SI-PANDA
Behavioural Insights Survey on COVID-19: Slovenia

NIJZ National Institute of Public Health

COVID-19 PANDEMIC IN SLOVENIA

Results of a panel online survey on the impact of the pandemic on life (SI-PANDA)

9th wave

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INTRODUCTION

Pandemic fatigue is the expected and natural human response to long-lasting public health crisis that significantly interferes with the daily life of an individual. It appears gradually and is influenced by emotions, experience, and attitudes. It is a response to long-lasting and unsolved distress in people's lives. The severity and the scope of COVID-19 pandemic and the introduction of strict measures to prevent and limit the transmission of the infection have a huge impact on the daily lives of all people, including those not directly affected by the virus. Over time, people's compensatory mechanisms for crisis management become fatigued and so these people lack motivation to follow recommended self-protective behaviours, and consequently jeopardize the effectiveness of measures to prevent the spread of SARS-Cov-2 infection among the population.

Understanding human behaviour in relation with COVID-19 enables the identification of at-risk target groups and helps to find solutions that encourage better adherence to protective behaviour recommendations. Adherence to measures in the population most effectively reduces the transmission and spread of SARS-CoV-2 in the long run, reduces fatigue and distress of all kinds, and increases the quality of life. In addition, it maintains a functioning healthcare system, enables the normalization of health promotional, preventive, and curative treatments, normalizes the functioning of all segments of society, from education to economy, and enables reducing inequalities through remote determinants of health. Above all, it can most effectively reduce the burden of COVID-19 at the individual and social level in Slovenia.

The aim of the research is to investigate and understand human behaviour in relation to COVID-19 and to assess pandemic fatigue during and after the COVID-19 pandemic in Slovenia. With it, we want to identify and address the impact of the pandemic, the measures introduced, and the recommendations and decisions made by the government on people's lives. Below, there are some key findings. The data collected in the survey provide key information on pandemic fatigue of the general population for professionals and decision makers. This also enforces the recommendation of the World Health Organization[1] that countries regularly conduct qualitative and quantitative population surveys, which should serve as the basis for further action.

[1] https://apps.who.int/iris/bitstream/handle/10665/335820/WHO-EURO-2020-1160-40906-55390-eng.pdf.

METHODOLOGY

The survey in the form of an online questionnaire is conducted in twelve waves (repetitions once every two weeks) starting on 4 December 2020. The survey is conducted on behalf of the National Institute of Public Health (NIJZ) by the Mediana Institute for Market and Media Research, while the data are analysed by NIJZ.

Every two weeks, selected panel members are invited to take part in an online survey conducted through Mediana's web panel. Each wave of online survey involves a sample of about 1,000 adults aged 18 to 74 who are included in Mediana's web panel.

In the survey, we use the World Health Organization (WHO)[2] questionnaire, which was translated, and adjusted to the situation in our country in accordance with the WHO instructions.

The data presented in the report are weighted by gender, age groups and statistical regions.

The report mostly presents data from the **9th wave** of the panel web survey, that took place **from 26 March 2021 to 29 March 2021** on a sample of 1,001 adults aged 18 to 74 years. Some comparisons with previous waves of survey are also shown.

So far, the following waves of the survey have been conducted:

1st wave: from 4 Dec 2020 to 6 Dec 2020

2nd wave: from 18 Dec 2020 to 21 Dec 2020

3rd wave: from 4 Jan 2021 to 5 Jan 2021

4th wave: from 15 Jan 2021 to 17 Jan 2021

5th wave: from 29 Jan 2021 to 30 Jan 2021

6th wave: from 12 Feb 2021 to 15 Feb 2021

7th wave: from 26 Feb 2021 to 1 Mar 2021

8th wave: from 12 Mar 2021 to 15 Mar 2021

9th wave: from 26 Mar 2021 to 29 Mar 2021

Focus groups

As NIJZ is conducting focus groups on the topic of vaccination against COVID-19 in parallel with the PANDA-SI survey, the section on vaccination presents some results of a discussion with those who are not decided regarding the vaccination against COVID-19, those in favour and those against vaccination against COVID-19, regarding the search of information on the epidemic and vaccination against COVID-19. The discussions were held on 11th February 2021 (undecided), 18th February (in favour) and 12th March 2021 (against vaccination).

[2] https://www.euro.who.int/en/health-topics/health-determinants/behavioural-and-cultural-insights-for-health/tools-and-resources/who-tool-for-behavioural-insights-on-covid-19/survey-tool-and-guidance-behavioural-insights-on-covid-19-produced-by-the-who-european-region

SUMMARY OF THE SURVEY

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Indicator	1st wave 4.-6.12.2020 (%)	9th wave 26.-29.3.2021 (%)
Use of the protective mask in public *(the share of respondents who have complied with the measure in the last 7 days)*	95.7	91.5
Maintaining recommended interpersonal distance in public *(the share of respondents who have complied with the measure in the last 7 days)*	90.7	83.6
Hand disinfection when washing is not possible *(the share of respondents who have complied with the measure in the last 7 days)*	90.6	86.7
Avoiding a private social event *(the share of respondents who have complied with the measure in the last 7 days)*	87.4	75.1
Testing in case of close contact with a person who tested positive for COVID-19 *(the share of respondents who would definitively get tested in case they were in contact with someone who tested positive for COVID-19 and would not develop any symptoms themselves)*	64.4	70.5
Intention to get vaccinated against COVID-19 *(the share of respondents who will get vaccinated against COVID-19, when it is their turn to get vaccinated)*	51.1	57.8
Avoiding a visit to the doctor due to a problem not related to COVID-19 *(the share of respondents who avoided a visit to the doctor in the last 2 weeks due to a non-COVID-19 problem)*	35.8	26.4
Mental health problems *(the share of respondents with depressive disorder or mental health problems)*	37.5	30.4
Deterioration of the personal financial situation *(the share of respondents who estimated that their financial situation in the last 3 months was worse than before)*	31.4	26.9

MAIN RESULTS

Complying with current measures

The vast majority of respondents stated that they had complied with the prescribed measures and recommendations to prevent the transmission of SARS-CoV-2 virus infection in the last 7 days (Figure 1). Of listed measures, respondents mostly comply with the use of a protective mask in public (91.5%) and the least staying at home (working from home, school, or study from home) (56.6%). Complying with the latter landed in the last place in the last, 9th, wave – before this, the least followed measure was disinfection of surfaces. The measure of staying at home covers both working from home as well as school or study from home. Due to the opening and closing of primary schools and, more recently, secondary schools, the interpretation of this indicator is more difficult and gives only a general feeling about how many employed and school-aged respondents remained at home in the observed period.

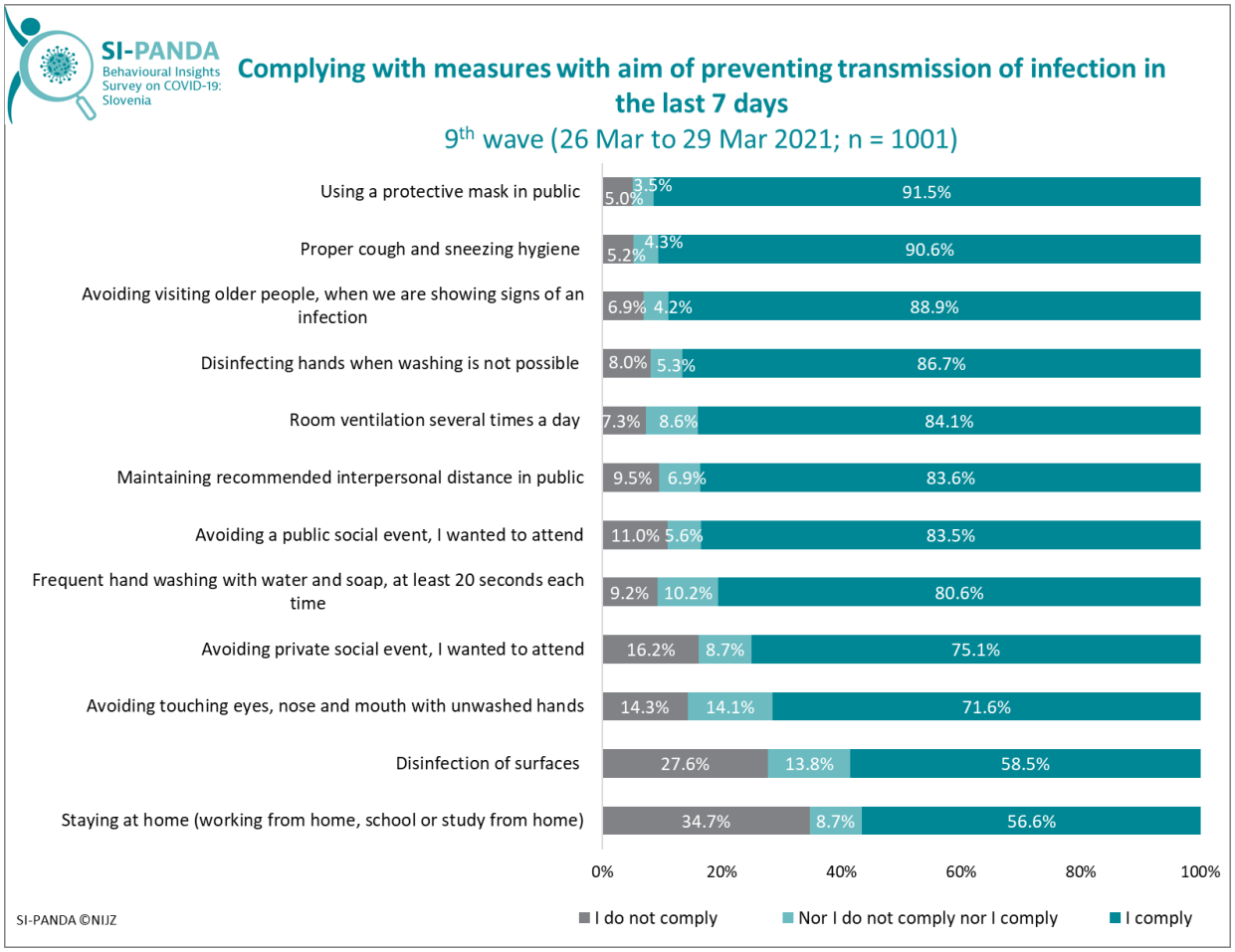


Figure 1: Complying with measures with aim of preventing infection in the last 7 days, total.

If we compare the results of individual survey waves, the use of a protective mask in public was the most considered measure through all waves (Figure 2). In 7th and 8th wave of the survey, a

decline in compliance with most measures is noticeable, which did not continue in the 9th wave. This could be attributed in part to an increase in the proportion of the population who had already recovered or been vaccinated against COVID-19, as well as to the fact that the number of newly infected people in the country began to decline and measures began to be relaxed, which probably had impact on reduced caution in people. Due to the upcoming warmer days, we have more opportunities to ventilate the rooms, which probably contributed to compliance with this measure in the last three survey waves. Despite the declining proportion of people who have complied with the measures in the last 7 days, a proportion of people who would certainly be tested if they were in contact with someone who tested positive for COVID-19 remains stable through individual waves and has even increased for about 5 percentage points in the 9th wave (to 70.5%, while it was somewhere around 65% in earlier waves).

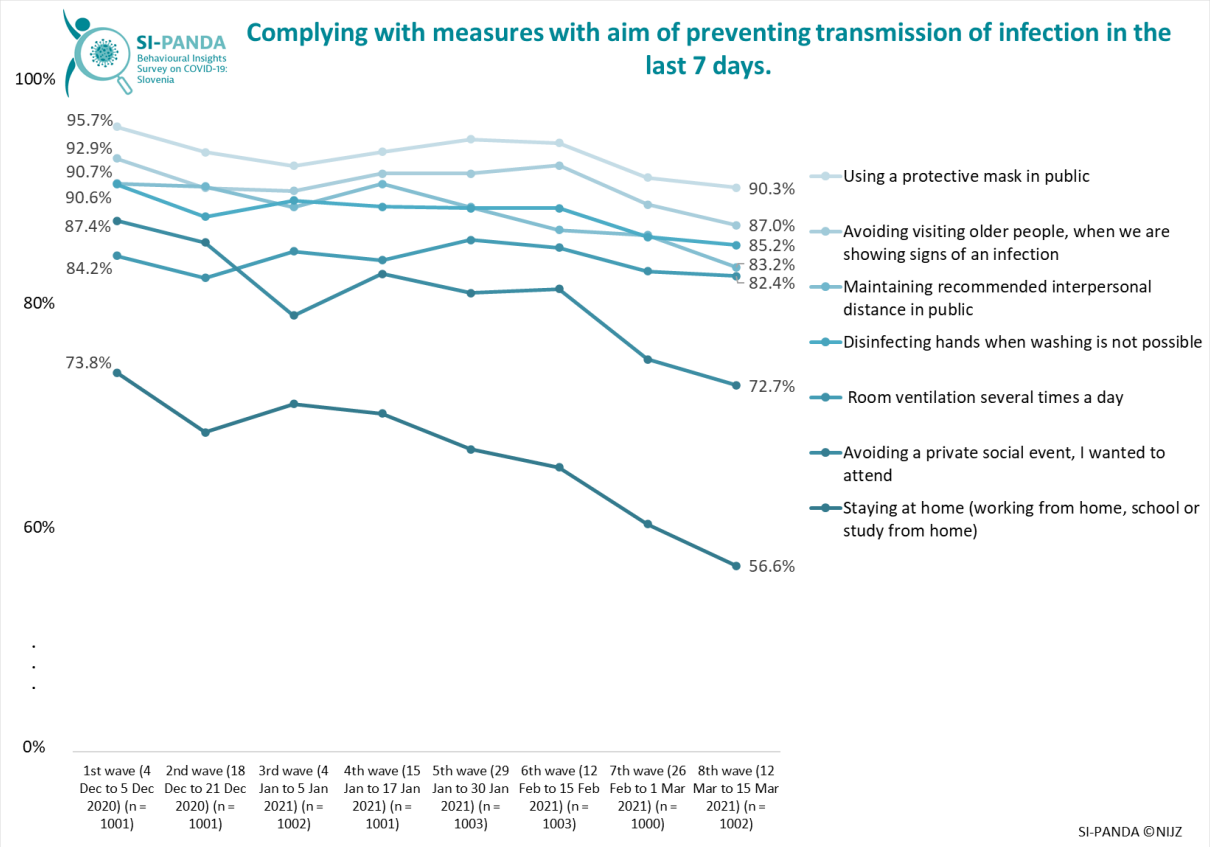


Figure 2: Complying with some measures with aim of preventing infection in the last 7 days, in total, by survey waves.

Supporting the measures currently in force

Measures to prevent and limit the spread of SARS-CoV-2 virus are very diverse, varying slightly between individual waves of survey, and have received very different support. Between the two that were in force throughout the observed period, respondents in the 9th wave most supported the mandatory use of masks on outdoor surfaces when it is not possible to provide interpersonal distance of at least 2 metres (60.2%), and less support was given to restriction of outdoor movement between 10 pm and 5 am (32.6%). Support for the latter measure increased in the 9th wave, and it is important to point out that this time we asked about supporting the reduced restriction of movement, between 10 pm and 5 am, while in the previous waves we asked about supporting the restriction of movement between 9 pm and 6 am. According to individual survey waves, there is a general decline in support for both measures (Figure 3).

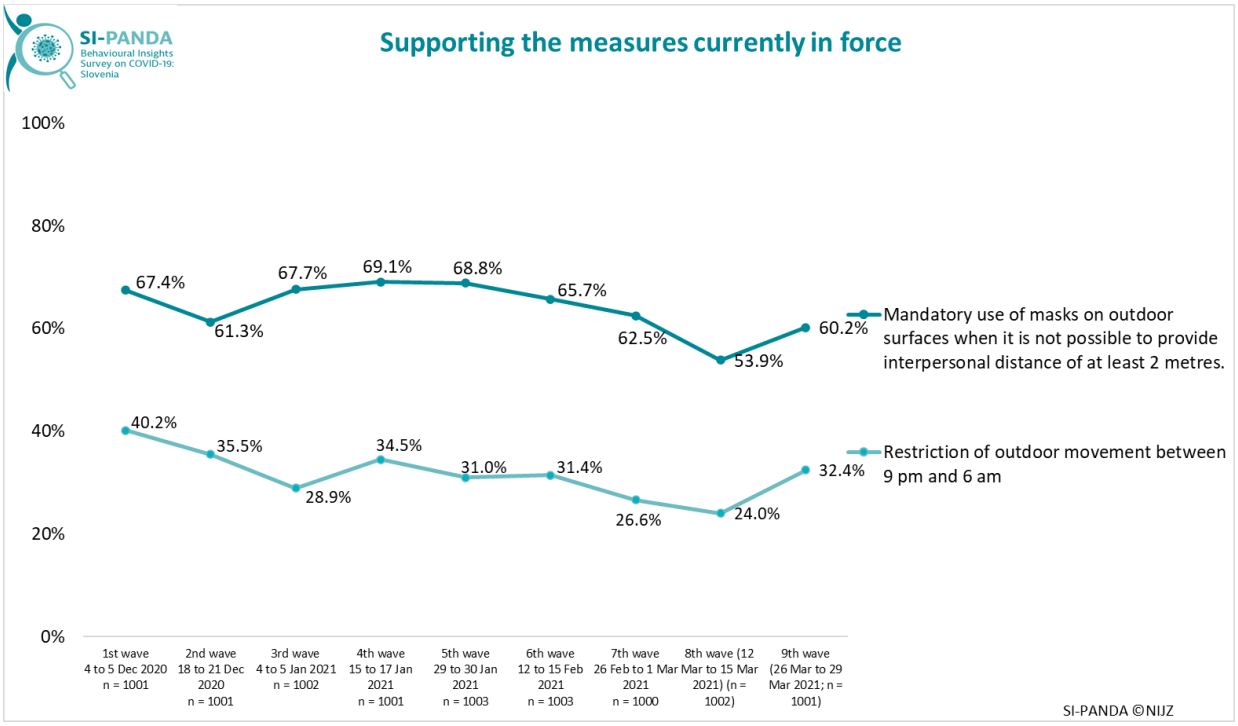


Figure 3: Supporting some measures currently in force, in total, by survey waves

In the 9th wave of the survey, we also asked respondents to what extent they support measures related to SARS-CoV-2. Respondents support the restriction of outdoor movement between 10 pm and 5 am the least – only a third of people (32.6%) support this measure (Figure 4). More than half of the respondents (54.6%) support the restriction of gathering of up to 10 people, taking into account the instructions of the NIJZ; and 60.2% support mandatory use of masks on outdoor surfaces when it is not possible to provide interpersonal distance of at least 2 metres.

