Public Health
Zentrum **Fulda**

IZGK
Interdisziplinäres Zentrum für
Gesundheitskompetenzforschung

**COVID-19 Health Literacy Survey
(COVID-HL Survey):**

University Students
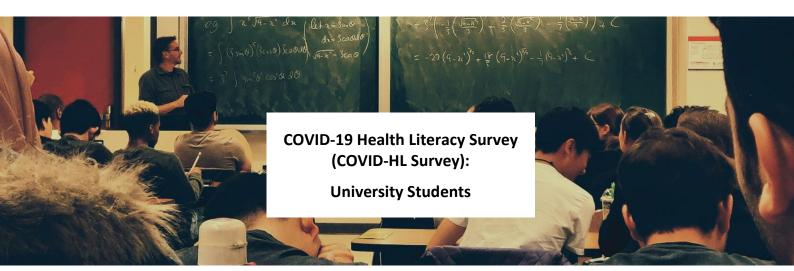
COVID-HL Consortium

COVID-19 Health Literacy Survey: University Students (COVID-HL Survey)
Questionnaire and Scale Documentation

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covid-hl.eu

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Content

Background

Given the recent pandemic of the novel coronavirus SARS-CoV-2019 and the Coronavirus Disease 2019 (COVID-19), various health information is available on the Internet considering issues such as diagnosis, treatment, protective behaviour, preventive measures, dashboard statistics and recommendations. Reliable and trustworthy health information is key in this situation for citizens to act upon information and knowledge provided by governments, health authorities and scientist and thereby to help slowing down the spread of COVID-19. In turn, this makes healthy citizen behaviour a critical asset to ease down the pressure and burden that is being put upon the health care sector in their fight against the virus, the treatment of COVID-19 patients and the search for a vaccine. Citizen behaviour, however, has to be facilitated by adequate government action and policies not only by providing health information but health, social and economic services for citizens to cope with the situation.

With information being a carrier of precious knowledge to contain the virus and empower citizens to act health literate, this has put an increased demand upon the general population to find information relevant to them, critically reflect about information and to transfer information to their everyday life and practices. This also applies for the group of university students, who make up a significant proportion of young adults worldwide. According to the Organisation for Economic Co-operation and Development (OECD), about 22% of 21 to 26-year-olds from OECD countries are enrolled in a bachelor's programme and another 6% in a master's programme (OECD, 2019). This group represents the future educational "elite" and works in postgraduate professions that generate a significant proportion of the economic and social capital of a society. In addition, graduates are often employed in management positions and in this role they are responsible not only for themselves but also for others. Health and (digital) health literacy is a central resource in this context. Moreover, this population group faces a period of transition when entering university that is characterized by many new facets, challenging circumstances and new experiences while most of them leave parents´ home and start their studies at university. This process of emerging adulthood is accompanied by new developmental tasks and requirements related to university (i.e. reg. examinations, self-organization of learning, peer-group and health-related issues). Health, health behaviour and (digital) health literacy in this period of life depend even more on students´ individual decisions and living circumstances rather than on parent or adult suggestions.

In response to the many uncertainties and the ever-changing circumstances in society created by the COVID-19 pandemic, the COVID-HL Consortium is conducting a survey on health literacy in relation to COVID-19 among university students. The aim of this survey is to measure (digital) health literacy, online information-seeking behaviour in relation to COVID-19 as well as current life, future perspective and health situation. The main goals of the COVID-HL are to:

- Assess digital health literacy of university students during the COVID-19 pandemic
- Explore the different digital sources of information students consult when seeking for COVID-19 information and identify their preferred choices
- Capture student's future time perspective/worries and their relation with student`s digital health literacy, information seeking behavior and health situation
- Assess students Sense of Coherence and its association with student`s digital health literacy, information seeking behavior and health situation

The benefit of the COVID-HL-Survey is to enable decision makers to develop policies and programmes to foster healthy and protective behaviour, preventive measures and adherence with the COVID-19

policies. Further, recommendations will help to slow down the virus and its spread, both of which putting burden on our health care systems, economies and citizen`s everyday life. Digital health literacy will empower university students and all other population groups to take greater control in the prevention of COVID-19 and its spread, and are likely to lead to better health outcomes.

This document provides the whole COVID-HL Survey Questionnaire and its Scale Documentation to be considered by all COVID-HL Consortium partners.

COVID-HL Survey: Questionnaire and Communication

1. Communication: Invitation letter for student participation

Dear students,

Based on the current dynamic development of the novel coronavirus, a great deal of information is available on the Internet, either on current distribution, diagnosis, treatment, protective measures or on active prevention. Against this background, we are conducting a survey among university students in [insert your country] on experienced stress and burden, the handling of health-related information on the Internet and your health.

We would like to invite you to participate in this survey. The survey is voluntary. Even if you do not participate, there will be no disadvantages for you. Before you start answering the questionnaire, we ask you to read the following information and declare your consent to participate.

