

Short Summary
**Health Literacy of the Population in
Germany Before and During the
COVID-19 Pandemic**

**Results of the Second Health Literacy
Survey Germany
(HLS-GER 2)**

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2021

The study was funded by the Federal Ministry of Health.

Please cite this as follows:

Schaeffer, D., Berens, E.-M., Gille, S., Griese, L., Klinger, J., de Sombre, S., Vogt, D., Hurrelmann, K. (2021): Health Literacy of the Population in Germany before and during the COVID-19 Pandemic. Results of the Second Health Literacy Survey Germany (HLS-GER 2). Short Summary. Bielefeld: Interdisciplinary Centre for Health Literacy Research (ICHL). Bielefeld University. DOI: <https://doi.org/10.4119/unibi/2951271>

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The German report can be accessed here:

Schaeffer, D., Berens, E.-M., Gille, S., Griese, L., Klinger, J., de Sombre, S., Vogt, D., Hurrelmann, K. (2021): Gesundheitskompetenz der Bevölkerung in Deutschland – vor und während der Corona Pandemie: Ergebnisse des HLS-GER 2. Bielefeld: Interdisziplinäres Zentrum für Gesundheitskompetenz-forschung (IZGK), Universität Bielefeld.
DOI: <https://doi.org/10.4119/unibi/2950305>

Introduction

The second Health Literacy Survey Germany (HLS-GER 2) provides new data on the health literacy of the population in Germany. The first representative population survey for Germany was published in 2014, the HLS-GER 1 (Schaeffer et al. 2017), following publication of the first European Comparative Survey (HLS-EU) about a decade ago. Now, seven years later, a new study is presented. It provides

- a new detailed measurement of the health literacy of Germany's population;
- a thematic expansion through the inclusion of the three new topics (a) digital health literacy, (b) navigation health literacy, and (c) communicative health literacy;
- a trend analysis, since the main study which took place between December 2019 and January 2020 was supplemented by an additional survey in August/September 2020 (HLS-GER 2'). This allows for a comparison of health literacy in Germany before and during the COVID-19 pandemic.

The study is part of the "WHO Action Network on Measuring Population and Organizational Health Literacy (M-POHL)" led by WHO Europe and the associated international survey HLS₁₉, which aims to collect new baseline data on health literacy. For this purpose, the survey instrument and the method of analysis were adapted within the HLS₁₉ consortium.

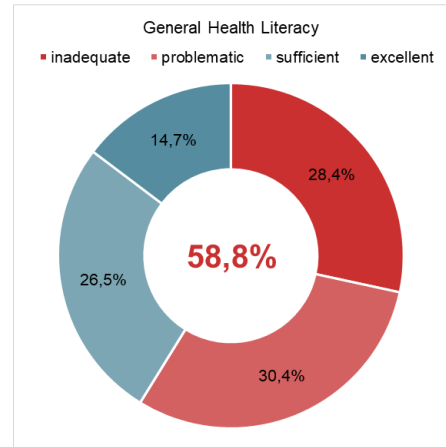
Methods

This study is based on a representative, quantitative cross-sectional survey of the German-speaking resident population aged 18 and older. The survey was conducted using paper-assisted oral-personal interviews (PAPI) by the Allensbach Institute for Public Opinion Research. The sample was drawn using the quota method. For the main HLS-GER 2 survey in December 2019 and January 2020, a total of 2,151 people were included in the analyses. For the complementary survey (HLS-GER 2') performed in August/September 2020, 540 respondents could be included.

In this study, health literacy was measured using the German version of the HLS₁₉-Q47. The wording of some of this instrument's items and the wording of the middle response categories have been changed, compared to the original HLS-EU instrument (HLS-EU Consortium 2012). Health literacy levels were calculated based on the newly defined sum score of the dichotomized items, which is standardized to the range of 0-100. As cut-off points for the health literacy levels, cutting points 50 – 66.66 – 83.33 were applied. As in the HLS-EU study, the resulting categories are labelled "inadequate", "problematic" (referred to as "low" health literacy), "adequate" and "excellent" (referred to as "high" health literacy) although they are not directly comparable. The new topics were analyzed using the same approach.