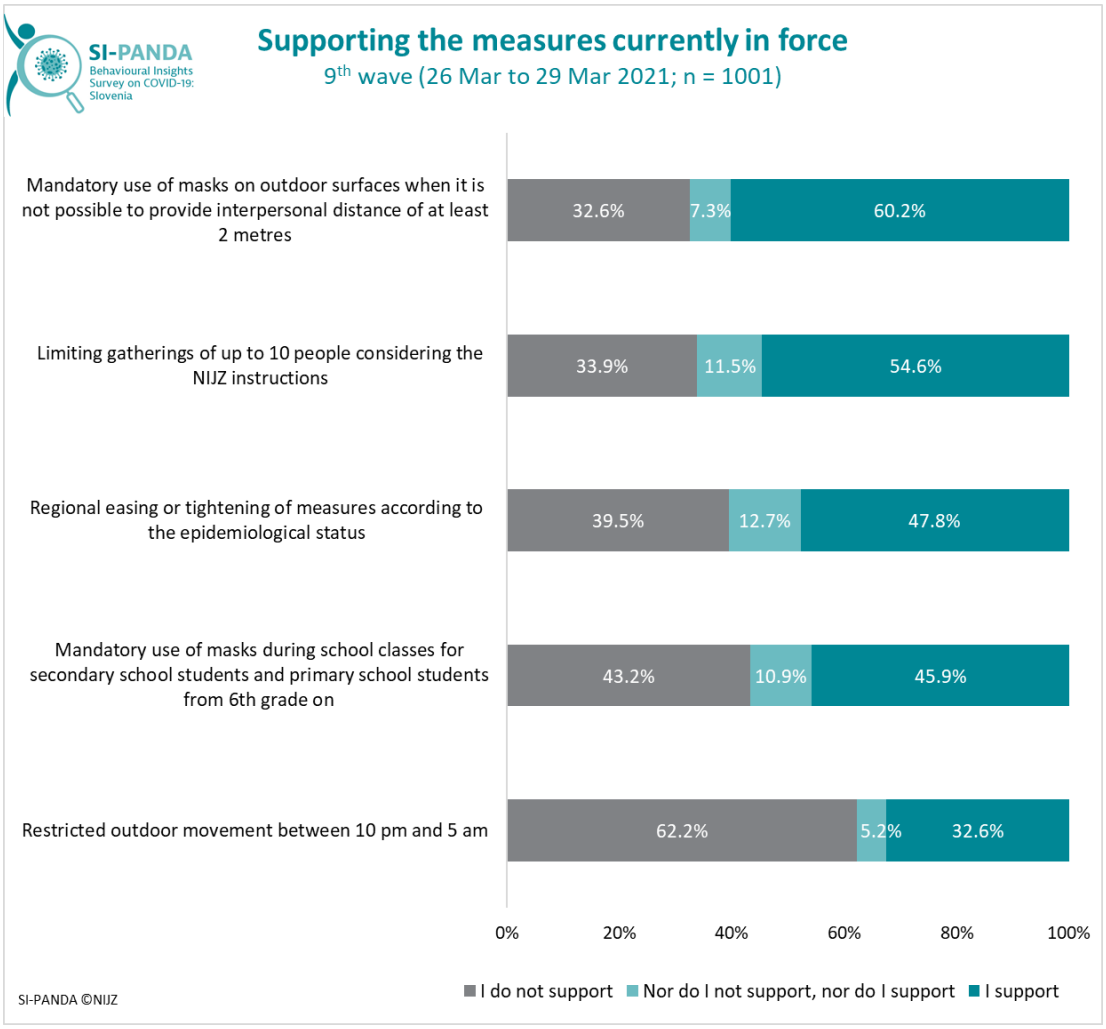


Figure 4: Supporting measures currently in force, in total.

Supporting the release of measures and possible measures

The highest support for the released measures was achieved by the support for the opening of schools for all primary and secondary school students (83.6%), followed by the lifting of the ban on crossing municipal borders (69.9%) (Figure 5).

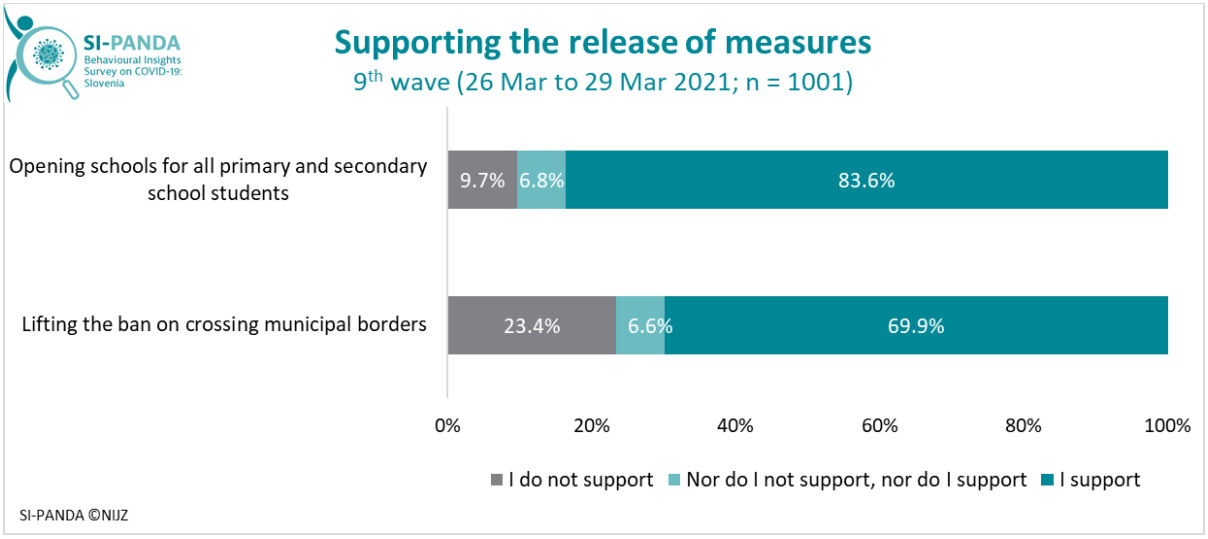


Figure 5: Supporting the release of measures, total.

Among the possible measures, the respondents in 9th wave supported opening of faculties for all students the most (71.9%) (Figure 6). More than half of the respondents (57.9%) support the introduction of control over in-home quarantine.

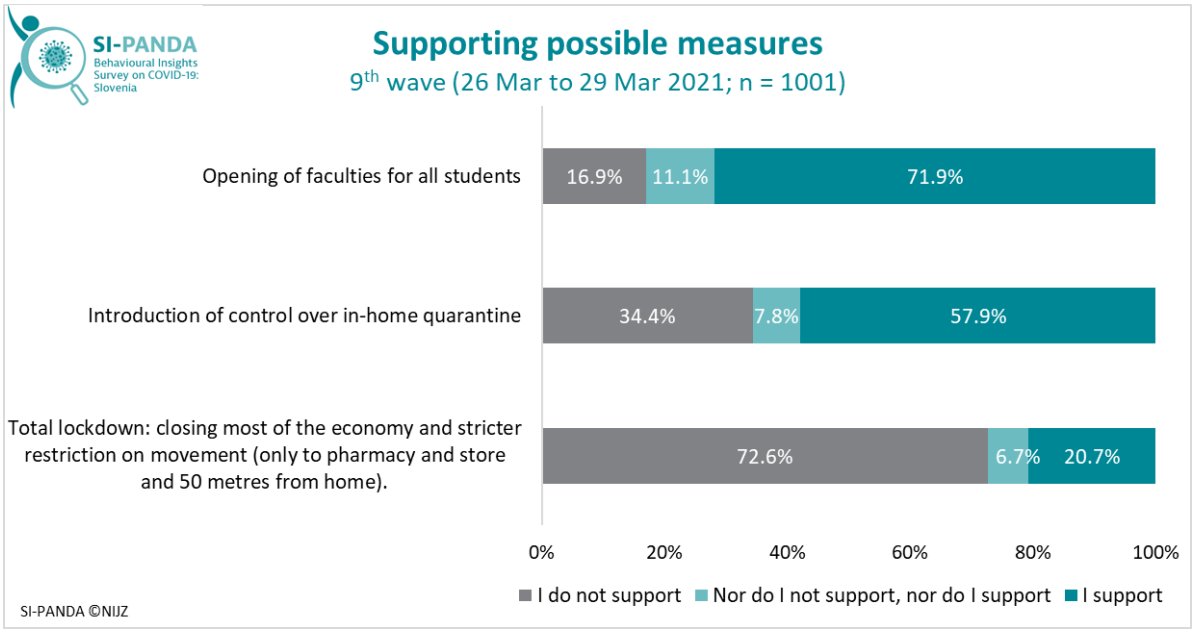


Figure 6: Supporting possible measures, total.

Given that in the days before the implementation of the 9th wave of the survey, there was a lot of talk about the total lockdown, we also asked the respondents about this. About a fifth of the respondents (20.7) support the total lockdown in terms of closing most of the economy and strict restriction on movement (only to the pharmacy and shop and 50 metres from home). We asked about support for this measure in the 4th and 5th waves of the survey – in both waves at that time, support was lower than now (Figure 7).

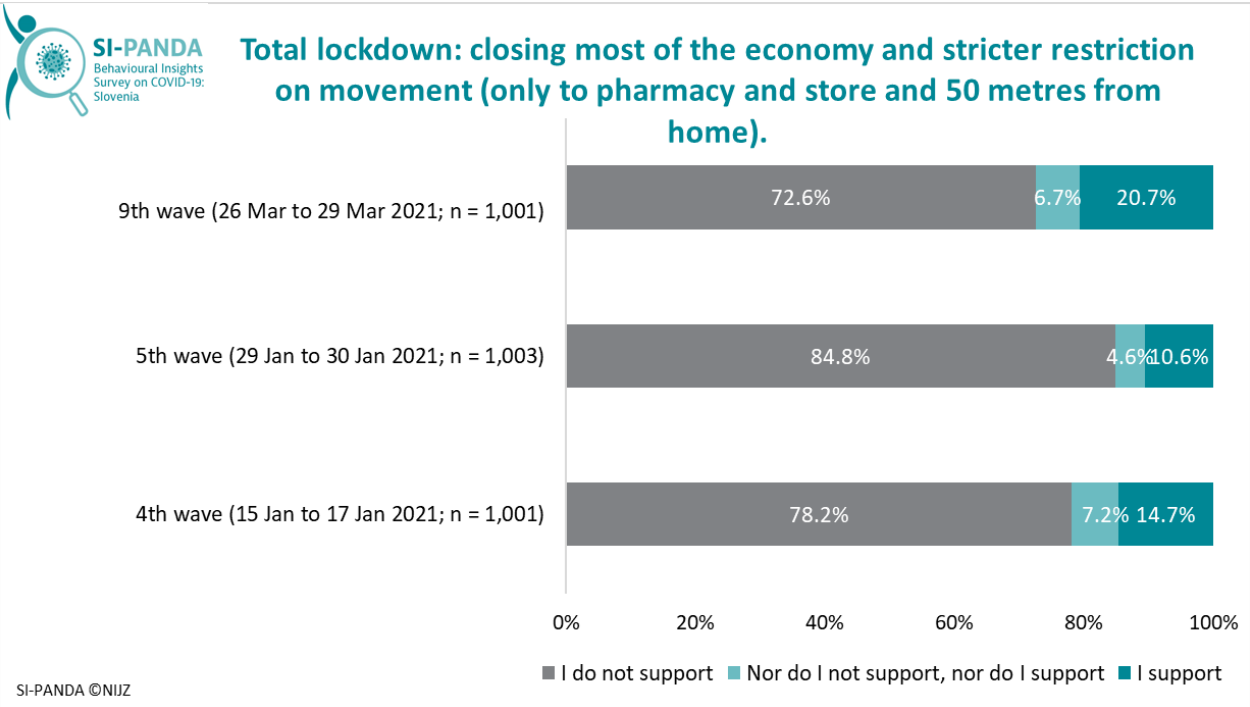


Figure 7: Supporting total lockdown, total, 4th, 5th and 9th wave.

Trust in persons and institutions to manage the pandemic adequately

Throughout the survey waves, respondents trust their personal physicians the most in terms of proper pandemic management – the average confidence on the 7-point scale in the 8th wave is 5.4. This is followed by trust in hospitals with an average of 5.1 and trust in employers with an average of 4.6 (Figure 8).If we compare the individual waves of survey, we find a decrease in trust in almost all listed persons or institutions.

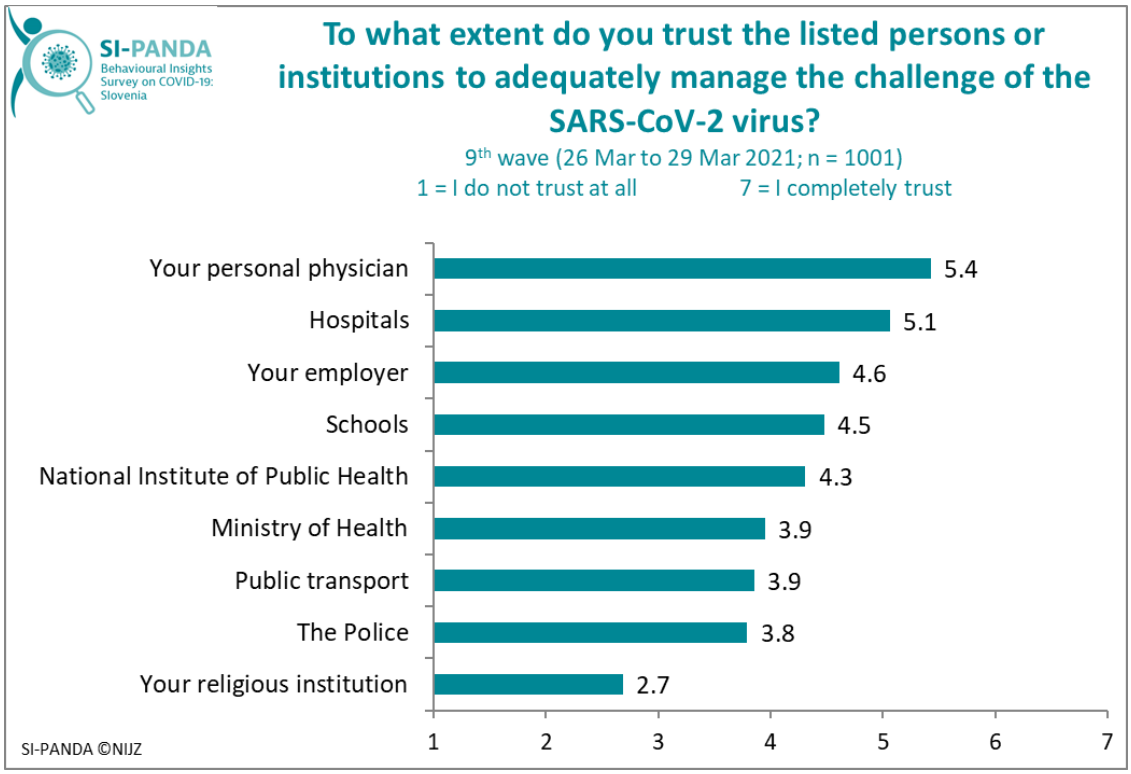


Figure 8: Trust in persons and institutions to manage pandemic adequately, in total.

Vaccination

In the 9th wave, two thirds (65.3%) of respondents believe that the COVID-19 vaccine can help curb the spread of SARS-CoV-2. Younger people are more sceptical about the vaccine compared to older people (Figure 9).

