>-0,08</i>	0.02	0.04	-0.01	0,05	0.02	0.01	0.00	-0.01	0.01
Age in years	-0.02	0.06	-0.01	0.04	0.01	0.02	0,15	0,05	<i>0,04</i>	<i>-0,08</i>	0.03	0.02
Education	-0.04	-0.03	0,13	-0,10	0,08	0.01	0.03	0.03	0,10	-0.07	<i>0,05</i>	-0,05
Level in society	0.01	0,12	0,12	<i>0,05</i>	<i>0,07</i>	0.01	<i>0,03</i>	0.02	0,08	0,13	0.03	0,05
Financial deprivation	-0,16	-0,08	-0.02	-0,21	-0,10	-0,27	-0,20	-0,24	-0,09	-0,13	-0,20	-0,17
No training in a health profession	-0.03	-0.01	-0,19	<i>-0,05</i>	<i>-0,05</i>	-0.04	-0,05	-0.03	-0,10	0.00	-0,05	-0,06
R ²	0.03	0.03	0.12	0.06	0.04	0.08	0.08	0.07	0.05	0.06	0.06	0,04
Valid count	2582	988	647	1529	1817	1042	4138	3110	2501	933	3104	
Total count	2967	1000	865	1599	2143	1195	4487	3500	2855	1247	3360	

Coefficients with p-values lower than 0.01 in bold, Coefficients with p-values lower than 0.05 in italic.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

Table A 13.33:

Model 3: Multivariable linear regression models of HL-VAC by GEN-HL, five social determinants, and training in a healthcare profession (standardized coefficients (β) and R^2), for each country and for all countries (equally weighted)

	AT	BE	BG	CZ	DE	HU	IE	IT	NO	PT	SI	All
GEN-HL	0.42	0.42	0.51	0.41	0.51	0.39	0.51	0.70	0.53	0.43	0.60	0.51
Gender female	-0.03	0.02	-0.08	-0.01	0.01	0.00	0.02	-0.02	-0.01	0.03	-0.02	0
Age in years	0.01	0.05	0.02	0.00	0.05	-0.02	0.13	0.08	<i>0.04</i>	-0.03	0.10	0.04
Education	-0.02	-0.01	0.10	-0.04	0.03	0.00	0.00	0.02	0.09	-0.09	<i>0.04</i>	<i>-0.02</i>
Level in society	0.01	0.04	-0.03	0.01	0.02	0.02	-0.02	0.01	<i>0.03</i>	0.10	-0.02	0.01
Financial deprivation	-0.07	-0.11	0.06	-0.12	-0.03	-0.16	-0.07	-0.04	-0.01	-0.04	-0.08	-0.08
No training in a health profession	-0.02	0.00	-0.11	-0.03	0.02	-0.02	-0.04	-0.01	-0.06	0.03	-0.03	-0.02
R^2	0.19	0.20	0.33	0.21	0.27	0.22	0.33	0.52	0.32	0.22	0.38	0.29
Valid count	2582	988	647	1529	1817	1042	4138	3110	2501	933	3104	
Total count	2967	1000	865	1599	2143	1195	4487	3500	2855	1247	3360	

Coefficients with p-values lower than 0.01 in bold and coefficients with p-values lower than 0.05 in italics.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

13.7 Odds ratios of a multivariable logistic regression model on being vaccinated within the last five years

Table A 13.34: Odds ratios of a multivariable logistic regression model on being vaccinated within the last five years (vaccination behavior) with HL-VAC, GEN-HL, gender, age, education, level in society, financial deprivation, and trained in a health profession as determinants, for each country and for all countries (equally weighted)

