

Short Summary Report
Corona-specific Health Literacy
in Germany
Second survey of the
HLS-COVID-19 trend study

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Original German report

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Studies on Population-based Health Literacy at IZGK

Overview of studies

Study	Time/Date	Study Titel and Focus
HLS-GER 1 HLS-GER 1'	Jul. / Aug. 2014	Representative Survey on Measuring Population Health Literacy in Germany N=2.000 (15+ years; funded by BMJV)
(Schaeffer et al 2017; Hurrelmann et al 2020)	Aug. / Sept. 2020	Health Literacy Survey Germany; Comparison of Results Between 2014 and 2020 N=504 (18+ years; funded by BMG)
HLS-GER 2 HLS-GER 2'	Dec. 2019 / Jan. 2020	Expanded Representative Survey on Population Health Literacy in Germany N=2.000 (18+ years; funded by BMG)
(Schaeffer et al 2021)	Sept. / Oct. 2020	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) N=500 (18+ years; funded by BMG)
HLS-COVID-19	Between Mar. - Dec. 2020	Corona-specific Health Literacy in Germany: Second Survey of the HLS-COVID-19 Trend Study T1 N=1037, T2 N=1021 (16+ years; T1: funded by BMBF; T2 funded by BMG)
(Okan et al 2020 / 2021)		

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Schaeffer D, Berens E-M, Vogt D. Health Literacy in the German Population. Dtsch Arztebl Int 2017; 114(4):53–60.

Hurrelmann, K., Klinger, J., Schaeffer, D. (2020): Gesundheitskompetenz der Bevölkerung in Deutschland – Vergleich der Erhebungen 2014 und 2020. Bielefeld: Interdisziplinäres Zentrum für Gesundheitskompetenzforschung (IZGK), Universität Bielefeld. DOI: <https://doi.org/10.4119/unibi/2950303>.

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 Gesundheitskompetenzforschung (IZGK), Universität Bielefeld. DOI: <https://doi.org/10.4119/unibi/2950305>.

Okan, O., de Sombre, S., Hurrelmann, K., Berens, E.-M., Bauer, U., Schaeffer, D (2020). Covid-19-Gesundheitskompetenz der Bevölkerung. in: „Monitor Versorgungsforschung“ (03/20), S. 40-45. doi: 10.24945/MVF.03.20.1866-0533.2222.

Okan, O., Bollweg, T. M., Bauer, U., Hurrelmann, K., Janner, C., Schaeffer, D. (2021). Trendstudie zur coronaspezifischen Gesundheitskompetenz: Ergebnisse der zweiten Erhebung der HLS-COVID-19 Studie. Bielefeld: Interdisziplinäres Zentrum für Gesundheitskompetenzforschung (IZGK), Universität Bielefeld. DOI: <https://doi.org/10.4119/unibi/2950307>.

Key Findings

The HLS-COVID-19 study is a representative trend study measuring coronavirus- and COVID-19-specific health literacy (in short: corona-specific health literacy) among online users in Germany, conducted at three measurement points in 2020. In the following, the most important results of the second survey (September 22 to October 5) are presented. In the second survey, N=1021 participants aged 16 and older in Germany were surveyed. Focus areas of the online survey included health literacy, information behaviour, prevention behaviour, attitudes and beliefs on vaccination, vaccination readiness, knowledge about COVID-19 as well as concerns and fears for the future.

The proportion of individuals with low corona-specific health literacy decreased from 50.4% to 35.5% between the first and second survey. This finding is related presumably to the continuous and extensive provision of information about the coronavirus through many information channels since the start of the pandemic. Such broad and permanent provision of information about a specific health risk represents a health communication strategy that is unprecedented in Germany. While it may need optimization in some places, the results of the HLS-COVID-19 survey indicate that such health communication strategy is effective and has positive effects on population health literacy. In addition, prevention messages such as the behavioural recommendations (e.g. physical distancing, hand washing, wearing a mask), are easy to understand and apply. At the same time, it should not be overlooked that slightly more than one-third of the population has low corona-specific health literacy, which is an alarming number in light of the current challenges related to containing COVID-19. In fact, data collected in the HLS-COVID-19 survey shows that low corona-specific health literacy is associated with numerous negative health outcomes.