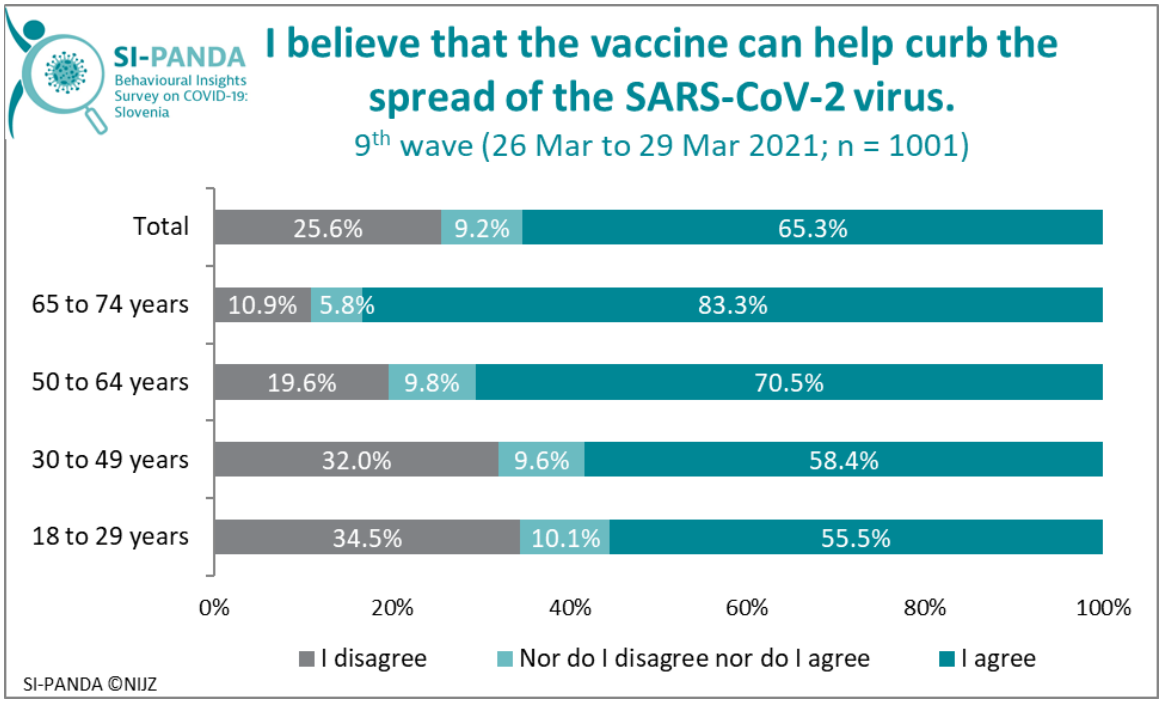


Figure 9: Opinion on whether the vaccine can help curb the spread of SARS-CoV-2 virus, in total and by age groups.

If we compare the different waves of the survey, the proportion of persons in 9th wave who believe that the vaccine against COVID-19 can help curb the spread of SARS-CoV-2 has returned to previous level in 9th wave after a decrease in 8th wave and it equals 65.2% (Figure 10).

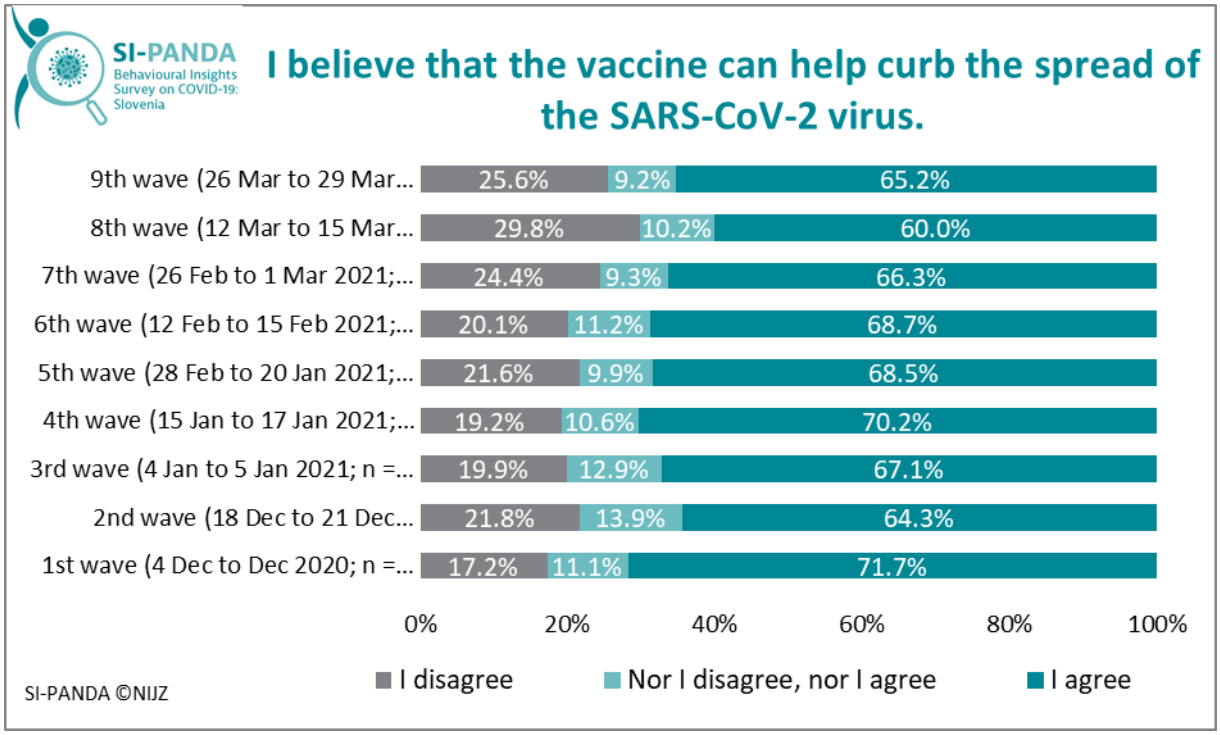


Figure 10: Opinion on whether the vaccine can help curb the spread of SARS-CoV-2, in total, by survey waves.

A good half of the respondents (57.8%) intend to be vaccinated against SARS-CoV-2 virus once the vaccine is available to them. According to the individual waves of survey, the intention to vaccinate is highest so far compared to previous waves, which is certainly encouraging (Figure 11). The decline in intention to get vaccinated in the 8th wave of the survey could be attributed to the suspension of vaccination with AstraZeneca vaccine between 15 and 18 March 2021, which received a lot of media attention. After the positive opinion of the European Medicines Agency (EMA) on the safety of this vaccine, there is renewed intention to get vaccinated. If we only consider persons who have not yet been vaccinated against COVID-19, a good half of them (52.0%) intend to be vaccinated in the 9th wave.

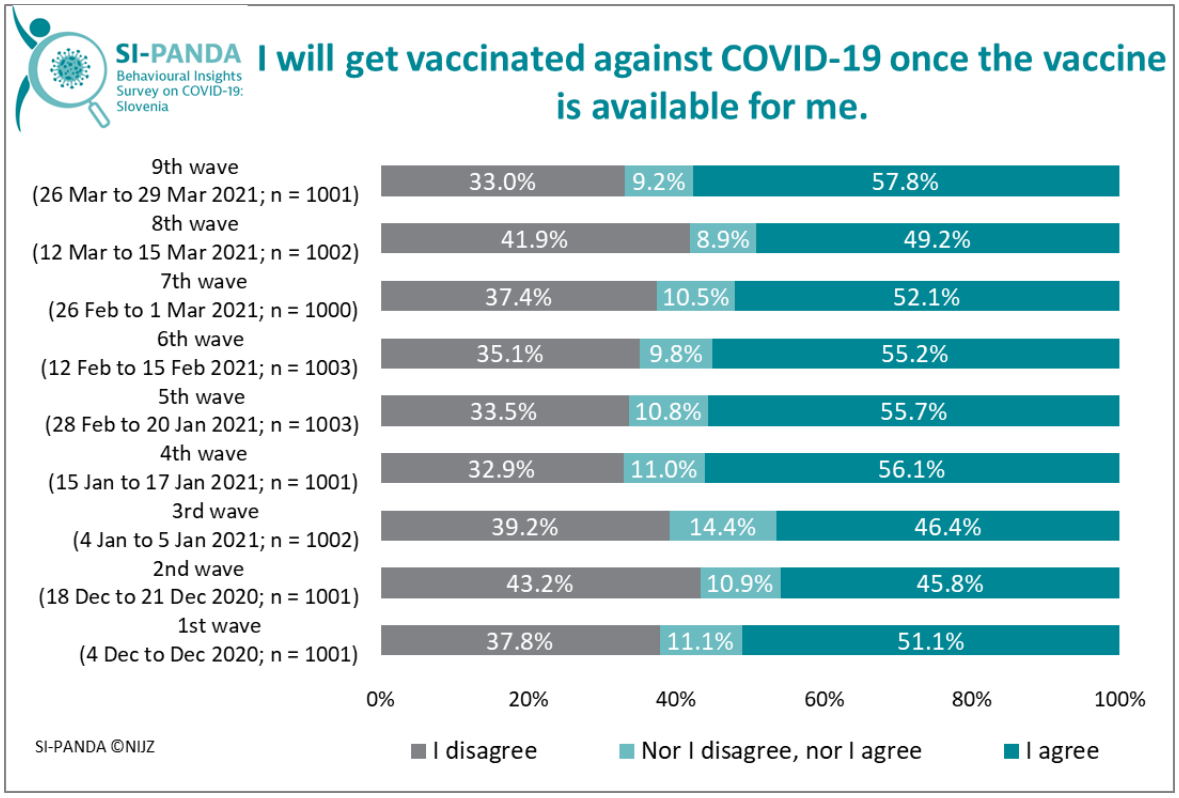


Figure 11: Intention to get vaccinated against COVID-19, in total, by survey waves.

The intention to get vaccinated increases with age (Figure 12). As expected, it is the highest in the age group 65 to 74, where good three quarters of respondents (81.7%) are determined to be vaccinated. More men (66.5%) than women (48.6%) intend to get vaccinated. Among people with chronic diseases, 66.5% intend to get vaccinated.

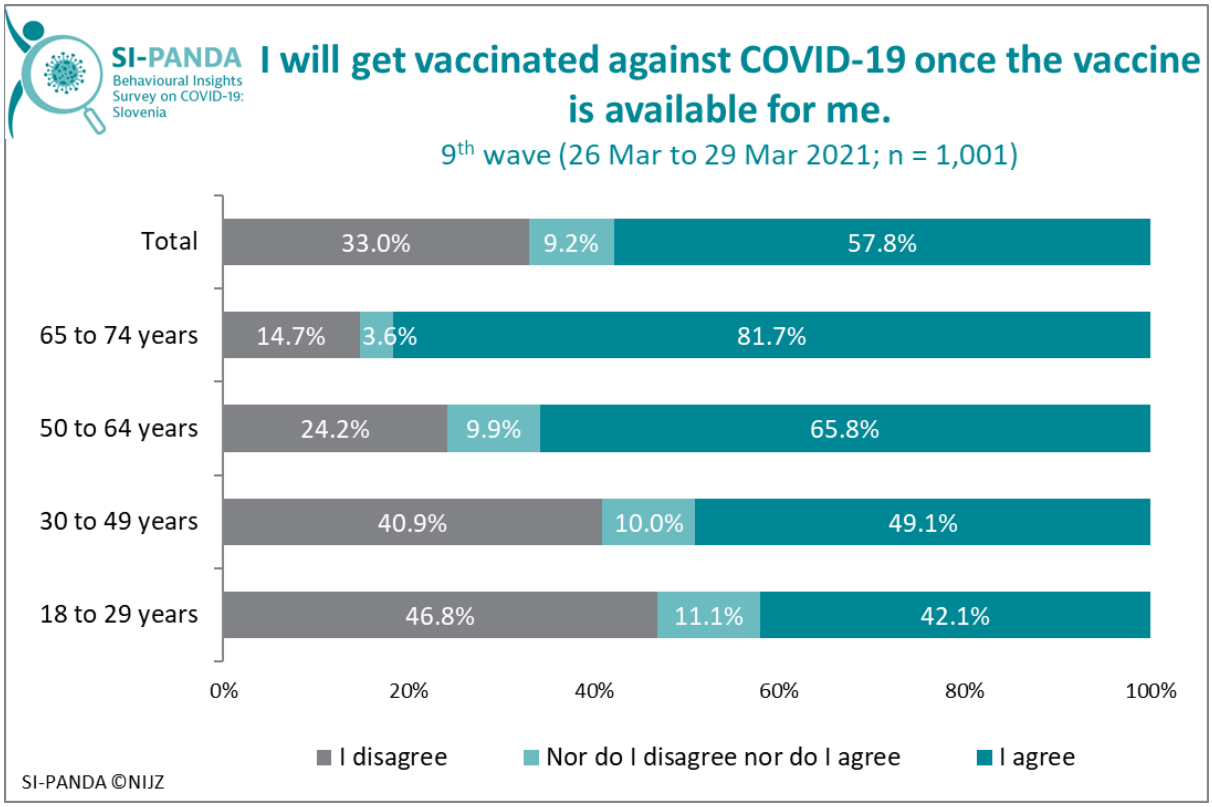


Figure 12: Intention to get vaccinated against COVID-19, in total and by age groups.

When asked what the decision to get vaccinated will depend on, respondents most agree, on average, that their decision will depend on the following factors:

- Whether sufficient data will be available that the vaccine is safe (in the 9th wave, the average value on the 7-point scale is 5.3);
- Whether sufficient data will be available that the vaccine is effective (5.3);
- Whether the vaccine has been in use for a long time (4.8);
- Recommendations from personal physician (4.5) (Figure 13).

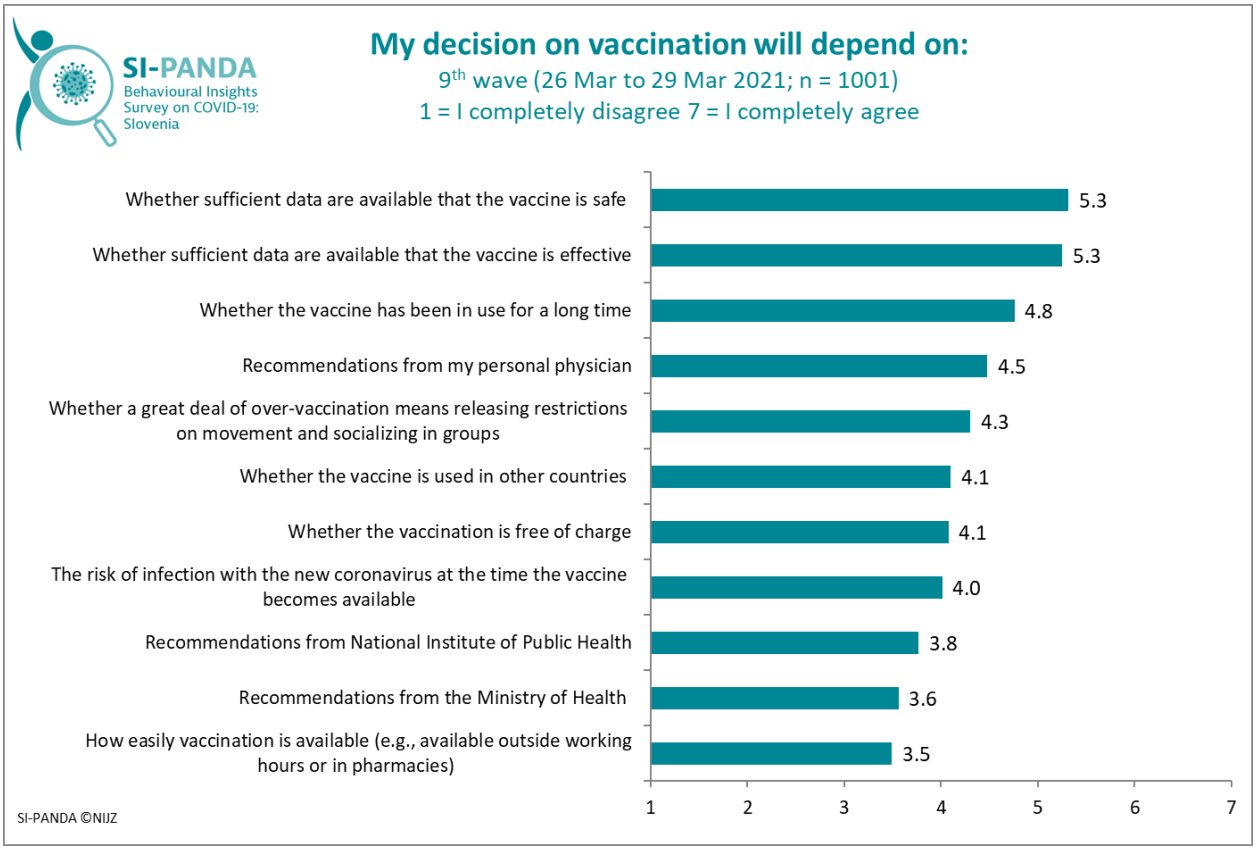


Figure 13: Reasons for decision on vaccination against COVID-19, in total.

In the 9th wave, we also asked if respondents had already been vaccinated against COVID-19. More than half (55.8%) of respondents did not get vaccinated because the vaccine was not yet available for them, and just under a third (27.5%) of respondents do not intend to get vaccinated. The share of those who do not intend to get vaccinated is, as expected, the highest in the youngest age group (40.0%). Women (36.7%) are more in favour of vaccination than men (19.0%). Among the respondents, 10.2% received one dose and 3.1% received two doses of the vaccine (Figure 14). The decision to get vaccinated among vaccinated persons was most dependent on the recommendation of a personal physician (average value on a 7-point scale of 5.1), if high vaccination will mean the release of restrictions on movement and socializing in groups (4.9), the recommendations of the National Institute of Public Health (4.8) and the recommendations of the Ministry of Health (4.7) (Figure 15).