Thank you very much for your support!

The study team of [insert yourself here]

Why do we collect and process your data?

The aim of the survey is to assess current stress levels, but also information-seeking behaviour and the ability to find and deal with health-related information as well as aspects of health among students in [insert your country].

We are only concerned with your personal assessment, so there are no "right" or "wrong" answers. Please answer the questionnaire in such a way that you do not think too long about individual answers. If you are unsure, please simply tick the answer that most closely matches you. It takes about 10 minutes to complete the questionnaire. Your anonymity and the protection of your personal data are of course guaranteed.

You can interrupt the interview and then continue where you left off. Please use the same link and the same device (eg. the same PC). In this context, personal data is collected, but it cannot be assigned to a specific person. The information is collected solely for scientific purposes and with the aim of developing support services.

How you can contact us

Insert your address and contact details here

2. COVID-HL Survey Questionnaire (COVID-HL-Q)

0.	**Which group do you belong to?**

☐   I am a university student and would like to participate in the survey.

☐   I am **not** a university student, but I am interested in this survey.

First, we ask you for some personal information.

1.	**Please indicate your sex.**

☐   Female   ☐   Male   ☐   Diverse

2.	**How old are you?**

I am _____ years old.

3.	**In what country were you born?**

☐   Germany

☐   Turkey

☐   Greece

☐   Italy

☐   Poland

☐   Romania

☐   Russia

☐   In another country, namely _____

4.	**Please indicate the subject group of your course of study.**

☐   Engineering Sciences

☐   Linguistics and Cultural Studies

☐   Mathematics/Natural Sciences

☐   Medicine/Health Sciences

☐   Law and Economics

☐   Social Sciences/Social Work/Psychology/Education

☐   Other, namely _____

5.	**What university are you studying at?** Please indicate the name of your university.

_____

6.	**Are you studying in a Bachelor's or Master's programme?**

☐ Bachelor   ☐ Master   ☐ Other (e.g. PhD)

7.	**How many semesters (including the current semester) have you been enrolled at a university in [include your country] so far?**
	This refers to the semesters in your current course of study plus the semester completed in a previous course of study as well as vacation and internship semesters.

_____ semesters

8.	**Please think of a ladder as representing where people stand in [include your country].**

❖ At the top of the ladder are the people who are the best off –
those who have the most money, the most education, and the
most respected jobs.

❖ At the bottom are the people who are the worst off – those who
have the least money, least education, the least respected jobs, or
no job.

The higher up you are on this ladder, the closer you are to the people at
the very top; the lower you are, the closer you are to the people at the
very bottom.

Where would you place yourself on this ladder?

Please mark a field from 1-10 where you think you stand at this time in
your life relative to other people in [include your country].

10	☐
9	☐
8	☐
7	☐
6	☐
5	☐
4	☐
3	☐
2	☐
1	☐

9.	**How do you primarily finance your studies?**
	You can select multiple response options if necessary.

☐ Support by parents

☐ Student grant (e.g. BaföG) -> needs to be adapted to country context

☐ Employment during the semester

☐ Employment during the semester break

☐ Scholarship

☐ Other, namely _____

10.	**How sufficient do you consider the money at your disposal?**

☐ Completely sufficient

☐ Sufficient

☐ Less sufficient

☐ Not sufficient

The following is an assessment of your current life situation and the extent to which you feel burdened by it.

11.	How do you personally find <u>your current life situation</u> in general?

manageable	☐	☐	☐	☐	☐	☐	☐	unmanageable
meaningless	☐	☐	☐	☐	☐	☐	☐	meaningful
structured	☐	☐	☐	☐	☐	☐	☐	unstructured
easy to influence	☐	☐	☐	☐	☐	☐	☐	impossible to influence
insignificant	☐	☐	☐	☐	☐	☐	☐	significant
clear	☐	☐	☐	☐	☐	☐	☐	unclear
controllable	☐	☐	☐	☐	☐	☐	☐	uncontrollable
unrewarding	☐	☐	☐	☐	☐	☐	☐	rewarding
predictable	☐	☐	☐	☐	☐	☐	☐	unpredictable

12.	The statements below concern your attitude towards the future. Each statement can reflect your attitude to different degrees.

If a certain statement describes your attitude exactly, answer it with "decidedly true". If the statement is not an accurate description of your attitude, answer it with "decidedly false".

