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),

22nd iteration

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INTRODUCTION

The COVID-19 pandemic has had a significant impact on all areas of human life, both in Slovenia and around the world. It has been three years since the first SARS-CoV-2 infection occurred in Slovenia on 4 March 2020. Since then, Slovenia has experienced several epidemic waves, affecting the entire country and all its inhabitants in one way or another. This time has been important for researching the impact and consequences of the pandemic on the individual and society as well as on the health system. The severity and the scope of the COVID-19 pandemic and the introduction of measures to prevent and limit the transmission of the infection have had a profound impact on the daily lives of all people in 2020 and 2021, including those not directly affected by the virus. The uncertain and long-lasting period of health and social crisis has led to a gradual exhaustion of compensatory mechanisms in humans, and thus to a lower success rate of measures to prevent the spread of SARS-CoV-2 infection among the population.

In order to better understand people's behaviour in the context of a crisis situation, both in terms of adherence to recommended measures such as vaccination against COVID-19, use of a mask, keeping safety distance, etc., as well as to gain insight into changes in their lifestyle, physical and mental health, we have already launched the SI-PANDA survey on 4 December 2020, which studies the impact of the COVID-19 pandemic on the lives of Slovenians. After 19 iterations of the survey in 2020 and 2021 (the last was carried out from 7 to 10 December 2021), a new set of 6 surveys is now on the way, with the first iteration carried out from 20 to 23 September 2022.

External circumstances have changed in the meantime. The SARS-CoV-2 virus has become our constant companion, as they call it our "new normal". We seem to have forgotten very quickly that anyone of us, at any age, can become seriously ill or even die from COVID-19. It is also true that most people who become infected with SARS-CoV-2 today, when Omicron is the predominant variant, are likely to have mild to moderate respiratory illness and will recover without special treatment. However, there are people among us, especially the elderly and those with chronic conditions, who are at greater risk from the disease. As a solidarity society, we have a duty to protect them through our behaviour. We are also facing the post-COVID syndrome or long COVID. This is a condition after SARS-CoV-2 infection, when various health problems persist for two months or longer, they cannot be explained by an alternative diagnosis, and severely affect an individual's functioning at work or at home.

The new set of SI-PANDA research aims to determine how often people have been exposed to SARS-CoV-2 infection since the beginning of the pandemic, and to study the consequences of recovering from SARS-CoV-2 infection. Given that vaccination against COVID-19 is still one of the most effective measures, we are also interested in people's attitudes towards vaccination and the reasons for their hesitation.

The results of the research presented in the report are aimed at experts and decision-makers, as well as the media and general public. This also implements the WHO recommendation[1], that countries should regularly conduct qualitative and quantitative population surveys, which should be the basis for further action.

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

METHODOLOGICAL NOTES

The research in the form of an online survey is being conducted in twenty-six iterations starting on 4 December 2020. The first set of the survey (up to and including the 12th iteration) was conducted by the Mediana Institute for Market and Media Research on behalf of the National Institute of Public Health (NIJZ) while the second and third sets are being conducted by Valicon. The first twelve iterations were conducted once every two weeks and the second part, including the 19th iteration, once a month. The third set of survey, which is being carried out after a nine-month break, will also be carried out once a month. The data are analysed at the NIJZ.

Selected panel members are invited to the online survey, which takes place through the online panel. Each iteration of online survey involves a representative sample of about 1,000 adults aged 18 to 74.

At the beginning of research, we used the World Health Organization (WHO)[2] questionnaire as a basis, which we translated and adapted to the situation in our country according to the WHO guidelines. We also used the translated MHI-5 questionnaire to measure individuals' mental health and the 7C questionnaire to determine the willingness to vaccinate. We have also included some questions that have been used in previous surveys carried out by the National Institute of Public Health and questions that members of the research team and colleagues have designed according to current needs.

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

The report presents data from the **22nd iteration** of the online survey, that took place **from 22 November 2022 to 25 November 2022** on a sample of 1,033 adults aged 18 to 74 years. Some comparisons with previous iterations of the survey are also shown.

Research carried out so far:

1st iteration from 4 Dec 2020 to 6 Dec 2020
2nd iteration from 18 Dec 2020 to 21 Dec 2020
3rd iteration from 4 Jan 2021 to 5 Jan 2021
4th iteration from 15 Jan 2021 to 17 Jan 2021
5th iteration from 29 Jan 2021 to 30 Jan 2021
6th iteration from 12 Feb 2021 to 15 Feb 2021
7th iteration from 26 Feb 2021 to 1 Mar 2021
13th iteration from 8 Jun 2021 to 10 Jun 2021
14th iteration from 6 Jul 2021 to 9 Jul 2021
15th iteration from 25 Aug 2021 to 28 Aug 2021
16th iteration from 21 Sept 2021 to 23 Sept 2021
17th iteration from 12 Oct 2021 to 15 Oct 2021
18th iteration from 9 Nov 2021 to 12 Nov 2021
19th iteration from 7 Dec 2021 to 10 Dec 2021
20th iteration from 20 Sept 2022 to 23 Sept 2022
21st iteration from 18 Oct 2022 to 21 Oct 2022
22nd iteration from 22 Nov 2022 to 25 Nov 2022

[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.

KEY FINDINGS OF THE 22ND ITERATION

➢ Supporting current recommendations

In the 22nd survey iteration, the respondents gave the highest levels of support to the recommendation of effective ventilation of enclosed spaces (79.4%) and effective ventilation in educational institutions (75.3%), isolation for persons with confirmed SARS-CoV-2 infection (72.8%), and the use of masks in health care facilities, pharmacies, and homes for the elderly (63.4%). People in the 65 to 74 age group give the most support to current recommendations. All of the listed recommendations are more strongly supported by those vaccinated against COVID-19 than by those who have not been vaccinated.

➢ Vaccination against COVID-19 and seasonal influenza

In the most recent iterations of SI-PANDA, the proportion of people who do not intend to be vaccinated against COVID-19 has been relatively stable at around one-quarter of respondents. Respondents who have not been vaccinated against COVID-19 are most concerned about the side effects of vaccination, long-term impact on their health and the safety of the vaccines. More than half of them also believe that there is too much pressure regarding vaccination. People who received the vaccine against COVID-19 cited the following reasons for vaccination: preventing a more severe course of the disease, protecting their health and the health of their loved ones, and contributing to curbing the epidemic as soon as possible and normalizing life again. 11.7% of the respondents are likely to be vaccinated against seasonal influenza in 2022/2023 season, and among the oldest age group (65–74 years) 24.7% are likely to be vaccinated.

➢ Compliance with isolation and quarantine and action in case of cold symptoms or respiratory infection

In case of cold symptoms or respiratory infection, the majority of people would react by self-testing for SARS-CoV-2 (72.2%). Upon contact with a person who tested positive for the SARS-CoV-2 virus, despite not developing symptoms themselves, 69.4% of people would get tested. Among those who were infected with SARS-CoV-2, isolation was consistently adhered to by 94.3%.

➢ Long COVID-19

Most people who have been infected with SARS-CoV-2 virus report that their infection was milder. About 60% of respondents reported that they had some problems three months after the first or only infection, or a second infection, which lasted at least two months. After recovering from COVID-19 infection, the most common problems cited by the respondents are fatigue and lack of energy. The longest-lasting problems after infection last up to 3 months in more than 50% of respondents. The problems reported by respondents most affect the field of leisure activities.

➢ Mental health

About a fifth (20.4%) of respondents often or daily feel tense, stressed or under a lot of pressure. Such feelings are more common among women, in younger age groups, among those who report having a worse financial situation compared to the past, and among those who are less physically active, who have at least one risky behaviour (such as smoking or alcohol overconsumption), who have mental health problems and those who live with children under 18. The majority of respondents manage tensions, stress and pressures easily or with some effort, a minority report that they do not manage them or manage them with severe effort, and 17.2% (compared to 13.5% in 21st iteration) report that they manage them with greater effort. Risky stress behaviour (experiencing stress frequently and having severe problems coping with it) is more common in younger age groups, in those with at least one chronic illness, in smokers, in those who are less

physically active and with at least one risky behaviour, in those who are in a worse financial situation than before, and in those who show a high likelihood of having a depressive disorder.

➢ Tobacco smoking

Among the respondents, about a fifth are tobacco smokers (cigarettes, cigars, cigarillos or tobacco pipes), just over a quarter are ex-smokers and about half are never smokers. Recovering from or worrying about COVID-19 was not a common reason for trying to quit or giving up tobacco smoking among surveyed smokers and ex-smokers.

RESULTS

Supporting current recommendations to control the spread of SARS-CoV-2 infections

Within days of the declaration of a coronavirus epidemic in Slovenia (12 March 2020), a number of measures were taken to limit the spread of SARS-CoV-2 infections, which varied according to the epidemiological situation in the country. At the end of May 2022, the Government adopted a decision on the expiry of the Ordinance on the temporary measures for the prevention and control of infectious disease COVID-19. Throughout the duration of the measures, as well as after their termination, there are recommendations for protecting health and preventing the spread of infections, which are also valid in the current epidemiological situation.

In August 2022, the Expert baselines and guidelines for preparedness and response to SARS-CoV-2 infections in the autumn-winter season 2022/2023 in Slovenia[3] were prepared, according to which public health measures will be adapted according to the epidemiological situation. Five possible long-term scenarios for the evolution of the epidemic have been developed, linked to: virus characteristics, population susceptibility, social factors and pharmacological measures. The objectives are based on five pillars (vaccination, transmission control, testing and treatment, SARS-CoV-2 monitoring and contact reduction measures). Each pillar has specific recommendations relating to the baseline (Phase 1) and the escalation phase (Phase 2). From 22 July 2022, we are in Phase 1, which aims to protect the most vulnerable groups of the population in order to prevent an increase in the number of people with the more severe form of COVID-19. Measures aimed at limiting the spread of the SARS-CoV-2 virus are recommended, but do not interfere significantly with the daily lives of most individuals.

Between 22 November and 25 November 2022, we asked respondents how supportive they were of the current recommendations.

The highest proportion of people support effective ventilation of enclosed spaces (79.4%), effective ventilation in educational institutions (75.3%), and isolation for people with confirmed SARS-CoV-2 infection (72.8%). Just over 60% of people support the use of masks in health care facilities, pharmacies and homes for the elderly. Just under a half support the use of masks in public transport (45.9%) and in enclosed public spaces (44.7%). In this survey iteration, respondents again showed the least support for the use of the Ostani zdrav application in colleges and universities (32.0%). People in the 65–74 age group show statistically significantly more support for the recommendation to isolate people with confirmed infection (87.3%) and for the recommendation to use masks in healthcare facilities, pharmacies and homes for the elderly (84.5%). The recommendations to use masks in public transport, in enclosed public spaces and to use Ostani zdrav application in colleges and universities are also statistically significantly more likely to be supported by people in the 65–74 age group (Figure 1).

[3] https://www.nijz.si/sites/www.nijz.si/files/uploaded/strokovna_izhodisca_in_usmeritve_za_pripravljenost_in_odzivanje_na_okuzbe_z_virusom_sars-cov-2.pdf.

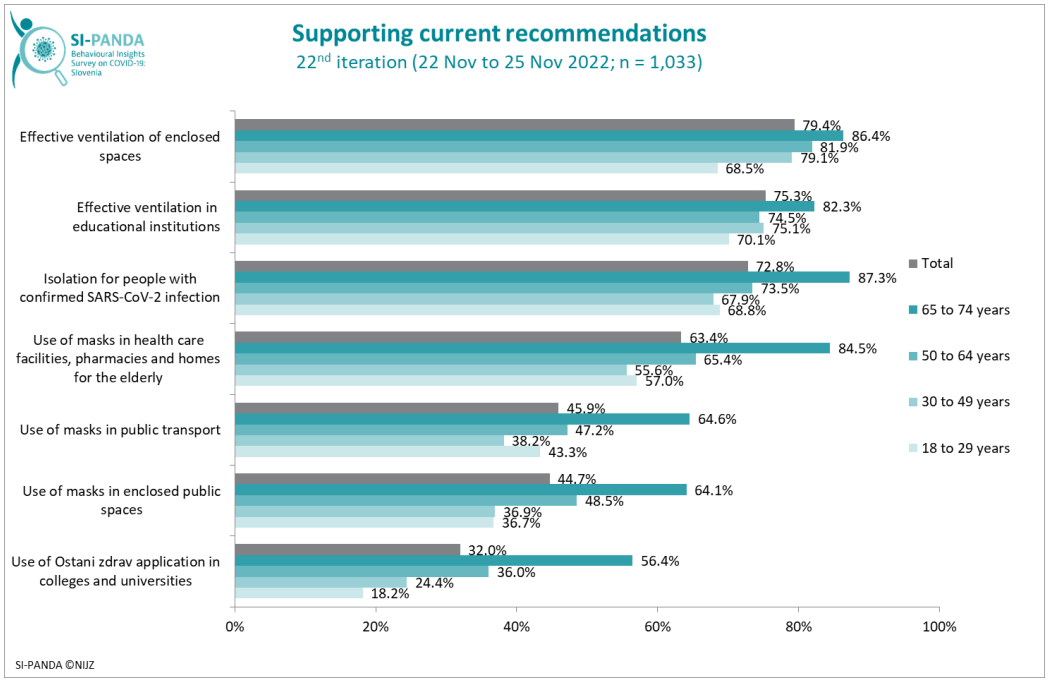

Figure 1: Supporting current recommendation, total and by age groups.

As expected, the current recommendations are supported more by people who were vaccinated against COVID-19. More than half of vaccinated people support all of these recommendations, and 39.4% of vaccinated people support the use of Ostani zdrav application in colleges and universities. Among unvaccinated persons, however, more than half support only the recommendations for effective ventilation of enclosed spaces (69.2%) and effective ventilation in educational institutions (63.9%), as well as isolation for persons with confirmed SARS-CoV-2 infection (54.5%). Only 14.6% of unvaccinated people support the use of Ostani zdrav application (Figure 2).

