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), 16th 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 virus infection among the population.

Understanding COVID-19-related human behaviour enables the identification of at-risk 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[1], that countries regularly conduct qualitative and quantitative population surveys, which should serve as the basis for further action.

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

METHODOLOGY

The survey in the form of an online questionnaire takes place in twenty-one replicates starting on 4 December 2020. The first part of the survey (up to and including the 12th 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)[2] 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 **16th wave** of the panel web survey, that took place **from 21 September 2021 to 23 September 2021** on a sample of 1,026 adults aged 18 to 74 years. Some comparisons with previous waves of survey are also shown.

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

1st wave:	from 4 Dec 2020 to 6 Dec 2020	9th wave:	from 26 Mar 2021 to 29 Mar 2021
2nd wave:	from 18 Dec 2020 to 21 Dec 2020	10th wave:	from 9 Apr 2021 to 12 Apr 2021
3rd wave:	from 4 Jan 2021 to 5 Jan 2021	11th wave:	from 23 Apr 2021 to 26 Apr 2021
4th wave:	from 15 Jan 2021 to 17 Jan 2021	12th wave:	from 7 May 2021 to 9 May 2021
5th wave:	from 29 Jan 2021 to 30 Jan 2021	13th wave:	from 8 Jun 2021 to 10 Jun 2021
6th wave:	from 12 Feb 2021 to 15 Feb 2021	14th wave:	from 6 Jul 2021 to 9 Jul 2021
7th wave:	from 26 Feb 2021 to 1 Mar 2021	15th wave:	from 25 Aug 2021 to 28 Aug 2021
8th wave:	from 12 Mar 2021 to 15 Mar 2021	16th wave:	from 21 Sept 2021 to 23 Sept 2021

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

SUMMARY OF THE SURVEY

SI-PANDA
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Indicator	1st wave (4 Dec to 6 Dec 2020) %	13th wave (8 Jun to 10 Jun 2021) %	16th wave (21 Sep to 23 Sep 2021) %
Testing in case of close contact with a COVID-19 positive person *(the share of respondents who would definitively get tested in case they were in contact with COVID-19 positive person and would not develop any symptoms themselves)*	64.4	67.9	76.3
Vaccination rate *(the share of respondents who were vaccinated with at least one dose of COVID-19 vaccine)*	/	49.0	68.2
Hesitation regarding vaccination *(the share of respondents who do not intend to be vaccinated)*	/	32.1	29.6
Long COVID *(the share of respondents who reported at least one medical problem one month after the recovery from the infection)*	/	73.5	76.6
Avoiding visiting the doctor due to a non-COVID-19 problem *(the share of respondents who avoided visiting the doctor in the last 2 weeks due to a non-COVID-19 problem)*	35.8	27.6	27.6
Physical activity *(the share of respondents who reported they were less physically active in the last 2 weeks than before the pandemic)*	44.8	32.6	28.2
Stress *(the share of respondents who have often, or every day, felt tense, stressed or under a lot of pressure in the last 14 days)*	/	23.3	24.8
Mental health problems *(the share of respondents with depressive disorder or mental health problems)*	37.5	37.7	36.7
Deterioration of the personal financial situation *(the share of respondents who estimated that their financial situation in the last 3 months was worse than before)*	31.4	24.1	21.3

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 16th wave of the survey, the largest support was given to the opening of theatres and cinemas under certain conditions (61.2%), more than a half of respondents also supported watching sporting events in person as well as live concerts, festivals, parties and other entertainment events in accordance with the RVT condition and the use of digital green certificate (Figure 1). The least support was given to the payable rapid testing (32.1%).