	Decidedly false			Hard to say			Decidedly true
I am afraid that the problems which trouble me now will continue for a long time	☐	☐	☐	☐	☐	☐	☐
I am terrified by the thought that I might sometimes face life's crises or difficulties	☐	☐	☐	☐	☐	☐	☐
I am afraid that in the future my life will change for the worse	☐	☐	☐	☐	☐	☐	☐
I am afraid that changes in the economic and political situation will threaten my future	☐	☐	☐	☐	☐	☐	☐
I am disturbed by the thought that in the future I won't be able to realize my goals	☐	☐	☐	☐	☐	☐	☐
I fall into a state of tension and uneasiness when I think of my future affairs	☐	☐	☐	☐	☐	☐	☐
I am sure that in the future I will realize the most important goals (values) in my life	☐	☐	☐	☐	☐	☐	☐
I have the impression that the world tends toward collapse	☐	☐	☐	☐	☐	☐	☐
I am disturbed by the possibility of a sudden accident or serious illness (e.g. cancer, COVID-19)	☐	☐	☐	☐	☐	☐	☐

Following questions are about how easy or difficult it is for you to deal with information about the corona-virus.

13.	**Have you searched the Internet in <u>the last four weeks</u> for information about the coronavirus?** This may include, for example, information on infected cases, on avoiding or dealing with restrictions in everyday life.

☐ Yes, only information for me

☐ Yes, only information for other people

☐ Yes, information for me and other people

☐ No, I haven't searched for information in the last four weeks
(➲ please proceed with question 24).

14.	**When you search the Internet for information on <u>the coronavirus or related topics</u>, how easy or difficult is it for you to…**

	Very easy	Easy	Difficult	Very difficult
… make a choice from all the information you find?	☐	☐	☐	☐
… use the proper words or search query to find the information you are looking for?	☐	☐	☐	☐
… find the exact information you are looking for?	☐	☐	☐	☐

15.	**When typing a message (e.g. on a forum, or on social media such as Facebook or Twitter) about <u>the coronavirus or related topics</u>, how easy or difficult is it for you to…**

	Very easy	Easy	Difficult	Very difficult
… clearly formulate your question or health-related worry?	☐	☐	☐	☐
… express your opinion, thoughts, or feelings in writing?	☐	☐	☐	☐
… write your message as such, for people to understand exactly what you mean?	☐	☐	☐	☐

16.	**When you search the Internet for information <u>on the coronavirus or related topics</u>, how easy or difficult is it for you to…**

	Very easy	Easy	Difficult	Very difficult
… decide whether the information is reliable or not?	☐	☐	☐	☐
… decide whether the information is written with commercial interests (e.g. by people trying to sell a product)?	☐	☐	☐	☐
… check different websites to see whether they provide the same information?	☐	☐	☐	☐

17.	**When you search the Internet for information <u>on the coronavirus or related topics</u>, how easy or difficult is it for you to…**				
		Very easy	Easy	Difficult	Very difficult
	… decide if the information you found is applicable to you?	☐	☐	☐	☐
	… apply the information you found in your daily life?	☐	☐	☐	☐
	… Use the information you found to make decisions about your health (e.g. on protective measures, hygiene regulations, transmission routes, risks and their prevention)?	☐	☐	☐	☐

18.	**When you post a message about <u>the coronavirus or related topics</u> on a public forum or social media, how often…**				
		Never	Once	Several time	Often
	… do you find it difficult to judge who can read along?	☐	☐	☐	☐
	… do you (intentionally or unintentionally) share your own private information (e.g. name or address)?	☐	☐	☐	☐
	… do you (intentionally or unintentionally) share some else's private information?	☐	☐	☐	☐

In the following, the current situation regarding the spread of <u>the coronavirus in [please add your country]</u> and worldwide is addressed. The following questions refer to the search for information related to the coronavirus and all consequences for your personal life.

19.	**Now various possibilities are mentioned how to get information about <u>the coronavirus and related topics</u> on the Internet. Please indicate how often you currently use these sources.**				
		Often	Sometimes	Rarely	Never	Don´t know
	Search engines (e.g. Google, Bing, Yahoo!)	☐	☐	☐	☐	☐
	Websites of public bodies (e.g. please add three from your country)	☐	☐	☐	☐	☐
	Wikipedia and other online-encyclopaedias	☐	☐	☐	☐	☐
	Social media (e.g. Facebook, Instagram, Twitter)	☐	☐	☐	☐	☐
	YouTube	☐	☐	☐	☐	☐
	Blogs on health topics	☐	☐	☐	☐	☐
	Guidebook-communities (e.g. please add one from your country)	☐	☐	☐	☐	☐
	Health portals (e.g. please add one from your country)	☐	☐	☐	☐	☐
	Websites of doctors or health insurance companies	☐	☐	☐	☐	☐
	News portals (e.g. of newspapers, TV stations)	☐	☐	☐	☐	☐

20.	**What language do the sources have that you use for searching information on coronavirus and related health topics?**
	You can select multiple response options if necessary.

- ☐ [add your language]
- ☐ English
- ☐ Other languages than [add your language] or English

21.	**Please indicate the specific topics you are searching for in the context of the coronavirus.**
	You can select multiple response options if necessary.