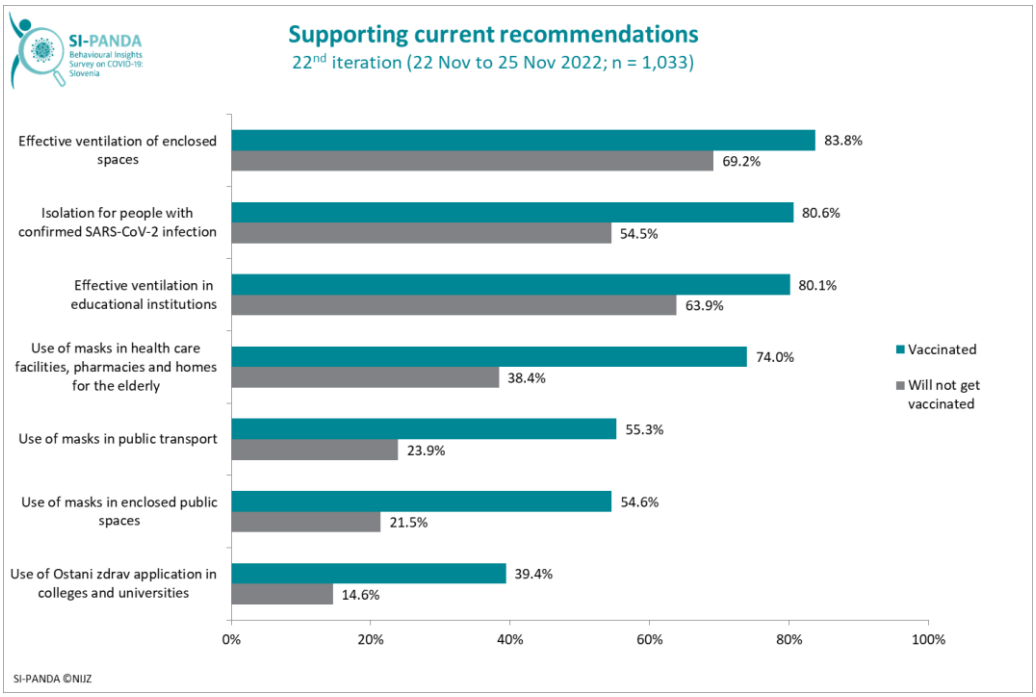

Figure 2: Supporting current recommendations, by vaccination status.

Working from home during and after the COVID-19 pandemic

During the COVID-19 epidemic, the medical profession promoted working from home to limit the transmission of SARS-CoV-2 within work organizations among employees, as enclosed spaces where large numbers of people congregate for long periods of time are ideal for the spread of the virus. According to epidemiologists at the time, this was one of the key measures to slow down the spread of the virus. At the start of the SI-PANDA survey in December 2020, (2nd iteration), a third of people had worked from home in the last seven days and almost half worked from home at least occasionally, indicating that employers encouraged this type of work and that employees used it to a significant extent. The share of people working from home has subsequently varied over the survey iterations, decreasing by 20 percentage points in the 17th survey iteration one year ago (October 2021) compared to the 2nd survey iteration. According to the 22nd survey iteration, the proportion of people working from home is only 11.7%. However, around 13% of the respondents in both the 17th and 22nd survey iterations mixed work at workplace and work from home, suggesting that this mode of working had persisted to some extent after COVID-19 pandemic (Figure 3).

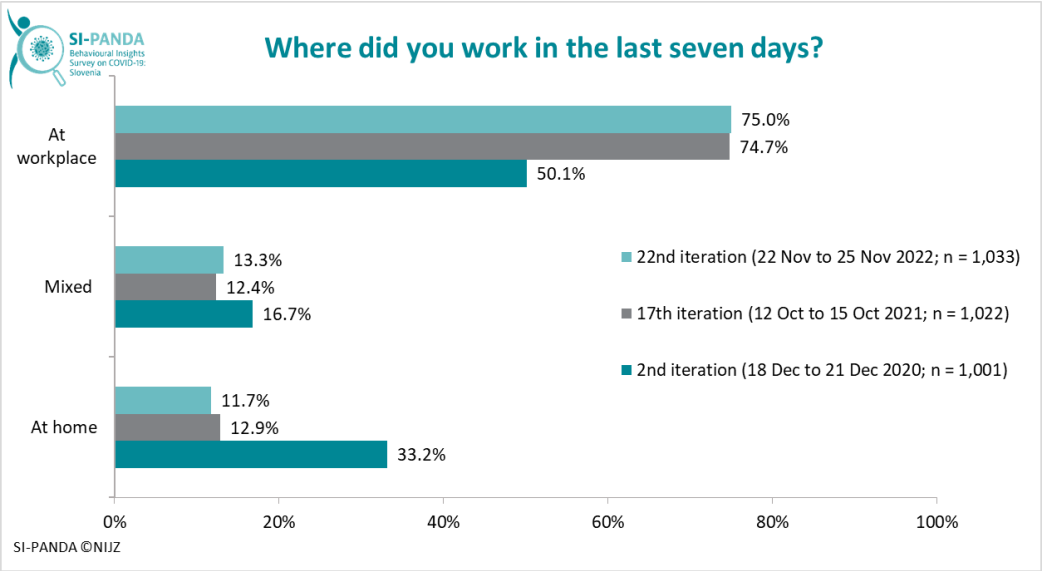

Figure 3: Performing work in the last 7 days, total (employed and self-employed) and by 2nd, 17th and 22nd survey iteration.

Statistically significantly more people with secondary education or less (81.8%) than those with at least higher education (69.4%) performed their work at workplace in the last 7 days. However, almost three times as many people with at least a higher education mixed work at workplace and work from home, compared with those with a secondary education or less (Figure 4). There were also statistically significantly more people from Eastern Slovenia (77.8%) than from Western Slovenia (71.9%) who worked in the workplace. In the 22nd survey iteration, more women than men also worked from home, but the gender difference is not statistically significant.

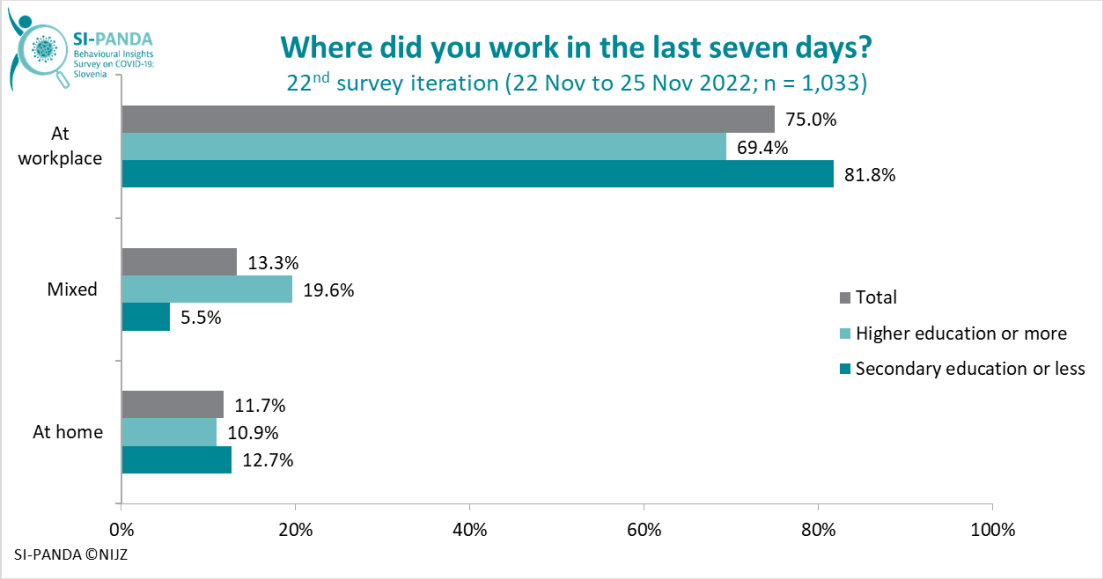

Figure 4: Performing work in the last 7 days, total (employed and self-employed) ad by educational attainment.

In January 2021, around a third of the employed or self-employed persons worked from home, while just under a fifth mixed working from home and working at workplace. Then, in February 2021, the share of people working from home decreased to around one fifth working from home and around 17% mixing working from home and at workplace. At the time of the 8th SI-PANDA survey iteration, in mid-March 2021, when the weekly number of SARS-CoV-2 infections in the seven days prior to the survey was approximately 5,000, 20.6% of the respondents were working from home, and just under one-fifth were mixing working from home and working at workplace (17.6%). In the following survey iterations, from the end of March 2021 to the beginning of May 2021, around a fifth of people (17.7%–26.9%) worked from home. The number of weekly SARS-CoV-2 infections in the last seven days prior to the survey iterations varies from the 9th to the 12th survey iteration (between approximately 4,500 and 6,500 infections). In the summer months of 2021 (June to August), the number of weekly infections in the last seven days prior to the survey was the lowest, and 12.1%–14.9% of people worked from home. This way of working was then maintained later. Even with the higher number of weekly infections between 12.3% and 14.7% of respondents worked from home between September and December 2021, which is similar to the previous period when the number of confirmed SARS-CoV-2 infections in the last seven days prior to the survey iteration was lower. However, the share of people working from home decreased slightly in autumn 2022 (September to November) compared to 2021, to just over 10%, and the number of weekly SARS-CoV-2 infections varied (from around 5,000 to 15,000 infections per week) (Figure 5).

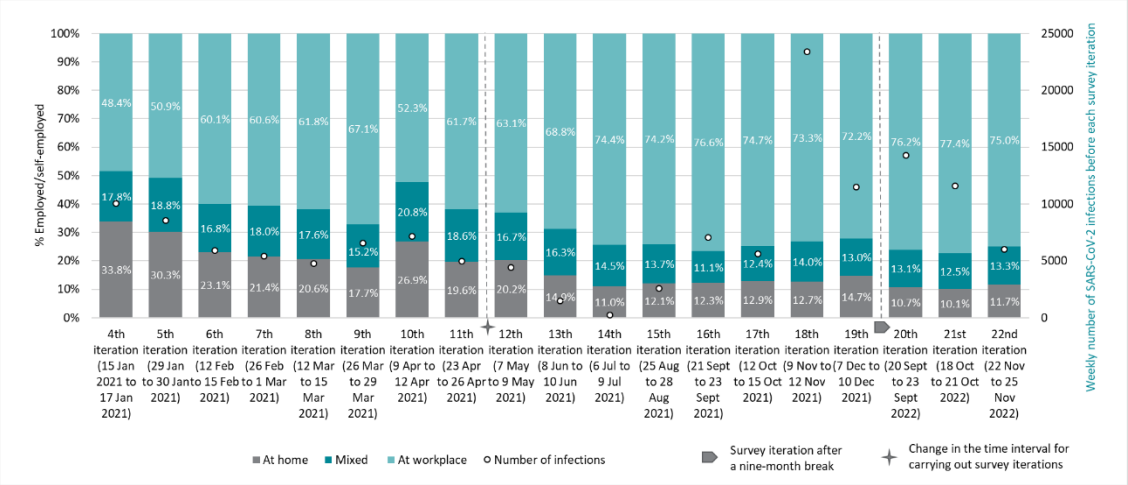

Figure 5: Performing work in the last seven days, by survey iterations and weekly number of SARS-CoV-2 infections in the last seven days before each survey iteration, from SI-PANDA 4 to SI-PANDA 22.

Vaccination against COVID-19

In the 22nd SI-PANDA survey iteration, 70.2% of the respondents answered that they had already been vaccinated against COVID-19 with at least one dose of the vaccine. Similarly, data from the Electronic Registry of Vaccinated Persons (*slov.* elektronski register cepljenih oseb – eRCO) show that 70% of adults have received at least one dose of COVID-19 vaccine by 25 November 2022. In the 22nd SI-PANDA survey iteration, 5.3% of persons responded that they had received one dose of vaccine, 24.9% of persons responded that they had received two doses of vaccine, 34.6% of persons responded that they had received the first booster dose, and 5.4% of persons responded that they had received the second booster dose (Figure 6). 27.6% of the respondents do not intend to be vaccinated, and 2.2% have not been vaccinated for health reasons. The proportion of people who do not intend to be vaccinated against COVID-19 has remained relatively stable in recent SI-PANDA survey iterations, hovering around a quarter of respondents. According to eRCO, by 25 November 2022, 38% of adults had been vaccinated with the first booster dose and 4% of adults had been vaccinated with the second booster dose.

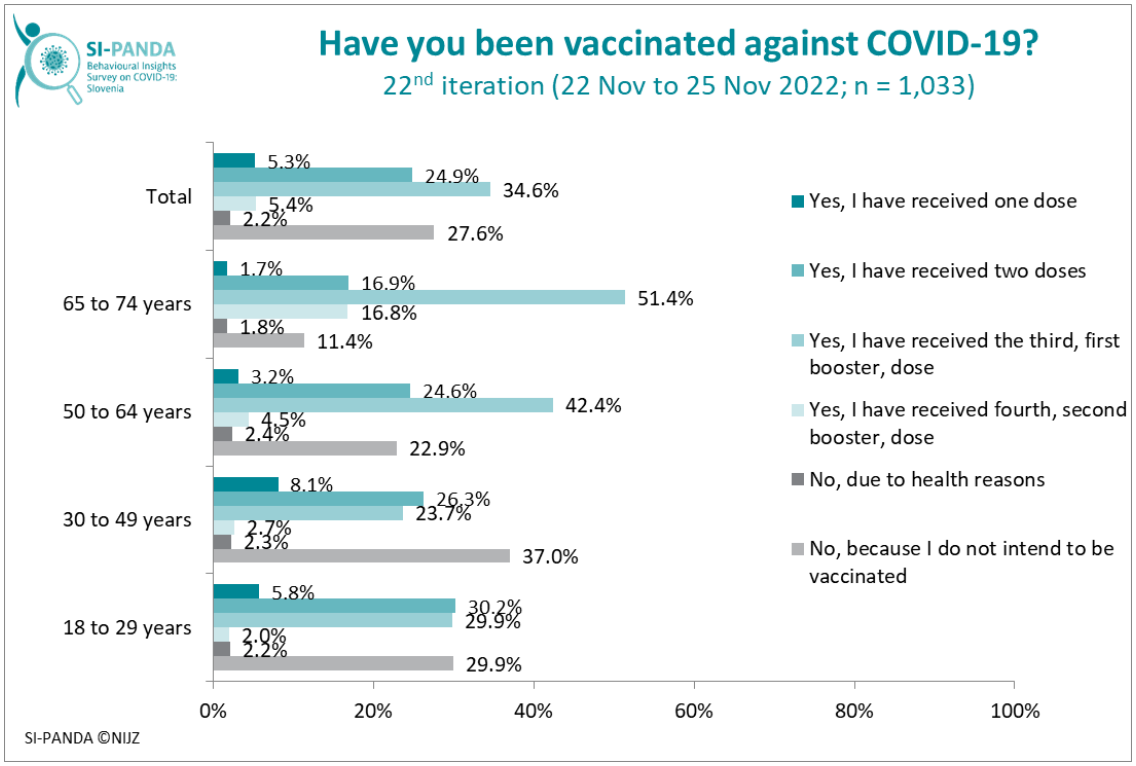

Figure 6: Vaccination against COVID-19, total and by age groups.