Individuals with low corona-specific health literacy...

- feel significantly less informed about the COVID-19 pandemic and the coronavirus.
- have less trust in all sources of health information.
- are significantly more likely to be confused by the amount of information available about the coronavirus.
- are less likely to inform themselves more about health topics since the outbreak of the pandemic (46.6% with high health literacy vs. 41.0% with low health literacy).
- are significantly less likely to engage in physical distancing, handwashing and wearing a face mask.
- more often have doubt in the effectiveness of recommended health behaviours (e.g. physical distancing, mask wearing) in preventing an infection with the coronavirus.
- have more often negative attitudes toward vaccination and show less vaccination readiness.
- are less concerned that they or a family member might get infected with the coronavirus.
- are more likely to think that the threat posed by the coronavirus is being exaggerated.
- are more likely to think that – regarding the COVID-19 pandemic and associated consequences – the worst is already over.

Information behaviour

- Overall, people feel well informed about the coronavirus, however, the proportion of very poorly informed people has increased significantly compared to the first survey in Spring 2020, while the proportion of well-informed people has decreased.
- About half of the respondents stated that they felt confused by the large amount of information on the coronavirus: 42.5% felt "somewhat confused", 8.9% felt "very confused".
- Almost half of the participants (45.2%) reported that they engage with health information more frequently since the start of the COVID-19 pandemic. However, 13% stated that they would engage less than before.
- Television is highlighted as the most frequently used source of information about the coronavirus.
- However, people have most trust in doctors, health experts, and health professionals, local health authorities, and official health information websites (e.g. Ministry of Health, Robert Koch Institute, Federal Centre for Health Education).

Prevention behaviour

- Individual behavioural measures such as wearing a protective mask (90%), washing hands more frequently (83%), and keeping a distance (82%) are generally applied, but often not in combination – as would be required by nationwide recommendations within the public health COVID-19 strategy.
- More than a quarter of respondents do not implement all of the three aforementioned preventive behaviours.
- Women (78.4% vs. 67.4% of men) are more likely to engage in all three preventive behaviours.
- Only 59% of 16- to 29-year-olds wear a mask, wash their hands more frequently, and practice physical distancing.

Vaccination-related attitudes and corona-related knowledge

- 54% of participants stated they were willing to get vaccinated once a vaccine against the coronavirus is available. Another 22.3% stated they would "maybe" get vaccinated, and about one quarter of the population did not want to be vaccinated at the time of the survey.
- The percentage of those who are critical of vaccinations is not negligible: 10.7% think that vaccinations are unsafe and 7.8% do not believe vaccinations are effective. Another 8.2% do not think vaccinations are important to protect themselves and their own children, and for 12.5%, vaccinations are not compatible with their attitudes and religious beliefs.

- Individuals with a lower education level and the elderly are more likely to have negative attitudes toward vaccinations. However, the vast majority of the population believes that vaccinations are safe (89.3%) and effective (92.2%) in protecting themselves and their own children (91.8%).
- Younger people are significantly more likely to say that vaccinations are harming the immune system. They are also more likely to think that there is already a vaccine for coronavirus and a medical treatment for COVID-19 – although by the time of the survey no vaccine was available.
- People with a low level of education are also more likely to fear that vaccines would have severe side effects and be harmful to the immune system.

Concerns and fears for the future

- 90% of respondents are concerned about COVID-19 and the associated crisis, 71.5% are afraid of getting infected, 66.1% take the threats associated to COVID-19 very seriously, and 93.7% believe that not much will change in the foreseeable future or that things could get worse.
- People with a chronic disease were more likely to voice fear and concern.

Denial of the coronavirus

- Almost one in ten respondents (8.1%) agree with the statement that "the coronavirus does not exist at all"
- People with a low level of education, from the "new" federal states (former states of Eastern Germany), younger people, and parents of minors belong to the group of those who significantly more often deny the existence of the coronavirus.

Summary

Essentially, health literacy comprises the skills and competencies needed to deal with health-relevant knowledge, information, and services (1). In this context, finding, understanding, critically appraising, and applying health information in everyday practices are the core components of health literacy (2). Thus, health literacy plays a key role during the COVID-19 pandemic and especially with regards to containing the spread of the coronavirus (3).

