



# **COVID-19 PANDEMIC IN SLOVENIA**

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

13th wave

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### **INTRODUCTION**

Pandemic fatigue is the expected and natural human response to long-lasting public health crisis that significantly affects 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 COVID-19-related human behaviour enables the identification of atrisk target groups and contributes to finding solutions that encourage better adherence to protective behaviour recommendations. Adherence to measures 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 COVID-19 burden 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 the help of this research, we hope 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. Here are some key results. 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<sup>1</sup>, that countries regularly conduct qualitative and quantitative population surveys, which should serve as the basis for further action.

<sup>&</sup>lt;sup>1</sup> 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 first part of the survey (up to and including the 12<sup>th</sup> wave) was conducted by the Mediana Institute for Market and Media Research on behalf of the National Institute of Public Health (NIJZ); and the second part is conducted by Valicon. The first twelve repetitions were performed once every two weeks and the second part once a month. Data are analysed at the NIJZ.

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

In the survey, we use the World Health Organization (WHO)<sup>2</sup> questionnaire, which was translated, and adjusted to the situation in our country in accordance with the WHO instructions, and we also included some additional questions.

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

The report mostly presents data from the 13<sup>th</sup> wave of the panel web survey, that took place from 8 June 2021 to 10 June 2021 on a sample of 1,015 adults aged 18 to 74 years. Some comparisons with previous waves of survey are also shown.

Do sedaj so bili izvedeni naslednji valovi raziskave:

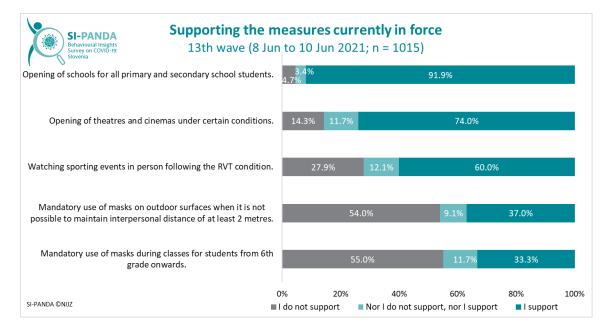
- 1<sup>st</sup> wave: from 4 Dec 2020 to 6 Dec 2020
- 2<sup>nd</sup> wave: from 18 Dec 2020 to 21 Dec 2020
- 3<sup>rd</sup> wave: from 4 Jan 2021 to 5 Jan 2021
- 4th wave: from 15 Jan 2021 to 17 Jan 2021
- 5<sup>th</sup> wave: from 29 Jan 2021 to 30 Jan 2021
- 6<sup>th</sup> wave: from 12 Feb 2021 to 15 Feb 2021
- 7<sup>th</sup> wave: from 26 Feb 2021 to 1 Mar 2021
- 8<sup>th</sup> wave: from 12 Mar 2021 to 15 Mar 2021
- 9<sup>th</sup> wave: from 26 Mar 2021 to 29 Mar 2021
- 10th wave: from 9 Apr 2021 to 12 Apr 2021
- 11th wave: from 23 Apr 2021 to 26 Apr 2021
- 12th wave: from 7 May 2021 to 9 May 2021
- 13th wave: from 6 Jun 2021 to 10 Jun 2021

<sup>&</sup>lt;sup>2</sup> 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.

### **MAIN RESULTS**

#### Supporting the measures currently in force

Measures to prevent and limit the spread of SARS-CoV-2 virus are in force for a long time and are very diverse. The measures have been varying between individual waves of the survey and have received very different support. We are presenting opinions on the measures that were in force at the time of the survey. In the 13<sup>th</sup> wave of the survey, the largest support was given to the opening of schools for all primary and secondary school students (91.9%), and almost three quarters of the respondents also supported the opening of theatres and cinemas under certain conditions (Figure 1). Support for the mandatory use of masks on outdoor surfaces when it is not possible to maintain interpersonal distance of at least 2 metres has fallen by 12.3 percentage points compared to the previous wave of the survey, which can be attributed to a more favourable epidemiological picture, which is why people probably don't think this measure is that important anymore.



#### Figure 1: Supporting the measures currently in force, total.

Throughout the survey, the respondents are also asked whether they find the restrictions currently in force as exaggerated. In the  $10^{th}$  wave – in time of temporary lockdown – 64.3% of respondents answered affirmative, which was the highest share so far (Figure 2), in  $12^{th}$  and  $13^{th}$  waves, however, the share of persons with such opinion fell again (54.7%), which is understandable given the additional release of measures and more favourable epidemiological situation.

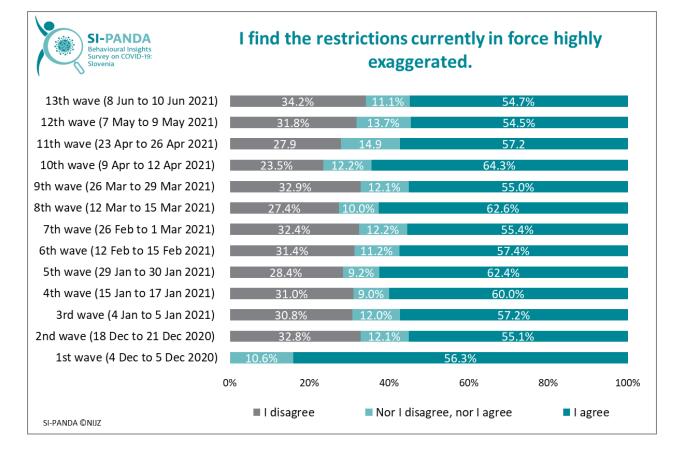


Figure 2: Opinion on the exaggeration of current restrictions, total, by survey waves.

In the 13<sup>th</sup> wave of the survey, 60.6% of respondents believed that measures related to SARS-CoV-2 virus unfairly limit the lives of some population groups more than others, while almost half (47.4%) believe that the inhabitants of Slovenia generally follow the measures related to SARS-CoV-2 virus (Figure 3).