More than half (53.4%) of the respondents agreed that the COVID-19 vaccine can prevent the more severe course of COVID-19, 12.0% were undecided and over a third (34.5%) of respondents disagreed. The proportion of people who believe that the vaccine can prevent a more severe course of the COVID-19 is the highest in the 65 to 74 age group (67.7%), and the lowest in the 30 to 49 age group, where less than a half (44.3%) of respondents agree with the statement (Figure 7). This also coincides with the results shown in the previous figure (Figure 6), where the proportion of people who do not intend to be vaccinated is the highest in the 30 to 49 age group, while the proportion of the vaccinated is the highest in the oldest age group (65 to 74 years).

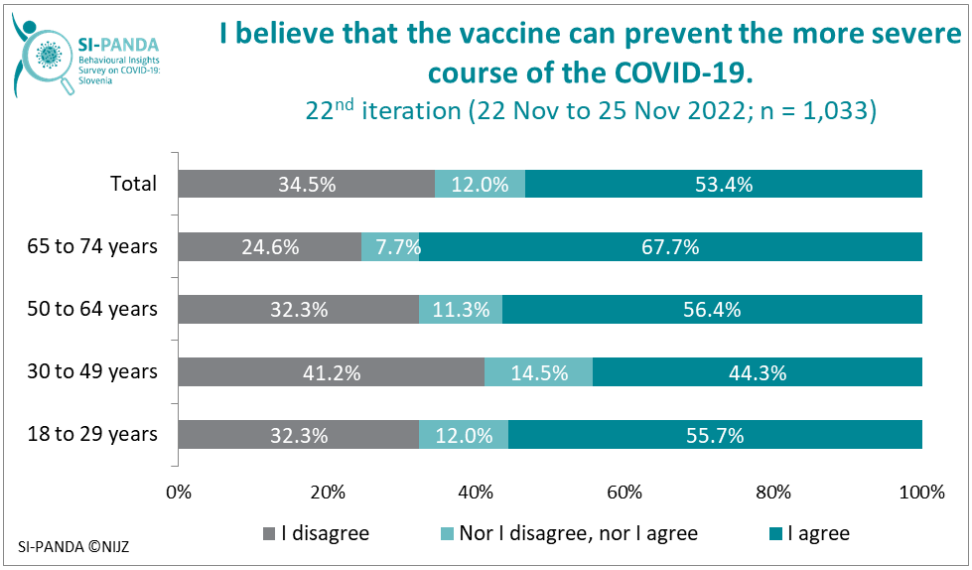

Figure 7: Opinion on whether vaccination can prevent more severe course of the disease, total and by age groups.

35.3% of the respondents think that vaccination against COVID-19 is not necessary and that it is better to get over the disease naturally, while just under half of the respondents disagree (49.5%) and 15.2% are undecided. The majority of people who will not be vaccinated against COVID-19 (75.4%) believe that vaccination against COVID-19 is unnecessary and that it is better to get over the diseases naturally. Among those who have been vaccinated, only less than one fifth of the respondents (18.3%) believe that vaccination against COVID-19 is unnecessary (Figure 8).

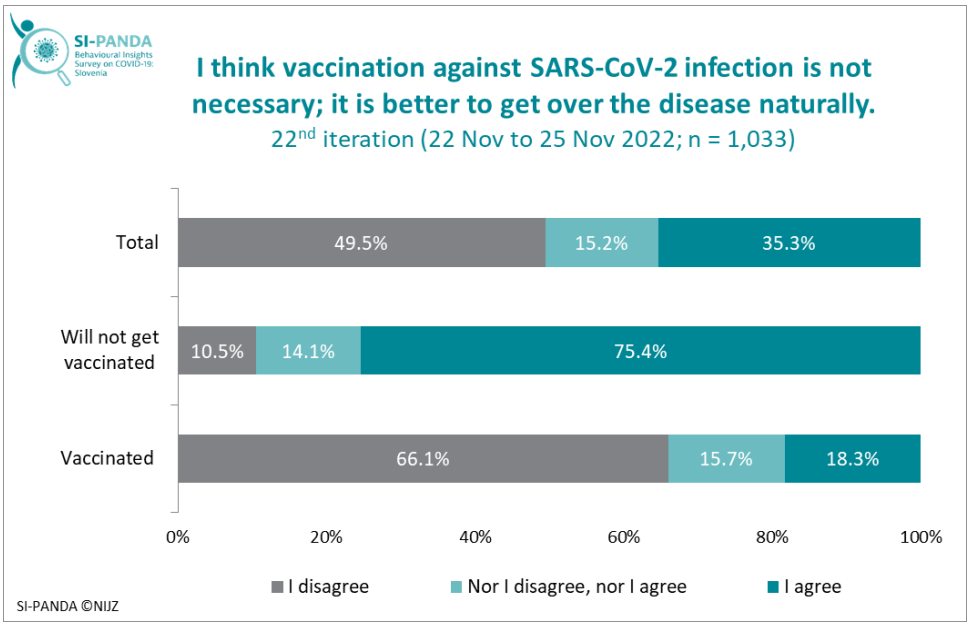

Figure 8: Opinion on whether it is better to get over the disease naturally, total and by vaccination status.

In the 22nd survey iteration, respondents were asked again about the factors that influenced or would influence their decision to be vaccinated against COVID-19. As in previous iterations of the survey, the 22nd iteration showed that, on average, respondents were most likely to agree that their decision to vaccinate depended / will depend on whether there was / is enough information available that the vaccine is safe and effective (average score on the 7-point scale in 22nd iteration for safety and for effectiveness is 4.4). The decision was / is also influenced by whether the

vaccine has been in use for a long time and the magnitude of the risk of SARS-CoV-2 infection at the time of vaccination (4.0–3.9). On average, respondents were least likely to agree that the decision to vaccinate depended or will depend on the recommendations of the Ministry of Health (3.4), on accessibility of vaccination (3.5) and on whether the vaccine is also used in other countries (3.5) (Figure 9).

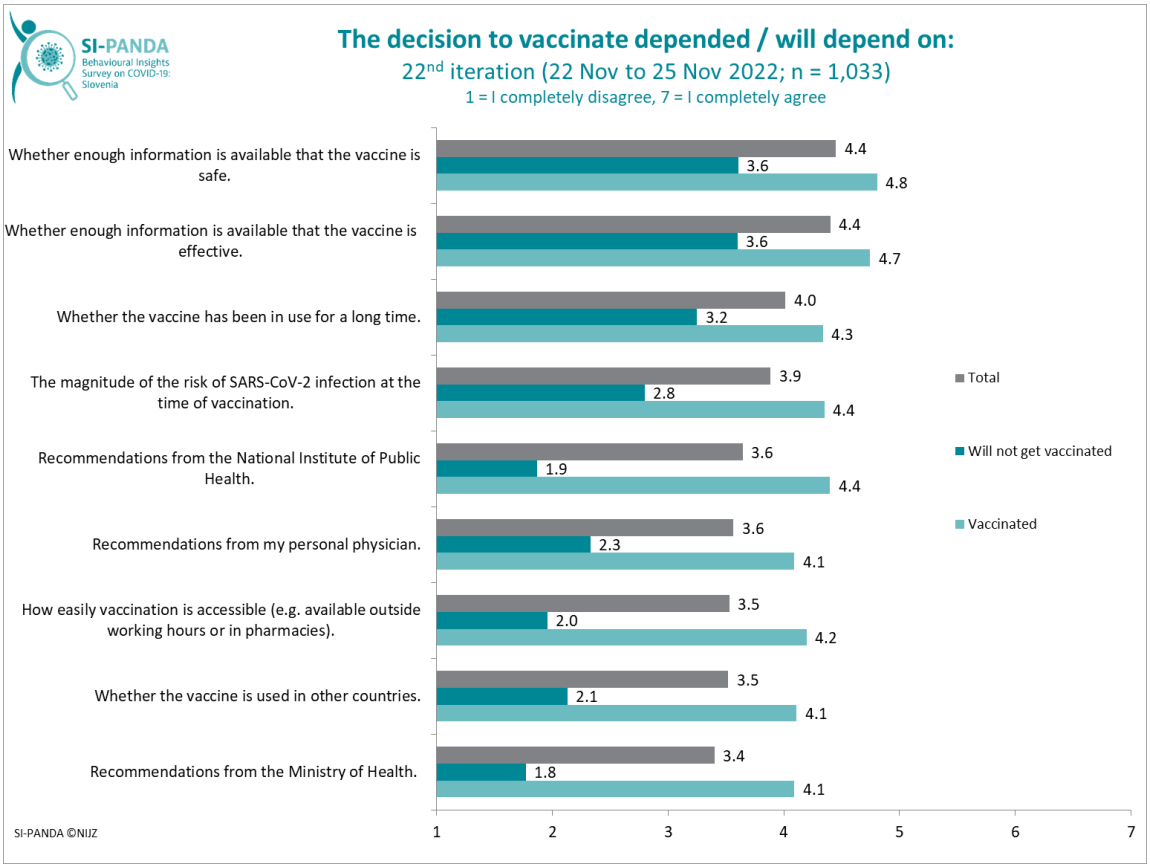

Figure 9: What the decision to vaccinate against COVID-19 depends on, total and by vaccination status.

In general, 37.8% of people surveyed believe that everyone should be vaccinated according to the national vaccination programme, irrespective of the SARS-CoV-2 virus. In the 65-74 age group, 55.4% of respondents feel this way, while in the 30-49 age group, less than a third of respondents (27.1%) feel this way (Figure 10).

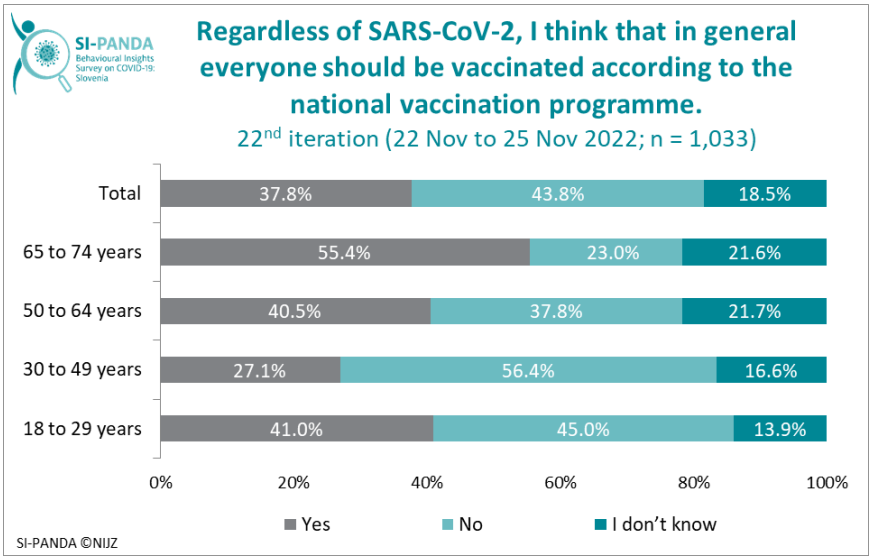

Figure 10: Opinion on vaccination in accordance with the national vaccination programme, total and by age groups.

People who had received primary doses of vaccine against COVID-19 (24.9%) were asked how likely they were to be vaccinated with the first booster dose against COVID-19: 19.5% reported they were likely to be vaccinated and 62.6% reported they were unlikely to be vaccinated with the first booster dose against COVID-19, just under a fifth (17.9%) were undecided regarding vaccination with the first booster dose against COVID-19.

People who had received the primary doses of vaccine were asked about their reasons for not receiving the third dose (the first booster dose). More than half of respondents (53.7%) thought that the booster dose would not give them additional protection, 50.2% of persons were concerned about the long-term health effects, 41.1% of respondents were concerned about the side-effects of the booster dose, a quarter of respondents (25.4%) were not sure that the booster dose is even recommended for them, a fifth (20.6%) felt that the first two doses gave enough protection. Just under a fifth of respondents had side effects after the previous vaccinations against COVID-19 (19.5%). The least frequently cited reasons for not vaccinating with the first booster dose were meeting the RVT condition (12.5%), waiting for a vaccine adapted to the current variant of the disease (7.9%), and pregnancy or trying to conceive and associated care for the child (4.5%) (Figure 11). Respondents could give several reasons why they would not be vaccinated with the third dose (the first booster dose).