	AT	BE	CZ	HU	IE	PT	SI	All
Intercept	3.14	2.35	0.51	0.21	0.63	7.63	0.96	1.14
GEN-HL	1.07	<i>0.85</i>	<i>0.85</i>	0.92	0.90	1.07	<i>0.89</i>	0.93
HL-VAC	1.28	1.24	1.41	<i>1.17</i>	1.43	1.00	1.33	1.29
Gender female	1.37	1.06	1.25	1.03	1.37	1.60	1.17	1.20
Age in years	0.98	0.99	1.00	1.00	1.00	<i>1.02</i>	0.99	1.00
Education	1.14	1.06	1.12	1.15	1.12	1.09	1.14	1.10
Level in society	1.01	1.01	1.05	1.05	0.99	0.09	1.04	1.05
Financial deprivation	0.92	0.94	0.97	1.04	0.98	<i>0.79</i>	<i>0.90</i>	0.91
No training in a health profession	0.63	0.51	0.80	1.13	<i>0.75</i>	0.94	<i>0.72</i>	0.72
Pseudo R²	0.05	0.04	0.04	0.02	0.05	0.03	0.06	0.04
Valid count	2487	988	1522	1026	4105	912	3041	
Total count	2967	1000	1599	1195	4487	1247	3360	

Coefficients with p-values lower than 0.01 in bold and coefficients with p-values lower than 0.05 in italics.

Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.

GEN-HL score: from 0=minimal HL to 100=maximal HL.

HL-VAC score: from 0=minimal HL to 100=maximal HL.

Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).

Level in society from 1=lowest level to 10=highest level in society.

Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

Table A 13.35: Odds ratios of a multivariable logistic regression model on being vaccinated within the last five years (vaccination behavior) with Vaccination HL, GEN-HL, gender, age, education, level in society, financial deprivation, trained in a health profession, and specific vaccination correlates as determinants, for each country and for all countries (equally weighted)