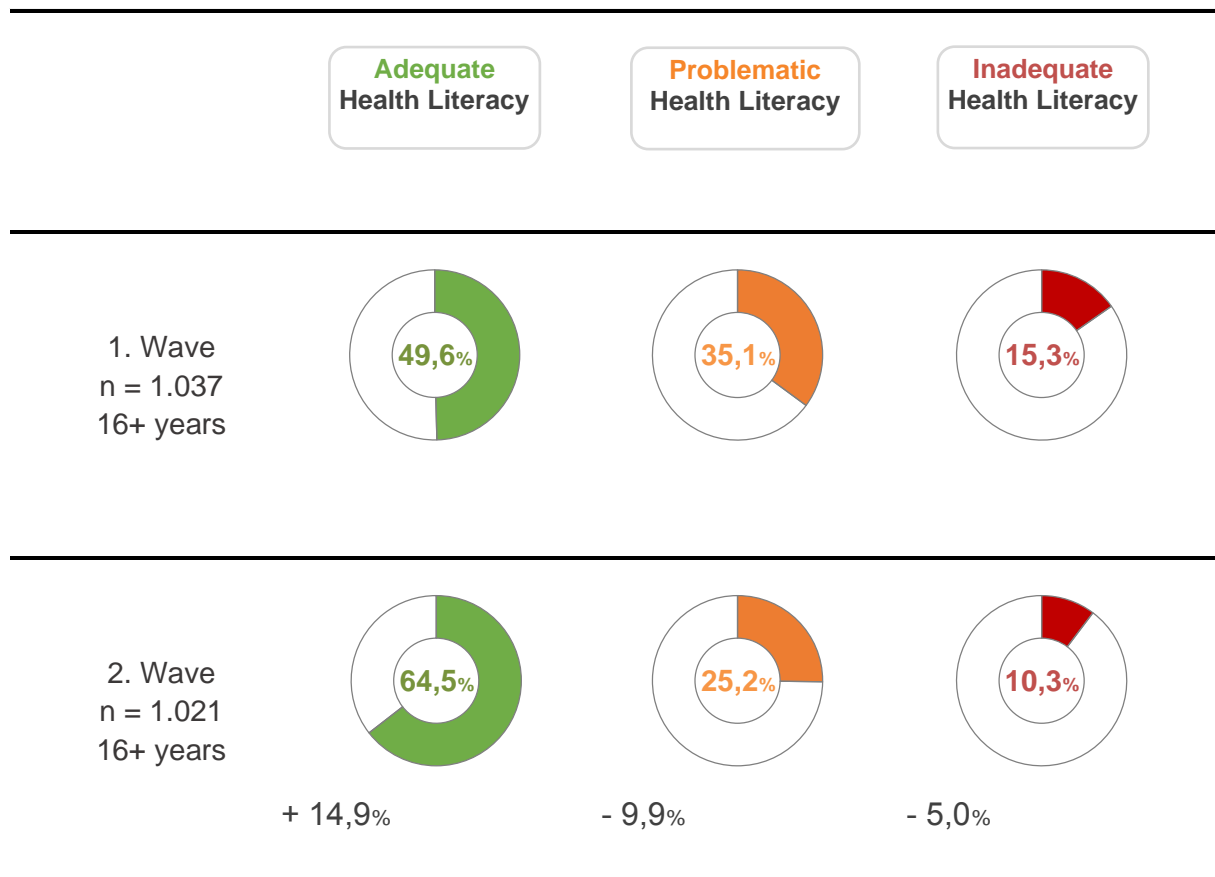
During the COVID-19 pandemic, health literacy plays a key role in enabling people to access information sources and acquire new knowledge about the coronavirus, as well as to understand and apply behavioural recommendations. Further, health literacy helps individuals to make personal risk assessments and distinguish between trustworthy health messages and misinformation or false information (4–6). Even before the COVID-19 pandemic, health information and online information environments were already highly complex and posed difficulties for people (7). Dealing with health information is particularly difficult for people with low health literacy, as shown in the German HLS-Ger 1 study (8), its follow-up survey (9), and the recently published HLS-Ger 2 study (10). With the outbreak of the pandemic, this situation has worsened, especially because digital communication technologies and transmission channels facilitate the rapid dissemination and multiplication of information. This rapid spreading of information via digital technologies – both accurate and false information - is also referred to as “infodemic”, which is short for “information epidemic” (11, 12). The infodemic leads to a significant increase of available online information on coronavirus and COVID-19, accompanied by information that is available via traditional media channels, such as TV, radio, and print, together creating a more complex and difficult-to-navigate information environment (7, 13).