- ☐ Current spread of the coronavirus (e.g. number of infected cases)
- ☐ Transmission routes of the coronavirus
- ☐ Symptoms of COVID-19
- ☐ Individual measures to protect against infection (e.g. hand washing tips)
- ☐ Hygiene regulations (e.g. disinfection & cleaning)
- ☐ Current situation assessments and recommendations (e.g. please add one official body from your country)
- ☐ Restrictions (e.g. exit restrictions, stay-at-home orders)
- ☐ Economic and social consequences of the coronavirus
- ☐ Dealing with psychological stress caused by the coronavirus
- ☐ Others, namely: _____

22.	**Now it's about how important various things are to you when you search the Internet for coronavirus and related topics. How important is it to you that…**

	Very important	Rather important	Rather not important	Not at all important
… the information is up to date?	☐	☐	☐	☐
… the information is verified?	☐	☐	☐	☐
… you quickly learn the most important things?	☐	☐	☐	☐
… the information comes from official sources?	☐	☐	☐	☐
… different opinions are represented?	☐	☐	☐	☐
… the subject is dealt with comprehensively?	☐	☐	☐	☐

23.	**How satisfied are you with the information you find on the Internet about coronavirus?**

- ☐ Very dissatisfied
- ☐ Dissatisfied
- ☐ Partly satisfied
- ☐ Satisfied
- ☐ Very satisfied

Finally, it is about your health. We would like to know how you are doing.

24.	**Do you have a chronic disease or a long lasting health problem?**
	This refers to diseases or health problems that last or are expected to last <u>at least 6 months</u>.

☐ No   ☐ Yes

25.	**Are you permanently impaired by a health problem in activities of normal everyday life?**
	If you answer the question with "no", you can directly continue with question 27.

☐ No   ☐ Yes

26.	**To what extent are you impaired by your chronic illness in activities of normal everyday life?**

☐ Severely impaired   ☐ Moderately impaired

27.	**The following statements concern your well-being during the last two weeks.**
	Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks.
	Over the last two weeks…

	All of the time	Most of the time	More than half of the time	Less than half of the time	Some of the time	At no time
… I have felt cheerful and in good spirits	☐	☐	☐	☐	☐	☐
… I have felt calm and relaxed	☐	☐	☐	☐	☐	☐
… I have felt active and vigorous	☐	☐	☐	☐	☐	☐
… I woke up feeling fresh and rested	☐	☐	☐	☐	☐	☐
… my daily life has been filled with things that interest me	☐	☐	☐	☐	☐	☐

28.	**In the last 6 months, how often have you had the following complaints?**

	About every day	More than once a week	About every week	About every month	Rarely or never
Headache	☐	☐	☐	☐	☐
Stomach-ache	☐	☐	☐	☐	☐
Backache	☐	☐	☐	☐	☐
Feeling low	☐	☐	☐	☐	☐
Irritability or bad temper	☐	☐	☐	☐	☐
Feeling nervous	☐	☐	☐	☐	☐
Difficulties in getting to sleep	☐	☐	☐	☐	☐
Feeling dizzy	☐	☐	☐	☐	☐

You've done it! Thank you very much for your participation.
The results of this study will be published on the websites of the study team (please include the team here). You can now close the page.

Scale Documentation

1. Sociodemographic information

1.1 Sex

Label	Item
sex	Please indicate your sex.

Response option:	[1] Female, [2] Male, [3] Diverse
Source:	Self-developed

1.2 Age

Label	Item
age	How old are you?

Response option:	Free text
Source:	Self-developed

1.3 Country of birth

Label	Item
origin	In what country were you born?

Response option:	[1] Germany
	[2] Turkey
	[3] Greece
	[4] Italy
	[5] Poland
	[6] Romania
	[7] Russia
	[8] In another country, namely
Source:	Self-developed [can be adapted to country needs]

1.4 Subject group

Label	Item
subjgr	Please indicate the subject group of your course of study.

Response option:	[1] Engineering Sciences
	[2] Linguistics and Cultural Studies
	[3] Mathematics/Natural Sciences
	[4] Medicine/Health Sciences
	[5] Law and Economics
	[6] Social Sciences/Social Work/Psychology/Education,
	[7] Other, namely
Source:	Self-developed according to the German Federal Ministry of Education and Research

1.5 University name

Label	Item
uniname	What university are you studying at?

Response option:	Free text
Source:	Self-developed

1.6 Study programme

Label	Item
studypro	Are you studying in a Bachelor's or Master's programme?

Response option:	[1] Bachelor, [2] Master, [3] other (e.g. PhD)
Source:	Self-developed

1.7 Number of semester

Label	Item
nrsemester	How many semesters (including the current semester) have you been enrolled at a university in [include your country] so far? **Instruction**: This refers to the semesters in your current course of study plus the semester completed in a previous course of study as well as vacation and internship semesters.

Response option:	Text field
Source:	Self-developed

1.8 Subjective Social Status (MacArthur Scale)

Label	Item
SSS	Please think of a ladder as representing where people stand in [include your country]. **Instruction**: At the top of the ladder are the people who are the best off – those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off – those who have the least money, least education, the least respected jobs, or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom. Where would you place yourself on this ladder? Please mark a field from 1-10 where you think you stand at this time in your life relative to other people in [include your country].