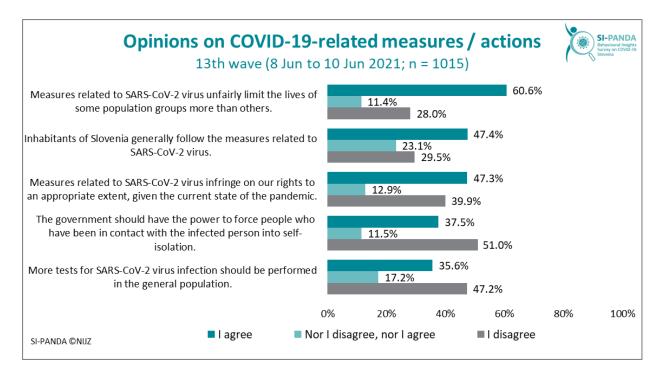


Figure 3: Opinions on COVID-19-related measures / actions, total.

### Supporting the possible measures

In the period before the 13<sup>th</sup> wave of the survey, there was a lot of talk about the upcoming introduction of the digital green certificate<sup>3</sup>, so we asked the respondents about their support for this measure – it was supported by more than half of the respondents. Approximately the same share of respondents also supports the possible introduction of supervision over the implementation of home quarantine (Figure 4).

SI-PANDA Briterional Brights Sweena 13th wave (8 Jun to 10 Jun 2021; n = 1015)												
Introductio	n of the digital green certificate.		37.5%	10.5%	5	2.0%						
Introduction of supervision over the implementation of home quarantine.			34.9%	10.1 <mark>%</mark>	55							
	(	0%	20%	40%	60%	80%	100%					
SI-PANDA ©NIJZ	I do not support	Nor I	do not sup	oport, nor	l suppor	t ∎lsu∣	pport					

Figure 4: Supporting the possible measures, total.

<sup>&</sup>lt;sup>3</sup> A universally valid certificate of vaccination, recovery or testing.

## 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 13<sup>th</sup> wave is 5.2. This is followed by trust in hospitals with an average of 4.8 and trust in employers with an average of 4.7 (Figure 5). People who have already been vaccinated or are planning to be vaccinated have more confidence in all the above institutions than those who will not be vaccinated.

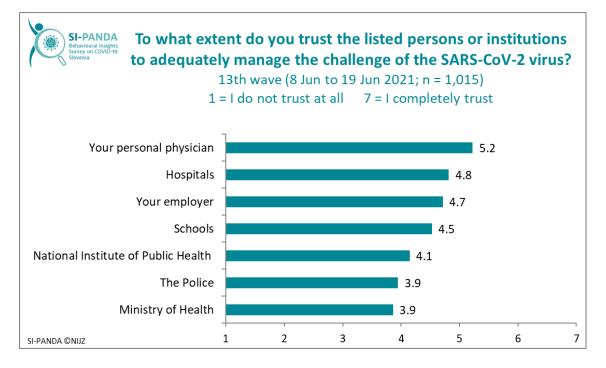


Figure 5: Trust in persons and institutions to manage the pandemic adequately, total.

#### Vaccination

Data from the 13<sup>th</sup> wave of the survey show that almost 50% of respondents have already been vaccinated with 28.2% of people already receiving two doses of the vaccine and 20.9% receiving one dose of the COVID-19 vaccine (Figure 6). The share of vaccinated persons (with one or two doses of COVID-19 vaccine) among the oldest age group of the respondents (from 65 to 74 years) is already 74.8% (Figure 6, Figure 7). More than a tenth (13.0%) of the respondents stated that they had not yet been vaccinated because the vaccine was not yet available for them, and almost a third (32.1%) of the respondents did not intend to be vaccinated. The share of those who do not intend to be vaccinated is expected to be the highest in the two youngest age groups, in which around 40% of people have such an attitude (Figure 7). Women (35.8%) are less in favour of vaccination than men (28.7%) (Figure 6).

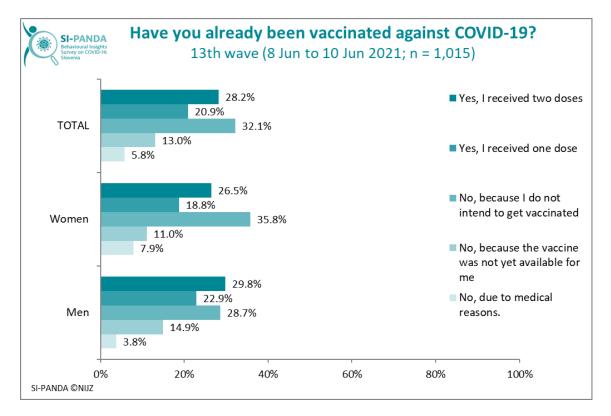


Figure 6: Vaccination against COVID-19, total and by gender.

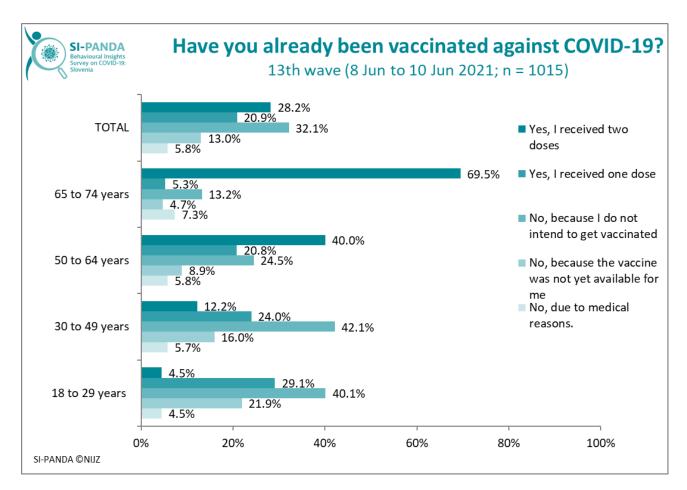


Figure 7: Vaccination against COVID-19, total and by age groups.