Studies on general health literacy focus on how easy or difficult it is for people to deal with health-related information regarding the whole spectrum of healthcare, diseases prevention, and health promotion. Such information is often very complex and difficult to understand and follow, especially for people with low levels of health literacy (9, 10, 14). Findings on generic population health literacy can not necessarily be compared to findings on specific health literacy, e.g. corona-specific health literacy or mental health literacy. The findings of the first measurement of population-based corona-specific health literacy in Germany have shown that health literacy regarding coronavirus and COVID-19 related health information is much higher compared to generic health literacy levels of the population (13). Overall, the results of the second measurement confirm this trend: currently, it is relatively easy to understand, appraise, and apply behavioral recommendations such as physical distancing, wearing a face mask, and hand-washing. This is probably best explained by the fact that such official recommendations are kept simple, easy-to-understand, and easy-to-use. In addition, information is often repeated via the most important communication channels since the outbreak of the global pandemic, which might have been related to an increase of knowledge and awareness about the coronavirus and COVID-19.

Corona-specific health literacy was assessed at three measurement points in 2020 (spring, autumn, and winter). The first survey (baseline survey between March 31 and April 7) was completed earlier in Spring 2020 (13, 15), the second survey took place between September 22 and October 5, 2020, and the third survey started on November 24 and ended on December 4, 2020. During the second and third measurement periods, comparative measurements of corona-specific health literacy in Austria and Switzerland were conducted. The focus of the study was to explore how corona-specific health literacy develops over time in the Germany

population (and in Austria and Switzerland). Also, the study investigated how easy or difficult it is for people to find, understand and critically appraise information on the coronavirus and COVID-19, and how they use such information to influence their health behaviour.

Corona-specific Health Literacy in Germany



HLS-COVID-19 Survey | Corona-specific Health Literacy in the German Population 2020

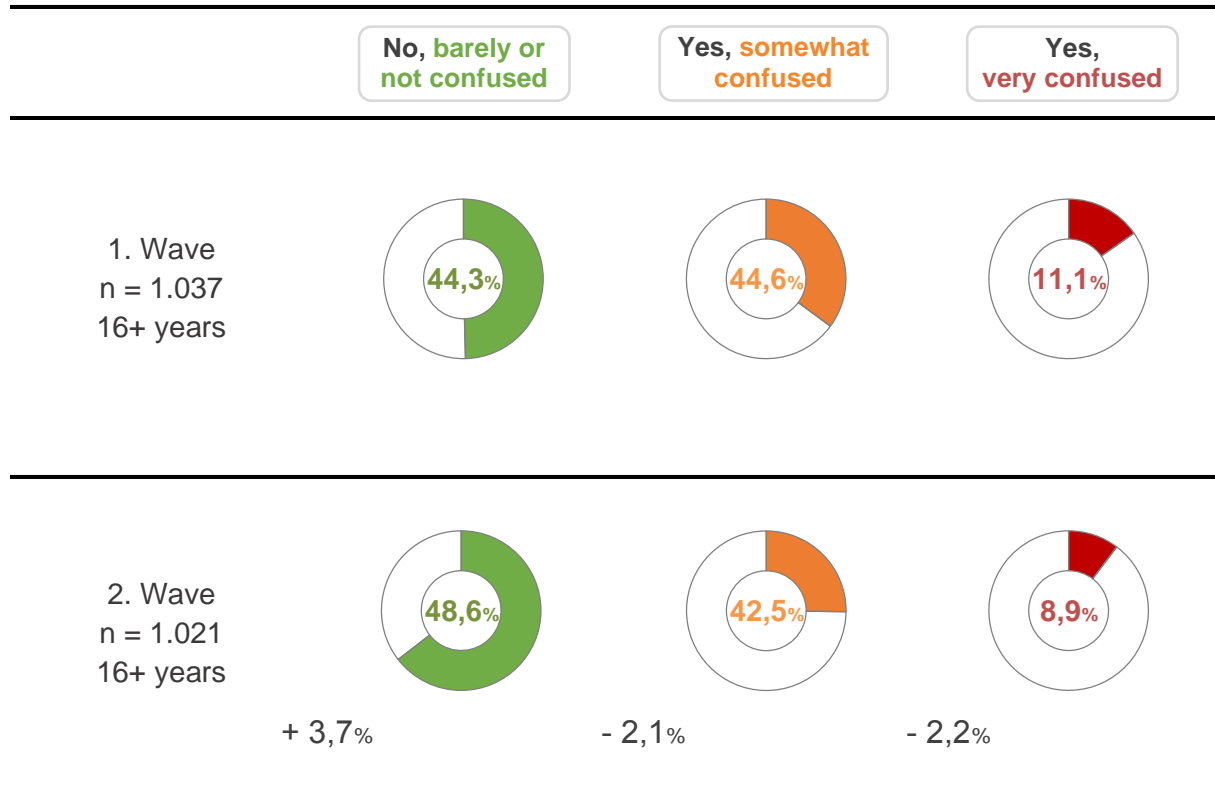
Figure 1: Corona-specific health literacy in spring and autumn of 2020