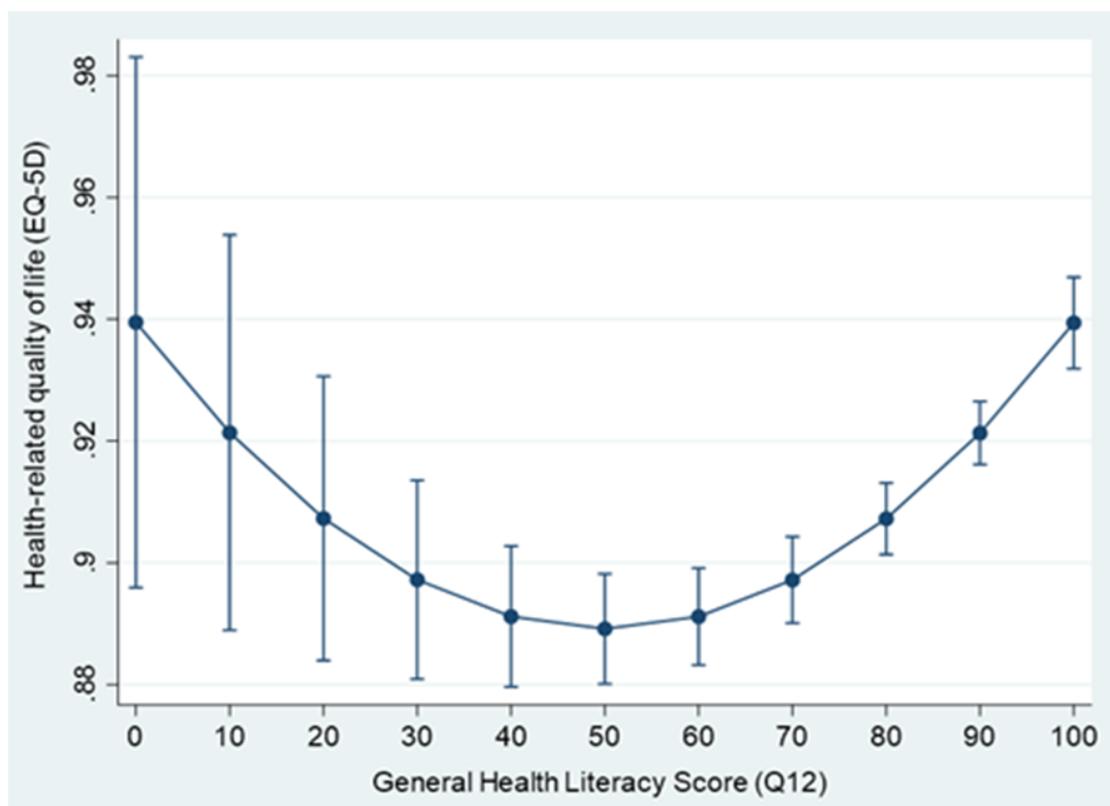
	AT	BE	CZ	HU	IE	PT	SI	All
Intercept	0.06	0.48	0.09	0.02	0.26	0.76	0.13	0.14
GEN-HL	1.06	<i>0.84</i>	<i>0.85</i>	0.96	0.92	1.12	0.91	0.14
HL-VAC	1.03	1.15	1.27	1.04	1.25	0.91	1.16	0.94
Gender female	1.63	1.13	1.23	1.1	1.30	1.45	<i>1.24</i>	1.15
Age in years	0.98	0.99	0.99	1.00	1.00	<i>1.02</i>	0.99	1.23
Education	1.15	1.02	<i>1.09</i>	1.15	<i>1.06</i>	1.04	1.11	0.99
Level in society	1.01	1.09	1.04	1.08	0.99	0.92	1.03	1.06
Financial deprivation	1.03	0.97	1.01	1.16	1.05	0.82	<i>0.91</i>	1.04
No training in a health profession	<i>0.62</i>	0.47	0.61	1.20	0.65	0.73	0.77	0.96
VAC confidence (score low to high)	1.33	1.16	1.22	1.12	1.11	<i>1.24</i>	1.13	0.70
VAC knowledge risks (score low to high)	1.21	1.18	<i>1.18</i>	1.44	1.32	1.12	1.31	1.14
VAC risk perception of getting a disease if not vaccinated (score low to high)	1.55	1.12	1.31	<i>1.33</i>	1.02	1.28	1.35	1.36
Pseudo R ²	0.19	0.07	0.11	0.08	0.07	0.05	0.12	0.10
Valid count	2295	988	1498	905	3954	831	2804	
Total count	2967	1000	1599	1195	4487	1247	3360	

Coefficients with p-values lower than 0.01 in bold and coefficients with p-values lower than 0.05 in italics.
 Due to rounding the numbers to two significant decimals, zeros may represent a value in the range of -0.005 to +0.005.
 GEN-HL score: from 0=minimal HL to 100=maximal HL.
 HL-VAC score: from 0=minimal HL to 100=maximal HL.
 Education by 9 ISCED levels, from 0 (lowest) to 8 (highest level).
 Level in society from 1=lowest level to 10=highest level in society.
 Financial deprivation: 4 categories, from no deprivation (0) to severe deprivation (100).