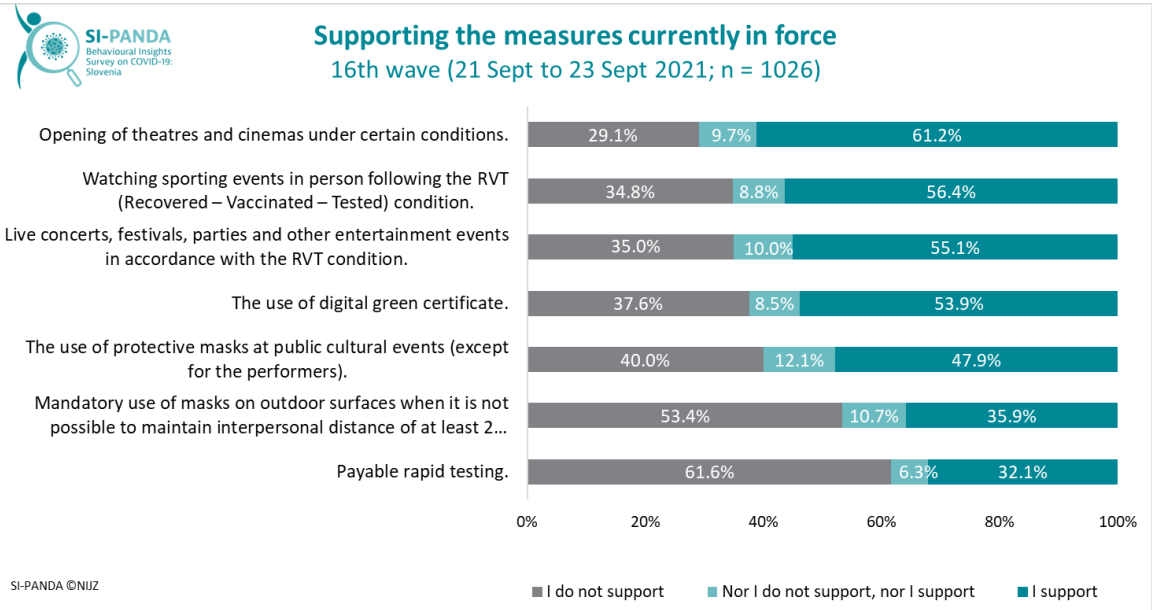

Figure 1: Supporting the measures currently in force, total.

In the 16th wave of the survey, 55.4% of respondents believed that measures related to SARS-CoV-2 virus unfairly limit the lives of some population groups more than others; the percentage is declining in the last four waves, which is probably connected with the more relaxed measures. 41.4% of the respondents believe that the measures infringe on our rights to an appropriate extent, given the current state of the pandemic; this percentage has increased a little compared to the previous wave. More worrying is the fact that the share of respondents who believe that the population of Slovenia is following the measures to control the SARS-CoV-2 virus fell by 5.4 percentage points in the 16th wave compared to the 15th wave, and by 20.2 percentage points compared to the 13th wave of the survey (Figure 2).