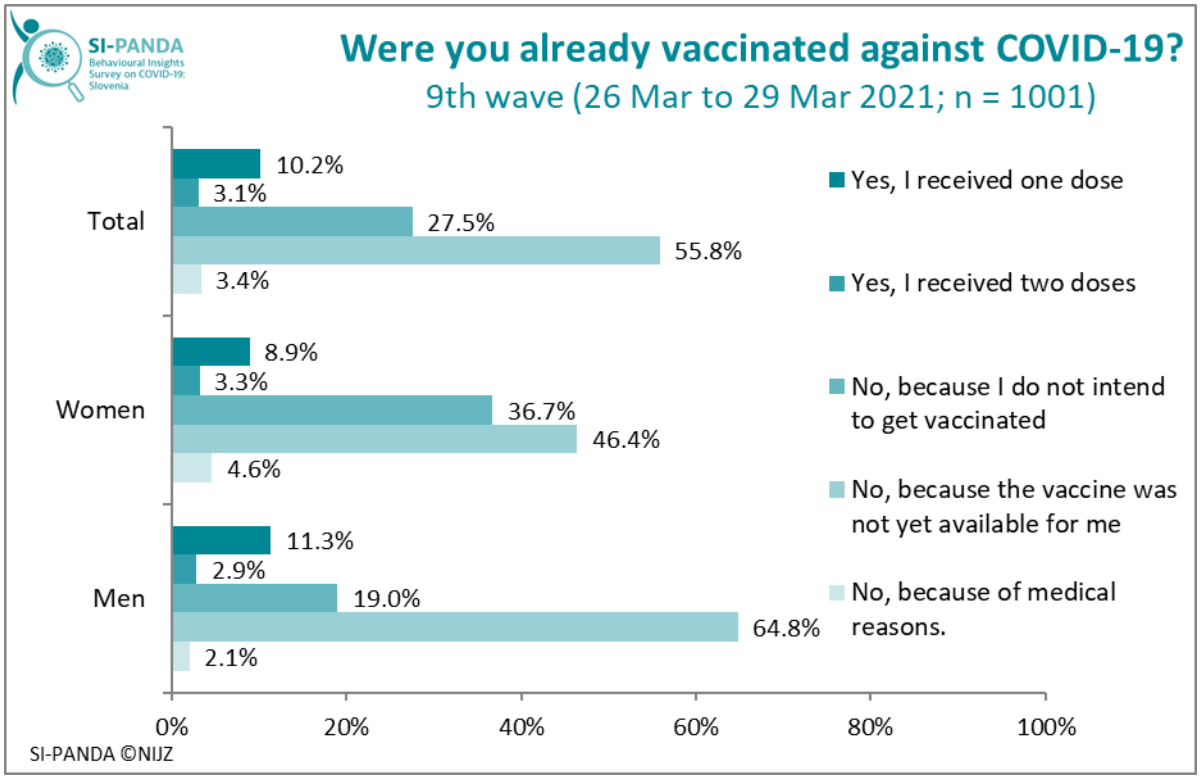


Figure 14: Vaccination against COVID-19, in total, by gender.

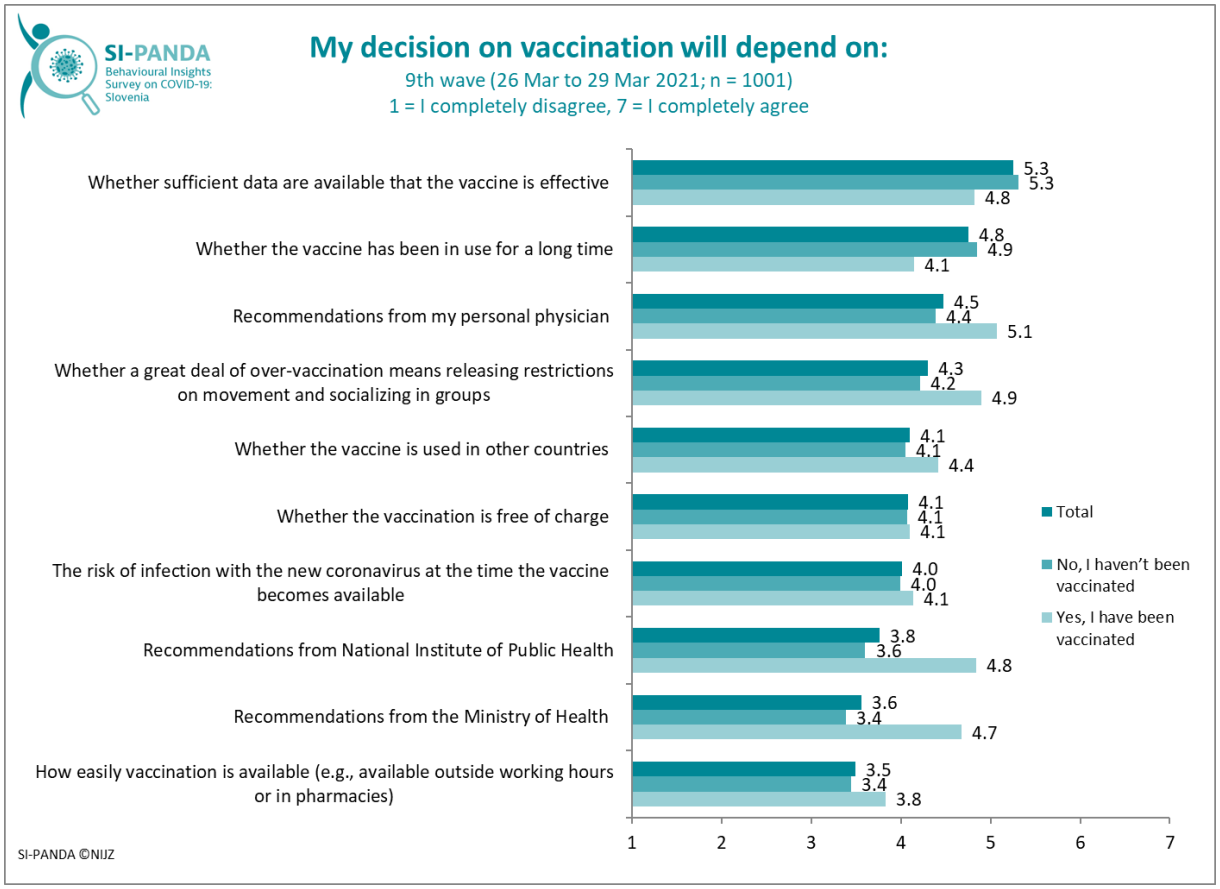


Figure 15: Reasons for the decision to get vaccinated against COVID-19, in total, vaccinated and unvaccinated persons.

Among those who have not yet been vaccinated against COVID-19, do not intent to get vaccinated or vaccine has not yet been available for them, 61.7% believe that they do not have enough reliable information about the vaccine. Among them, a higher share of women (68.0%) than men (55.9%) (Figure 16).

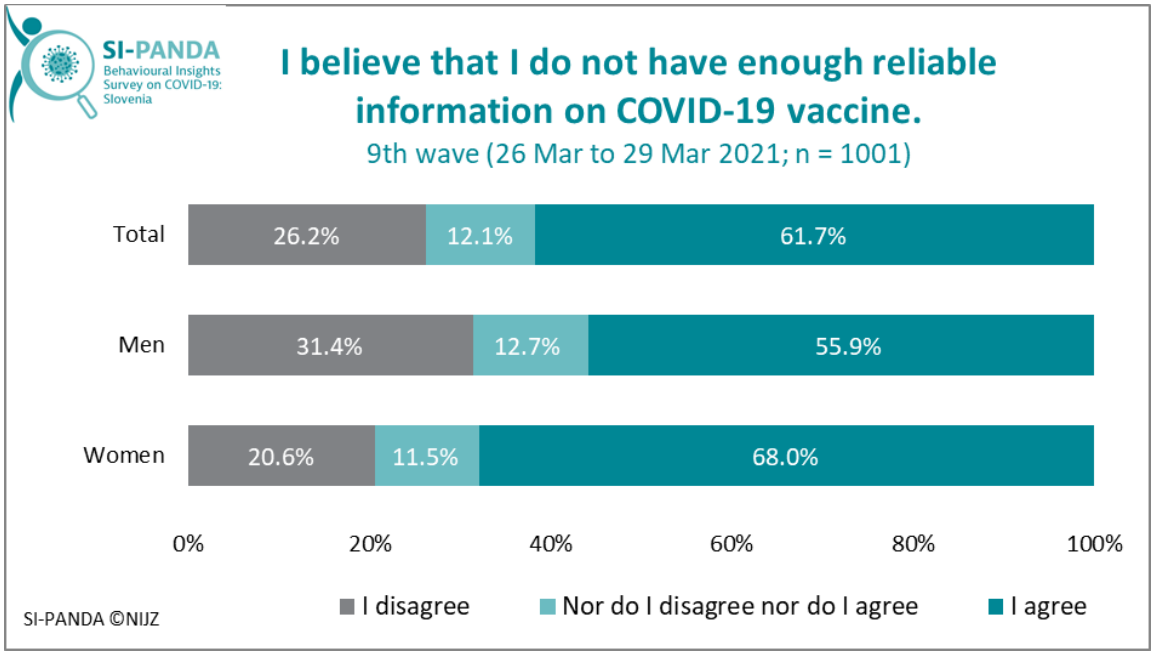


Figure 16: The lack of reliable information about the COVID-19 vaccine among unvaccinated persons, in total, by gender.

Among unvaccinated respondents aged 18 to 74, 15.5% reported distress due to waiting for COVID-19 vaccination. This share is higher among people with chronic diseases (25.9%) and twice as high among people with already expressed depressive disorders (29.7%), so it is important that these groups be vaccinated as soon as possible (Figure 17).

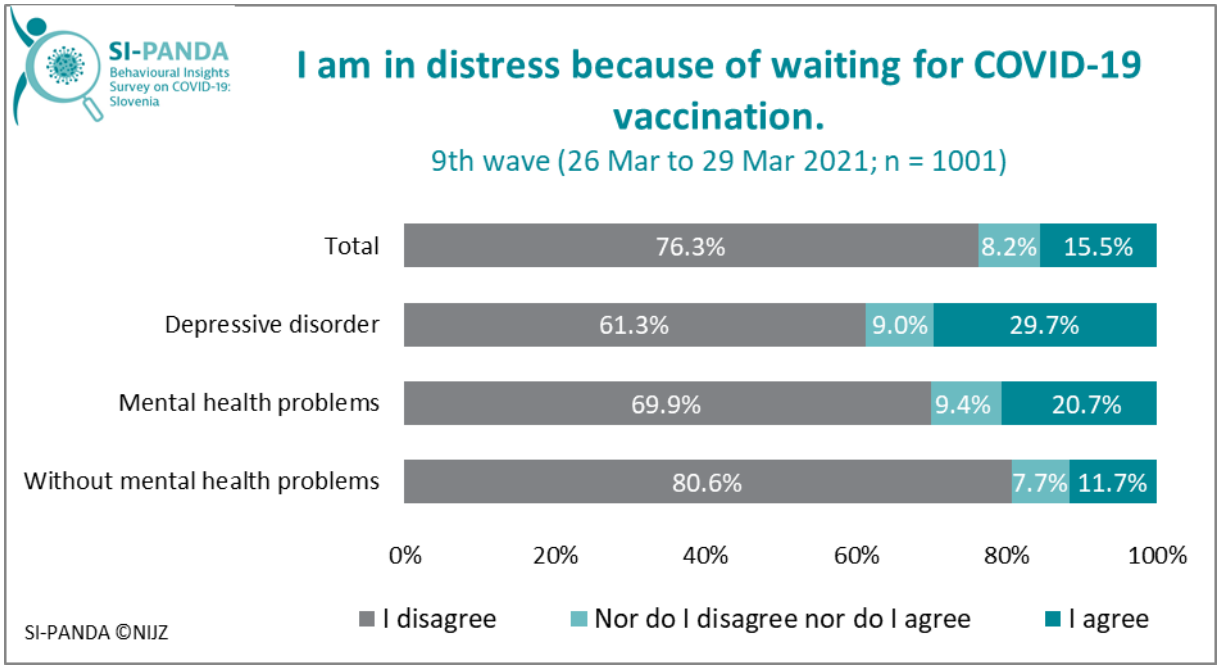


Figure 17: Distress among unvaccinated persons due to waiting for COVID-19 vaccination, in total and by presence of mental health problems.

Among those respondents who have not yet been vaccinated, almost half (45.8%) would be vaccinated if they could choose which vaccine against COVID-19 they will be vaccinated with (Figure 18).

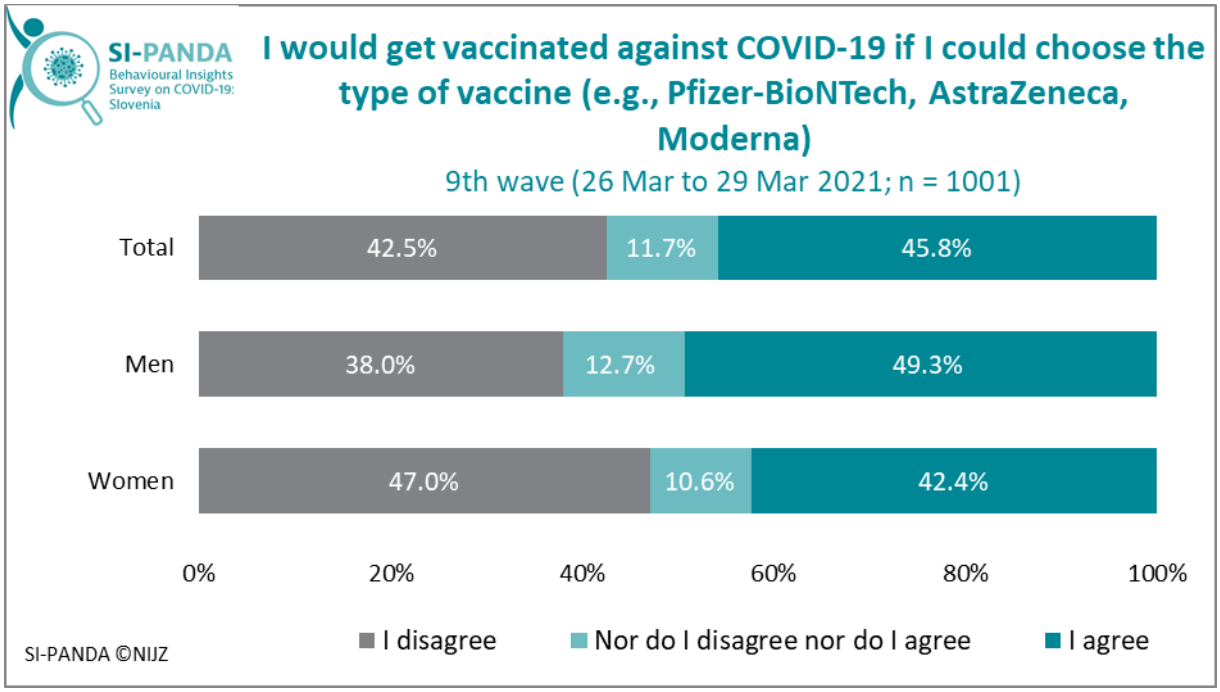


Figure 18: Preference for vaccination in case of choice of vaccine type among unvaccinated persons, total and by gender.

More than a third of unvaccinated persons (35.9%) would get vaccinated if this were a condition for a holiday abroad. The proportions of respondents who would get vaccinated under this condition are higher among people from urban and suburban environments compared to those living in rural environment (Figure 19).

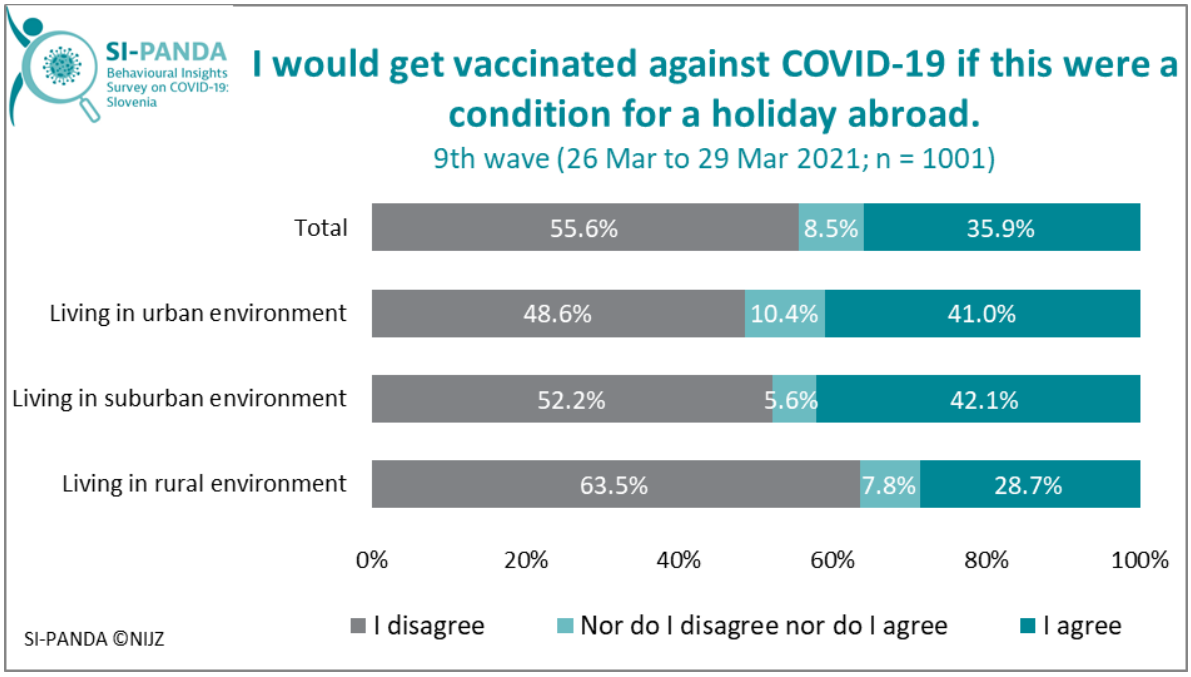


Figure 19: Preference for vaccination among unvaccinated persons, if this were a condition for holiday abroad, in total, according to the living environment.