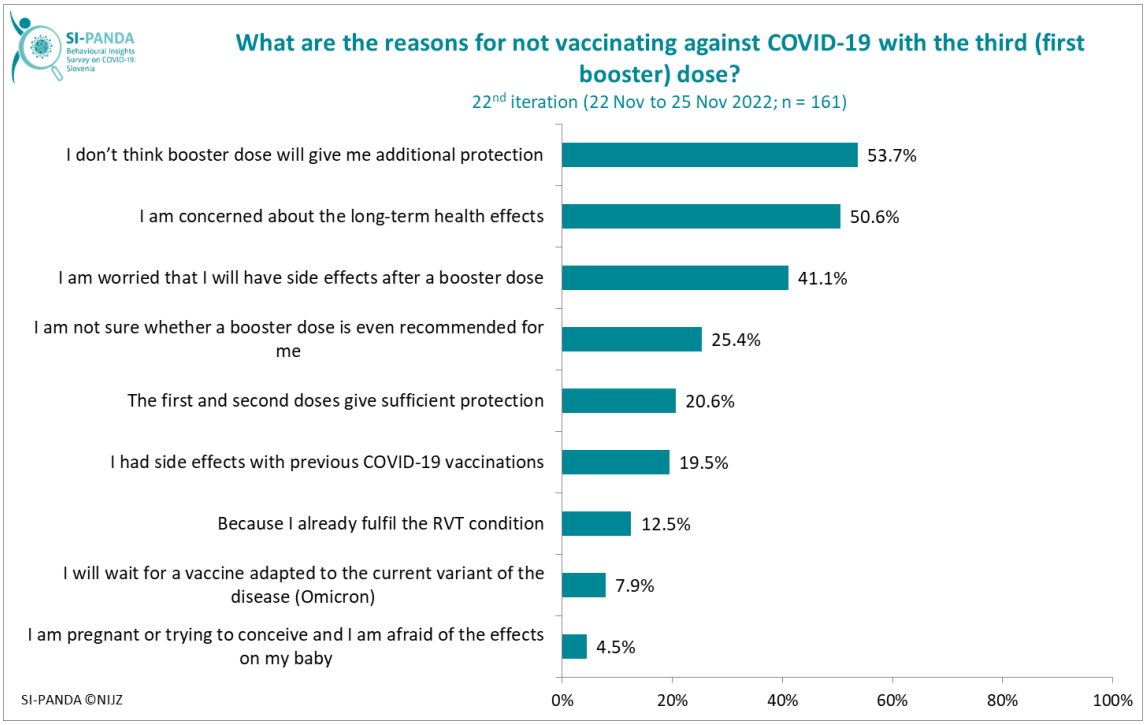

Figure 11: Reasons against vaccination with a third dose of COVID-19 vaccine among persons who received first two doses of COVID-19 vaccine and who are unlikely to be vaccinated with a third dose of COVID-19 vaccine, total.
Note: Several answers were possible

Those who reported having received a third dose (first booster) of COVID-19 vaccine (34.6%) were asked how likely they were to be vaccinated with a second booster dose (fourth dose) of COVID-19 vaccine. Less than a half (43.0%) indicated that they were likely to be vaccinated, and 36.8% indicated that they were unlikely to be vaccinated with a second booster dose of COVID-19 vaccine; a good fifth of the respondents were undecided.

Persons who received the first booster dose were asked about their reasons for not receiving a fourth (second booster) dose of COVID-19 vaccine. Over a half of the respondents (54.5%) felt that a booster dose would not give them additional protection, 38.0% were concerned about long-term health effects, 35.9% thought that the doses they had already received gave them enough protection, and 24.6% were worried that they would experience side effects after a second booster dose, 23.9% were not sure whether a booster dose is even recommended for them, 22.8% stated that they had experienced side effects after previous vaccinations, and a fifth stated that they already fulfilled the RVT condition (20.3%). The least frequently cited reasons for not vaccinating with a second booster dose are waiting for the vaccine to be adapted to the current variant (16.2%) and pregnancy or trying to conceive and the associated concern for the child (0.9%) (Figure 12). Respondents could give several reasons why they would not be vaccinated with the fourth dose (the second booster dose).

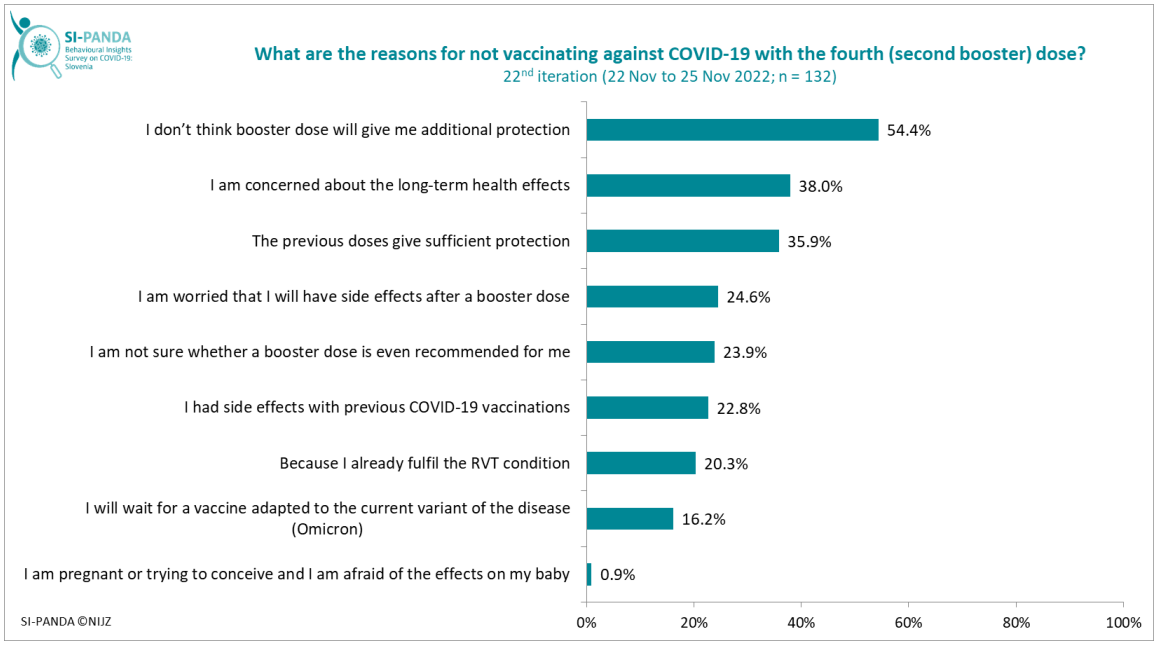

Figure 12: Reasons against vaccination with a fourth dose of COVID-19 vaccine among persons who received first two doses of COVID-19 vaccine and are not likely to be vaccinated with the fourth dose of COVID-19 vaccine, total.
Note: Several answers were possible.

Respondents who had already been vaccinated with at least one dose of the COVID-19 vaccine (70.2%) reported that their main reasons vaccinating were to prevent a more severe course of the disease or its consequences (59.2%), to protect the health of their loved ones (57.3%), and to protect their own health (55.4%) and to contribute to curbing the epidemic as soon as possible and returning to normal life (51.4%). Other common responses were that they already fulfil the RVT condition (48.2%) and that the benefits of vaccination outweigh the risks of the disease (43.9%) (Figure 13).

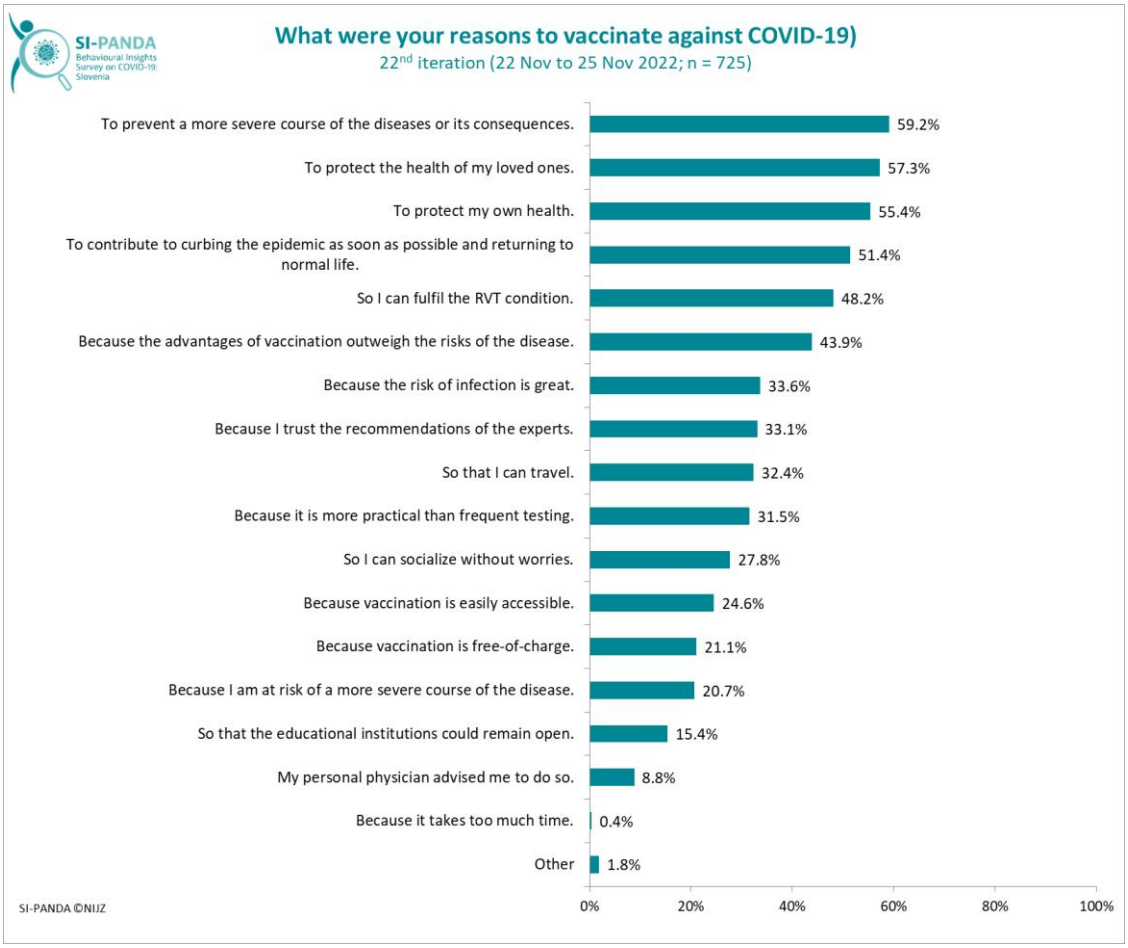

Figure 13: Reasons why vaccinated persons were vaccinated against COVID-19, total.
Note: Several answers were possible

In the 22nd survey iteration, non-vaccinated persons (27.6%) were also asked for more detailed reasons why they did not intend to be vaccinated. As in previous iterations, in the 22nd iteration, the main reasons were concerns about side effects after vaccination (66.4%), concerns about the long-term impact on health (63.8%), and the perception that the vaccine is not safe (62.3%) and because there is still too much pressure regarding vaccination (52.8%). A good third is concerned about the impact on their current health status (37.7%), and just under a third of respondents believe that the vaccine will not work (30.7%) (Figure 14).

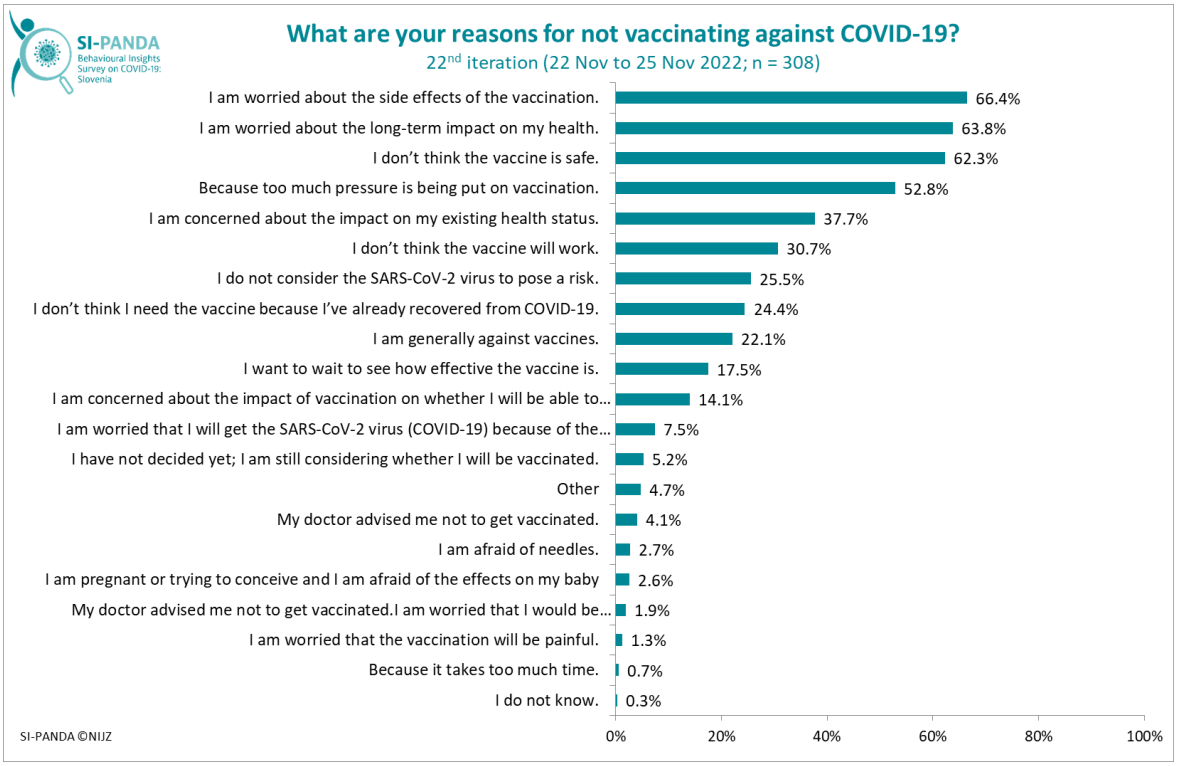

Figure 14: Reasons why unvaccinated persons are not vaccinated against COVID-19, total.
Note: Several answers were possible.

Vaccination against seasonal influenza

Considering that it is time of vaccination against seasonal influenza, we also sked the respondents how likely it is that they will be vaccinated against seasonal influenza in the 2022/23 season. 5.8% of respondents were already vaccinated against influenza in the 2022/23 season. Among those who have not yet been vaccinated against influenza in 2022/23, only 11.7% of respondents said they were likely to be vaccinated against influenza. The proportion of respondents likely to be vaccinated against seasonal influenza was highest among the oldest respondents (65–74 years), where 24.7% were likely to be vaccinated (Figure 15). However, more people with at least one chronic disease (18.8%) are also likely to be vaccinated against seasonal influenza compared to those without chronic diseases (7.1%). Interestingly, the 2.9% of people who will not be vaccinated against SARS-CoV-2 are also likely to be vaccinated against seasonal influenza.