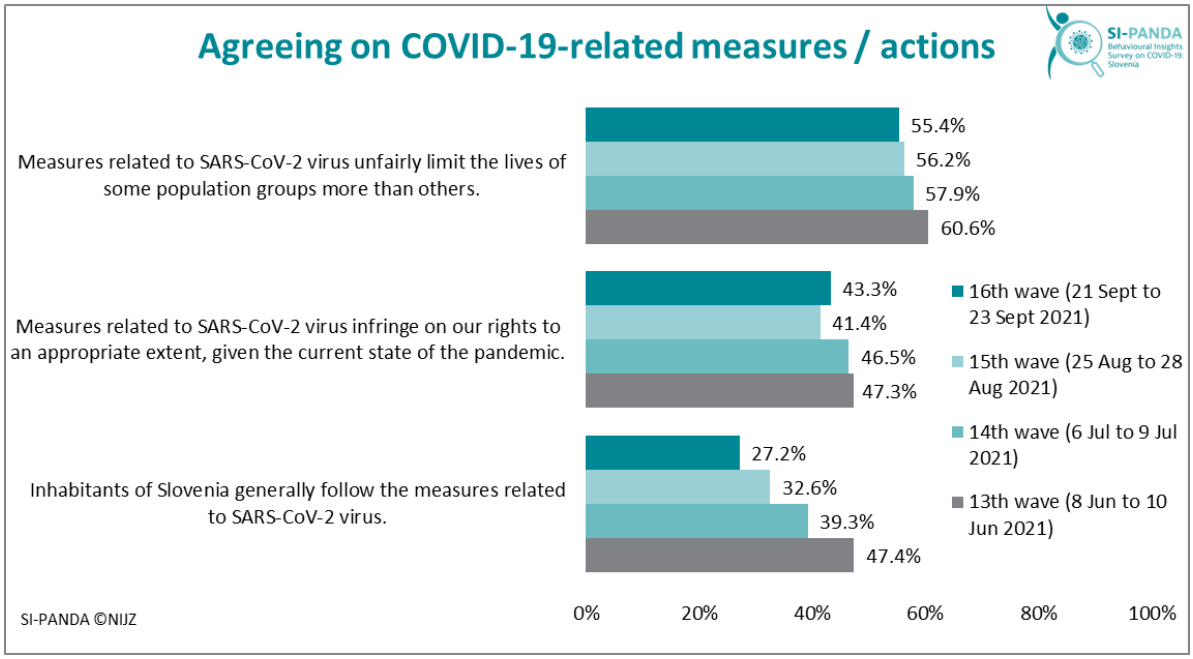

Figure 2: Opinions on COVID-19-related measures / actions, total and by survey waves.

If we look at the opinion on whether the measures related to SARS-CoV-2 virus unfairly limit the lives of some population groups more than others, the respondents in the age group 30-49 agree with this statement in the highest share and the oldest group of respondents agrees with this statement in the smallest share (Figure 3).

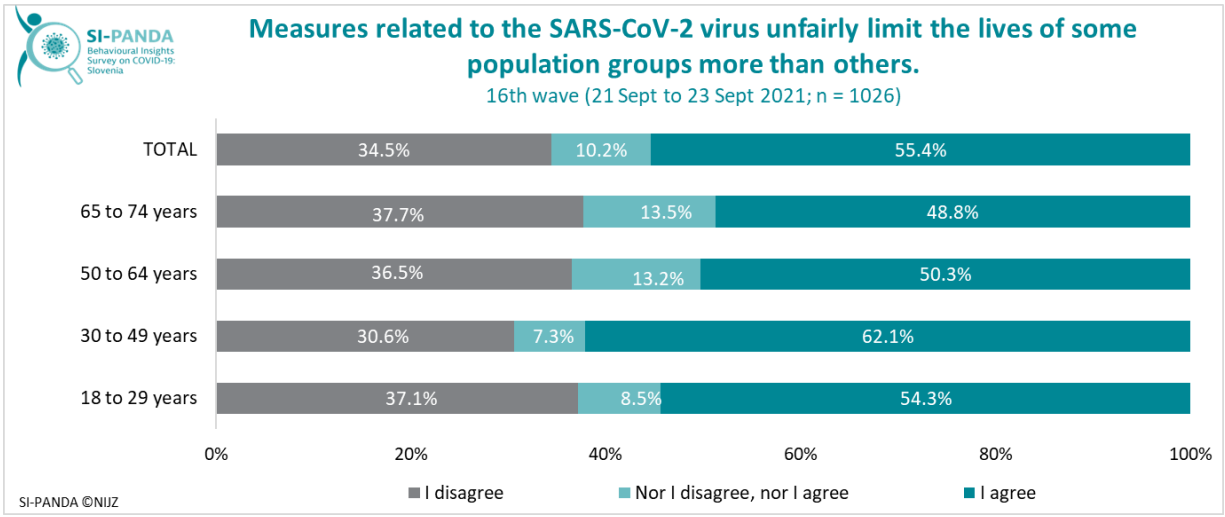

Figure 3: Opinions on whether measures related to SARS-CoV-2 virus unfairly limit the lives of some population groups more than others, total and by age groups.

Considering the vaccination status, almost a quarter more of those who will not be vaccinated agree with the statement that measures related to SARS-CoV-2 virus unfairly limit the lives of some population groups more than others compared to those who are already vaccinated (Figure 4).