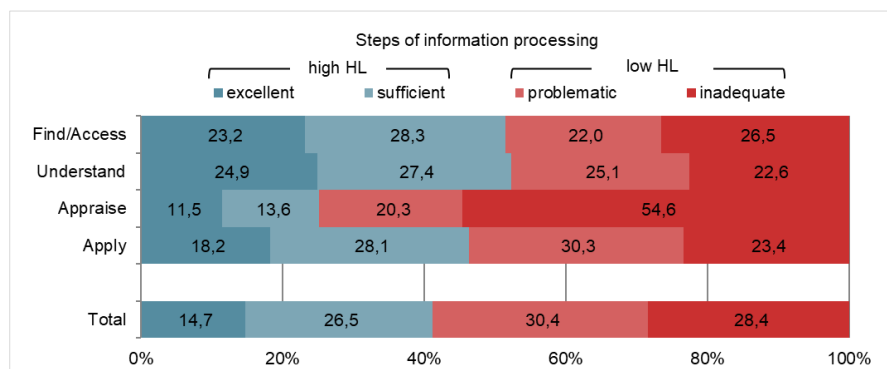
Main results of the HLS-GER 2

1. Health literacy in Germany has declined over the last seven years. At 58.8 percent, considerably more than half of the population has low health literacy. During the COVID-19 pandemic, health literacy increased slightly. However, low health literacy still affects the majority of the population in Germany: therefore, strengthening health literacy remains an important public health task.
2. Health literacy is unequally distributed in the population: In particular, people with a low educational level, low social status, migration experience, older people and people living with chronic illness or long-term health problems have a lower health literacy (*for percentages see section key results of the HLS-GER 2 and HLS-GER 2'*). The study thus underlines the importance of vulnerable groups. At the same time, it reveals shifts; in contrast to previous studies, it also shows that *younger* people between the age of 18 and 29 have more difficulties in dealing with health information. It also shows that people living with *several* chronic diseases have lower health literacy than people affected by only one chronic disease. People with *personal* migration experience also have a significantly higher proportion of low health literacy than people with only parental migration experience.



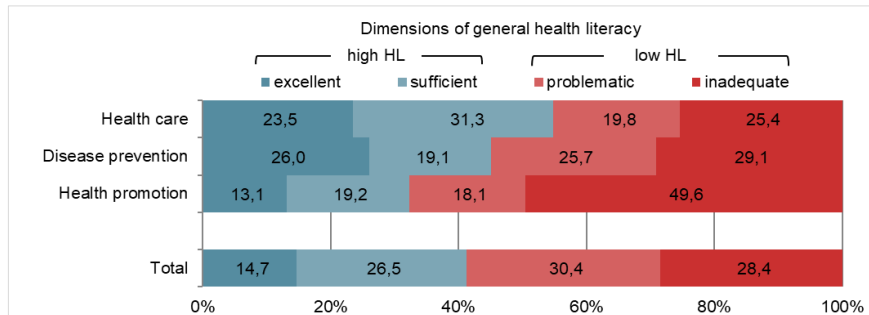
Based on these and other findings, the study provides important indications for the development of differentiated, target group-specific interventions, which has long been demanded to especially improve the participation opportunities of vulnerable groups. The complementary survey conducted during the COVID-19 pandemic once again shows the importance of such a demand because it confirms the observed social disparities in health literacy.

3. Of the four steps in information processing (finding/accessing, understanding, appraising, applying), *appraising* health information is perceived as the most difficult one: almost 75 percent of the population face problems with this step. This indicates that the growth of information as well as of misinformation and false information, which has been observed for some time, poses a considerable problem for the population and, in turn, demonstrates the need to improve the quality of health information. Another result emphasizes this: *Applying* health information is also often perceived as difficult; the proportion of individuals with low health literacy in this step also increased. However, improvements have been made during the COVID-19 pandemic. In particular, the appraisal of information has become easier. Nevertheless, the proportion of low health literacy is still at a high level.