Results of focus groups with persons in favour of vaccination against COVID-19, with those who are against it and with persons who are undetermined: Searching for information

In the framework of the project entitled *Measures in the field of COVID-19 spread management with an emphasis on vulnerable groups*, in Work Package 3, a qualitative research with some key target groups is carried out using the focus groups method. The aim of Work Package 3: *Dissemination* is to ensure the comprehensive and continuous dissemination of key information, materials, and activities to the general public with a focus on vulnerable groups.

In the focus groups with the population of Slovenia who are in favour of vaccination, those who are against it and with persons who are undetermined about vaccination, we checked, among other things, where they seek for information on the pandemic and vaccination against COVID-19 and who they trust the most.

The participants who are in favour of vaccination are mainly searching for information coming from experts (epidemiologists, infectologists). They find this information in the media, social networks, professional articles, from friends who are doctors. They are not interested in opinions of lay people or people who write anonymous comments on the internet. They believe that there is a lot of information, but not all of it is of good quality, and that it is necessary to be able to filter it, which not everyone can do due to different educational backgrounds. They believe that professional articles are too demanding for lay people, so it is important that experts explain the information in a popular way.

Participants who are against vaccination do not usually seek information about the pandemic and COVID-19 vaccination. In general, they believe that the population in over-informed, or there is too much information, and it is difficult to assess which information is credible and which to trust. Thus, they also do not define which source of information, either an institution or a person, they trust the most. They get information from the media and from friends, but they are often contradictory. However, those participants who seek information, follow various sources, both the media, the NIJZ and hospitals, as well as alternative sources of information, where they also find contradictory information. As far as vaccination is concerned, they believe that real and realistic information cannot be obtained or given because too little time has passed since the development of the vaccine.

Participants in the focus groups of undetermined about vaccination against COVID-19 mostly did not yet seek for information about the vaccine at the time of the discussion, while those who did, sought professional information from official sources and from sources they trusted. As the participants explained, the key reason why they are not searching for information is that, according to the vaccination strategy, they are still very far from being in line for vaccination. They are familiar with the information from the media, which are often contradictory, and they avoid various posts and comments on the Internet and social networks. Participants also said they will be informed in detail about the vaccine when it is their turn to get vaccinated. They will do this through the variety of professional sources such as vaccine research, expert statements and records.

The impact of the pandemic on lifestyle and bad condition

In the 9th wave of the survey, a good third of respondents (35.9%) stated that they had been less physically active in the last 2 weeks than before the pandemic; just under a fifth (19.0%) ate more unhealthy foods than before the pandemic; 15.4% of the respondents smoked more than before the pandemic; and 9.7% drank more alcohol than before the pandemic (Figure **20**). If we compare all the waves of the survey so far, among the lifestyle factors, the pandemic had the greatest impact on the reduction of physical activity. Minor fluctuations in lifestyle changes are detected in all waves of the survey. In last three waves of the survey, there are noticeable changes towards a healthier lifestyle – a lower share of those who are physically less active, lower share of those who eat more unhealthy foods and smoked more and lower shares of those who drank more alcohol than before the pandemic. Perceived changes could be attributed to longer daytime, improved weather, and better opportunities for outdoor activities as well as to winter holidays. At the same time, we have also witnessed the partial release of measures that have enabled grater mobility of people.

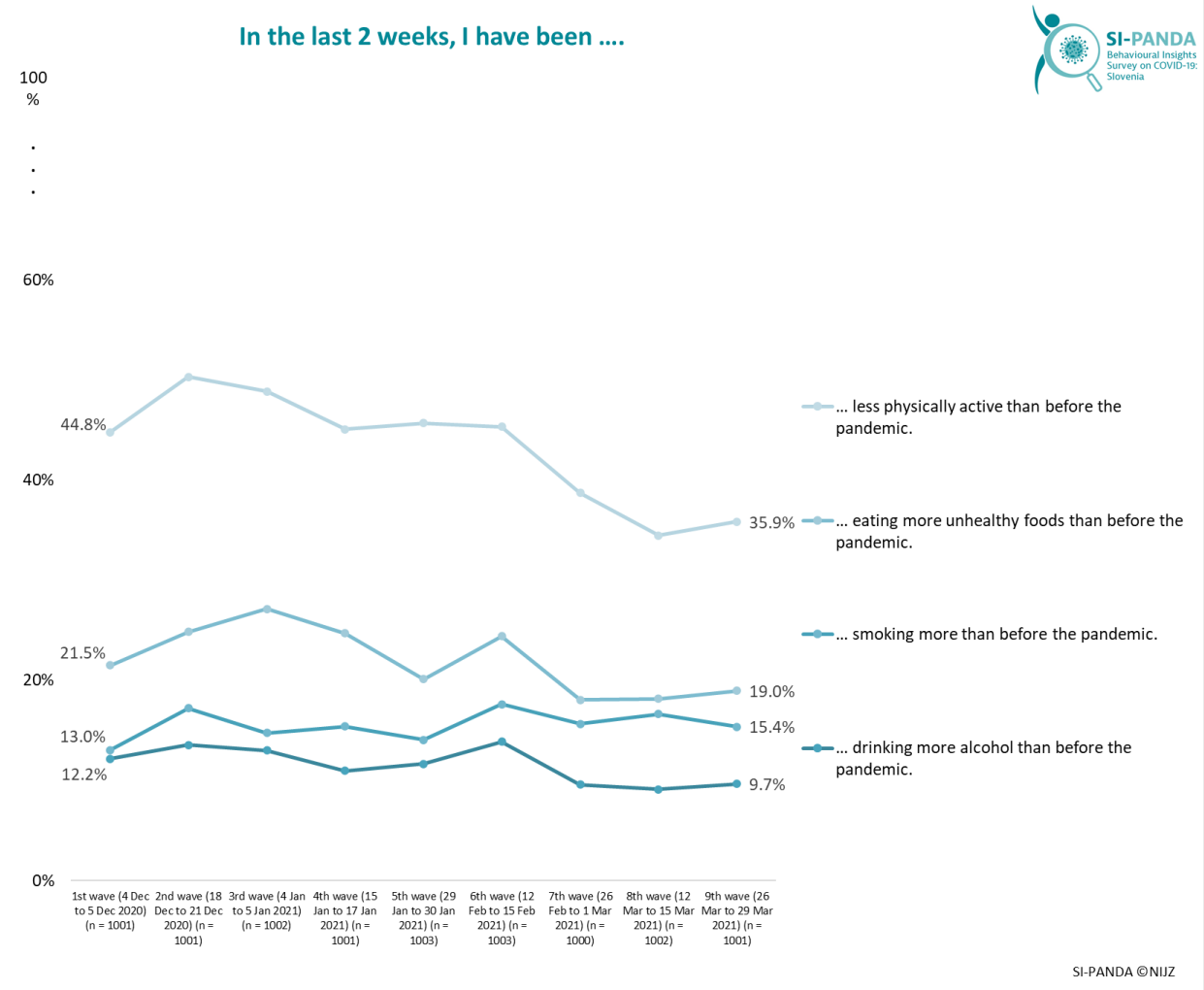


Figure 20: The impact of the pandemic on lifestyle in the last 2 weeks, in total, by survey waves.

The youngest age group of the respondents reported the unhealthiest lifestyle habits (Figure 21). Compared to other age groups, they were les physically active (43.9% of the respondents aged 18 to 29) and ate more unhealthy foods than before the pandemic (27.7%). Fifth (21.6%) reported that they smoke more than before the pandemic, while a sixth (16.4%) of those respondents increased alcohol consumption during the pandemic.

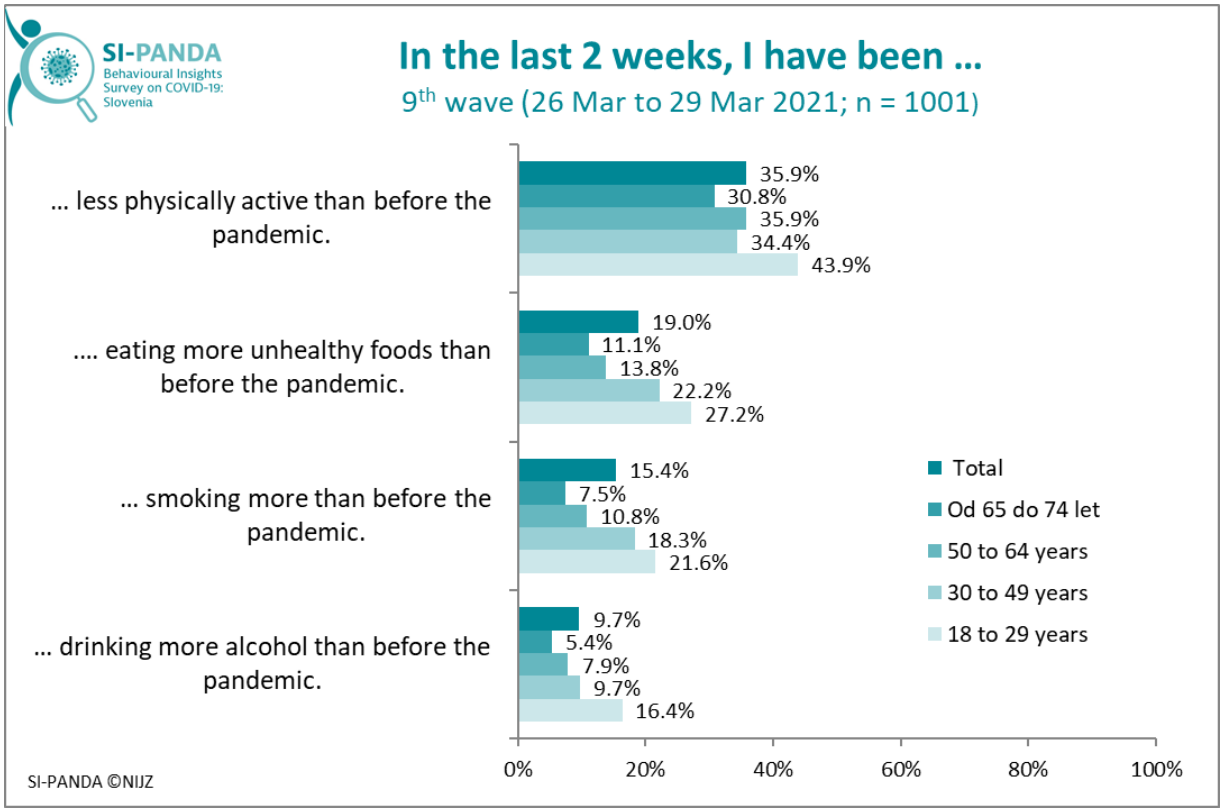


Figure 21: The impact of the pandemic on lifestyle in the last 2 weeks, in total and by age groups.

We also checked for the presence of mental health problems during the pandemic. In the 9th wave of the survey, we found that 19.1% of respondents had mental health problems and 11.3% had signs of depressive disorder. The youngest age group of respondents (aged 18 to 29) reported the most mental health problems in the 9th wave, with the shares of people with mental health problems (28.5%) and depressive disorder (17.8%) highest compared to other age groups (Figure 22). This is in line with the predictions that the COVID-19 pandemic affected mainly the older generations, while the consequences of measures to contain it, mainly affected younger generations.

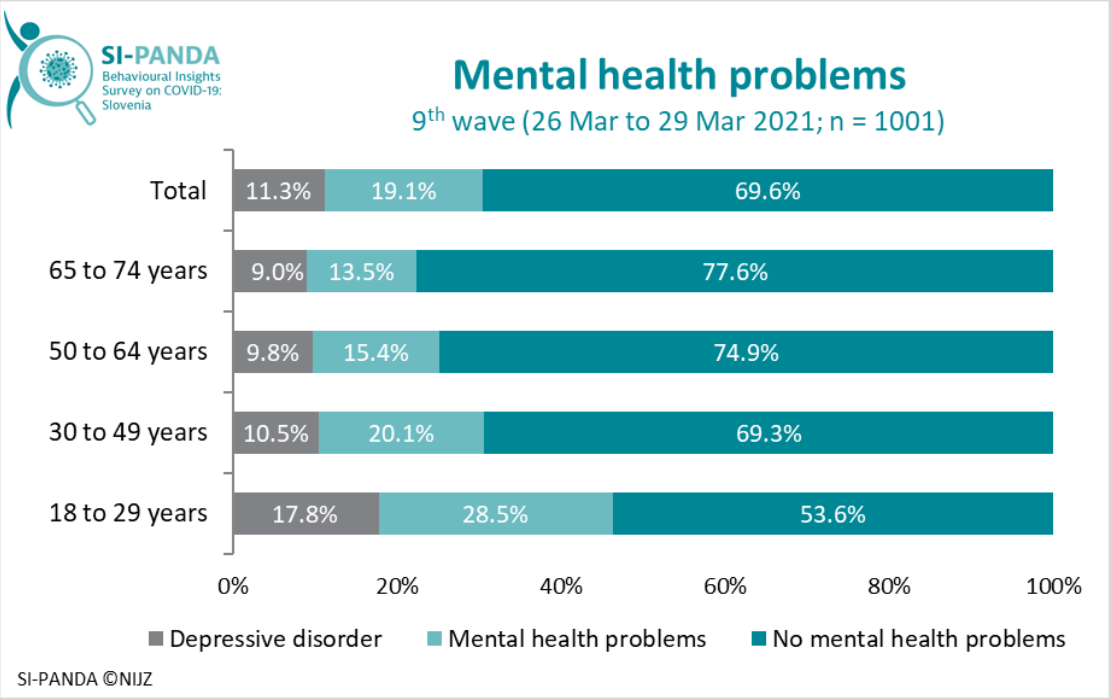


Figure 22: Presence of mental health problems, in total and by age groups.

Contact with the healthcare system

In the 9th wave of the survey, a good quarter of respondents (26.4%) avoided visiting a doctor due to the problem not related to SARS-CoV-2, and 5.6% postponed vaccination for themselves or their child. In 8th and 9th wave, doctor avoidance decreased significantly and is the lowest so far compared to other waves of the research (Figure 23). This could be attributed to the reduced number of hospitalizations of COVID-19 patients, which has led to the release of some other healthcare activities for which more healthcare staff are also available and thus people have more options for treatment.

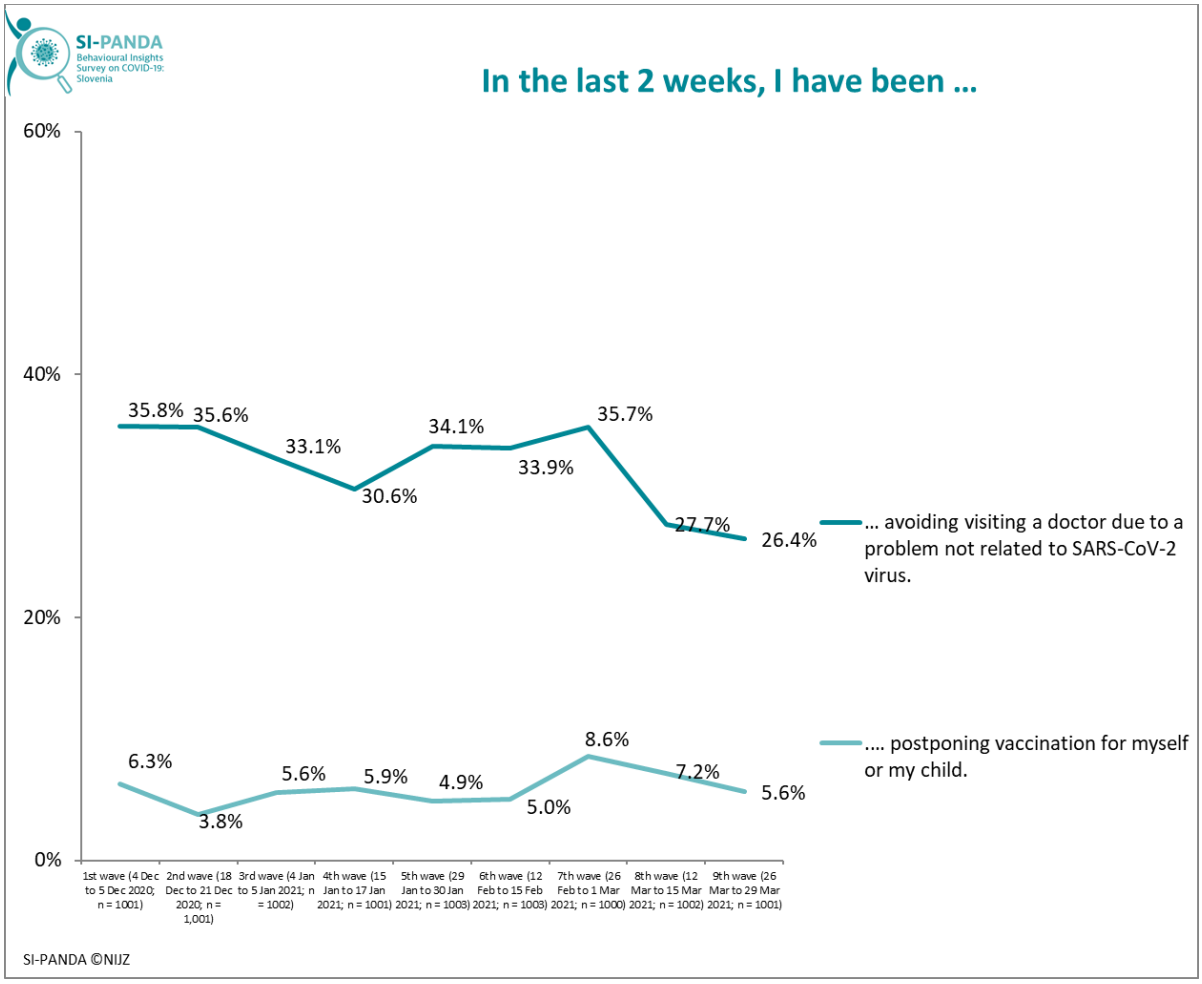


Figure 23: The impact of the pandemic on the contact with healthcare system in the last 2 weeks, in total, by survey waves.