Data of the second survey in the autumn of 2020 show that the percentage of people with low corona-specific health literacy has decreased from 50.4% to 35.5% (see figure 1). In the second survey, older people find it significantly more difficult to deal with information about the coronavirus than younger people. Among older people, the proportion of individuals with sufficient corona-specific health literacy is 60.3%, compared to 69.7% among 16- to 29-year-olds. The greatest challenge reported is assessing the trustworthiness of media-related health information and sources as well as using information to influence one's behaviour.

Although the majority of the population still feels well informed about coronavirus, the number of those that feel poorly informed has increased significantly compared to the first survey in the spring of 2020 (see figure 2). Uncertainty about the abundance of information regarding the coronavirus and COVID-19 has decreased slightly. However, more than half of the citizens still report that they are confused by the abundance of available information on the coronavirus and COVID-19: 42.5% feel "somewhat confused", 8.9% even "very confused". This confusion is reported across all of the population. Individuals with lower corona-specific health literacy

feel significantly less informed and report more confusion by the abundance of information on the coronavirus and COVID-19.

Do you feel confused about all the information on COVID-19 and the coronavirus?



HLS-COVID-19 Survey | Corona-specific Health Literacy in the German Population 2020

Figure 2: Confusion about information on COVID-19 and coronavirus

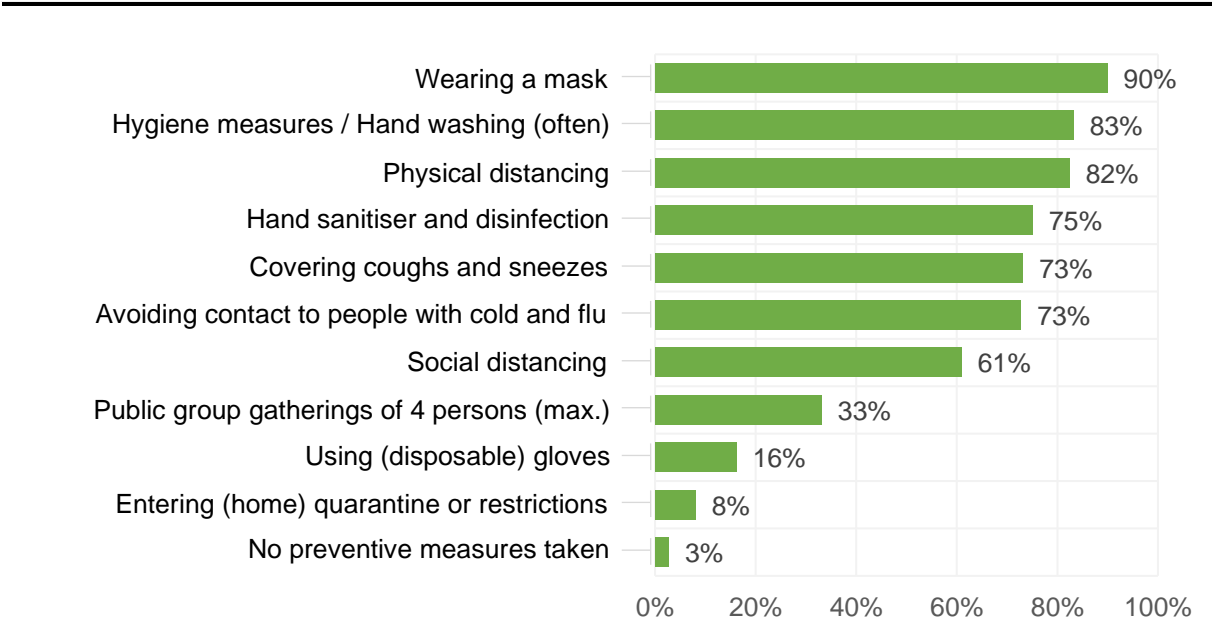
The COVID-19 pandemic has visibly changed the information behaviour of the public, with 45.2% of respondents reporting that they now seek information about health topics more frequently than they did before the pandemic. In this context, older people inform themselves more frequently than younger people. However, people with a low level of education are significantly more likely to report to search for information on health topics less often now than they did before the pandemic (17.2% vs. 10.5%).

Television appears to have become the most frequently accessed source of health information on coronavirus during the crisis. The Internet is used as the second most common source of information. For instance, two-thirds of the respondents reported seeking information on coronavirus through health information websites. Traditional media such as radio and print formats (newspapers and magazines) are named as the next most important sources. Only one-third report that they access information from their own social environment or from doctors, health experts, and health professionals. However, people with a high level of corona-specific health literacy more frequently consult doctors, health experts, and official health information websites to obtain information on the coronavirus.