Response option:	Ten point scale (1 to 10) with higher points indicating a higher subjective social status
Source:	• Adler, N. E., Epel, E. S., Castellazzo, G. & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: preliminary data in healthy white women. *Health Psychol*, *19*, 586–592. • Hoebel, J., Müters, S., Kuntz, B., Lange, C. & Lampert, T. (2015). Messung des subjektiven sozialen Status in der Gesundheitsforschung mit einer deutschen Version der MacArthur Scale [Measuring subjective social status in health research with a German version of the MacArthur Scale]. *Bundesgesundheitsblatt*, *58*, 749-757.

1.9 Financing of the studies

Label	Item
finan	How do you primarily finance your studies? **Instruction**: You can select multiple response options if necessary.

Label	Item
finan1	Support by parents
finan2	Student grant (e.g. BaföG) -> needs to be adapted to country context
finan3	Employment during the semester
finan4	Employment during the semester brake
finan5	Scholarship
finan6	Other, namely

Response option:	[0] no (i.e. not indicated), [1] yes (i.e. indicated)
Source:	Universität Bielefeld (2007). *Gesundheitssurvey für Studierende in NRW: Fragebogen* [Health Survey among university students in Northrhine-Westphalia/Germany: Questionnaire]. Available online: https://tinyurl.com/qkxxwuz

1.10 Satisfaction financial situation

Label	Item
satfinan	How sufficient do you consider the money at your disposal?

Response option:	[1] not sufficient, [2] less sufficient, [3] sufficient, [4] completely sufficient
Source:	Universität Bielefeld (2007*). Gesundheitssurvey für Studierende in NRW: Fragebogen* [Health Survey among university students in Northrhine-Westphalia/Germany: Questionnaire]. Available online: https://tinyurl.com/qkxxwuz

2. Life situation and future anxiety

2.1 Sense of Coherence

Label	Question
SoC	How do you personally find your current life situation in general?

Label	Item
SoC1	manageable – unmanageable (invert)
SoC2	meaningless - meaningful
SoC3	structured – unstructured (invert)
SoC4	easy to influence - impossible to influence (invert)
SoC5	insignificant - significant
SoC6	clear – unclear (invert)
SoC7	controllable – uncontrollable (invert)
SoC8	unrewarding - rewarding
SoC9	predictable – unpredictable (invert)

Response option:	Semantic differential with seven points (1 to 7) with higher values indicating a higher SoC
Adaptations:	Originally, the scale focuses on the work context (How do you personally find your current job and work situation in general?). Verbal adaptations have been made to allow the assessment of the current living situation
Psychometric quality:	The overall scale has a Cronbach alpha of .83; subscales show acceptable to good reliability α=.72 to .84)
Subscales	- Comprehensibility: Items 1, 3, 6 & 9 - Manageability: 4 & 7 - Meaningfulness: 2, 5 & 8
Source:	- Bauer, G. F., Vogt, K., Inauen, A. & Jenny, G. J. (2015). Work-SoC–Entwicklung und Validierung einer Skala zur Erfassung des arbeitsbezogenen Kohärenzgefühls [Work-SoC–Development and Validation of a Scale Measuring Work-Related Sense of Coherence]. *ZS Gesundheitspsychol*, *23*, 20-30. - Vogt, K., Jenny, G. J. & Bauer, G. F. (2013). Comprehensibility, manageability and meaningfulness at work: Construct validity of a scale measuring work-related sense of coherence. *Journal of Industrial Psychology*, *39*(1), 1-8.

2.2 Future Anxiety

Label	Question
FA	The statements below concern your attitude towards the future. Each statement can reflect your attitude to different degrees. **Instruction**: If a certain statement describes your attitude exactly, answer it with "decidedly true". If the statement is not an accurate description of your attitude, answer it with "decidedly wrong".

Label	Item
FA1	I am afraid that the problems which trouble me now will continue for a long time.
FA2	I am terrified by the thought that I might sometimes face life's crises or difficulties.
FA3	I am afraid that in the future my life will change for the worse.
FA4	I am afraid that changes in the economic and political situation will threaten my future.
FA5	I am disturbed by the thought that in the future I won't be able to realize my goals.
FA6	I fall into a state of tension and uneasiness when I think of my future affairs.
FA7	I am sure that in the future I will realize the most important goals (values) in my life. (invert)
FA8	I have the impression that the world tends toward collapse.
FA9	I am disturbed by the possibility of a sudden accident or serious illness (e.g. cancer, COVID-19).