Source: HLS₁₉ Consortium

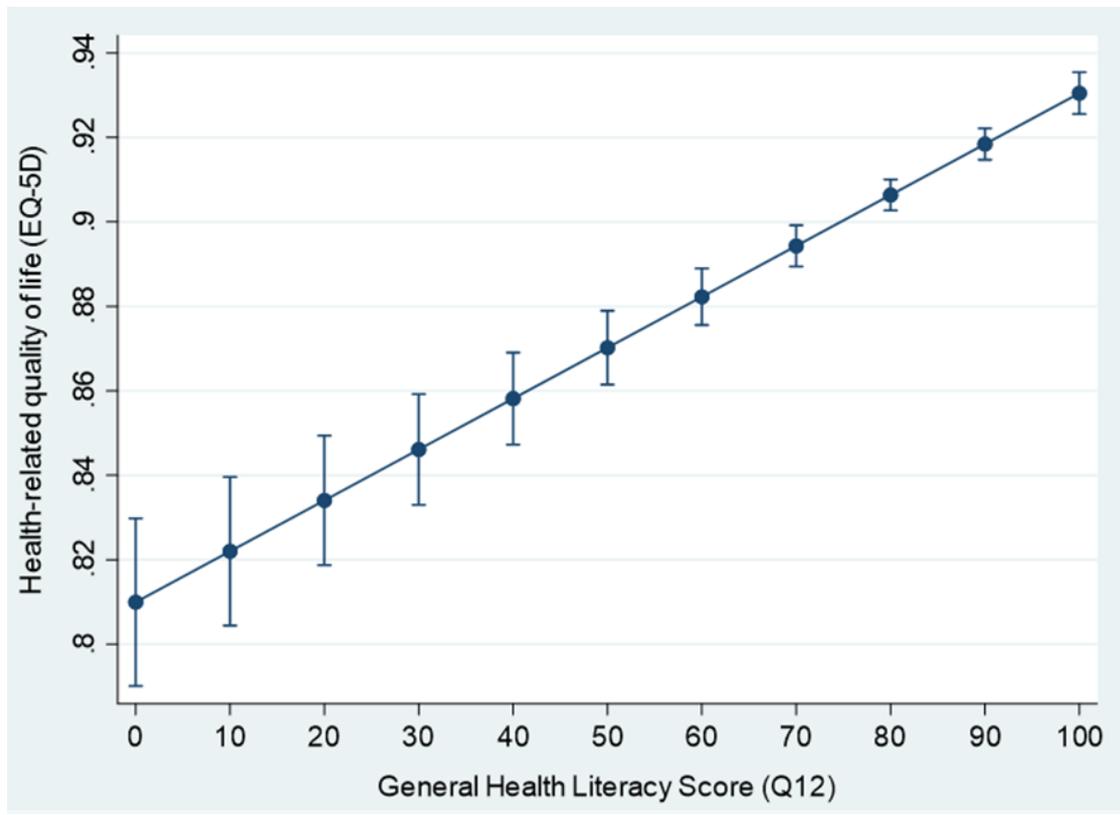
14 Annex for Chapter 14: Health literacy and health-related quality of life as a mediator for health costs

Figure A 14.1: The relationship between GEN-HL on the x-axis, and health-related quality of life (EQ-5D) on the y-axis, based on the **Norwegian** model presented in Table 14.2. All the other variables in the model are kept constant on their average. The vertical lines are the graph is the confidence interval for the point estimates.