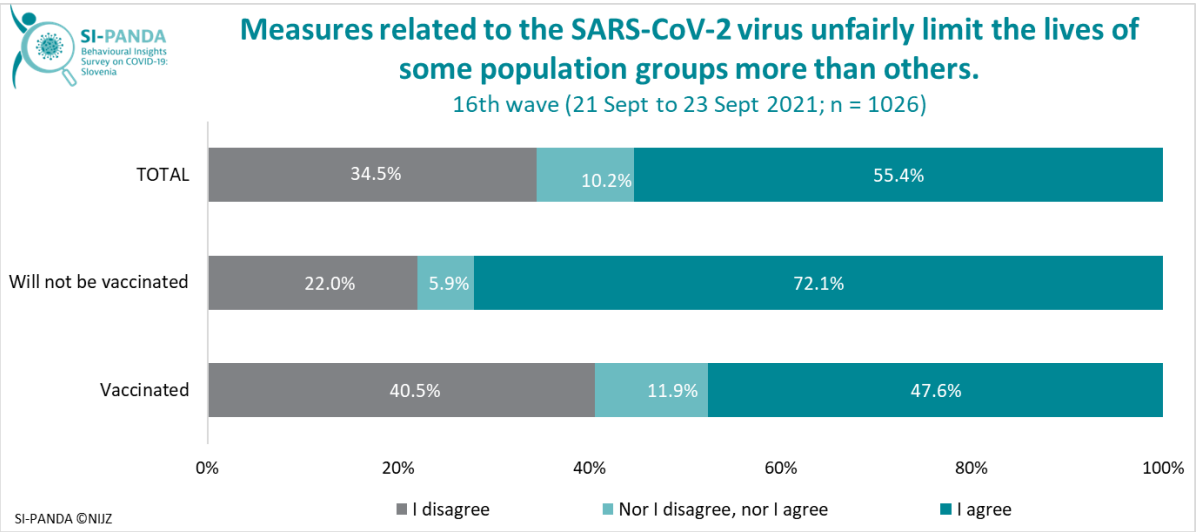

Figure 4: Opinions on whether measures related to SARS-CoV-2 virus unfairly limit the lives of some population groups more than others, total and by vaccination status.

"Recovered, vaccinated, tested" (RVT) rule

From 11th to 16th wave of the survey, we were interested in what the respondents thought about the availability of services and activities under certain conditions related to SARS-CoV-2 virus or RVT condition. 50.4 percent of respondents believe that vaccinated people should generally be subject to less stringent restrictions than unvaccinated ones – the largest share of respondents with such opinion is among those in the 65-74 age group (Figure 5).