When it comes to trust in information sources, physicians, health professionals, local health authorities, and official health information websites (e.g. Health Ministry, Robert Koch Institute, Federal Centre for Health Education) are rated as being most trustworthy. Television and radio are also named as highly trusted sources. Information provided by the social environment, newspapers, and magazines (online as well as print formats) is perceived trustworthy by more than half of the respondents. Messenger groups as well as social media are predominantly rated as untrustworthy and only one in five persons report that they would trust these sources. People with low corona-specific health literacy are more sceptical towards all information sources, which is expressed in significantly less trust overall.

Focusing on population health behaviour related to official recommendations (see figure 3), it becomes apparent that individual behavioural measures such as wearing a protective mask (90%), washing hands more frequently (83%), and keeping a distance (82%) are practiced, but often not in combination – as would be required by official guidelines. More than a quarter of respondents do not implement these three recommended behaviours together, with women (78.4%) implementing them more frequently than men (67.4%). Remarkably, only 59% of 16- to 29-year-olds report to engage in physical distancing, washing hands more frequently, and mask-wearing. Overall, individuals with low corona-specific health literacy are significantly less likely to implement behavioural protective measures in daily life. The number of recommendations followed is also lower among people with a lower education level and household income, people living in the area of former East Germany, people without a chronic health condition, and parents of minors.

What behavioural measures have you taken to prevent yourself or others from coronavirus infection?



2nd Wave October, n = 1021, 16 years +

Figure 3: Health and protection behaviour

Regarding vaccine-related attitudes, a considerable proportion of respondents stated that vaccinations are unsafe (10.7%), ineffective (7.8%), and unimportant for their own protection and the protection of family members (8.2%). Statistically significant associations were found for age, education, corona-specific health literacy, and migration background. Younger people are significantly more likely to agree that vaccinations are important to protect themselves or their children. People with lower educational attainment have lower confidence in vaccines. Also, lower corona-specific health literacy is associated with stronger disagreement with the statements that vaccines are important, effective, safe, and in line with their own attitudes and religious beliefs.