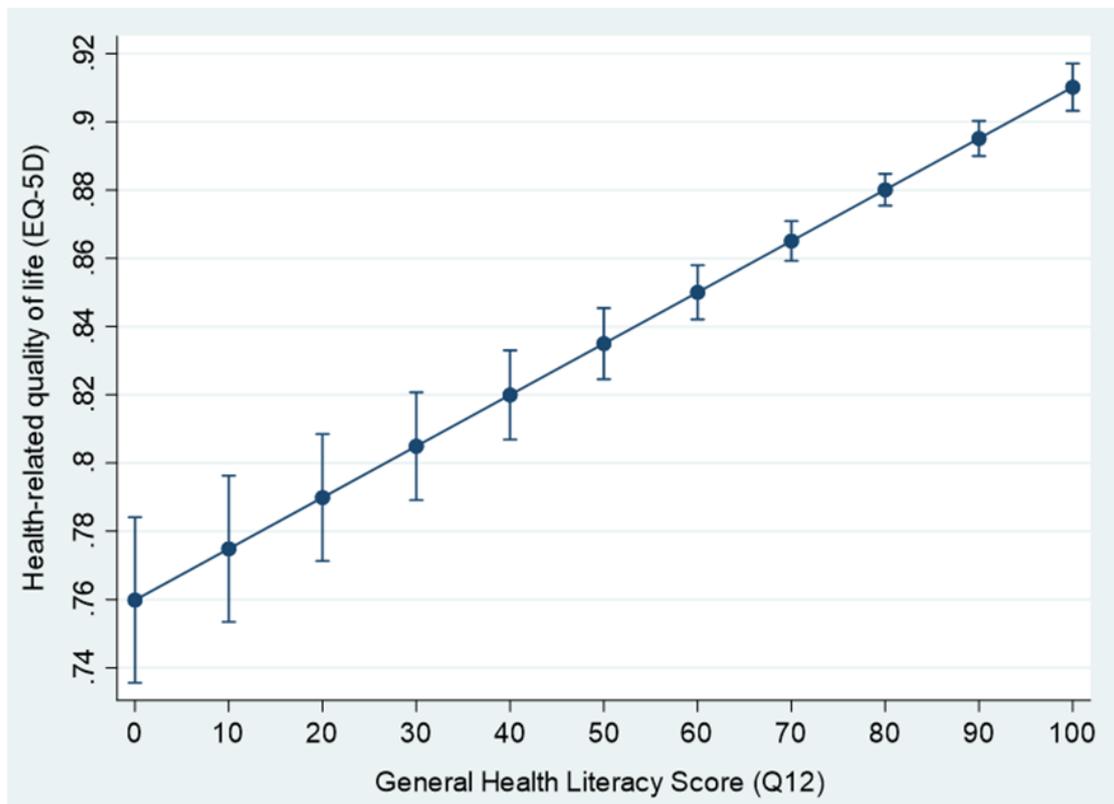
Source: HLS₁₉ Consortium

Figure A 14.2: The relationship between GEN-HL on the x-axis, and health-related quality of life (EQ-5D) on the y-axis, based on the **Irish** model presented in Table 14.2. All the other variables in the model are kept constant on their average. The vertical lines in the graph are the confidence interval for the point estimates.