If we compare the last waves of the survey, we can see that the share of people who have already received both doses of the vaccine is steadily increasing, and the share of people who do not intend to be vaccinated ranges from 27.5% to 32.1% (Figure 8).

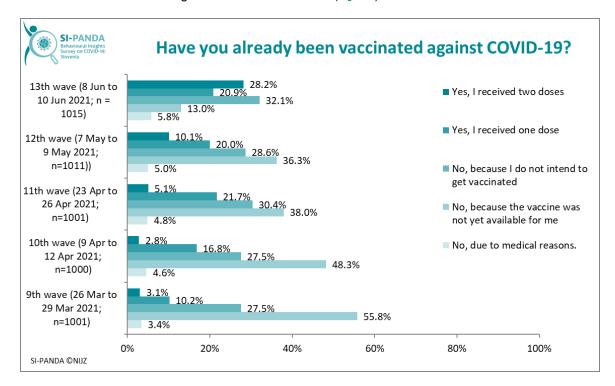


Figure 8: Vaccination against COVID-19, total, 9th to 13th wave of survey.

In this wave of the survey, we also asked the respondents a few questions to determine the level of preparedness to vaccinate against COVID-19, or the level of rejection of it. Men in the oldest age group were the most prepared to vaccinate (average 5 on a 7-point scale), while the vaccination is mostly rejected by women in both youngest age groups (average 3.4 on a 7-point scale) (Figure 9). Among those who had already recovered from the infection, those who had a more severe course of the diseases that required hospital treatment were the most willing to be vaccinated (average 5.2).

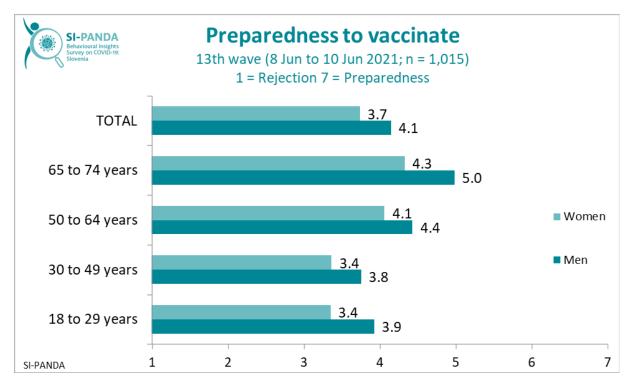


Figure 9: Preparedness to vaccinate against COVID-19, by gender and age groups.

When asked what the decision to vaccinate will depend on, respondents most agree on average that their decision to vaccinate will depend on whether enough data is available that the vaccine is safe (in 13<sup>th</sup> wave, the average value on a 7-point scale is 4.7), whether sufficient data will be available on whether the vaccine is effective (4.6), whether the vaccine has been in use for a long time and whether they will be able to choose the type of vaccine by themselves (both 4.2) (Figure 10). Compared to previous wave of the survey, there has been a decrease in agreement that their decision will depend on the recommendation of a personal physician (in 12<sup>th</sup> wave of the survey, the average was 4.3).

However, if we look at what the decision to vaccinate will depend on among the people for whom the vaccine has not yet been available, the predominant reason is whether higher vaccination rate will mean the release of restriction on movement and socializing in groups (average 5.3 on a 7-point scale). Among those who have already been vaccinated, the main reason for the decision to vaccinate was the possibility of choosing the type of vaccine (5.1), and among those who will not be vaccinated<sup>4</sup>, the decision to vaccinate depends most on whether sufficient data will be available that the vaccine is safe (4.5) (Figure 10). The results of the research thus show that the possibility of choosing the type of vaccine is important for people, as well as the release of restriction on movement and socializing in groups with sufficient vaccination rate and, of course, confidence in the safety of vaccines.

<sup>&</sup>lt;sup>4</sup> Do not intend to be vaccinated or will not be vaccinated due to medical reasons.

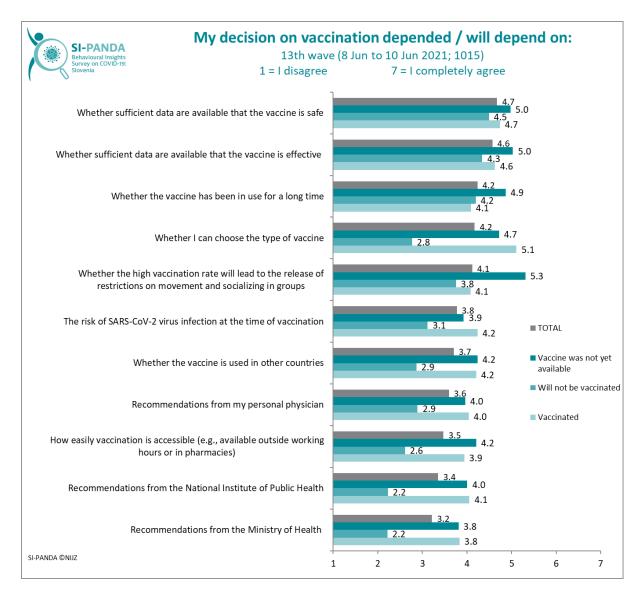


Figure 10: Reasons for the decision to vaccinate, total and by vaccination rate.

If we compare the respondents who have already recovered from COVID-19 with those who have not yet, th epshare of those who will not be vaccinated is, as expected, higher among those who had already recovered from COVID-19 (48.2% among those who have recovered from the disease compared to 35.3% among people who have not yet recovered from the diseases) (Figure 11).