According to data reported by vaccination providers, only 8.1% of the Slovenian population was vaccinated against seasonal influenza in the 2021/22 season, or 24.5% of the population in the age group of 65 and over.

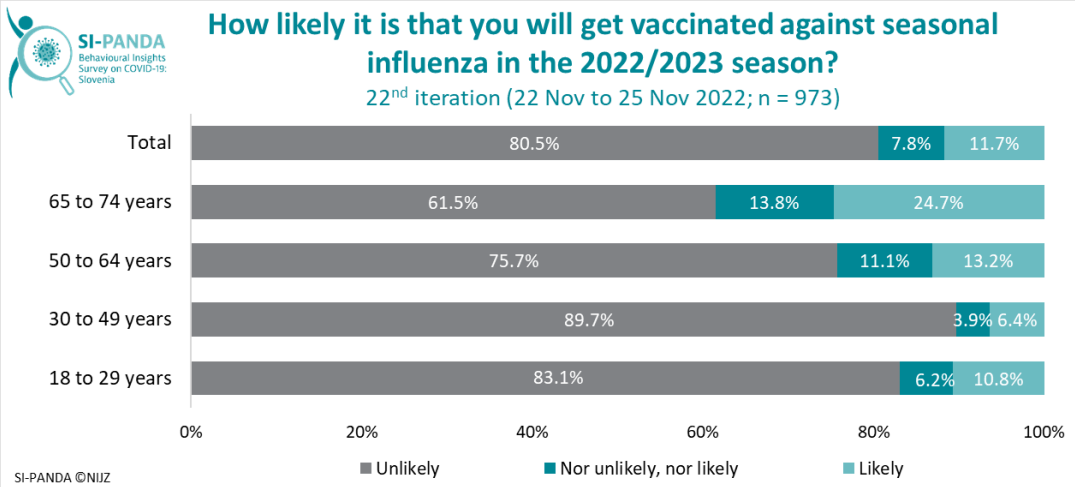

Figure 15: Vaccination against seasonal influenza in 2022/2023 season, total and by age groups.

Compliance with isolation and quarantine and action in case of cold symptoms or respiratory infection

In 22nd survey iteration, we were interested in how people would act if they had cold symptoms or respiratory infection. Respondents could select several possible answers to this question. The majority (72.2%) indicated that they would self-test for SARS-CoV-2. Poor third of people stated that they would wait to see how the symptoms develop and a quarter would self-isolate. A good fifth of people would call their personal physician, less than a fifth would inform their high-risk contacts about their symptoms or go for testing at an official testing site. Only 3.2% of people would not do anything with cold symptoms or respiratory infection (Figure 16).

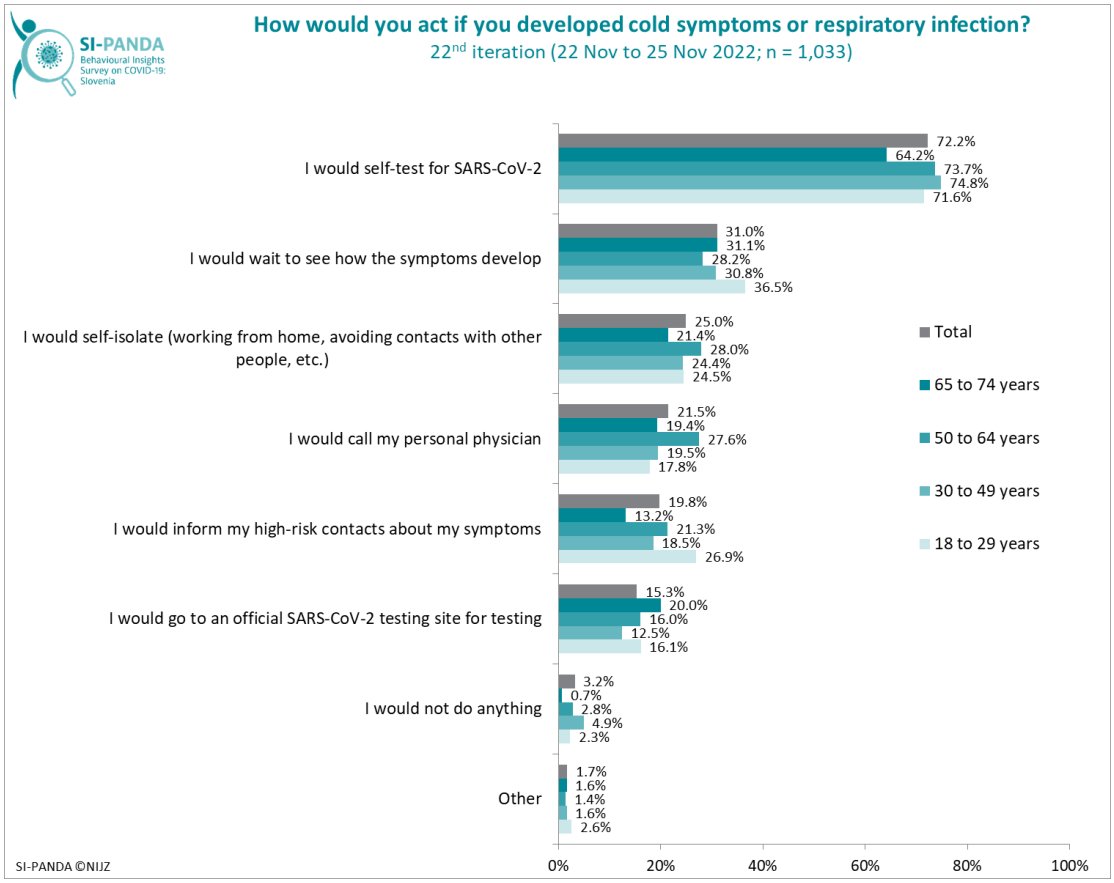

Figure 16: Acting in case of cold symptoms or respiratory infection, total.
Note: Several answers were possible.

As many as 69.4% of people answered in the affirmative to the question whether they would get tested if they had been in contact with someone who had tested positive for SARS-CoV-2 and had not developed symptoms themselves. A statistically significantly higher proportion of people who have at least one chronic disease would get tested when in contact with an infected person, despite not developing symptoms (73.4%) compared to people without chronic diseases (66.6%) (Figure 17).

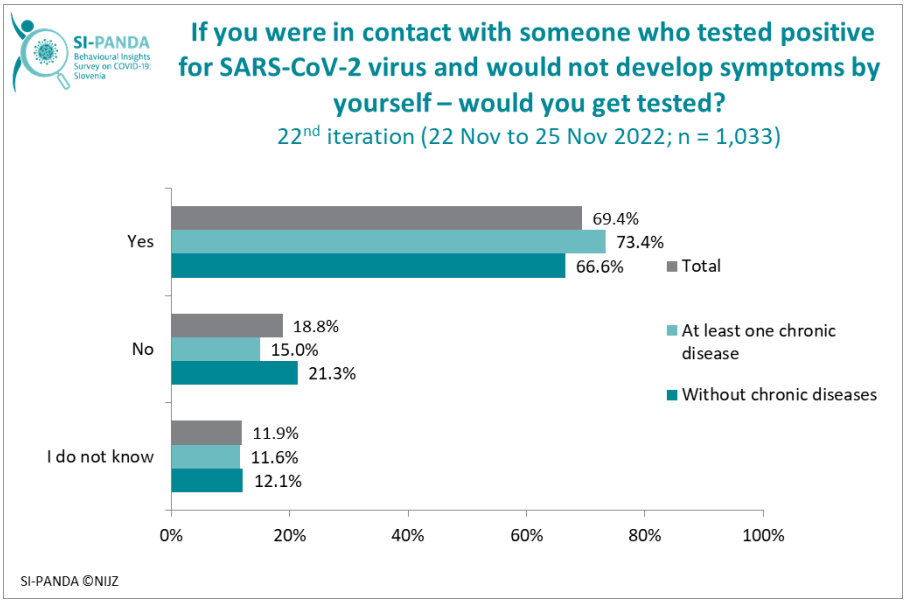

Figure 17: Decision for testing in case of a contact with SARS-CoV-2 infected person, total and by the presence of chronic disease.

We also asked SARS-CoV-2 infected people whether they had strictly adhered to isolation at the time of infection, i.e. not leaving the home, limiting contact with other people and following recommendations to limit the spread of the disease. The vast majority of people answered yes (94.3%), and only 5.7% did not consistently adhere the isolation (Figure 18). This share has been stable since the start of the SI-PANDA survey.

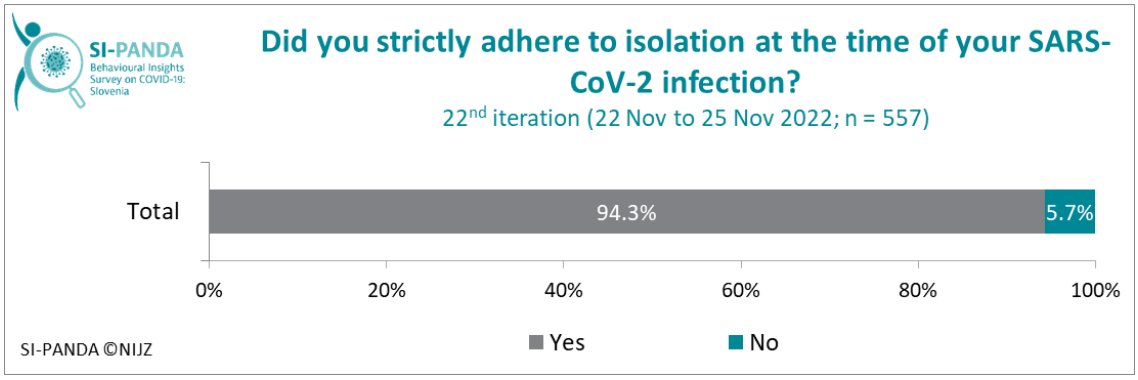

Figure 18: Strict adherence to isolation at the time of SARS-CoV-2 infection, total.

Problems after recovering from infection with the SARS-CoV-2 virus – post-COVID syndrome or long COVID

Most people who contract COVID-19 recover completely within a few weeks of the onset of the disease. However, research shows that in some people individual problems may persist long after SARS-CoV-2 infection, or may disappear and reappear (same or different problems) several weeks or months after the initial recovery. Abroad, these problems have been called post-acute COVID-19, post-COVID syndrome or long COVID. It is more common among patients with a more severe course of the disease and older patients, but also occurs in those who have overcome a milder form of the disease and also among young adults who had no health problems before the infection[4]. The symptoms of long COVID are diverse: the most common are fatigue, shortness of breath, insomnia, problems with memory and concentration (the so-called "brain fog"), heart palpitations (an unpleasant feeling of the heartbeat), pain in various body parts, diarrhoea, nausea, etc.[5].

In the 22nd SI-PANDA survey iteration, just under half of the respondents reported that they had not yet been infected with SARS-CoV-2 (46.1%), 37.6% had been infected once or were currently infected, and 13.7% reported that they had been infected twice. Only 2.7% of people who had been infected with SARS-CoV-2 reported having been infected three or more times. The proportion of persons who have never been infected with the SARS-CoV-2 virus is statistically significantly higher in persons aged 50 and more (55.1–63.0%) compared to persons under 50 years of age (42.7–33.7%). Just over 57% of people in the youngest age group (18–29 years) have been infected at least once, while among the oldest age group (65–74 years), 37.0% have been infected at least once (Figure 19). Among those who have already been infected with the SARS-CoV-2 virus, or are currently recovering from the infection, 69.7% of people were infected once, 25.4% of people were infected twice, 3.7% of the respondents were infected three times, and a good percent (1.3%) of respondents were infected four times or more.

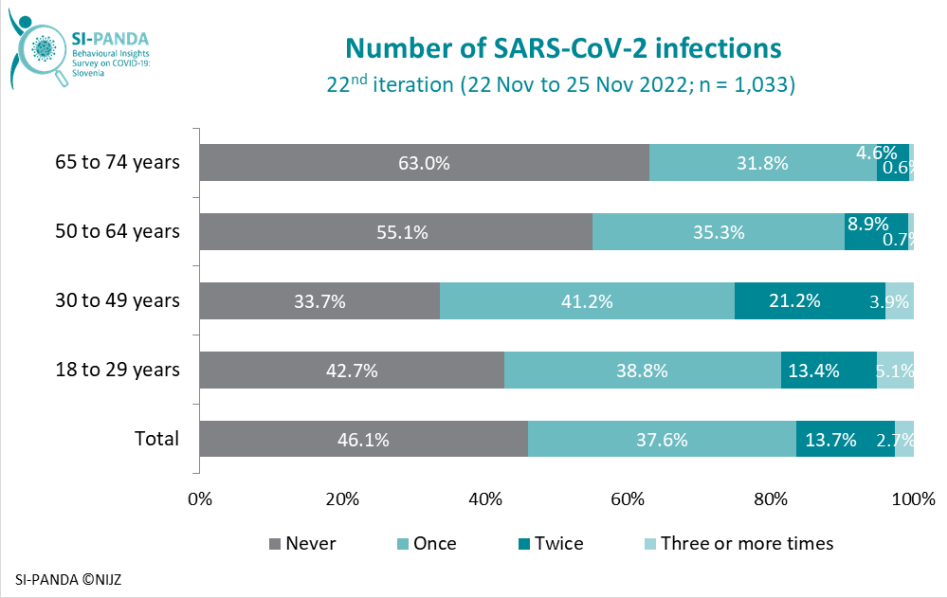

Figure 19: Number of SARS-CoV-2 infections, total and by age groups

[4] Brackel, CLH, Lap, CR, Buddingh, EP, et al. Pediatric long-COVID: An overlooked phenomenon? Pediatric Pulmonology. 2021; 56: 2495–502 https://doi.org/10.1002/ppul.2552.
[5] Nalbandian, A., Sehgal, K., Gupta, A. et al. Post-acute COVID-19 syndrome. Nat Med 27, 601–15 (2021) https://doi.org/10.1038/s41591-021-01283-z.