Response option:	Seven point response scale (0=decidedly false, 1= false, 2= somewhat false, 3= hard to say, 4=somewhat false, 5=true, 6= decidedly true)
Remarks/ Adaptations:	• The first five items (FA1 to FA5) refer to a short version of the future anxiety scale (Zaleski, 1996), which is called "Dark Future Scale" (Zaleski et al., 2019). Items FA6 to FA9 belong to the long version (Future Anxiety Scale) and have been chosen based face validity. • FA9: original wording "(e.g. AIDS, cancer)" has been changed into "(e.g. cancer, COVID-19)"
Psychometric quality:	• Dark Future Scale: α=0.88, validity: examination of the factor structure and correlation analyses with similar instruments
Subscales	• Dark Future Scale: Items FA1 to FA5
Source:	• Zaleski, Z., Sobol-Kwapinska, M., Przepiorka, A. & Meisner, M. (2019). Development and validation of the Dark Future scale. *Time & Society*, *28*(1), 107-123. • Zaleski, Z. (1996). Future anxiety: Concept, measurement, and preliminary research. *Pers Indiv Differ*, *21*(2), 165-174.

3. Health Literacy and information seeking behavior

3.1 Self- versus surrogate seeking

Label	Item
HIS	Have you searched the Internet in the last four weeks for information about the coronavirus? **Instruction**: This may include, for example, information on infected cases, on avoiding or dealing with restrictions in everyday life.

Response option:	[1] Yes, only information for me [2] Yes, only information for other people [3] Yes, information for me and other people [4] No, I haven't searched for information in the last four weeks
Source:	Self-developed

3.2 Digital Health Literacy (DHLI)

Subscale: Information searching

Label	Question
DHLIsearch	When you search the Internet for information on the coronavirus or related topics, how easy or difficult is it for you to…

Label	Item
DHLIsearch1	make a choice from all the information you find?
DHLIsearch2	use the proper words or search query to find the information you are looking for?
DHLIsearch3	find the exact information you are looking for?

Response option:	[1] very difficult, [2] difficult, [3] easy, [4] very easy
Remarks/ adaptations:	• Introduction question: original wording "When you search the Internet for information on health…" has been changed into "When you search the Internet for information on the coronavirus or related topics…"

Subscale: Adding self-generated content

Label	Question
DHLIcont	When typing a message (e.g. on a forum, or on social media such as Facebook or Twitter) about the coronavirus or related topics, how easy or difficult is it for you to…

Label	Item
DHLIcont1	clearly formulate your question or health-related worry?
DHLIcont2	express your opinion, thoughts, or feelings in writing?
DHLIcont3	write your message as such, for people to understand exactly what you mean?

Response option:	[1] very difficult, [2] difficult, [3] easy, [4] very easy
Remarks/ adaptations:	• Introduction question: original wording "When typing a message (e.g. to your doctor, on a forum, or on social media such as Facebook or Twitter)" has been changed into "When typing a message (e.g. on a forum, or on social media such as Facebook or Twitter) about the coronavirus or related topics …"

Subscale: Evaluating reliability

Label	Question
DHLIrely	When you search the Internet for information on the coronavirus or related topics, how easy or difficult is it for you to…

Label	Item
DHLIrely1	decide whether the information is reliable or not?
DHLIrely2	decide whether the information is written with commercial interests (e.g. by people trying to sell a product)?
DHLIrely3	check different websites to see whether they provide the same information?

Response option:	[1] very difficult, [2] difficult, [3] easy, [4] very easy
Remarks/ adaptations:	• Introduction question: original wording "When you search the Internet for information on health…" has been changed into "When you search the Internet for information on the coronavirus or related topics…"

Subscale: Determining relevance

Label	Question
DHLIrelev	When you search the Internet for information on the coronavirus or related topics, how easy or difficult is it for you to…

Label	Item
DHLIrelev1	decide if the information you found is applicable to you?
DHLIrelev2	apply the information you found in your daily life?
DHLIrelev3	use the information you found to make decisions about your health (e.g. on protective measures, hygiene regulations, transmission routes, risks and their prevention)?

Response option:	[1] very difficult, [2] difficult, [3] easy, [4] very easy
Remarks/ adaptations:	• Introduction question: original wording "When you search the Internet for information on health…" has been changed into "When you search the Internet for information on the coronavirus or related topics…" • DHLIrelev3: original wording "(e.g. on nutrition, medication or to decide whether to ask a doctor's opinion)" has been changed into (e.g. on protective measures, hygiene regulations, transmission routes, risks and their prevention)"

Subscale: Protecting privacy

Label	Question
DHLIpriv	When you post a message about the coronavirus or related topics on a public forum or social media, how often…

Label	Item
DHLIpriv1	do you find it difficult to judge who can read along?
DHLIpriv2	do you (intentionally or unintentionally) share your own private information (e.g. name or address)?
DHLIpriv3	do you (intentionally or unintentionally) share some else's private information?