Respondents of the youngest age group (28.8%) and respondents aged 50 to 64 years (32.6%) are among those who are more likely to avoid visiting a doctor due to a problem not related to SARS-CoV-2 virus. Respondents aged 30 to 49 years mostly postponed vaccination for themselves or their child (7.8%) (Figure 24). In the youngest age groups, vaccination delays were significantly reduced (by 12 percentage points) compared to previous waves.

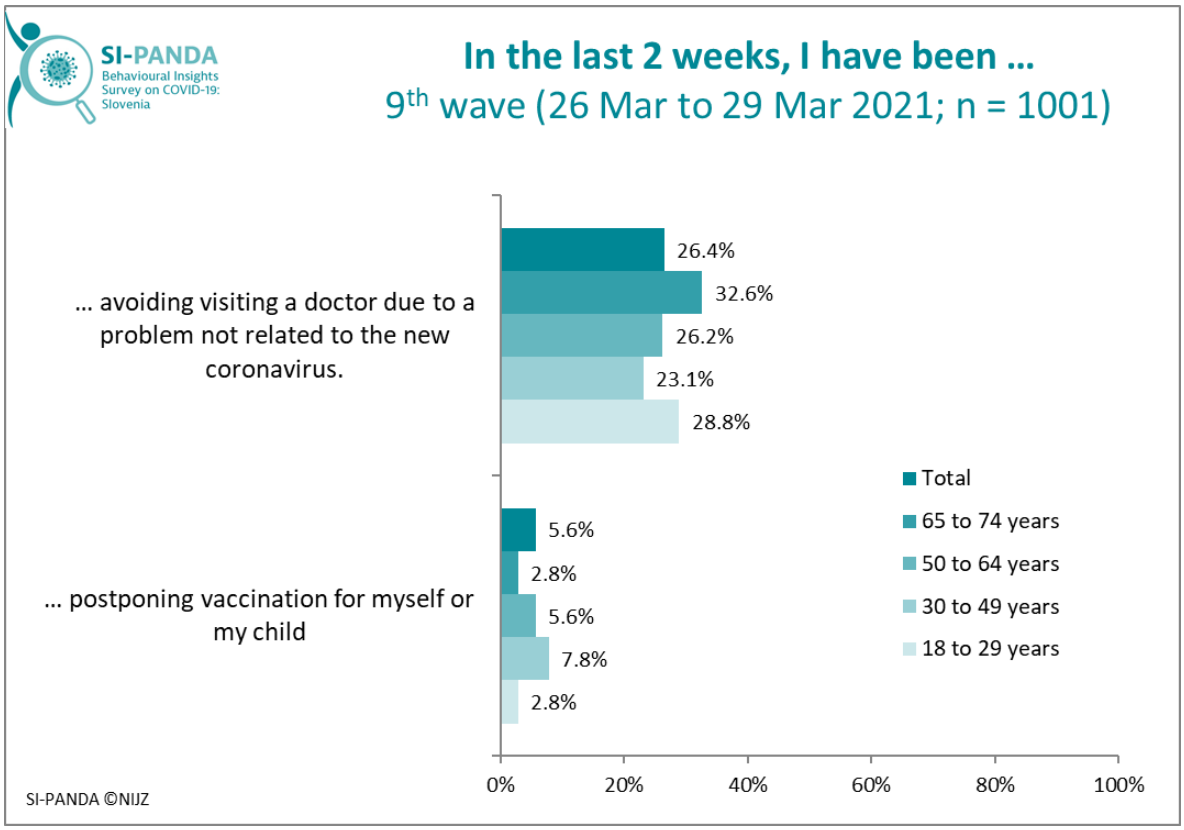


Figure 24: The impact of the pandemic on the contact with healthcare system in the last 2 weeks, in total and by age groups.

Due to perceived delayed contacts with the doctor and the medical team and due to suspended preventive activities at the primary healthcare level, a worsening of the pandemic of chronic non-communicable diseases with all syndemic consequences is expected, probably more pronounced in socioeconomically vulnerable groups.

The impact of the pandemic on the financial situation

A good quarter (26.9%) of the respondents believe that their financial situation in the last 3 months is worse than before. The share of respondents who believe that their financial situation is worse in the last 3 months than before has decreased by 4.5 percentage points compared to the 1st wave of the survey. Respondents, aged 18 to 29, perceive their financial situation the worst (Figure 25), so it will be necessary to pay special social attention to this group also in accordance with the proposed EU programmes for managing the current crisis. Given their employment status, the unemployed and the self-employed perceive their financial situation as bad, which indicates a major public health problem.

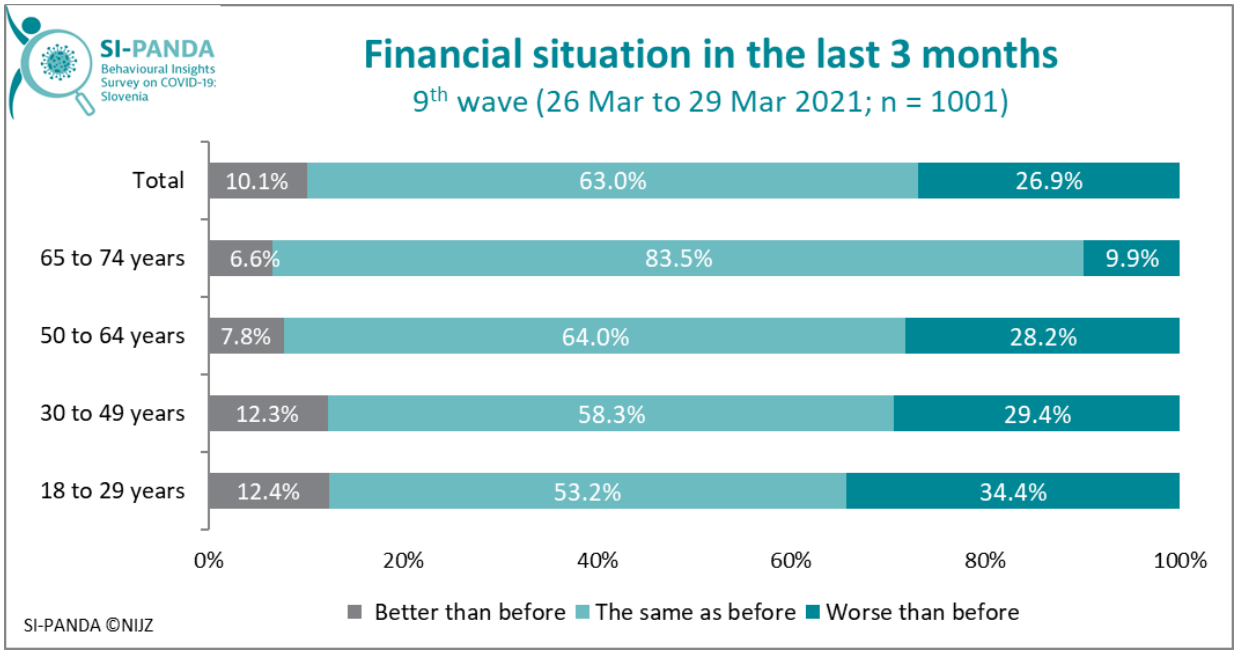


Figure 25: Perception of financial situation in the last 3 months, in total and by age groups.

In terms of gender and education, the financial situation in the last 3 months was perceived as worse by the majority of women with secondary education. To a lesser extent, the financial situation deteriorated for men with college education (Figure 26).

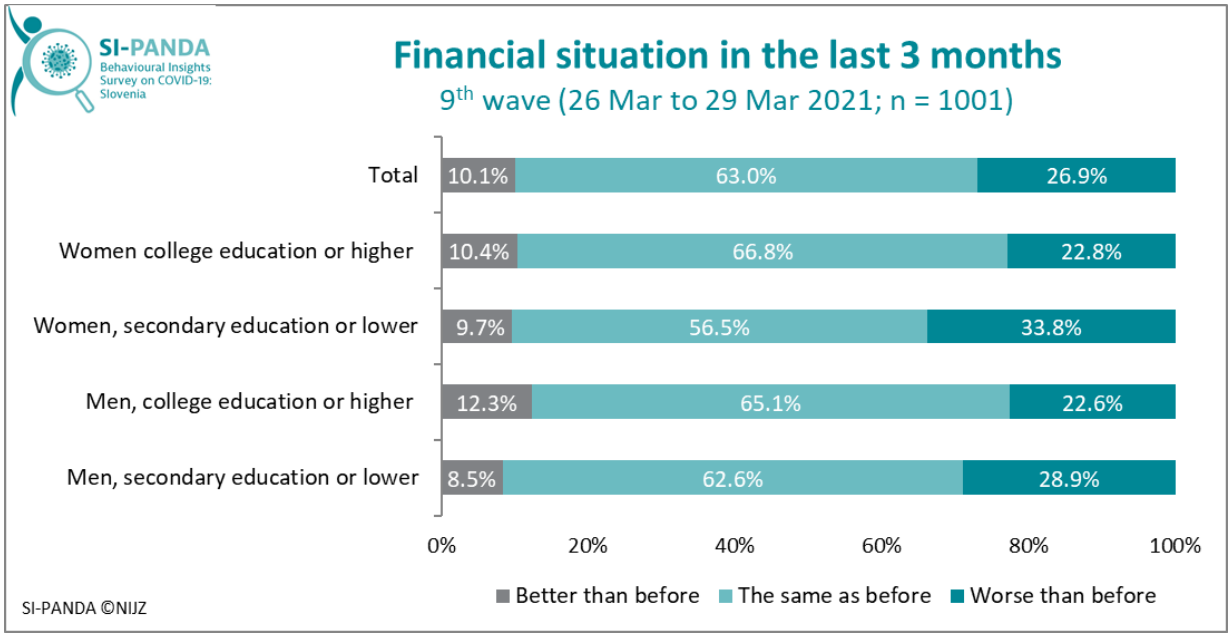


Figure 26: Perception of financial situation in the last 3 months, in total and by gender and level of education.

Highlighted topic of the 9th wave of the survey: Infodemic

The entire world as well as Slovenia is facing the pandemic of SARS-CoV-2 virus, which causes the COVID-19 disease. The pandemic represents a profound public and socio-health crisis. The crisis, however, brings great uncertainty and fear.

The pandemic is accompanied by an infodemic, which means the rapid spread of information and fake news through social networks and other communication channels[3]. It is a broader global phenomenon that is receiving increasing attention from many countries, including the World Health Organization[4], which has made the management of infodemic one of its priorities. The COVID-19 pandemic has also largely generated an epidemic of information, misinformation, misleading information. At the same time, it should be noted that this is the first pandemic to emerge in the digital industry, in the age of communications, the 'infodemic' of misinformation and conspiracy theories.

The COVID-19 infodemic is largely a reflection of the widespread use of social media and the spread of information from the widest possible sources. Social media traffic has reached an all-time record as people are forced to stay at home, worried and hungry for information, while social media and online social networking services cannot rely on human moderators to enforce their rules.

The COVID-19 global pandemic is thus an ideal breeding ground for misinformation, especially on the Internet. At the same time, we are daily faced with an excessive amount of information circulating on online social networks and other online platforms, which makes it difficult to guide the community on a particular topic and difficulties in identifying reliable and credible sources and information. The mass production of COVID-19-related misinformation is therefore of great concern to healthcare professionals.

Both in Slovenia and globally, the global COVID-19 pandemic has caused a staggering increase in misinformation and various conspiracies that lead to dangerous outcomes for our society and health. However, a large amount of information, including false, inaccurate, misleading, misinformation, etc., is not limited to digital platforms, but also spills over into other spheres, as it is often covered by journalists and thus transferred to the media, which gives such information and extra attention as well as credibility.

Therefore, it is important to understand how often people access information related to COVID-19, what communication channels they use to do so, and how much they trust them.

Given that worldwide attention is focused on vaccination against COVID-19, which is expected to end the pandemic, attitudes towards vaccination and the level of health literacy associated with vaccination may play a key role. It is also important to know the level of health literacy of the Slovenian population. The World Health Organization defines the term as an individual's knowledge, motivation and ability to access, understand, evaluate and assess health information

[3] Chong, Y. Y., Cheng, H. Y., & Chan, H. Y. L. (2020). COVID-19 pandemic, infodemic and the role of eHealth literacy International Journal of Nursing Studies COVID-19 pandemic, infodemic and the role of eHealth literacy. International Journal of Nursing Studies, 108.

[4] https://www.who.int/news/item/23-09-2020-managing-the-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-the-harm-from-misinformation-and-disinformation.

and use and make decisions regarding health information, especially in connection with health promotion and maintaining or improving health at all stages of life[5]. An important role can also be played by the attitude of the population towards various conspiracy theories, which have been strengthening in recent years, and with the COVID-19 pandemic they have gained new momentum.

Frequency of searching for information about SARS-CoV-2 virus

One of the important indicators of understanding the infodemic and informing the population is the frequency of searching for information related to the SARS-CoV-2 virus.

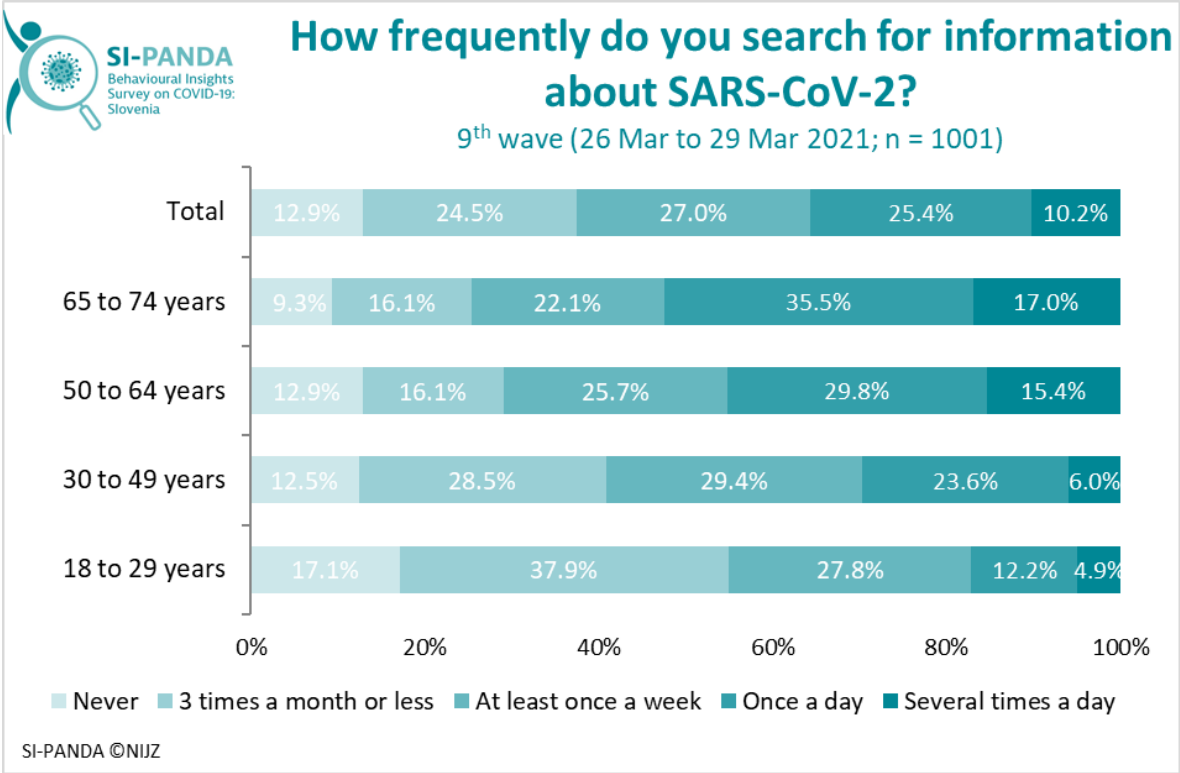


Figure 27: Frequency of searching for information on SARS-CoV-2, total and by age groups.

Survey results show that the frequency of searching for information increases with age – younger people search for information less often and older people more often whereas the differences between age groups are significant. More than half (52.5%) of people aged 65 to 74 seek information on SARS-CoV-2 at least once a day, compared to only 17.1% of young people aged 18 to 29. Therefore, every second person over the age of 65 seeks information on SARS-CoV-2 at least once a day, and only every sixth person aged between 18 and 29 (Figure 27). No differences in gender and level of education were detected in the frequency of searching for information on SARS-CoV-2, while in general, every third respondent or 36.6% of all respondents search for information on SARS-CoV-2 at least once a day.