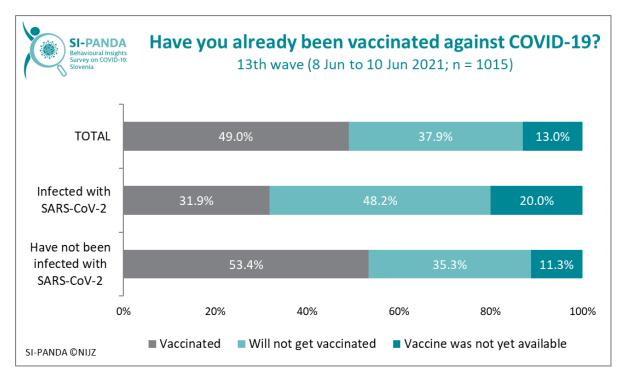
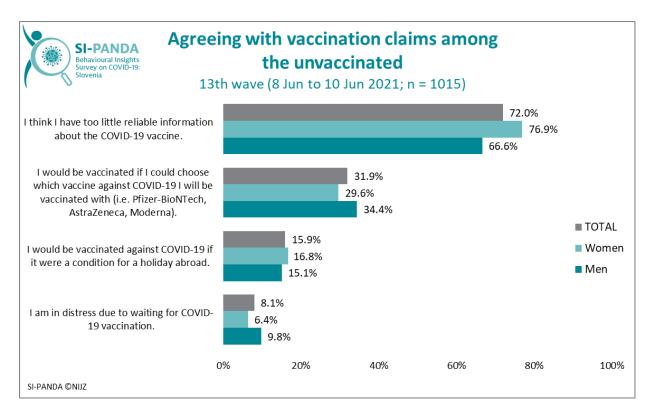


Figure 11: Vaccination against COVID-19, total and by recovery rate.

In the 9<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup>, and 13<sup>th</sup> waves of the survey, we also asked about some opinions related to vaccination against COVID-19. As in the previous waves, the relatively high share of those who believe that they do not have enough reliable information about the COVID-19 vaccine still surprises in the 13<sup>th</sup> wave – the share is 72.0% and has even risen by almost 10 percentage points since the last wave of the survey. Just under a third of respondents would be vaccinated if they could choose which vaccine against COVID-19 they will be vaccinated with (31.9% in the 13<sup>th</sup> wave compared to 47.7% in the 12<sup>th</sup> wave). This percentage has decreased as currently the choice of vaccine exists and is not merely hypothetical. However, compared to the 12<sup>th</sup> wave of the survey, the share of people who would be vaccinated if this were a condition for a holiday abroad decreased, namely by 11.5 percentage points. About 8.1% of people are in distress due to waiting to be vaccinated against COVID-19 (Figure 12).



#### Figure 12: Agreeing with claims on vaccination against COVID-19, total and by gender.

In the 13<sup>th</sup> wave of the survey, we also asked for more detailed reasons why respondents do not intend to be vaccinated. Concerns about post-vaccination side effects, concerns about long-term health effects and the opinion that the vaccine is not safe are among the main reasons. One-fifth of the respondents stated that they did not consider the SARS-CoV-2 virus to pose a risk (Figure 13).

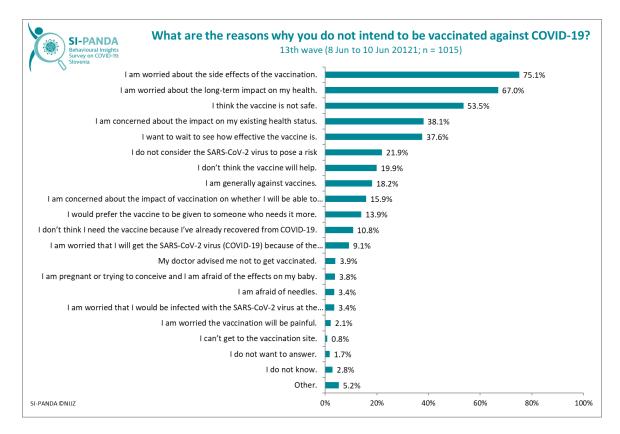


Figure 13: The reasons why respondents do not intend to vaccinate against COVID-19, total.

#### **Epidemiological survey**

In this wave of the survey, we were also interested in whether respondents would be willing to participate in a short survey with the epidemiological service for the purpose of an epidemiological inquiry if their test for SARS-CoV-2 were positive. Almost three quarters (73.1%) answered that they would participate in the survey. The lowest share of those who would be willing to participate is among the youngest respondents, and then increases with age (Figure 14).

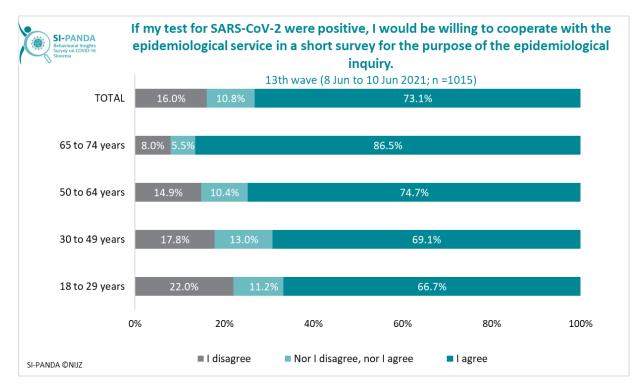


Figure 14: Willingness to participate in a survey with the epidemiological service in case of a positive test for SARS-CoV-2.

Willingness to cooperate with the epidemiological service is the highest among the respondents who were vaccinated against COVID-19 (85.2%) (Figure 15).