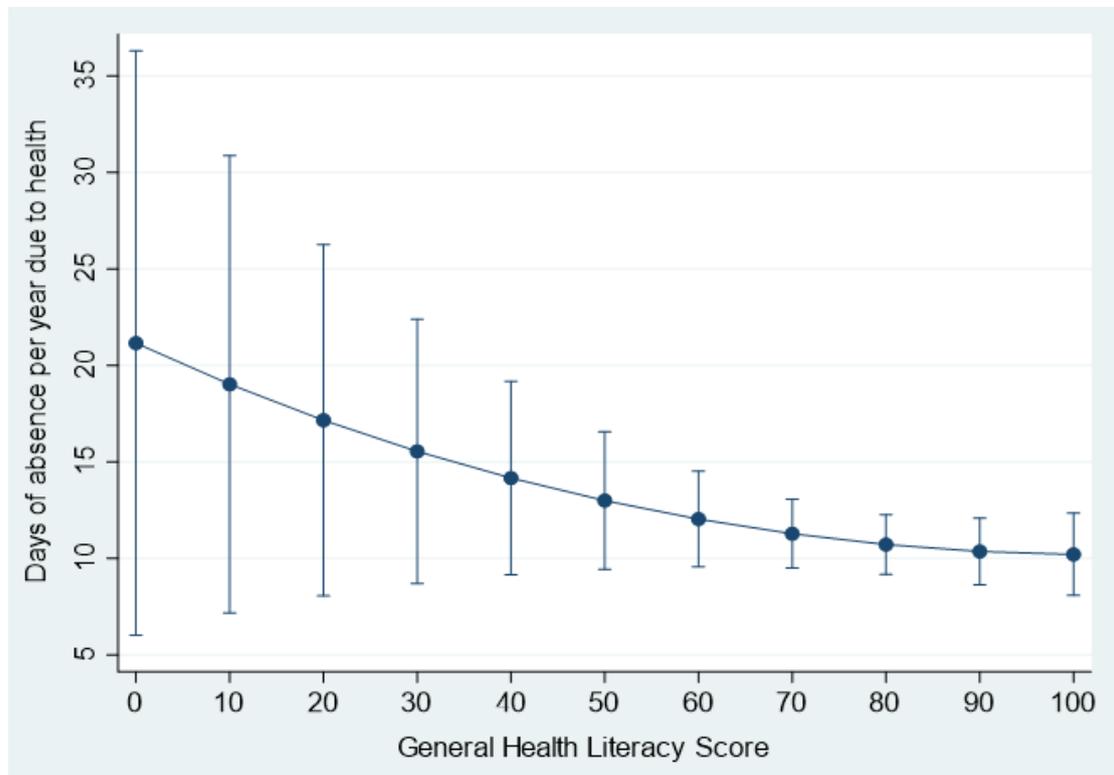
Source: HLS₁₉ Consortium

Figure A 14.3: The relationship between GEN-HL on the x-axis, and health-related quality of life (EQ-5D) on the y-axis, based on the **Danish** model presented in Table 14.2. All the other variables in the model are kept constant on their average. The vertical lines in the graph are the confidence interval for the point estimates.



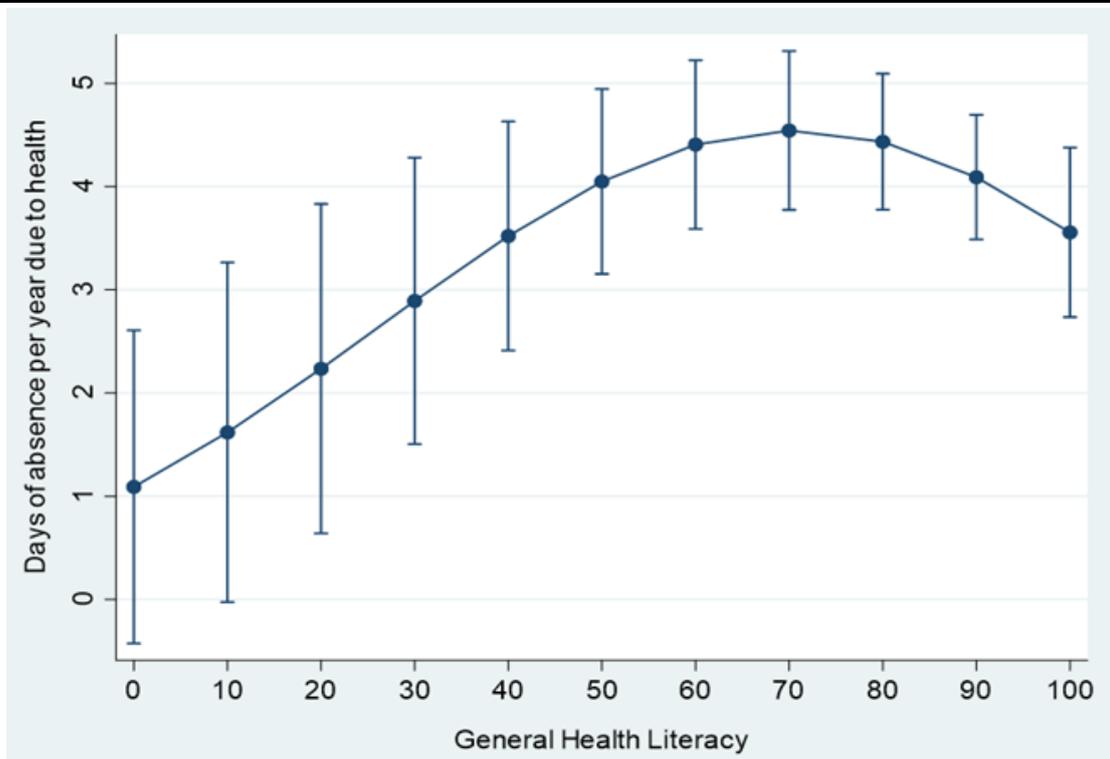
Source: HLS₁₉ Consortium

Figure A 14.4: The relationship between GEN-HL on the x-axis, and days of absence per year due to health on the y-axis, based on the **Norwegian** model presented in Table 14.3. All the other variables in the model are kept constant on their average. The vertical lines in the graph are the confidence intervals for the point estimates.