The frequency of searching information may also be related to individual's risk assessment, which is higher in older age groups due to the proven greater vulnerability and risk of severe COVID-19

[5] Sørensen, K. (2013). Health literacy: the neglected European public health disparity. Maastricht University.

disease than in the young, where the disease is often mild or even asymptomatic. Among those over 65, as many as 47.2% of respondents assess their risk of a severe course of disease, while among young people aged 18 to 29, only 9.0% make such an assessment (Figure 28). In this respect, information about the SARS-CoV-2 virus is probably considered less important by young people, which is also reflected in the lower frequency of searching for such information in young people and higher in older people.

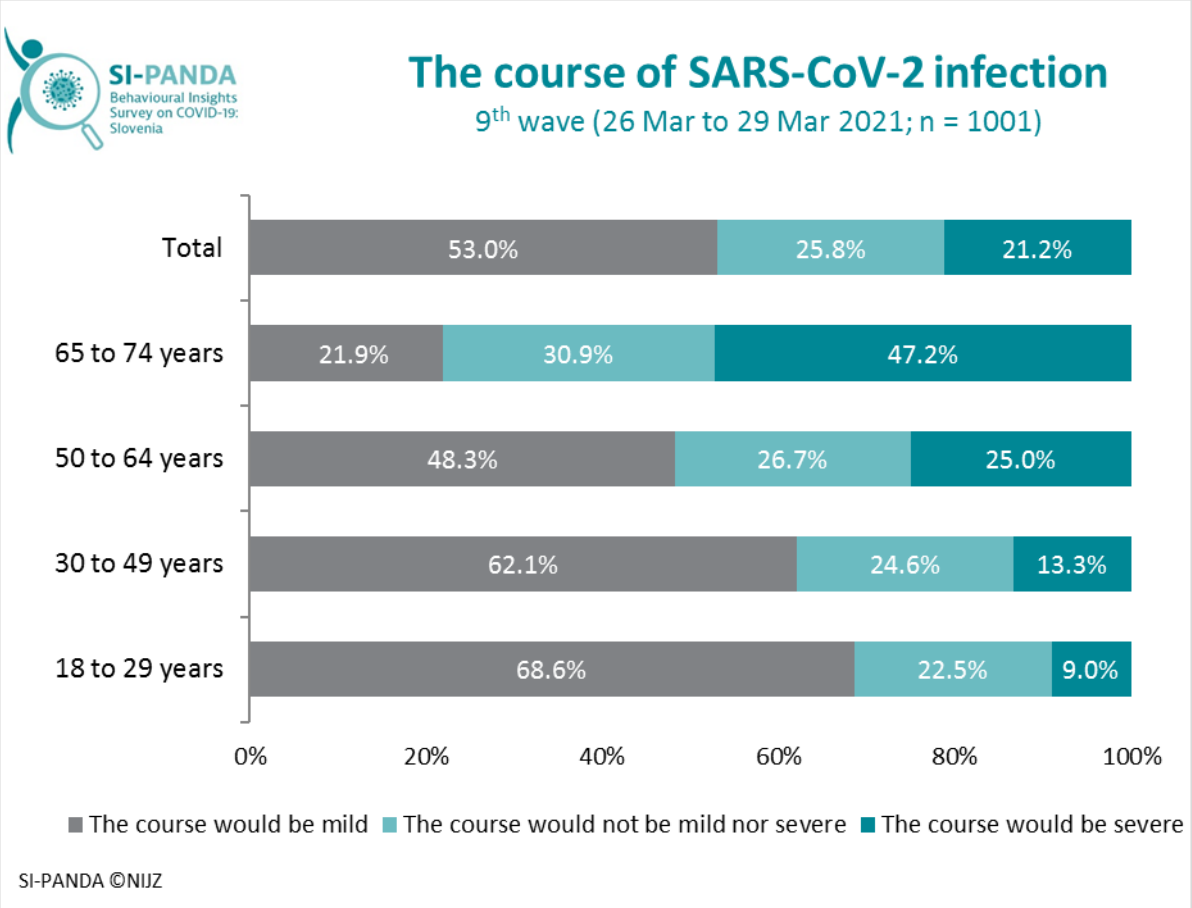


Figure 28: Perception of the course of SARS-CoV-2 infection, in total and by age groups.

Frequency of use of information sources

It is interesting to note that almost half of the respondents most often obtain information from television. Other research also confirms that in crisis situations, the media and especially television become more important sources of information than in non-crisis situations [6]. Respondents also cite health professionals, the National Institute of Public Health, Sledilnik website, radio, and the COVID-19 Government Advisory Group as common sources of information, which are a common source of information for about a third of respondents. Of these sources, respondents use social networks and influencers on social networks the least (Figure 29).

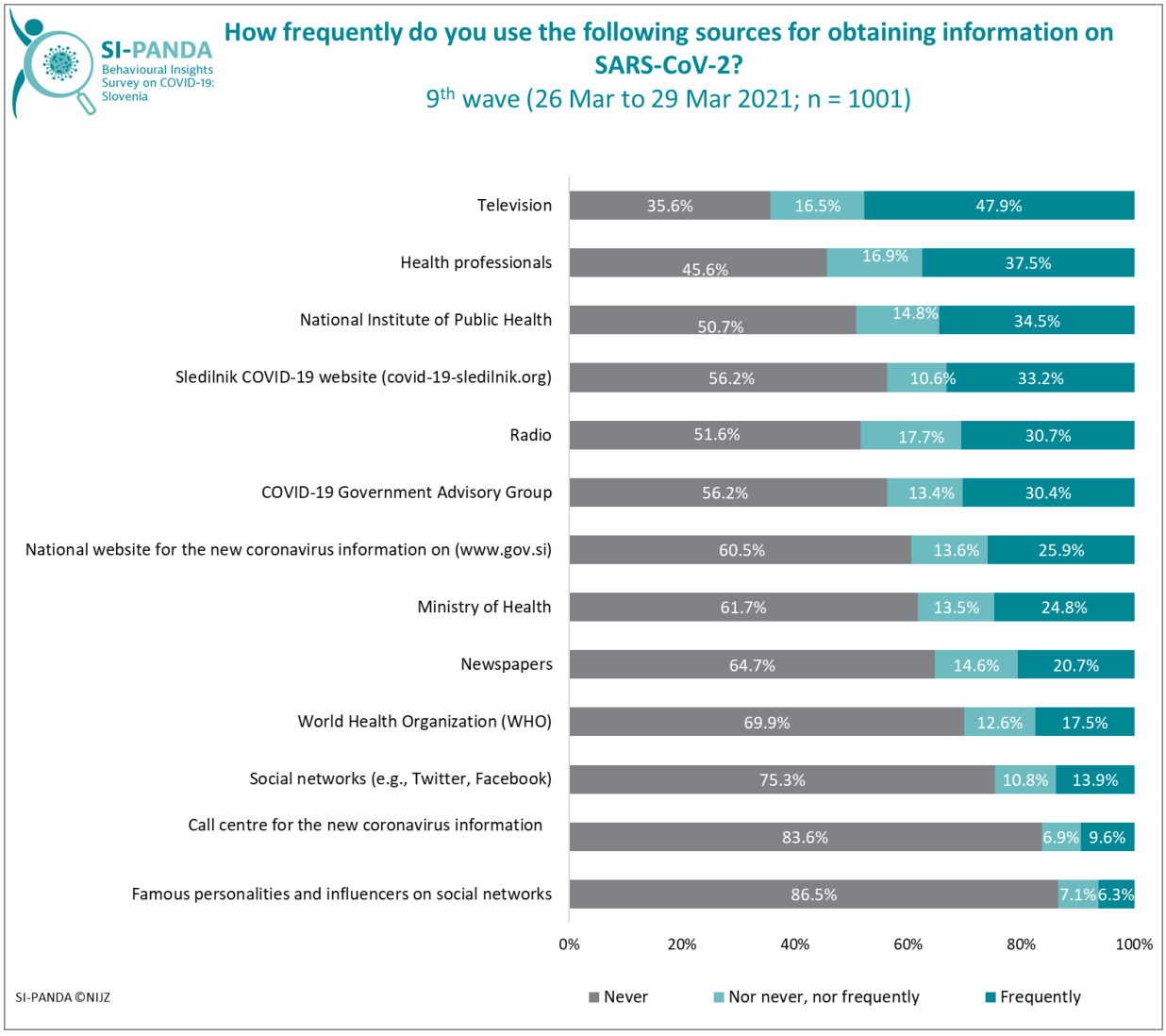


Figure 29: Frequency of the use of different sources for obtaining information on SARS-CoV-2, in total.

[6] Park S, Avery EJ. Effects of Media Channel, Crisis Type and Demographics on Audience Intent to Follow Instructing Information During Crisis. J Contingencies Cris Manag. 2018;26(1).

Frequency of the use of information sources through previous survey waves

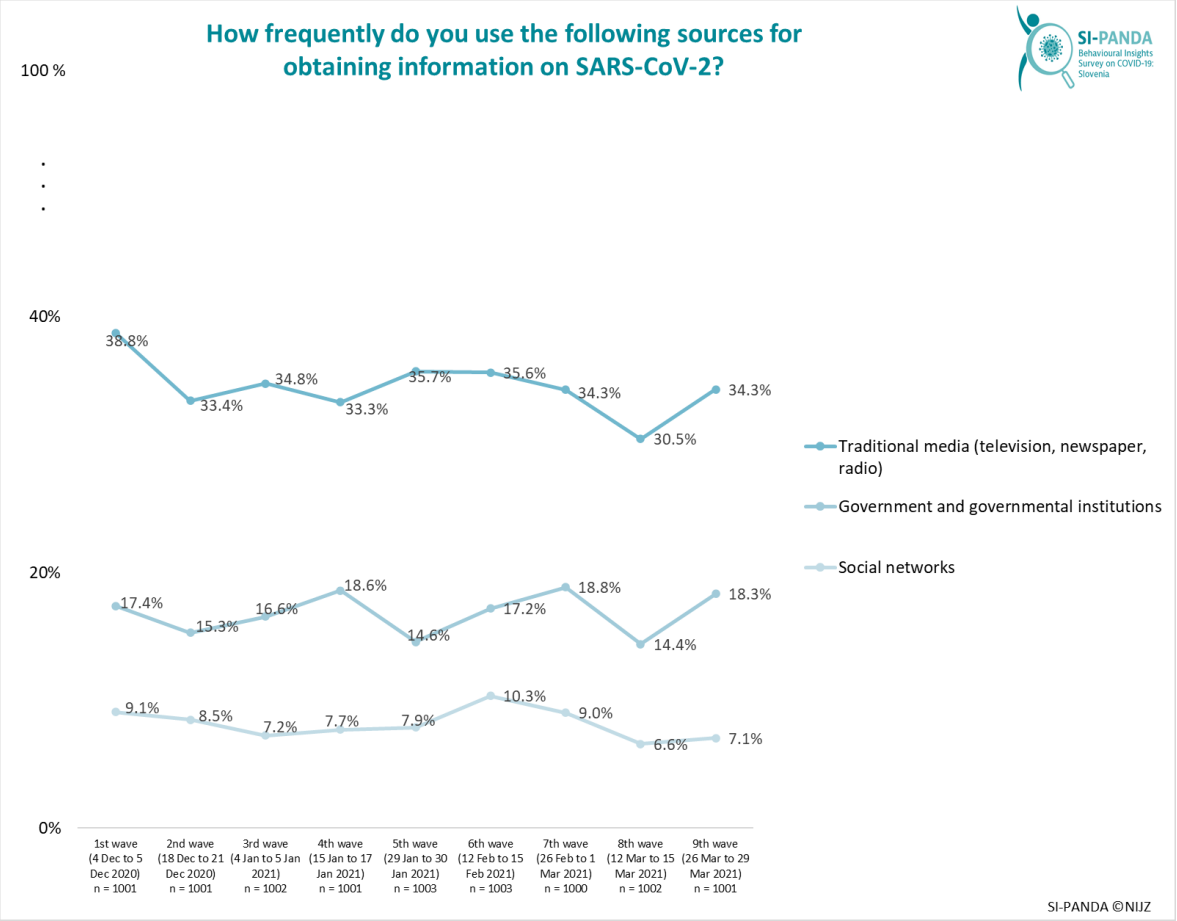


Figure 30: Frequency of the use of different sources for obtaining information on SARS-CoV-2, in total, by survey waves.

The results of previous survey waves show that, out of all sources, respondents most often use traditional media to obtain information, which includes television, radio and newspapers. Traditional media is used by every third respondent, with differences between waves being minimal (Figure 30). There are no major differences between the individual waves of survey in the use of social networks and the trend is relatively stable, while the differences between the Government and governmental institutions as sources of information are greater. The results of 9th wave show that government sources (including the Ministry of Health, the COVID-19 Government Advisory Group, Coronavirus (SARS-CoV-2) government website and the Government Call Centre for coronavirus information) are used by every fifth respondent to obtain information on SARS-CoV-2 virus. As a source of information, almost half of the respondents trust the Government and governmental institutions, and a good third trust the traditional media (Figure 31).

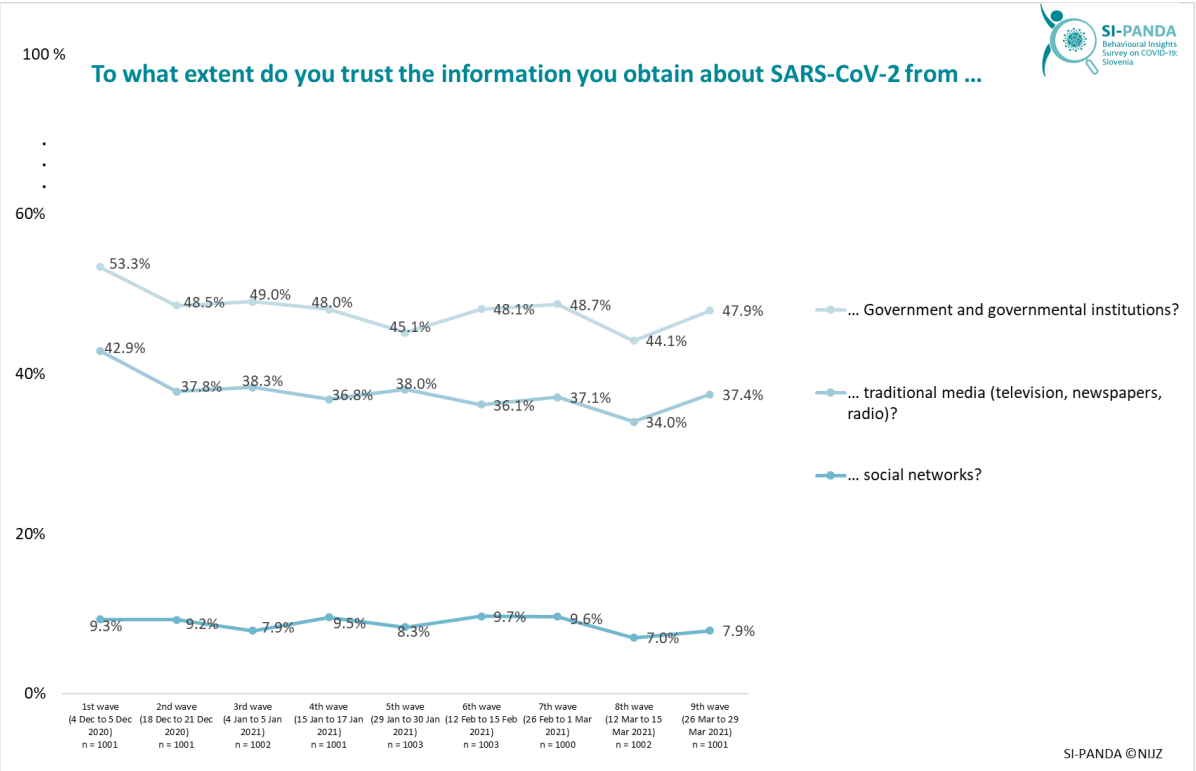


Figure 31: Trust in sources for obtaining information on SARS-CoV-2, in total, by survey waves.

Trust in information sources

Two thirds (67.9%) of respondents trust healthcare professionals, which is in line with the findings of numerous surveys, which show that healthcare professionals are the most important and at the same time most trustworthy information sources[7,8]. The results of the 9th survey wave also show considerable trust in information sources from National Institute of Public Health (55.3%), Government Call Centre for the new coronavirus information (51.0%), World Health Organization (50.7%), Sledilnik website (49.9%) and the Coronavirus (SARS-CoV-2) government website (49.6%). Respondents have the least trust in information obtained on social networks and in the information of influencers on social networks (Figure 32).