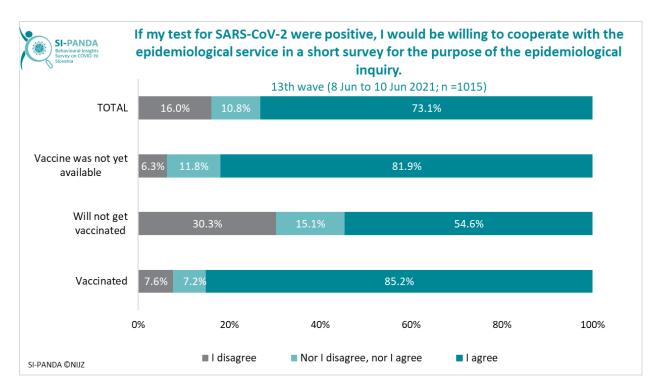


Figure 15: Willingness to participate in a survey with the epidemiological service in case of a positive test for SARS-CoV-2.

## The impact of the pandemic on lifestyle and some other areas of life

In the 13<sup>th</sup> wave of the survey, almost 40% of respondents reported spending more time in front of a television, computer or other electronic devices in the last 2 weeks than before the pandemic; a particularly high share of these persons was among the youngest respondents (aged 18 to 29), where it amounted to almost 60%. The youngest age group of respondents reported in highest shares, as throughout the survey, other unhealthy lifestyle habits in the last 2 weeks. Thus, compared to other age groups, they ate more unhealthy food than before the pandemic (37.4% of respondents aged 18 to 29) and were in more than 40% less physically active than before the pandemic. Nearly a third also avoided visiting a doctor due to a problem not related to SARS-CoV-2 virus (Figure 16).

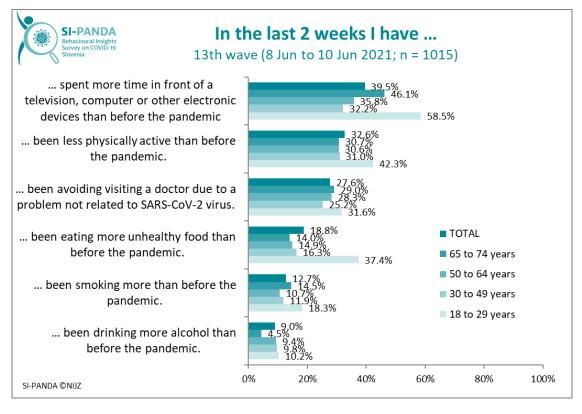


Figure 16: The impact of the pandemic on lifestyle in the past 2 weeks, total and by age groups.

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. In the 13<sup>th</sup> wave of the survey, except for smoking, the lifestyle deteriorated slightly.

In the 13<sup>th</sup> wave of the survey, respondents were also asked about the impact of the pandemic on individual areas of life. As expected, the largest share (61.5%) of people reported that the pandemic had a negative impact on their social contacts with extended family and friends, followed by a negative impact on physical activity and financial security (deterioration in both areas was reported by 34.5% of respondents) (Figure 17).

On the other hand, those who reported the positive impact of the pandemic, for the most part observed this impact in the area of physical activity – this can be explained by the fact that they

may have had more time for these activities, or by the fact that other activities, in which they would otherwise engage, were severely curtailed during the pandemic.

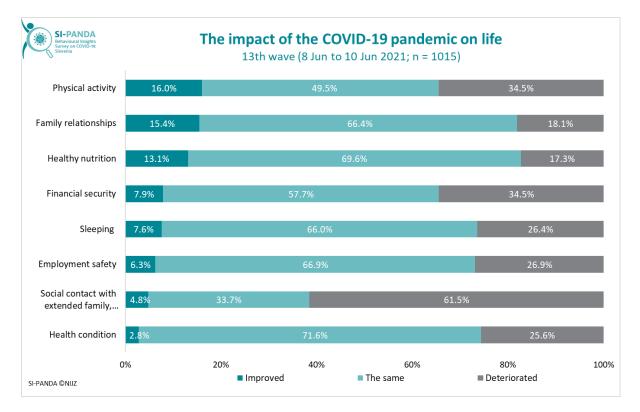


Figure 17: The impact of the COVID-19 pandemic on areas of life, total.

If we look at the impact of the pandemic on individual areas of life in people with depressive disorder, the pandemic has generally had a much worse impact on their lives. Also in this group of respondents, the deterioration of social contacts with extended family and friends stands out the most, as reported by as many as 75.9% of people and the deterioration of sleep, which was reported by 62.4% of people with depressive disorder (Figure 18).

SI-PANDA Behavioral Indights Survey on COVID-19: Sovenia	The impact of the COVID-19 pandemic on life in persons with depressive disorder 13th wave (8 Jun to 10 Jun 2021; n = 1015)							
Healthy nutrition	11.9%	50.6%				37.5%		
Family relationships	8.1%	54.7%			37.2%			
Physical activity	7.6%	35.8%		56.6%				
Sleep	3.7 <mark>%</mark>	33.9%		62.4%				
Financial security	<mark>3.6</mark> %	47.2%				49.3%		
Employment safety	<mark>3.2</mark> %	55.8%				41.0%		
Social contacts with extended family and	<mark>2.</mark> 5%	21.6%			75.9%			
Health condition	0.9%	53.7%				45.4%		
( SI-PANDA ©NIJZ	)%	20% ■ Improved	40%	■ The same	60%	80% ■ Deteriorated	100%	

Figure 18: The impact of the COVID-19 pandemic on areas of life in persons with depressive disorder, total.

#### **Experiencing stress**

Lifestyle changes can be influenced, among other factors, by experiencing situations, circumstances, and events as stressful<sup>5</sup>. In prolonged emergencies and uncertainties, such as an epidemic, the experience of stress usually increases, but there may also be an immediate adjustment, especially if the stressors remain at a similar, albeit higher, level or increase gradually.<sup>6</sup>

In the 13<sup>th</sup> wave of the survey, respondents were asked about how often they felt tense, stressed or under a lot of pressure in the last 14 days. Almost a quarter of respondents (23.3%) experienced stress on a daily or frequent basis, most often in the age group 18 to 29, where the share was 40.2% (Figure 19).