The proportion of people who have never been infected with SARS-CoV-2 is statistically significantly higher among people who have received at least one dose of the covid-19 vaccine (50.7%) compared to people who will not be vaccinated (35.1%). Unvaccinated persons also have a higher proportion of persons who have been infected three or more times with SARS-CoV-2 (4.9%) compared to vaccinated persons (1.7%) (Figure 20).

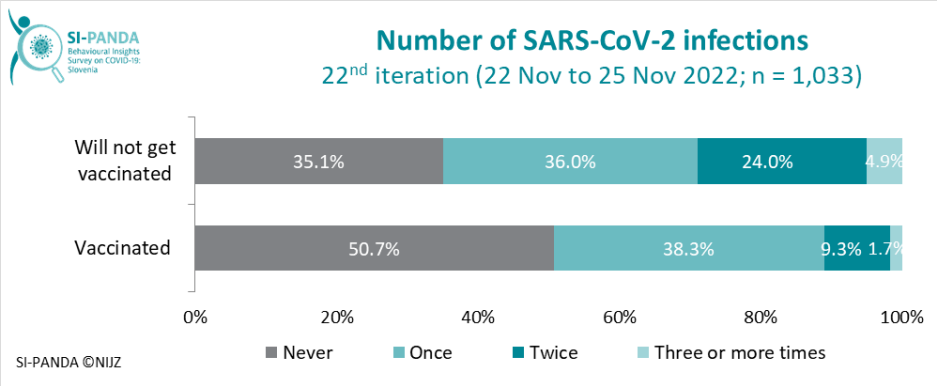

Figure 20: The number of Sars-cOv-2 infections, by vaccination status.

The first (or only) infection with the SARS-CoV-2 virus was asymptomatic or mild in the majority (80.4%), while 19.6% of persons reported a more severe course of the disease, which in some cases also required hospital treatment. The course of the second infection was described by the vast majority (85.6%) as asymptomatic or mild, and by 14.4% as more severe, but none of the respondents required hospital treatment. The course of the third infection is less well defined, but we can see that the majority (85.3%) were asymptomatic or had mild symptoms. A more severe course, which did not require hospitalisation, was present in 14.7% of the subjects in the third infection (Figure 21).

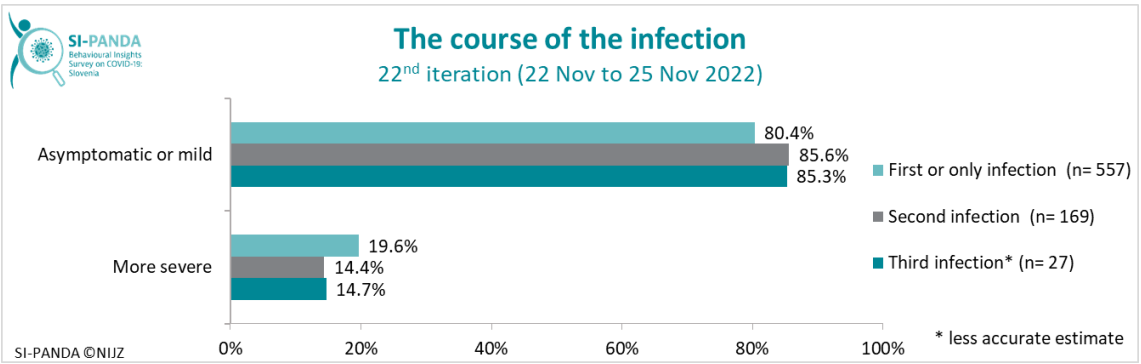

Figure 21: The course of SARS-CoV-2 virus infection.

We were interested in whether the course of the infection depended on which variant of the SARS-CoV-2 virus the respondents were infected with. We ask the respondents in which month they were infected with the SARS-CoV-2 virus and thus obtain information in which time period they were infected. We further explain the scenario used to determine the prevalent variant of the SARS-CoV-2 virus upon infection. Since March 2020, when we discovered the first case of infection with the SARS-CoV-2 virus in Slovenia, several variants of the virus have been identified until today. According to National Laboratory of Health, Environment and Food (NLZOH), since the emergence of the virus in our country, there have been four predominant variants, which have occurred in different time periods[6]. Based on the NLZOH data on the predominant SARS-CoV-2

[6] https://www.nlzoh.si/objave/sledenje-razlicicam-sars-cov-2-61/.

virus variants, four time periods were created according to the prevalent SARS-CoV-2 virus variant (B258.17 and previous variants, Alpha, Delta and Omicron). The period of the prevalent variant of the SARS-CoV-2 virus was determined when more than 60% of all studied infections were on the side of this particular variant. In the 21st SI-PANDA survey iteration, we asked the respondents about the month and year of infection (first or the only, second and third infection). Based on these data, we assumed that a single person infected with COVID-19 between March 2020 and March 2021 was infected at a time when B.258.17 and earlier variants were prevalent. People who were infected between April 2021 and June 2021 were classified in the Alpha variant group. People infected between July 2021 and December 2021 were classified in the group infected during the prevalent Delta variant. Those infected from January 2022 onwards were classified as infected at the time of the prevalent Omicron variant (Table 1).

Table 1: Prevalent SARS-CoV-2 virus variant during the observation period from March 2020 to the present.

Observed period	Prevalent SARS-CoV-2 virus variant
March 2020 – March 2021	B.258.17 and previous
April 2021 – June 2021	Alpha
July 2021 – December 2021	Delta
January 2022 →	Omicron

A good quarter of persons were infected for the first time or only once during the period when the B.258.17 or previous variants were prevalent, 17.4% when the Delta variant was prevalent, and slightly over a half of respondents were infected for the first or only time, when the Omicron variant was prevalent (52.1%). Only 4.6% of respondents were infected for the first time between April 2021 and June 2021, when the Alpha version was prevalent. In the case of a second consecutive infection, the vast majority (88.4%) of persons were infected from January 2022 onwards, when the omicron variant is prevalent among SARS-CoV-2 infections; 6.0% were infected a second time when the delta variant prevailed; 4.0% when B.258.17 and earlier variants were prevalent; and only 1.6% were infected a second time during the period when the alpha variant was prevalent (Figure 22).

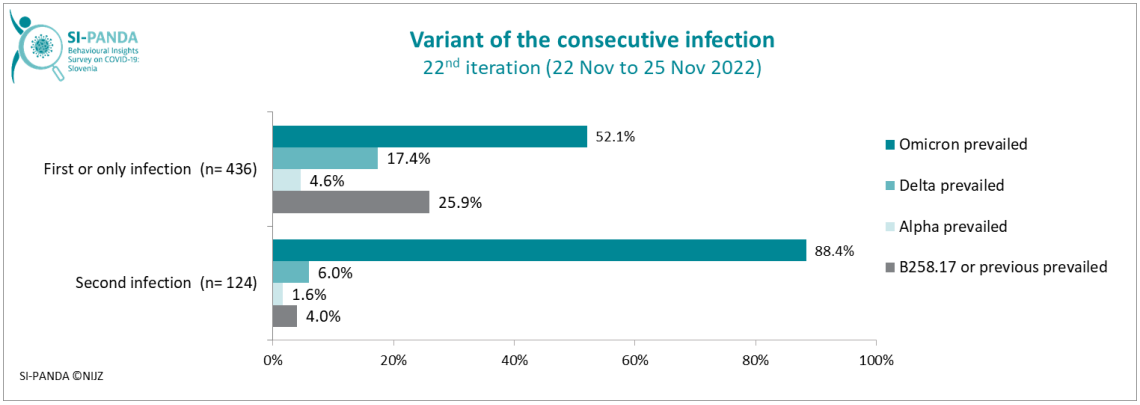

Figure 22: Prevalent SARS-CoV-2 virus variant, by consecutive infection.

According to the WHO, from 10 to 20% of people infected with the SARS-CoV-2 virus still have some health problems at least two months after infection, and one in ten recovered persons even after 12 weeks[7]. Thus, we were interested in whether the respondents had or have any of the

[7] WHO Policy brief 39 In the wake of the pandemic, Preparing for Long COVID, https://apps.who.int/iris/bitstream/handle/10665/339629/Policy-brief-39-1997-8073-eng.pdf https://www.who.int/europe/news-room/fact-sheets/item/post-covid-19-condition

listed problems (Figure 23) three months after recovering from COVID-19, it was possible to report several problems.

Approximately 60% of respondents infected with the SARS-CoV-2 virus stated that three months after recovering from first or only as well as the second infection they still had or have certain problems that lasted or they last at least two months. The most common long-term problem reported both after the first (or only) and after the second infection is fatigue and lack of energy (37.0% after the first infection, 36.6% after the second). The second most common problem after recovering from the first or only infection, was reduced physical capacity (23.8%), and headache (25.2%) and muscle and joint pain (24.2%) after recovering from the second infection (Figure 23).

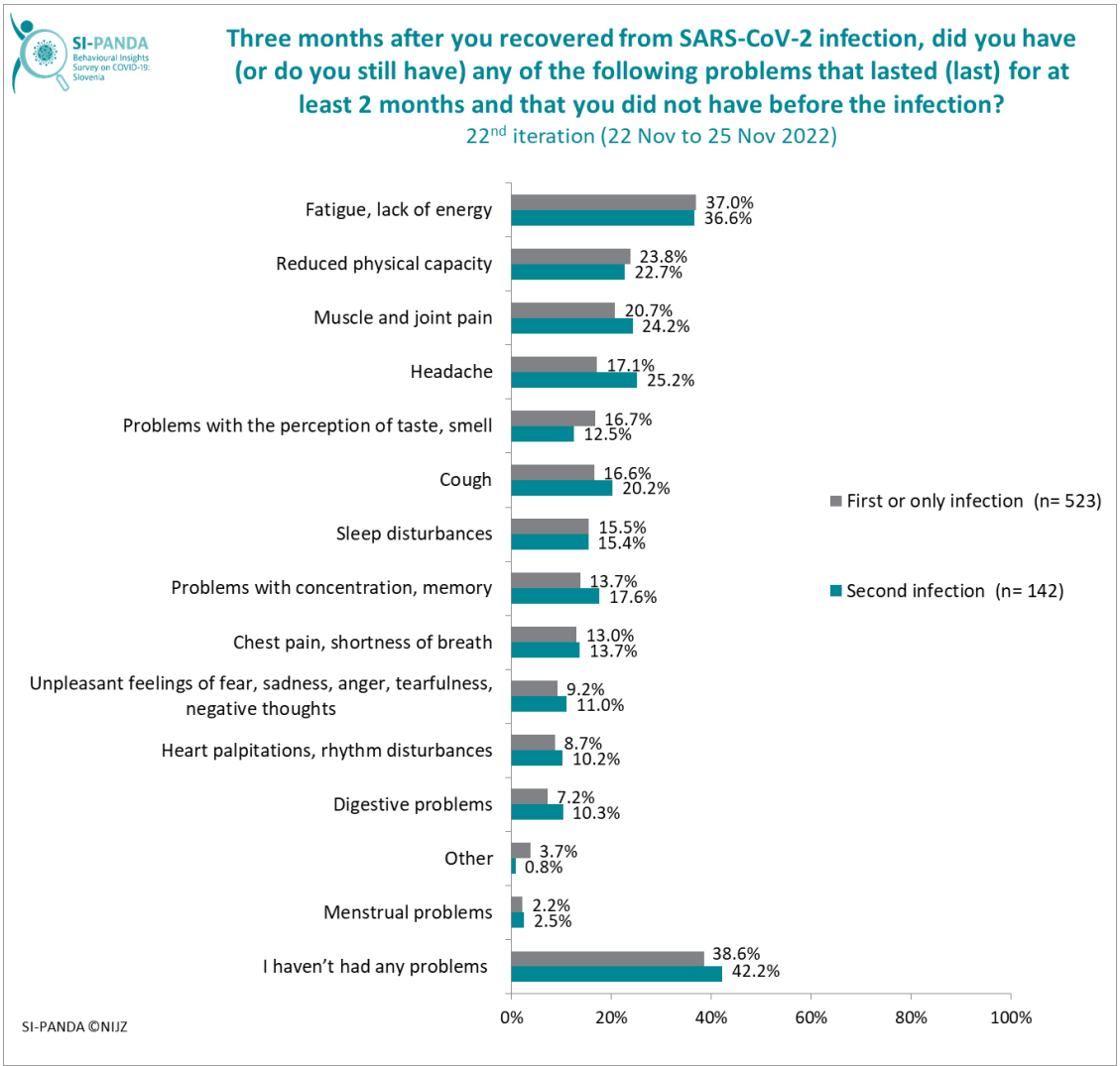

Figure 23: Health problems present three months after the infection, lasting at least two months among persons who have had an infection with the SARS-CoV-2 virus, total and by consecutive infection.
Note: Several answers were possible.

When asked how long the longest-lasting problem had lasted after the infection, just over half of the respondents answered that it lasted up to three months (53.5%), 22.7% had experienced such problems more than 6 months after the infection, and just under a fifth from 3 to 6 months after the infection (Figure 24).

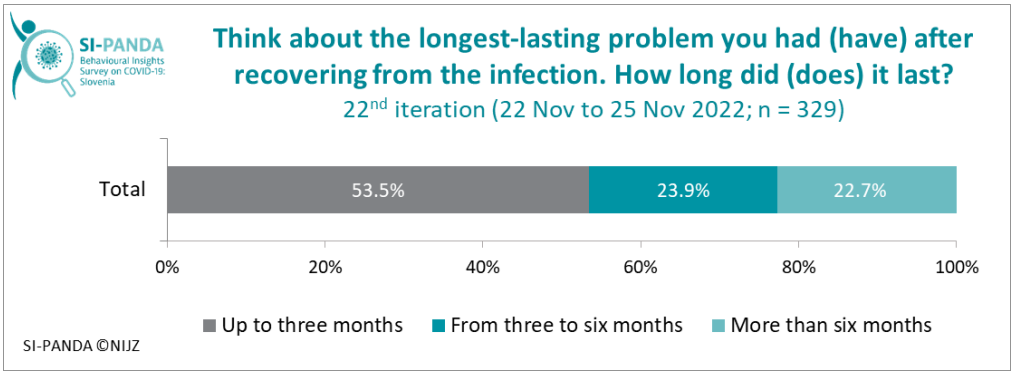

Figure 24: Duration of the longest-lasting problem after the infection, among persons who had at least one problem after recovering from the infection, total.