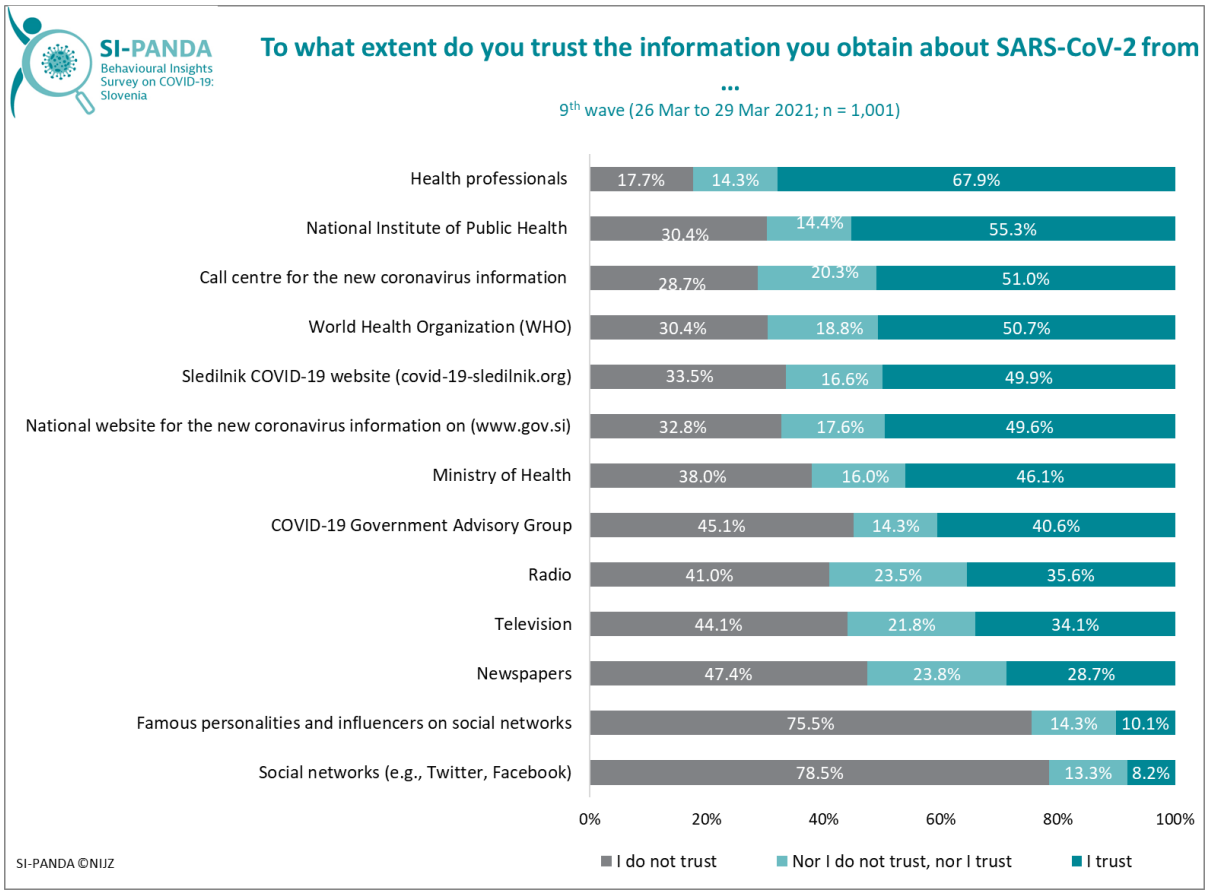


Figure 32: Trust in sources for obtaining information on SARS-CoV-2, in total.

[7] Stefanoff, Pawel, Svenn Erik Mamelund, Mary Robinson, Eva Netterlid, Jose Tuells, Marianne A. Riise Bergsaker, Harald Heijbel, et al. 2010. Tracking Parental Attitudes on Vaccination across European Countries: The Vaccine Safety, Attitudes, Training and Communication Project (VACSATC). Vaccine 28 (35): 5731–37.
[8] Yaqub, Ohid, Sophie Castle-Clarke, Nick Sevdalis in Joanna Chataway. 2014. Attitudes to Vaccination : A Critical Review. Social Science & Medicine 112: 1–11.

Conspiracy theories

There is a significant proneness to conspiracy theories among respondents (Figure 33). The trend is stable throughout the current duration of the survey (December 2020 to March 2021), which confirms the findings that the pandemic of infectious diseases in Slovenia has strengthened the so-called infodemic. The proneness to conspiracy theories is relatively high; it is the highest in people with signs of depressive disorder, in people with a high school education or less, and in people who have not (yet) been vaccinated. Conspiracy theories are least likely to occur in persons who have received at least one dose of the vaccine so far (Figure 34).

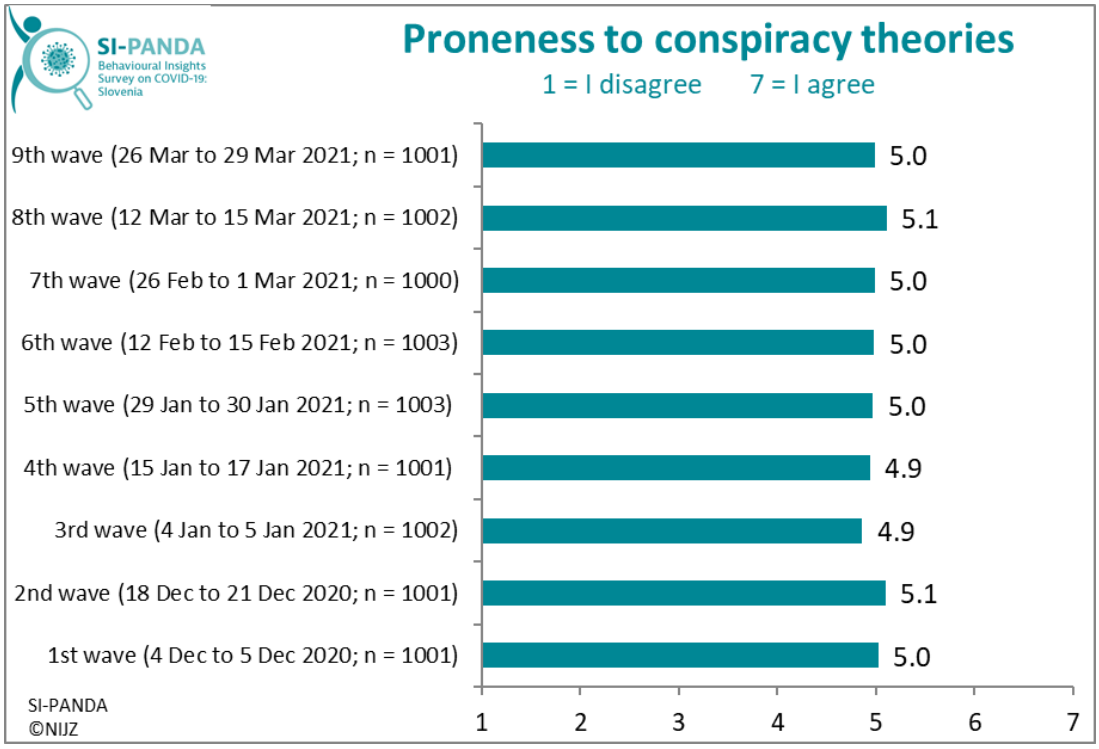


Figure 33: Proneness to conspiracy theories, in total, by survey waves.

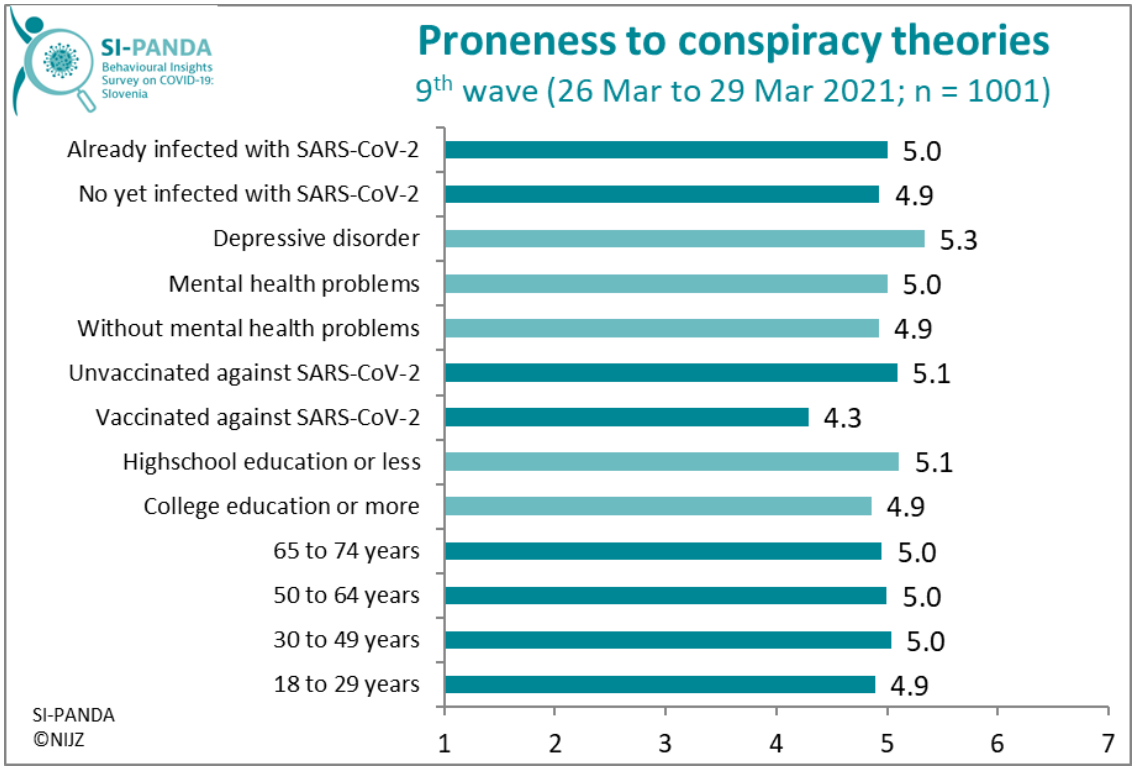


Figure 34: Proneness to conspiracy theories, in total, by explanatory variables.

Health literacy

As we stated in the introduction to this chapter, the knowledge of health literacy in Slovenia is an important aspect. The SI-PANDA survey finds that a significant proportion of respondents find it very easy to find information about the new coronavirus (64.3%), while a much smaller proportion of respondents can easily assess whether the information about SARS-CoV-2 in the media is reliable (Figure 35). The reliability of information about the new coronavirus in the media is more easily assessed by men (36.7%) than by women (29.8%). The differences are also noticeable between age groups – the reliability of information is most easily assessed by respondents aged 50 to 64 (39.1%), while the share of those who easily assess the reliability of information is only 26.4% in the age group 18 to 29.

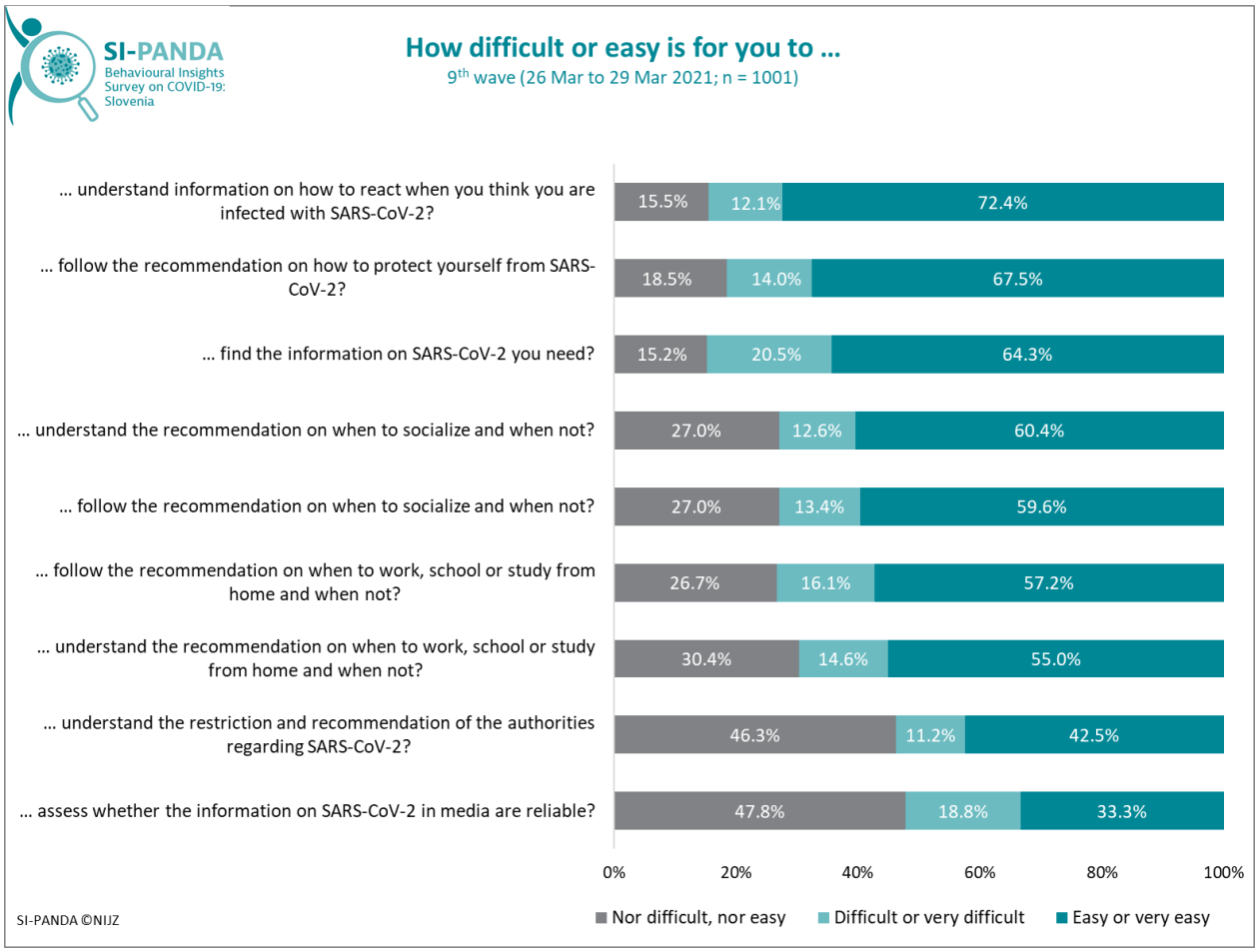
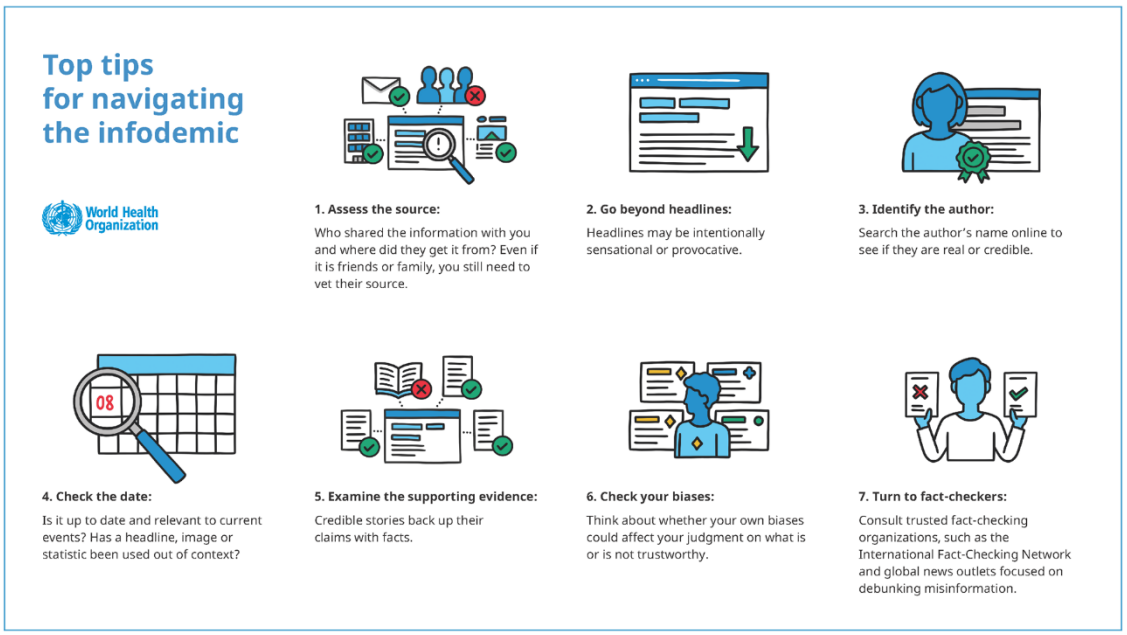


Figure 35: Health literacy, in total.

Conclusion

Individuals are taking an increasingly active role in managing their health (and treatment) and want to be more and more informed, so they are also looking for more information from various sources such as the Internet, health professionals, friends, family, the media, etc. [9]. It is important that, due to large amount of information we are exposed to on a daily basis from various sources, we know how to assess whether those information and sources are credible and that we can trust them. Therefore, in a flood of different information, it is important to check the author (who wrote the text and why), check the source (whether it is reliable and generally recognized), check the tone and style of the text (whether balanced and clear or sensationalist and one-sided), responsibly disseminate information and do not share unverified information. We check our sources and if we have any doubts, we do not use them. This will make it easier for us to judge and decide on choices, which will help maintain our health and the health of our surroundings.



On the other hand, a tailored response is needed from all parts of the society, which also depends on the degree of damage, the purpose, the form of information dissemination, the participants and their origin. Therefore, misinformation can be addressed through targeted counterclaims and myth-breaking initiatives and media literacy. Above all, it is important to encourage the acquisition of information from trustworthy sources and making decisions based on the opinions of scientists and health professionals, and to maintain a democratic debate. This means promoting citizens' media and information literacy, including critical thinking, the ability to recognize misinformation and digital skills, and supporting the empowerment of citizens in general.

[9] Harmsen, Irene A, Gemma G Doorman, Liesbeth Mollema, Robert A C Ruiter, Gerjo Kok in Hester E de Melker. 2013. Parental Information-Seeking Behaviour in Childhood Vaccinations. BMC Public Health 13 (1): 1219.

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