Experiencing stress decreases with age and is the lowest in the oldest age group from 65 to 74 years, namely 9.1%. compared to the data from the CINDI survey, which took place about a year ago, from 11 May to the end of June 2020, the shares of respondents are higher a year later, as in 2020 about 7% less (16.3%) reported that they experience stress often or even daily. Also in 2020, experiencing stress was most common in the youngest (18 to 24 years) and least common in the oldest age group (65 to 74 years).

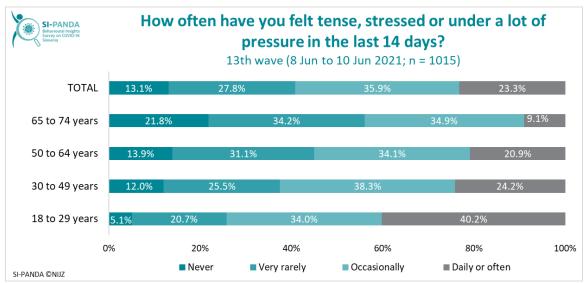


Figure 19: Frequency of experiencing stress in the last 14 days, total and by age groups.

Stress is more often experienced by women, i.e., it is experienced daily or often by 27.6% of surveyed women and by 19.2% surveyed men. Similar results were obtained in the CINDI survey in 2020.

<sup>&</sup>lt;sup>5</sup> Park, A. L., Velez, C. V., Kannan, K., & Chorpita, B. F. (2020). Stress, functioning, and coping during the COVID-19 pandemic: Results from an online convenience sample. The Behavior Therapist, 42(6), 210-216.

<sup>&</sup>lt;sup>6</sup> Fu S, Greco LM, Lennard AC in Dimotakis N. Anxiety responses to the unfolding COVID-19 crisis: Patterns of change in the experience of prolonged exposure to stressors. Journal of Applied Psychology 2021; 106(1): 48.

Stress is, as expected, experienced more often by respondents who show signs of depressive disorder, namely by the majority – almost 70% compared to those who have mental health problems (35.3% experience stress daily or often) and those who do not have mental health problems (only 8.4% experience stress daily or often) (Figure 20).

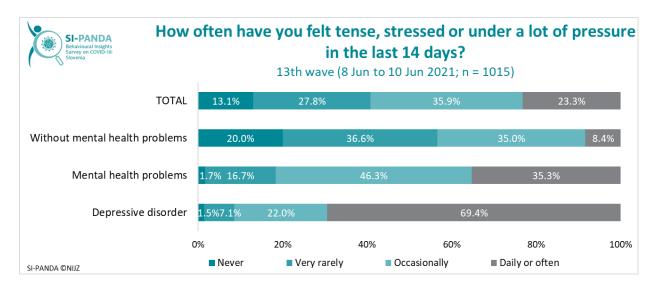
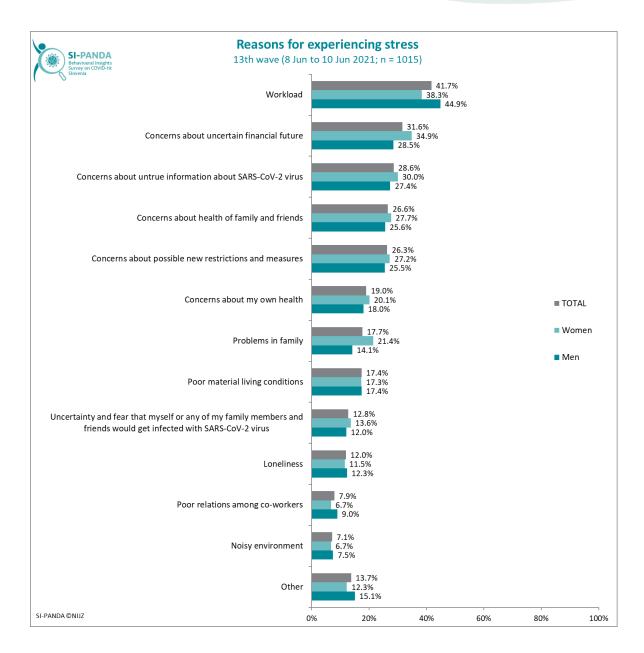


Figure 20: : Frequency of experiencing stress in the last 14 days according to mental health problems, total.

Respondents cited workload as the most common reason for stress (41%). This was followed by concerns about the following: an uncertain financial future (31.6%); untrue information about the SARS-CoV-2 virus (28.6%); the health of family and friends (26.6%); possible new restrictions and measures (26.3%); and concerns about own health (19%). Women are more likely to experience stress due to an uncertain financial future, untrue information about SARS-CoV-2 virus, the health of family and friends, possible new restrictions and measures, concerns about their own health, while men are more likely to experience stress due to workload (Figure 21).



#### Figure 21: Reasons for experiencing stress, total and by gender.

The biggest differences between the more and less educated in the causes of stress are in experiencing workloads and poor material living conditions. Respondents with higher educational attainment were more likely to experience stress due to workload; respondents with secondary and lower education were more likely to experience stress due to poor material conditions compared to more educated.

Most respondents (80.6%) managed tensions, stress and pressure easily or with some effort, 15% had major problems, and 4.4% had severe problems or did not manage stress. Women and young adults (18 to 29 years) had more problems with stress management, especially younger women (18 to 29 years) and the oldest women (65 to 74 years) (Figure 22) and respondents with secondary education attainment.

Compared to the CINDI survey from 2020, in 2021 the share of those who manage stress easily or with some effort decreased, while the share of those who had major problems or severe problems increased or they did not manage stress.