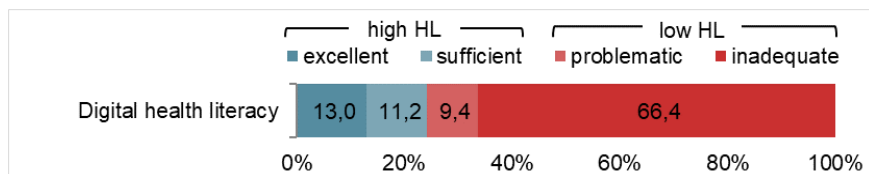
4. In all three domains of health literacy – health care, disease prevention, and health promotion – respondents perceive it as difficult to deal with information. However, this is particularly pronounced in *health promotion*. For example, accessing information on health promotion in everyday life (workplace, school, living environment) or mental health problems is considered very difficult.

There are also challenges in the domain of *prevention*, for example concerning vaccination. The situation is similar in the domain of *health care*. Medical package inserts are considered difficult to understand far more often than in the previous study, and a large share of the population reports having difficulties in deciding whether they should get a second opinion. These individual results provide insights into the diverse challenges in the three domains of health literacy surveyed.



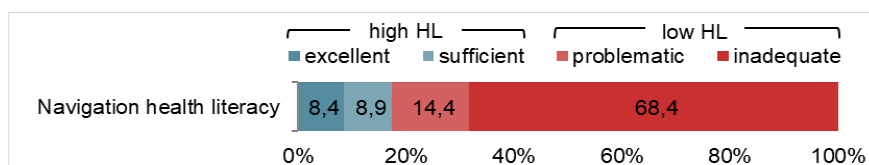
5. Low health literacy has numerous negative consequences and is associated with unhealthy behavior such as less physical activity, an unhealthier diet, a higher likelihood of being obese, poorer self-perceived health, more days absent from work, and more intensive use of the health system (more doctor visits, hospitalizations, more frequent use of emergency services). These associations are stronger in the additional survey conducted during the COVID-19 pandemic and illustrate that low health literacy is an important determinant of health and economic factor.

6. *Digital health literacy* of the respondents is very low. Three-quarter of the respondents have a low level of digital health literacy and thus have great difficulties in dealing with digital information. The appraisal of the trustworthiness and neutrality of digital information is considered especially difficult.



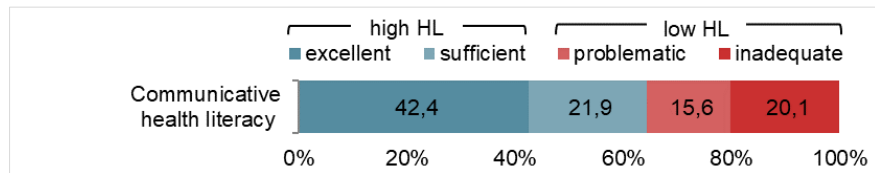
A similar picture emerges regarding the overall use of digital health information opportunities, which is not very high according to the study. This also changed during the COVID-19 pandemic. Since the pandemic, the use of digital information opportunities has increased, and the share of low digital health literacy has decreased. Nevertheless, there is a great need for action to improve digital health literacy – and to also catch up with other countries.

7. This also applies to *navigation health literacy*. More than 80 percent of the population has low navigation health literacy, which means they often face difficulties in dealing with information regarding navigation and orientation – especially concerning questions about how the health system



works, understanding health reforms, patient rights, or quality issues. This is particularly true for people with a low educational background, low social status, for older people, but remarkably also for younger people. The COVID-19 pandemic has hardly changed this. The result is that the navigation of the health system and its organizations, as well as the relevant information about it, urgently need to be improved.

8. *Interaction and communication with doctors is easier for the respondents. The proportion of those with*



low communicative health literacy is relatively lower compared to the other topics. Nevertheless, there are challenges, as well: For example, more than half of the population finds it difficult to understand the terminology used by doctors or to get sufficient time to talk to them. This addresses two very important issues that have long been criticized and must be improved.

9. Overall, the results of the HLS-GER 2 and the complementary survey HLS-GER 2' underline the *need for political action*. They show once again how important it is to continuously strengthen the population's health literacy and to intensify the necessary intervention development, research, and networking. Only the cooperation of all relevant stakeholders and their networks from different areas of society allows for a sustainable promotion of health literacy in Germany.