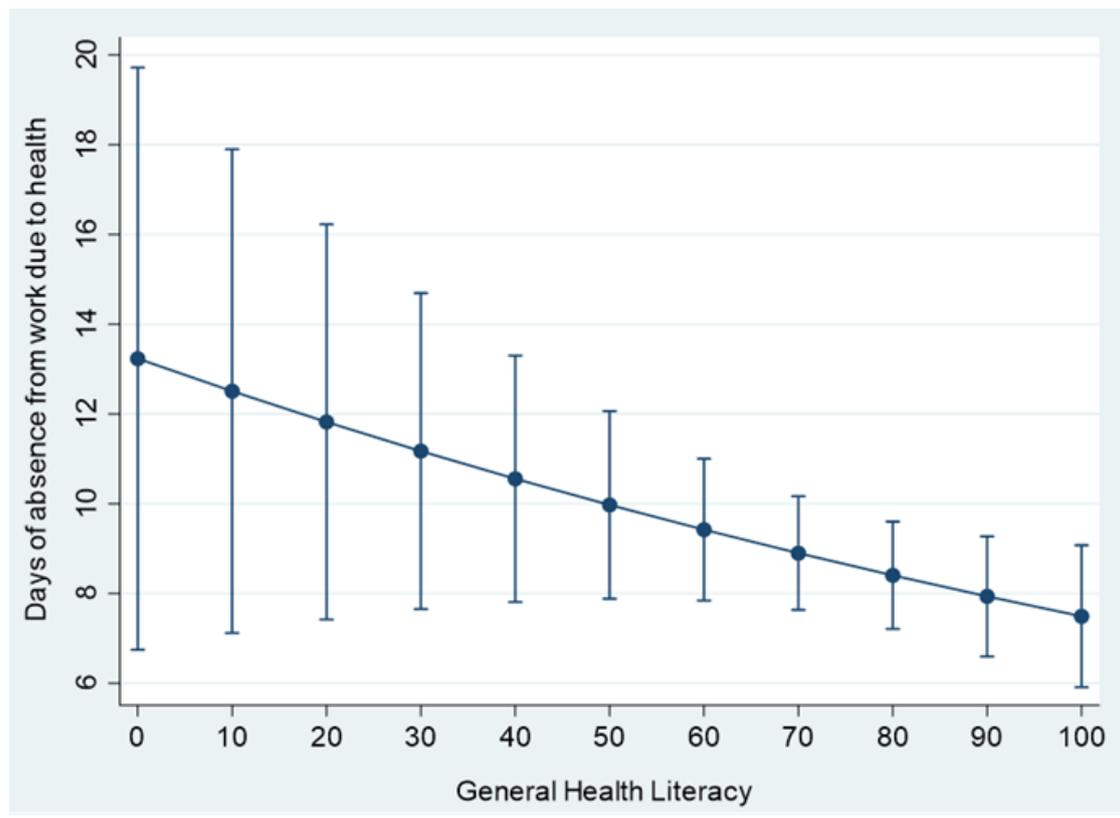
Source: HLS₁₉ Consortium

Figure A 14.5: The relationship between GEN-HL on the x-axis, and days of absence per year due to health on the y-axis, based on the **Irish** model presented in Table 14.3. All the other variables in the model are kept constant on their average. The vertical lines in the graph are the confidence intervals for the point estimates.



Source: HLS₁₉ Consortium

Figure A 14.5: The relationship between GEN-HL on the x-axis, and days of absence per year due to health on the y-axis, based on the **Danish** model presented in Table 14.3. All the other variables in the model are kept constant on their average. The vertical lines in the graph are the confidence intervals for the point estimates.



Source: HLS₁₉ Consortium