A good third of people who said they had or had had problems after contracting SARS-CoV-2 consulted a doctor because of the problems they had experienced. A statistically significantly higher proportion of people with at least one chronic disease (46.0%) compared with those without chronic diseases (24.4%) had consulted a doctor for problems after having the infection (Figure 25).

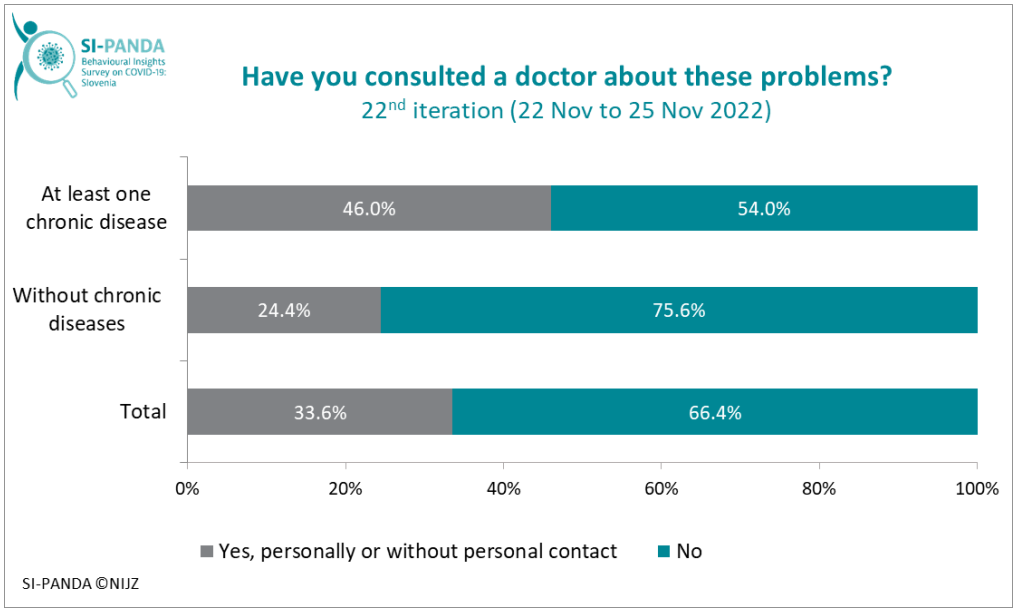

Figure 25: Consultation with a doctor for problems after a SARS-CoV-2 infection, total and in relation to the presence of chronic disease.

The problems that people had after recovering from the infections had the greatest impact on the area of performing leisure activities, as 81.4% of people report that the problems after recovering from infections had impacted their leisure activities slightly, very or extremely. Approximately 70% of people stated that the problems at least slightly impacted their well-being and interpersonal relationships, area of work and job, and care for home and family (Figure 26). Statistically significantly more women report that the problems had very impacted their care for home, family, children and household chores, as well as their well-being and interpersonal relationships.

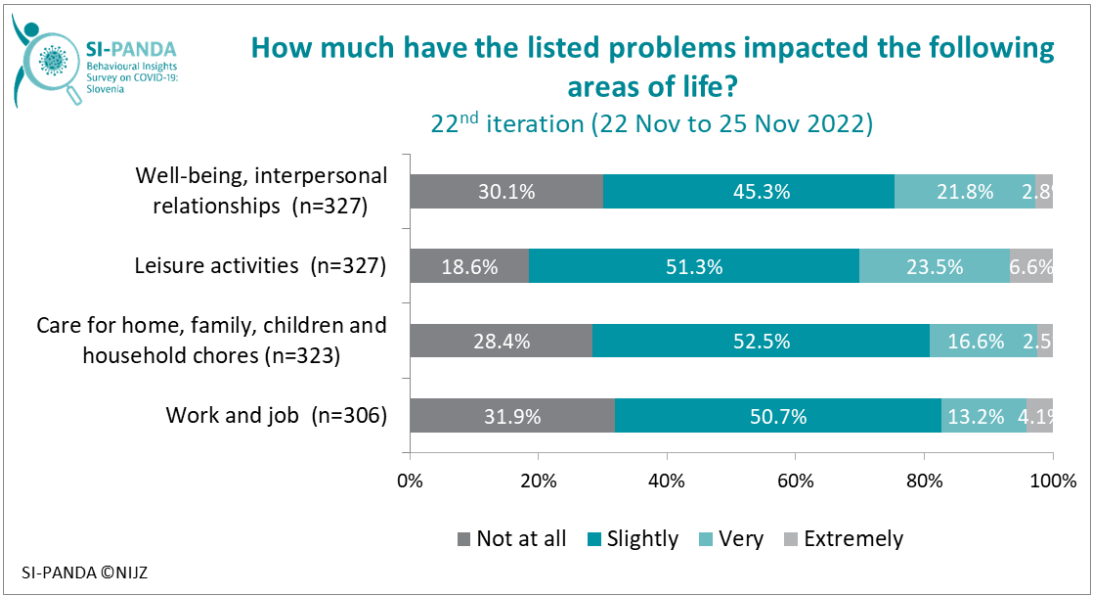

Figure 26: The impact of problems after recovering from SARS-CoV-2 infection on different areas of life among persons with at least one problem after recovering from the infection, total.

The consequences of recovering from and infection with SARS-CoV-2 virus can affect various areas of a person's life. On the one hand, these are a mild and non-specific health problems, but on the other hand, they are often quite complex and still receive insufficient attention from the profession, both from a research and a clinical point of view.

Much is still unknown about the causes and long-term consequences of SARS-CoV-2 infection, but research is ongoing. It is already clear that post-COVID syndrome is relatively common and has a significant impact on an individual's ability to work and their daily life. All this can have economic consequences for the individual, their family and society as a whole.

In Slovenia, there are already specialized clinics for people who have long-term health problems after recovering from COVID-19. Most patients with problems after recovering from COVID-19 are treated in the outpatient department of the Infection Clinic. Patients with consequences of the diseases are cared for at the URI Soča and as part of the outpatient clinic for lung diseases and allergies at the University Clinical Centre Ljubljana. Rehabilitation of patients with long-COVID also takes place at the primary level, within Health Promotion Centres in Community Health Care Centres.

Most people with COVID-19 recover relatively quickly. Given that research shows that the risk of long-term health problems after SARS-CoV-2 infection is not so low, vaccination against COVID-19 is also important in this respect. More campaigns are therefore needed to promote vaccination against COVID-19 and to make people aware of the positive effects of vaccination. In order to prevent and limit the transmission of infection, it is also important to follow the recommendations for health promotion and disease prevention in the current epidemiological situation since no one is safe from the consequences of an infection.

Experiencing stressful events and coping with them

We recognize and experience stress, tensions and pressures in our lives in different ways. Over time, the experience of stressors, the stress reaction and the intensity change, and the stress reaction can be present in the form of feelings of tension, vulnerability or fear. Most people cope easily with everyday stressful events. But some people experience stress very often and at the same time they are unable to cope with it. This is when we talk about risk stress behaviour, which is associated with many negative consequences for health and quality of life[8-9]. In recent years, we have seen the emergence of new challenges and significant changes in the prevalence of both known and new stressors. The COVID-19 pandemic has particularly highlighted the importance of stress management for maintaining mental health.

Research shows that most people are successful in adapting to new stressors, but this is not the case for everyone, and we need to ensure that those who are not able to do so are adequately supported and that appropriate approaches are developed to reduce and cope with stressors that change over time, both in their prevalence and in the severity of their impact on the population[10].

In the 22nd survey iteration, we asked how often adult respondents had felt tense, stressed or under a lot of pressure in the last 14 days, and how they coped with tension, stress and pressure. We find that 20.4% feel tense, stressed or under a lot of pressure often or on a daily basis, which is slightly less than in the 21st iteration, when the percentage was 22.0% and slightly more than in the 20th iteration, when the percentage was 18.9%. In the 22nd survey iteration, over a third (35.8%) of persons feel tense or stressed occasionally and less than a third (32.4%) very rarely (Figure 27).

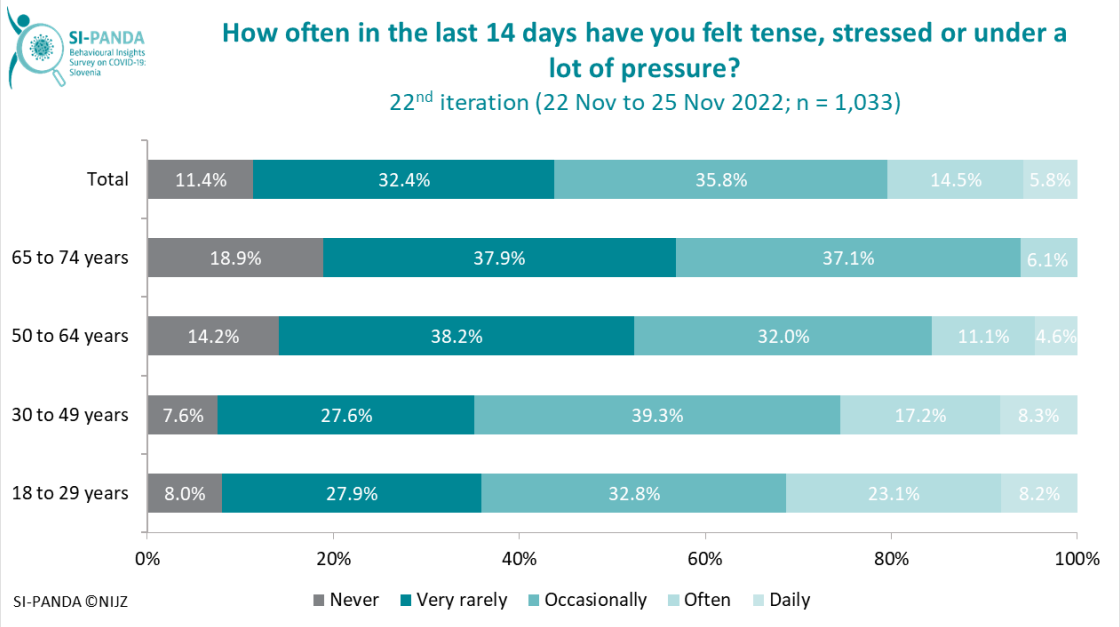

Figure 27: The frequency of experiencing stress in the last 14 days, total and by age groups.

[8] Nishimi, K., Borsari, B., Marx, B. P., Rosen, R. C., Cohen, B. E., Woodward, E., … O'Donovan, A. (2022). Clusters of COVID-19 protective and risky behaviors and their associations with pandemic, socio-demographic, and mental health factors in the United States. Preventive Medicine Reports, 25, 101671. https://doi.org/10.1016/j.pmedr.2021.101671.

[9] Barry V, Stout ME, Lynch ME, et al. The effect of psychological distress on health outcomes: A systematic review and meta-analysis of prospective studies. Journal of Health Psychology. 2020; 25(2): 227–39. https://doi:10.1177/1359105319842931.

[10] Fu, S. (Q.), Greco, L. M., Lennard, A. C., & Dimotakis, N. (2021). Anxiety responses to the unfolding COVID-19 crisis: Patterns of change in the experience of prolonged exposure to stressors. Journal of Applied Psychology, 106(1), 48–61. https://doi.org/10.1037/apl0000855.

In the 22nd survey iteration, the proportion of respondents who feel stressed or under a lot of pressure on a frequent or daily basis was significantly higher for women compared to men, for younger age groups compared to older age groups, for those who report having a worse financial situation than before compared to those who have a better or the same financial situation as before, for those who are less physically active, who have mental health problems, and who live with children under 18 years of age. Stress or pressure is significantly more likely to be experienced by those who have at least one risk behaviour (health-harming behaviours such as smoking and excessive alcohol consumption[11]) compared to those who do not have any risk behaviours (Figure 28).

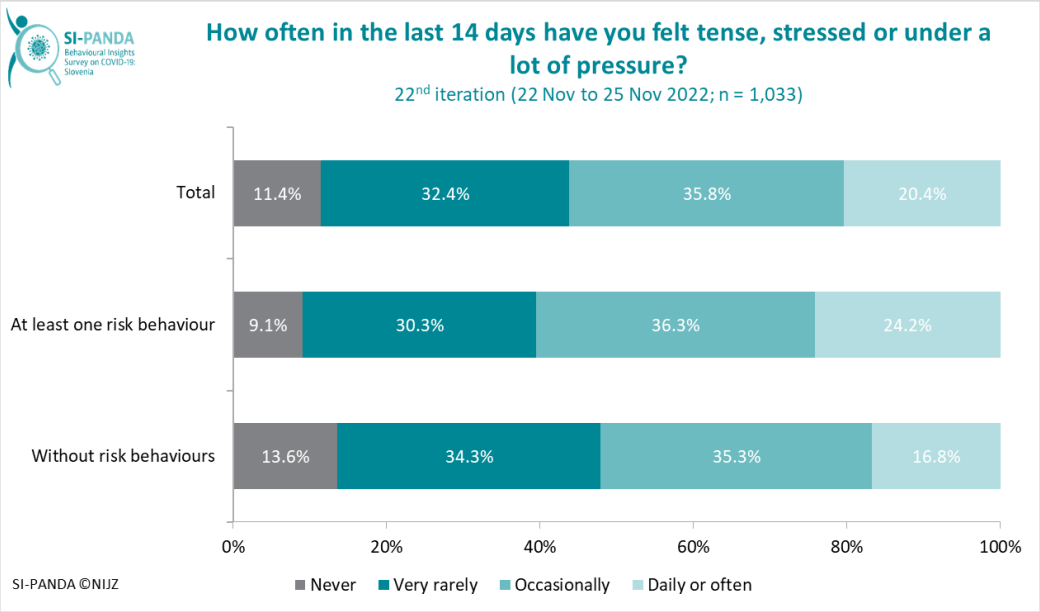

Figure 28: The frequency of experiencing stress in the last 14 days, total and by the presence of risk behaviours.