The importance of sufficient health literacy is once again highlighted by the experiences gained during the COVID-19 pandemic. They show that comprehensive, continuous health information disseminated through many channels is effective – provided it is adapted and tailored to the different groups in society, has a low threshold, is easy to access, comprehensible, reliable, and applicable. The study provides numerous indications of how appropriate interventions can be designed in a promising way. Above all, it shows how important it is to take a parallel approach when promoting health literacy by developing behavioral interventions targeted to individuals and structural interventions that aim to foster health literacy and remove existing barriers related to it.

Summary of key results of the HLS-GER 2 and HLS-GER 2'

General health literacy

- 58.8 percent of the population in Germany have low health literacy according to the HLS-GER 2.
- During the COVID-19 pandemic, health literacy improved by 3 percentage points.

Vulnerable groups

- The groups of people with lower health literacy include those
 - with a low level of education (78.3 percent),
 - with low social status (71.9 percent),
 - aged 65 and over (65.1 percent),
 - with chronic illnesses (62.3 percent), especially with several long-term illnesses
 - with a migration background (63.1 percent), especially people with a personal migration experience
 - between the age of 18 and 29 (60.7 percent),
- There are minor differences in health literacy between women and men.

Steps of information processing

- Appraising information is most difficult for the population. 74.9 percent of the respondents have low levels of health literacy in this area.
- At 53.7 percent, the proportion of low health literacy in the *application* of health information is also relatively high.
- Since the outbreak of the COVID-19 pandemic, there has been a tendency toward slightly improved levels of health literacy at all stages of information processing.

Domains of health literacy

- The domain of *health promotion* has the highest percentage of low health literacy, 67.7 percent.
- The domain of *prevention* has 54.8 percent, the domain of *health care* 45.2 percent.
- During the COVID-19 pandemic, health literacy also tended to improve in these areas.

Consequences of low health literacy

- People with high levels of health literacy live healthier lives: 49.6 percent of respondents with excellent health literacy eat fruit, vegetables, or salads every day. This applies to only 31.0 percent of people with inadequate health literacy.
- Respondents with low health literacy take more sick leave: 35.4 percent of respondents with excellent health literacy were on sick leave for 6 days or more during the last 12 months compared to 49.6 percent of respondents with inadequate health literacy.
- People with low health literacy use the health system more frequently. 13.6 percent of respondents with excellent health literacy recorded 6 or more contacts to general practitioners over the last 12 months, compared to 27.8 percent of those with inadequate health literacy.
- The found correlations became even stronger during the COVID-19 pandemic.

Digital health literacy

- The share of individuals with low digital health literacy is 75.8 percent. Especially elderly people aged 65 and older (86.0 percent) and people with a low educational level (86.7 percent) have low digital health literacy.

- During the COVID-19 pandemic, digital health literacy improved, especially among younger age groups, but not among older people.
- Health-related websites are used by almost two-thirds of the population, while 35.6 percent never access them.
- 68.5 percent of the population never use digital devices, 79 percent do not use health apps.
- The use of digital health information and communication opportunities has also increased during the COVID-19 pandemic.

Navigation health literacy

- Almost 83 percent of the respondents have low navigation health literacy.
- 57.7 percent of the respondents have difficulties understanding information about the operating principles of the health system, 68.1 percent consider it difficult to find information on the quality of health facilities/services, and 73.6 percent find it difficult to understand information on current health reforms. 70.7 percent of the population report that they have difficulties understanding what rights they have as a patient in the health care system.
- Navigation health literacy has hardly changed during the COVID-19 pandemic.

Communicative health literacy

- Communicative health literacy is better. The proportion of low health literacy in this area is 'only' 35.7 percent.
- The comprehensibility of the terminology (46.5 percent) and the lack of time (47.5 percent) cause the most difficulty in communicating with doctors.

Literature

HLS-EU Consortium. (2012). *Comparative Report of Health Literacy in Eight EU Member States; The European Health Literacy Survey HLS-EU. Second Revised and Extended Version*. Accessed: 09.04.2020. Available at: https://cdn1.sph.harvard.edu/wp-content/uploads/sites/135/2015/09/neu_rev_hls-eu_report_2015_05_13_lit.pdf

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