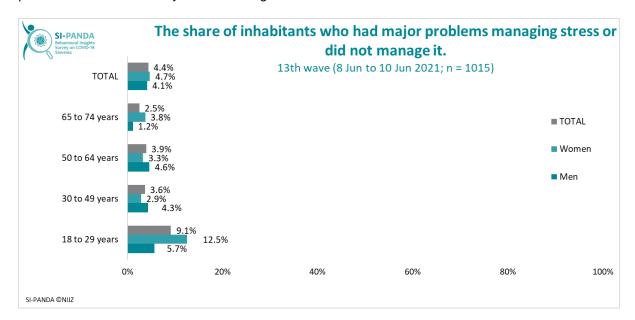


Figure 22: The shares of those who manage stress with severe problems or do not manage it, by age and gender.

More than half of the respondents (53.3%) reported that they were able to always or often find a way to relay when they needed to, and 10.9% reported that this happened very rarely or never. In terms of mental health problems, those with signs of depressive disorder were the least likely to find a way to relax (37.4% rarely or never), followed by those with mental health problems (12%) and those without mental health problems (4.6%) (Figure 23). Respondents in the 18-29 age group and those with higher education rarely found a way to relax.

Compared to the CINDI survey from 2020, fewer respondents reported that they can always or often find a way to relax when they need to, and as many as 11% of them reported in this survey that they very rarely or never find a way to relax.

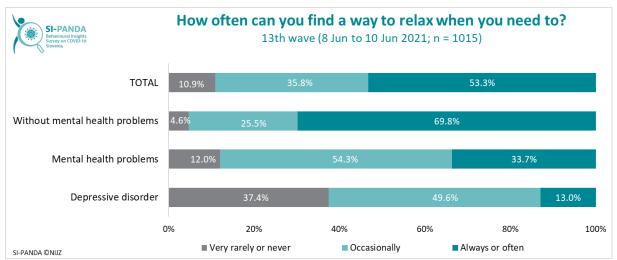


Figure 23: Shares of answers to the question of the frequency of relaxation in relation to mental health problems, total.

#### "Recovered, vaccinated, tested (RVT)" rule

In the 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> waves of the survey, we were interested in what the respondents thought about free testing for SARS-CoV-2 virus infection and about the availability of services and activities under certain conditions. In the 13<sup>th</sup> wave of the survey, 67.5% of respondents agree that the population should have two free PCR tests per month, which would be available without health reasons – the share of these persons decreased by 5.5 percentage points compared to the 12<sup>th</sup> wave. If the condition for using the service is a negative test, 70.5% of respondents believe that a rapid antigen test should be sufficient. 52.5% believe that all services should be available without any COVID-19-related evidence, and only 26.7% agree that only PCR testing method should be used as evidence of a negative test (Figure 24).

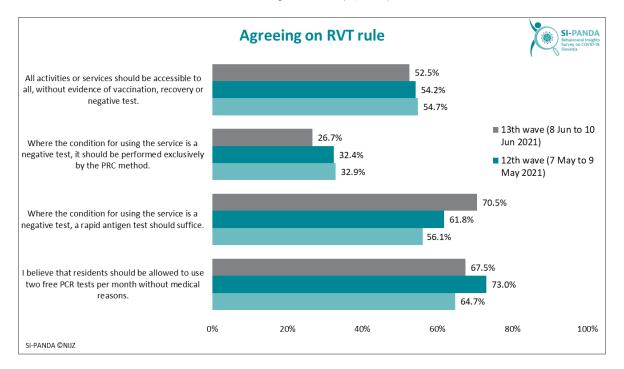


Figure 24: Respondents agreeing on COVID-19 testing and conditions for using services, total.

With regard to age groups, the youngest age group, as expected, has the lowest shares of those who believe that only a test performed by the PCR method should suffice as evidence (18.3%), while in the oldest age group the share of persons with such opinion is almost equal to the share of persons who disagree with it (Figure 25).

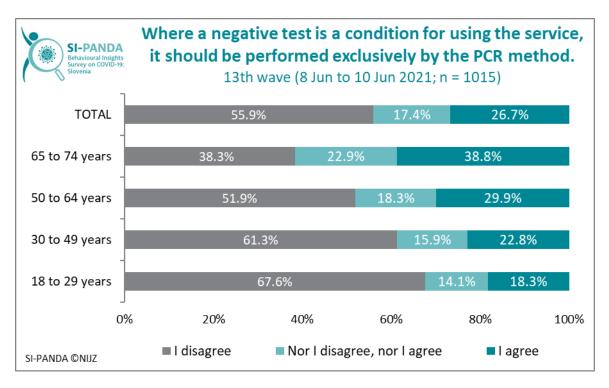


Figure 25: Respondents' opinion on the fact that only a negative PCR test should suffice as evidence, by age groups.

If we compare respondents with regard to vaccination status, among those who do not intent to be vaccinated, the share of those who believe all services and activities should be accessible without any COVID-19-related evidence is the largest (Figure 26).

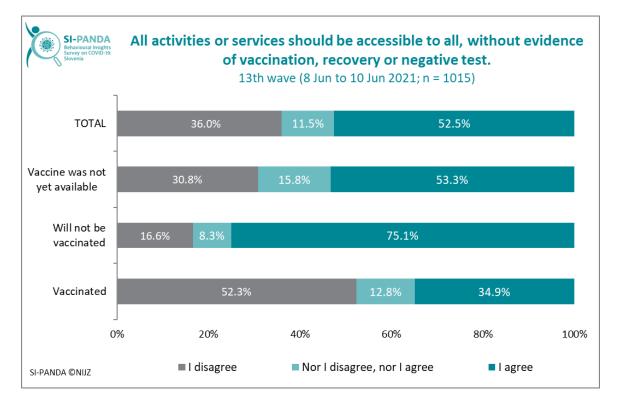


Figure 26: Respondents' opinion on whether all activities and services should be accessible to all, without any RVT evidence, total and by vaccination rate.