Response option:	[1] often, [2] several times, [3] once, [4] never
Remarks/ adaptations:	• Introduction question: original wording "When you post a message on a public forum or social media" has been changed into "When you post a message about the coronavirus or related topics on a public forum or social media…"

Psychometric quality:	• Validity: Principal component analysis was performed to determine content validity. Correlation analyses were used to determine the construct validity. • Reliability: α=0.57 to 0.68 (protecting privacy, T1, T2) to α=0.89 to 0.91 (determining relevance, T1, T2)
Subscales	• Information searching • Adding self-generated content • Evaluating reliability • Determining relevance • Protecting privacy Further subscales (not used in this study): • Operational skills • Navigation Skills
Source:	• Van der Vaart, R. & Drossaert, C. (2017). Development of the digital health literacy instrument: measuring a broad spectrum of health 1.0 and health 2.0 skills. *J Med Internet Res*, *19*(1), e27.

3.3 Sources used for online information seeking

Label	Item
source	Now various possibilities are mentioned how to get information about the coronavirus and related topics on the Internet. Please indicate how often you currently use these sources.

Label	Item
souce1	Search engines (e.g. Google, Bing, Yahoo!)
souce2	Websites of public bodies (e.g. please add three from your country)
souce3	Wikipedia and other online-encyclopaedias
souce4	Social media (e.g. Facebook, Instagram, Twitter)
souce5	YouTube
souce6	Blogs on health topics
souce7	Guidebook-communities (e.g. please add one from your country)
souce8	Health portals (e.g. please add one from your country)
souce9	Websites of doctors or health insurance companies
souce10	News portals (e.g. of newspapers, TV stations)

Response option:	[1] never, [2] rarely, [3] sometimes, [4] often, [0] don´t know
	Adapted from Marstedt (2018):
Source:	• Marstedt, G. (2018). *Das Internet: Auch Ihr Ratgeber für Gesundheitsfragen? Bevölkerungsumfrage zur Suche von Gesundheitsinformationen im Internet und zur Reaktion der Ärzte* (The Internet: Also your guide to health issues? Population survey on the search for health information on the Internet and the reaction of doctors). Gütersloh: Bertelsmann Stiftung.

3.4 Languages of the sources

Label	Item
lang	What language do the sources have that you use for searching information on coronavirus and related health topics?
	Instruction: You can select multiple response options if necessary.

Label	Item
lang1	[add your language, e.g. German for Germany]
lang2	English
lang3	Other languages than [add your language] or English

Response option:	[0] no (i.e. not indicated), [1] yes (i.e. indicated)
Source:	Self-developed

3.5 Corona related topics searched

Label	Item
topic	Please indicate the specific topics you are searching for in the context of the coronavirus. **Instruction**: You can select multiple response options if necessary.

Label	Item
topic1	Current spread of the coronavirus (e.g. number of infected cases)
topic2	Transmission routes of the coronavirus
topic3	Symptoms of COVID-19
topic4	Individual measures to protect against infection (e.g. hand washing tips)
topic5	Hygiene regulations (e.g. disinfection & cleaning)
topic6	Current situation assessments and recommendations (e.g. please add one official body from your country)
topic7	Restrictions (e.g. exit restrictions, stay-at-home orders)
topic8	Economic and social consequences of the coronavirus
topic9	Dealing with psychological stress caused by the coronavirus
topic10	Others, namely ____

Response option:	[0] no (i.e. not indicated), [1] yes (i.e. indicated)
Source:	Self-developed

3.6 Importance of internet information search

Label	Item
import	Now it's about how important various things are to you when you search the Internet for coronavirus and related topics. How important is it to you that…

Label	Item
import1	the information is up to date?
import2	the information is verified?
import3	you quickly learn the most important things?
import4	the information comes from official sources?
import5	different opinions are represented?
import6	the subject is dealt with comprehensively?

Response option:	[1] not at all important, [2] rather not important, [3] rather important, [4] very important
Source:	• Gebel, C., Juenger, N. & Wagner, U. (2014). Informations- und engagementsbezogenes Medienhandeln von Jugendlichen [Information and engagement related media activities of young people]. In: C. Gebel & U. Wagner (Hrsg.), *Jugendliche und die Aneignung politischer Informationen in Online-Medien* [Young people and the acquisition of political information in online media] (pp 53-136). Wiesbaden: Springer.

3.7 Information satisfaction

Label	Item
satisf	How satisfied are you with the information you find on the Internet about corona-virus?

Response option:	[1] very dissatisfied, [2] dissatisfied, [3] partly satisfied, [4] satisfied, [5] very satisfied
Source:	Self-developed

4. Personal health situation

4.1 Chronic disease

Label	Item
chrondis	Do you have a chronic disease or a long-lasting health problem? **Instruction**: This refers to diseases or health problems that last or are expected to last at least 6 months.