Findings regarding beliefs about vaccination as measured in this survey are alarming, because individuals with a lower education level and younger individuals are significantly more likely to believe that vaccinations “overwhelm the immune system” and are associated with serious side effects. Also, women are more likely to report that vaccinations can have serious side effects. Further, individuals with low corona-specific health literacy are significantly more likely to believe that vaccinations overwhelm or weaken the immune system, have serious side effects, and can cause the diseases they are intended to protect against.

A quarter of the population report that they do not intend to get vaccinated against coronavirus once a vaccine is available. Another 22.3% are still undecided. Vaccination readiness is significantly higher among men, older people, people with higher educational attainment, and people with a chronic health condition. Low corona-specific health literacy is associated with significantly lower vaccination readiness.

Most people have adequate knowledge of coronavirus and COVID-19-related topics. However, younger people are significantly more likely to think that physical distancing and wearing a mask do not provide protection against an infection. Likewise, they are more likely to affirm the belief that a treatment for COVID-19 is already available. In addition, men as well as people with low education levels are more likely to believe that a medical treatment is already available. Individuals with lower education levels are more likely to think that preventive behaviours cannot protect against coronavirus infection. Individuals with low corona-specific health literacy are significantly more likely to doubt the effectiveness of distancing, increased handwashing, and wearing a mask.

It is certainly a worrying finding that almost one in ten persons report that they do not believe in the existence of the coronavirus. This perception is more frequent among people with lower education levels, those living in the states of former Eastern Germany, younger people, and parents of minors.

90% of respondents are concerned about the impact the COVID-19 pandemic has on their lives, and 71.5% are afraid to be infected or afraid for a family member to get infected with the coronavirus. Two-thirds of the population (66.1%) take the dangers posed by the coronavirus upon their lives and society very seriously, and 93.7% believe that the situation regarding the COVID-19 pandemic will either remain unchanged or worsen in the foreseeable future. Worries, fears, the assessment of the dangers posed by the coronavirus, and the expectation of a worsening course of the pandemic are very high, especially among people with chronic diseases. However, in contrary, it is also a remarkable finding that almost one third of all respondents stated that they are not worried about an infection with the coronavirus. Further, fears are more widespread among women. People with low corona-specific health literacy are less worried about an infection and have a more positive attitude regarding their personal future perspective.

Conclusion

Overall, the findings of the second survey are consistent with those of the first survey conducted in spring 2020 (13, 15): For most, it is easy to understand, appraise, and apply information related to behavioural recommendations such as keeping physical distance, wearing a mask, and washing hands. This can possibly be attributed to how health communication strategies are applied during the pandemic: Key recommendations on risks and preventive measures are expressed in lay language and phrased in concrete terms that are easy to apply (e.g., wearing a mask, physical distancing, washing hands). Compared to other available, sometimes highly complex, disease-specific information, information on coronavirus and COVID-19 is kept simple and has been repeated frequently through all communication channels since the outbreak of the pandemic. In addition, people have now been accompanied by the coronavirus and the associated health communication measures for more than ten months. Therefore, it can be assumed that a significant increase in knowledge on the topic of the coronavirus and COVID-19 has taken place, which is expressed in the finding of the second survey that the population finds it easier to deal with health information on the matter. It remains to be seen, however, whether and to what extent changes in knowledge, competence, attitude, and behaviour will be stable over time.

Further, it should not be overlooked that slightly more than one third of the population has low corona-specific health literacy. This is a rather high a number in light of the finding that low corona-specific health literacy is associated with numerous negative consequences, as mentioned before.

In the near future, it is therefore critical to provide targeted information that meets the needs of the population (or different population groups), to strengthen their health literacy, and to present and reinforce positive behaviours in a sustainable way that can be easily implemented by all. In particular, the ability to appraise health-related media information, as well as print and web-based information, needs to be strengthened, and this should begin at early stages of life, in particular, the school and education sector. At the same time, information development, provision, and supply must be further optimised, information must be simplified in a way that it is appropriate for different audiences, the reliability of information must be increased in order to combat misinformation on a systems level, and finally, it is important to implement and maintain a comprehensive communication strategy across all media channels to inform citizens well and reduce uncertainty and confusion.

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