## Problems after SARS-CoV-2 virus infection recovery – post-COVID syndrome or long COVID

Most people who get COVID-19 recover in a few weeks. But researchers, as well as healthcare professionals, find that in some people, individual symptoms persist for months after the diagnosis, or they disappear and reappear weeks or months after initial recovery. Abroad, these problems have been termed post-acute COVID-19 or long COVID. It is more common among hospitalized and elderly patients, but it also occurs in those who have overcome a milder form of the disease and also among young adults who did not have health problems before the infection. The symptoms of long-COVID are varied, e.g., fatigue, shortness of breath, insomnia, memory and concentration problems (i.e., foggy brain), heart palpitations, pain in various parts of body, diarrhoea, nausea, etc.<sup>7</sup>.

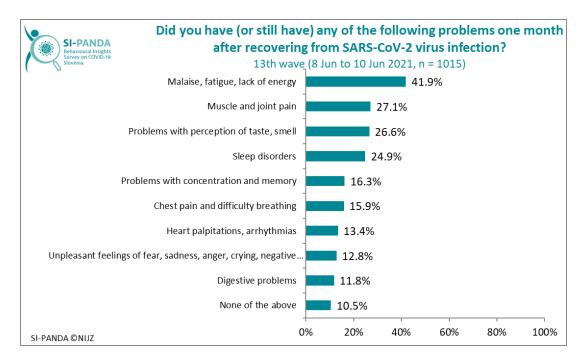
In the 13<sup>th</sup> wave of the survey, 20.2% of respondents report that they are or have been infected with the SARS-CoV-2 virus so far, of which 11.9% report that their infection was asymptomatic, 63.2% report that the course of the disease was mild, in 22.5% the course of the disease was more severe, but did not require hospital treatment, and 2.4% had been treated in the hospital. Respondents who are or have been infected with SARS-CoV-2 virus were asked in the 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> waves about possible problems after recovering from SARS-CoV-2 virus infection.

According to the WHO, a quarter of people who become infected with the SARS-CoV-2 virus have some health problems for at least one month after infection, and one in ten patients is thought to have some symptoms after 12 weeks<sup>8</sup>. Therefore, we were interested in whether the subjects who recovered from COVID-19 had or still have one of the symptoms shown below one month after recovering from SARS-CoV-2 virus infection (Figure 27).

We can find that in 13<sup>th</sup> wave most people (73.5%) still had some problems one month after recovering from the infection. The most common problems were malaise, fatigue and lack of energy, reported by almost half of recovered patients (41.9%), a good quarter reported muscle and joint pain (27.1%), problems with taste perception of taste and smell (26.6%), and sleep disorders (24.9%). This is followed by problems with concentration and memory (16.3%), chest pain and difficulty breathing (15.9%), heart palpitations, digestive problems and unpleasant feelings of fear, sadness, etc. (Figure 27). On average, the respondents had two problems. In all three waves of the survey, the average number of problems is the same (2 problems). The data therefore show that the share of people who have health problems one month after COVID-19 is significant, so it is important that the health status of patients is monitored for a longer period of time.

<sup>&</sup>lt;sup>7</sup> Nalbandian, A., Sehgal, K., Gupta, A. et al. Post-acute COVID-19 syndrome. Nat Med 27, 601–615 (2021). https://doi.org/10.1038/s41591-021-01283-z.

<sup>&</sup>lt;sup>8</sup> 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.





Comparisons of the last three waves show that the share of persons who had one problem is around 50%, while the share of those who had two problems rose from 12.5% to around 17% in 12<sup>th</sup> and 13<sup>th</sup> waves. In the 13<sup>th</sup> wave, the share of people who had 5 or more problems also increased (Figure 28).

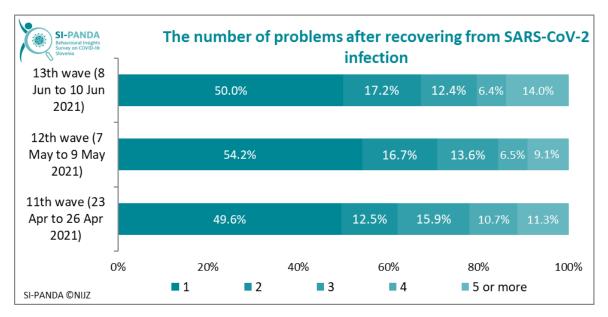


Figure 28: The number of problems after recovery from SARS-CoV-2 infection, 11th, 12th and 13th waves.

Surprisingly, a large share of persons does not consult a doctor about problems after recovery from COVID-19. in the 11<sup>th</sup> wave there were 58.7% such respondents, in 12<sup>th</sup> wave 65.2% and in 13<sup>th</sup> wave 58.2%. Given this, it can be assumed that these are, on the one hand, mild and non-specific health problems, but on the other hand, it is often a rather complex picture, to which the profession if currently paying too little attention. However, clear guidelines for the treatment of people with long COVID and their systematic monitoring are also lacking.

Much is still unknown about the causes and long-term effects of SARS-CoV-2 infection on humans, but research is underway. It is already clear that long COVID is relatively common and has a significant impact on an individual's ability to work and his or her daily life. All this can have economic consequences for the individual, his family and society<sup>8</sup>. Abroad, many major health centres are already opening specialized clinics to care for people who have permanent symptoms after recovering from COVID-19. Support groups are also available. Patient registries and other types of epidemiological surveillance of long COVID, as well as cohort and other research, are also being established.

Most people with COVID-19 recover quickly. Given that research shows that the risk of long-term health problems after infection with the SARS-CoV-2 virus is not so small, vaccination against COVID-19 is also important in this regard. However, precautionary measures, such as washing hands, wearing masks indoors, maintaining physical distance, avoiding crowds and room ventilation, must continue to be strictly followed.



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