Response option:	[1] no, [2] yes
Source:	Robert Koch-Institut (2017). Fragebogen zur Studie „Gesundheit in Deutschland aktuell": GEDA 2014/2015-EHIS. [Questionnaire for the study " German Health Update": GEDA 2014/2015-EHIS]. *Journal of Health Monitoring*, *2*(1), 105–135. DOI 10.17886/RKI-GBE-2017-014

4.2 Impairment by health problems

Label	Item
impair	Are you permanently impaired by a health problem in activities of normal everyday life? **Instruction**: If you answer the question with "no", you can directly continue with question … (filter question)

Response option:	[1] no, [2] yes
Source:	Robert Koch-Institut (2017). Fragebogen zur Studie „Gesundheit in Deutschland aktuell": GEDA 2014/2015-EHIS. [Questionnaire for the study " German Health Update": GEDA 2014/2015-EHIS]. *Journal of Health Monitoring*, *2*(1), 105–135. DOI 10.17886/RKI-GBE-2017-014

4.3 Strengths of impairment by health problems

Label	Item
impstr	To what extent are you impaired by your chronic illness in activities of normal everyday life?

Response option:	[1] moderately impaired, [2] severely impaired
Source:	Robert Koch-Institut (2017). Fragebogen zur Studie „Gesundheit in Deutschland aktuell": GEDA 2014/2015-EHIS. [Questionnaire for the study " German Health Update": GEDA 2014/2015-EHIS]. *Journal of Health Monitoring*, *2*(1), 105–135. DOI 10.17886/RKI-GBE-2017-014

4.4 Wellbeing

Label	Item
WHO	The following statements concern your well-being during the last two weeks. **Instruction**: Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks. **Over the last two weeks**…

Label	Item
WHO1	I have felt cheerful and in good spirits
WHO2	I have felt calm and relaxed
WHO3	I have felt active and vigorous
WHO4	I woke up feeling fresh and rested
WHO5	My daily life has been filled with things that interest me

Response option:	Six point response scale (0=at no time, 1= some of the time, 2= less than half of the time, 3= more than half of the time, 4=most of the time, 5=all of the time
Remarks/ Adaptations:	no
Psychometric quality:	• The WHO-5 has been found to have adequate validity in screening for depression and in measuring outcomes in clinical trials. Item response theory analyses in studies of younger persons and elderly persons indicate that the measure has good construct validity as a unidimensional scale measuring well-being in these populations
Subscales	no
Analysis	The total raw score, ranging from 0 to 25, is multiplied by 4 to give the final score, with 0 representing the worst imaginable well-being and 100 representing the best imaginable well-being. When WHO-5 is used for the screening of depression, a cut-off score of ≤ 50 is suggested.
Source:	• Bech, P., 2004. Measuring the dimensions of psychological general well-being by the WHO-5. *QoL Newsletter*, *32*, 15-16. • Topp, C. W., Østergaard, S. D., Søndergaard, S. & Bech, P. (2015). The WHO-5 Well-Being Index: a systematic review of the literature. *Psychother Psychosom*, *84*(3), 167-176.

4.5 Health complaints

Label	Item
hcomp	In the last 6 months, how often have you had the following complaints?

Label	Item
hcomp1	Headache
hcomp2	Stomach-ache
hcomp3	Backache
hcomp4	Feeling low
hcomp5	Irritability or bad temper
hcomp6	Feeling nervous
hcomp7	Difficulties in getting to sleep
hcomp8	Feeling dizzy

Response option:	Five point response scale (0=rarely or never, 1= about every month, 2= about every week, 3= more than once a week, 4=about every day)
Remarks/ Adaptations:	This instrument is used in the Health Behaviour in School-aged Children (HBSC) study as HBSC Symptom Checklist" (HBSC-SCL) since 1986.
Psychometric quality:	• Although previous studies suggest that the scale reflects two dimensions (psychological and somatic) that might differ qualitatively, the scale can be considered as measuring a uni-dimensional latent trait of psychosomatic complaints.
Subscales	no
Analysis	• **Creating a Subjective Health Complaints Index**: The index is calculated using only 7 out of the 8 items (without the item "sleeping difficulties). The scale provides a concise summary of individual health complaints. In order to calculate the index, it is necessary to sum up the 7 items. Values range from 1 to 35. The sum score can then be transformed into T-values. Higher values indicate fewer and less severe health complaints. • **Multiple recurrent health complaints** (using all items): The percentage of students can be calculated who experience two or more subjective health complaints at the same time several times a week or daily.
Source:	• Haugland, S. & Wold, B. (2001). Subjective health complaints in adolescence--reliability and validity of survey methods. *J Adolesc*, *24*, 611-624. • Haugland, S., Wold, B., Stevenson, J., Aarø, L.E. & Woynarowska, B. (2001). Subjective health complaints in adolescence - a cross-national comparison of prevalence and dimensionality. *Eur J Public Health*, *11*, 4-10. • Hetland, J., Torsheim, T. & Aarø, L. E. (2002). Subjective health complaints in adolescence: dimensional structure and variation across gender and age. *Scand J Public Health*, *30*(3), 223-230.