Most respondents (77.7%) manage tension, stress and pressure with some effort or easily, a minority (5.1%) reports that they do not control them or control them with a great effort, and 17.2% (in 21st iteration there were 13.5% of such respondents) report that they control them with greater effort. Women are more likely to report poorer stress management than men, younger age groups, those who have had a worse financial situation than in the past, those with at least one chronic illness, those who smoke, those who are less physically active, those with at least one risky behaviour and those with mental health problems.

The connection between financial security and health is well researched and proven [12]. Based on the data of the 22nd survey iteration, we recognize the connection between experiencing stress and the self-assessment of the financial situation in the past three months. Although we cannot conclude causal links between the self-assessed financial situation in the past three months and the experience of stress, the importance of the financial situation stability is indicated. Tension, stress and pressure are managed with greater effort or severe difficulty by those who have had a better financial situation in the past three months (21.3%) compared to those who have had the same financial situation (16.8%); and even higher percentages (31.7%) of those who manage

[11] Manchia, M., Gathier, A. W., Yapici-Eser, H., Schmidt, M. V., Quervain, D., Amelsvoort, T., … Vinkers, C. H. (2021). The impact of the prolonged COVID-19 pandemic on stress resilience and mental health: A critical review across waves. European neuropsychopharmacology, 55, 22–83. 10.1016/j.euroneuro.2021.10.864.

[12] Neiloy R. Sircar & Eric A. Friedman (2018) Financial security and public health: How basic income & cash transfers can promote health, Global Public Health, 13:12, 1878-1888, DOI: 10.1080/17441692.2018.1460383

stress with greater effort or severe difficulty are among those who report having had a worse financial situation compared to the past time (Figure 29).

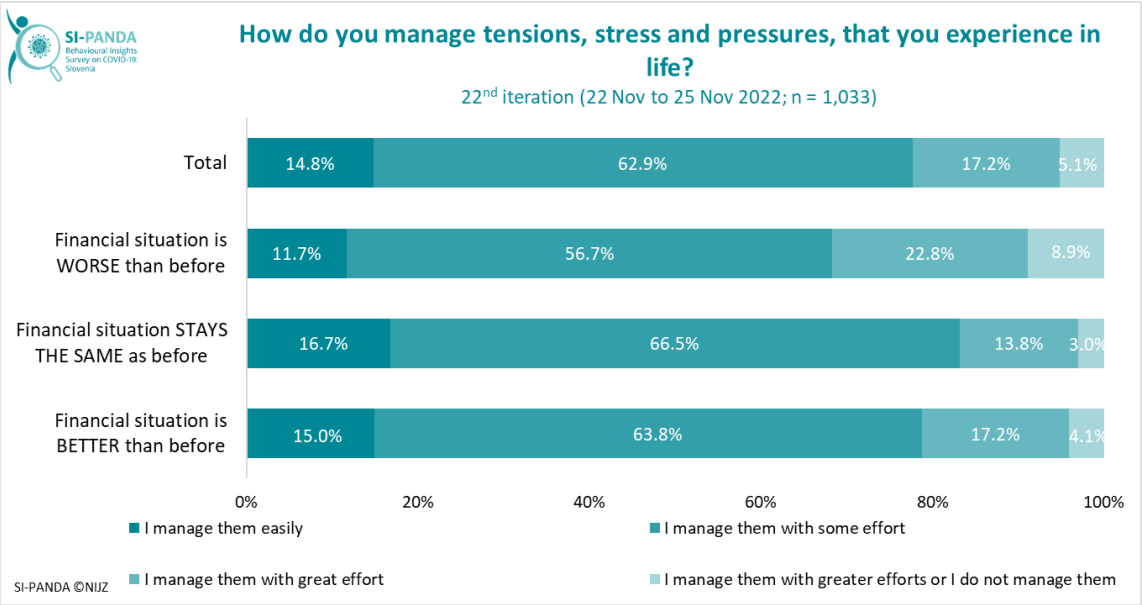

Figure 29: The frequency of experiencing stress in the past 14 days, total and by the self-assessment of financial situation in the last three months.

The proportion of people with risky stress behaviour – that is people who experience stress often or daily and at the same time have severe problems with stress management or do not manage it at all – was 4.1% in 22nd iteration, which is slightly less than in the 21st iteration when it was 5.1%. Risky stress behaviour is more common in younger age groups (18–49 years – about 6%) compared to older age groups (with a peak of 2.7%), those with at least one chronic disease, smokers, those who are less physically active and those with at least one risky behaviour. Risk stress behaviour was also significantly higher among those with a worse financial situation than before (8.4%) compared to those whose financial situation remains the same as before (2.0%) and those whose financial situation is better than before (2.2%) (Figure 30).

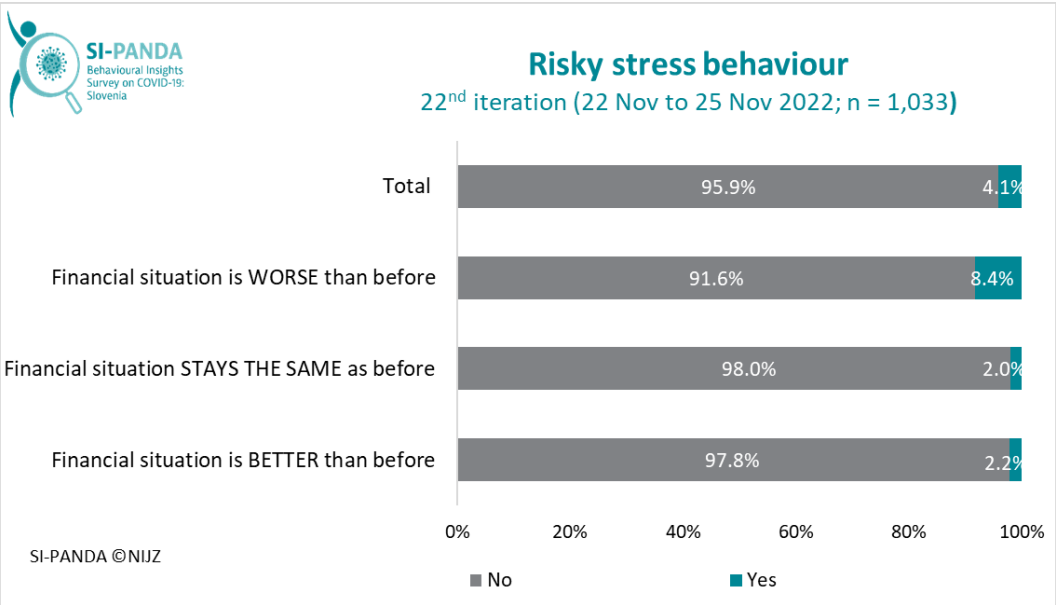

Figure 30: The presence of risky stress behaviour, total and by financial situation.

Risky stress behaviour was more common in those showing a high likelihood of depressive disorder (28.6%), compared to those with minor mental health problems (5.4%) and those with no mental health problems (0.4%) (Figure 31). Research shows that people with poorer mental health are more susceptible to and less able to cope with stress [13].

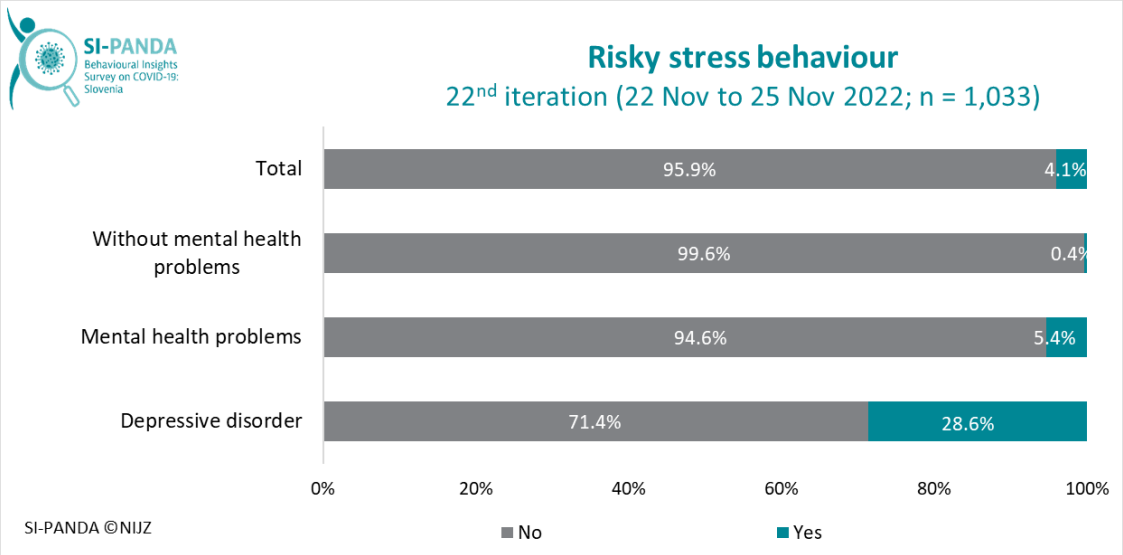

Figure 31: The presence of risky stress behaviour, total and by mental health problems.

[13] Klaiber, P., Wen, J. H. in DeLongis, A. in Sin, N. L. (2021). The ups and downs of daily life during COVID-19: age differences in affect, stress, and positive events. The journals of gerontology, 76(2), e30–e37. https://doi.org/10.1093/geronb/gbaa096

Tobacco smoking

Tobacco use is one of the leading preventable risk factors for death and years of healthy life lost in Slovenia. At least 60 people in Slovenia die every week from diseases attributable to tobacco use, 23 of them before the age of 70. Smokers also have a higher risk of more severe COVID-19 disease and death from SARS-CoV-2.

In the 22nd survey iteration, we asked whether respondents smoked or had ever smoked tobacco (cigarettes, cigars, cigarillos or tobacco pipes). We find that among all respondents, about one-fifth are tobacco smokers (20.1%), just over one-quarter are ex-smokers (28.2%), and about half (51.7%) have never smoked tobacco (Figure 32).

There are no gender differences in any of the percentages, but the percentages of smokers, ex-smokers and never smokers differ by age group (Figure 32). There are no differences between the percentages of smokers in the 30–49 (21.5%) and 50–64 (26.6%) age groups, nor between the percentages of smokers in the youngest (13.5%) and oldest (11.5%) age groups, but the percentages of smokers in the 30–49 (13.5%) and 50–64 (11.5%) age groups are higher than the percentages of smokers in the youngest and oldest age groups. The percentage of ex-smokers is highest in the oldest age group (46.5%), while there is no difference in the percentage of ex-smokers between the other three age groups (18–29 age group: 22.6%; 30–49 age group: 23.7%; 50–64 age group: 26.9%). The percentage of respondents who have never smoked is highest in the youngest age group (63.9%), followed by the 30–49 age group (54.8%), then the 50–64 age group (46.5%) and the 65–74 age group (42%), which have the lowest percentages and do not differ between the two age groups.

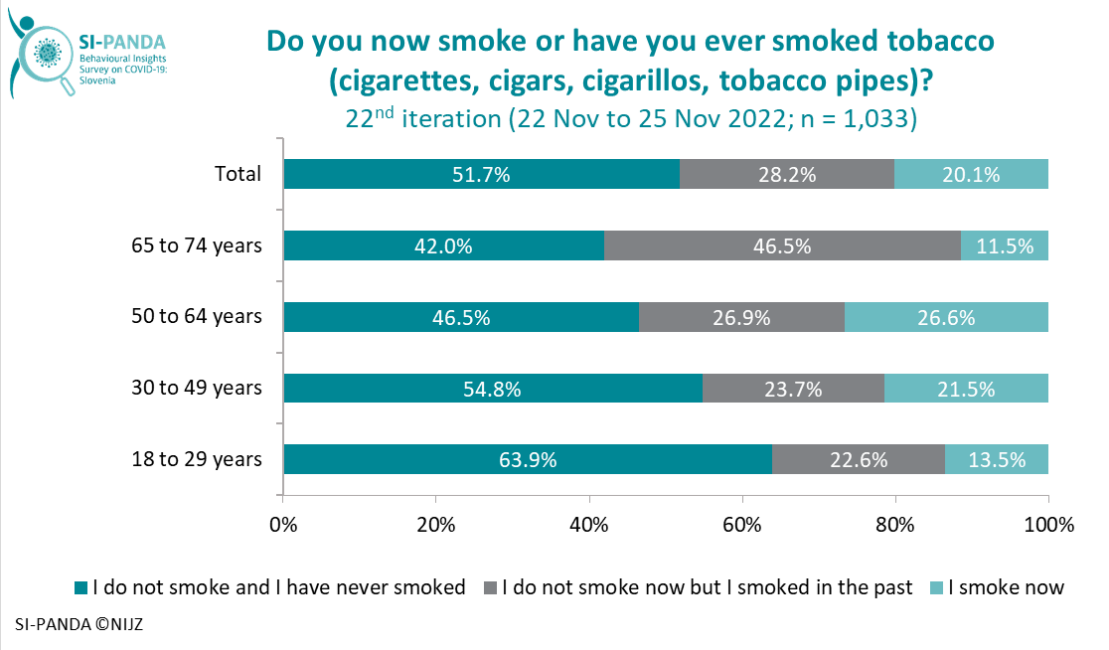

Figure 32: Smoking status, total and by age groups.

The percentage of smokers is higher among respondents with secondary education or less (23.8%) than among those with higher education or more (16.1%). It is also higher among respondents with mental disorders or mental health problems (25.1%) than among those without mental health problems (17.7%). The percentage of smokers does not vary by cohesion region (Eastern Slovenia: 20.6%; Western Slovenia: 19.5%).

In the 22nd survey iteration, we also looked at whether smokers had quit or tried to quit because they had recovered from, or were worried about, COVID-19. Among ex-smokers who quit smoking during the COVID-19 pandemic, 3.3% quit because of recovering from or being worried about COVID-19, and the majority (96.7%) quit for a variety of other reasons. Among smokers who had made at least one quit attempt in the last year, only 1.5% had done so because they have recovered from or were worried about COVID-19.

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