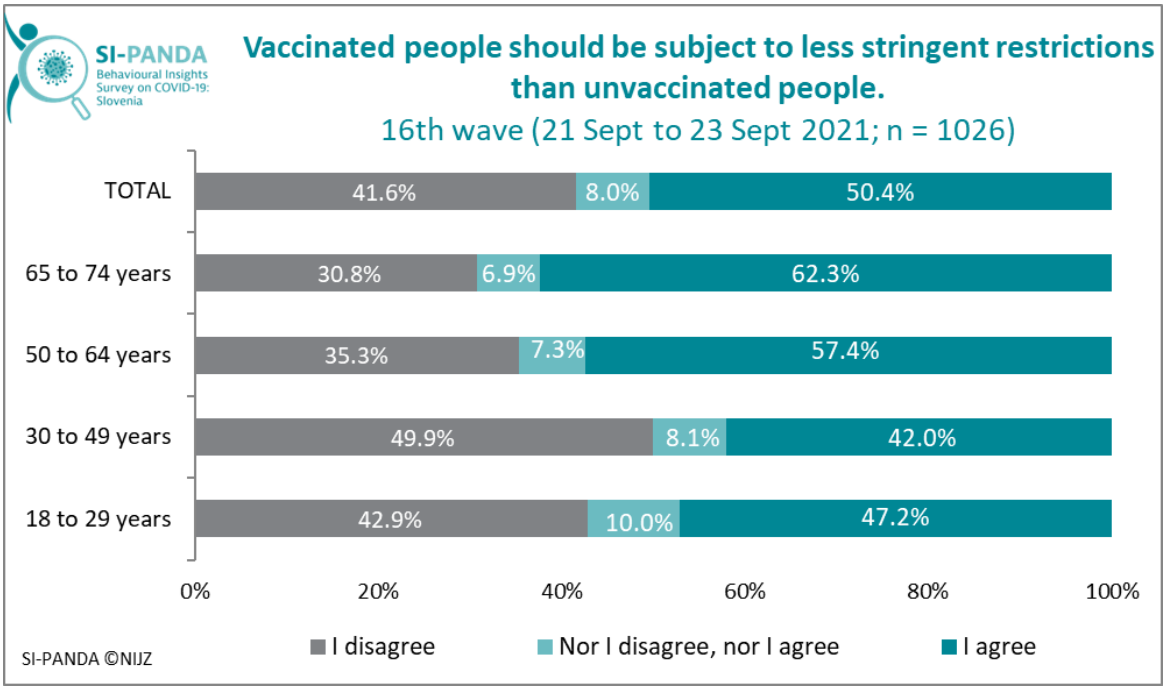

Figure 5: Opinion on the fact that vaccinated people should be subject to less stringent restrictions than unvaccinated ones, total and by age groups.

More than 40.0% of respondents believe that all services and activities should be available without any evidence on vaccination, recovery or negative test. Half of those under the age of 50 want access to services without any evidence (Figure 6). In part, this may be related to lower vaccination rate among younger people and a higher share of those who do not intend to be vaccinated in the youngest age groups (data from previous research waves).

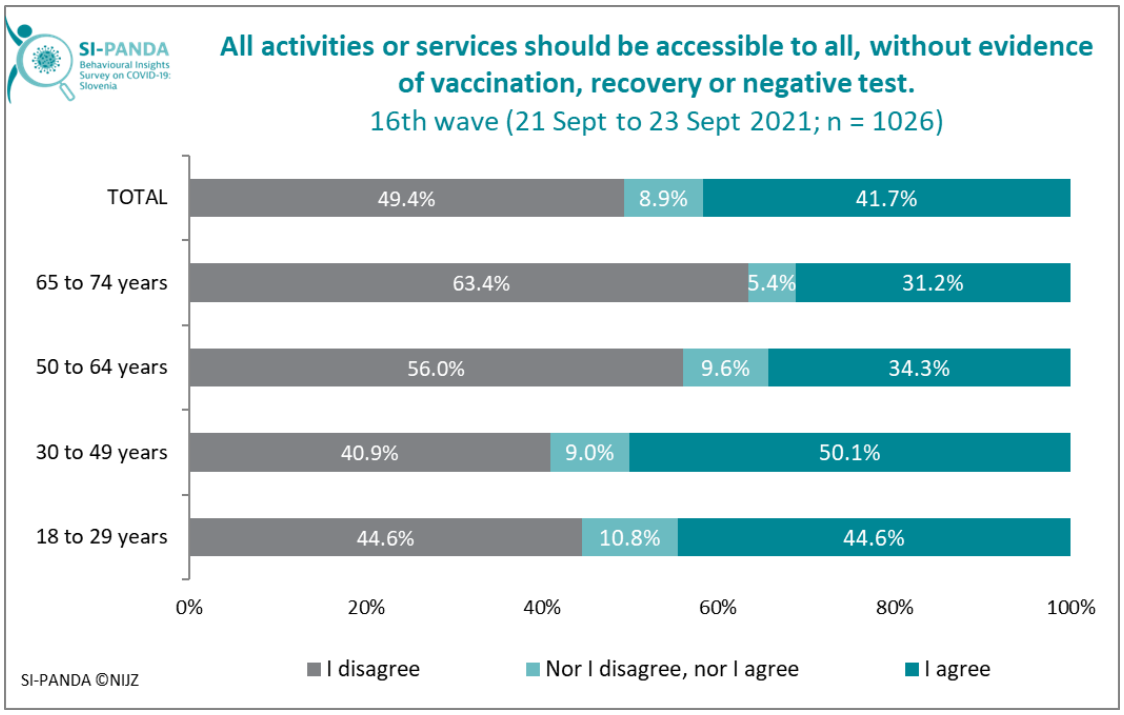

Figure 6: Respondents' opinion on whether all activities and services should be accessible to all, without any RVT evidence, total and by age groups.

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.

Respondents in the 16th wave were asked if they found it irresponsible that people over the age of 50 did not respond more to COVID-19 vaccination, as measures during the pandemic were primarily aimed at protecting their health. About 50 percent of respondents believe that such behaviour is irresponsible; it is interesting to note that the smallest share of people who have such an opinion is among the youngest respondents (40.2%), who in the course of the survey showed to be the most affected by pandemic containment measures (Figure 7).

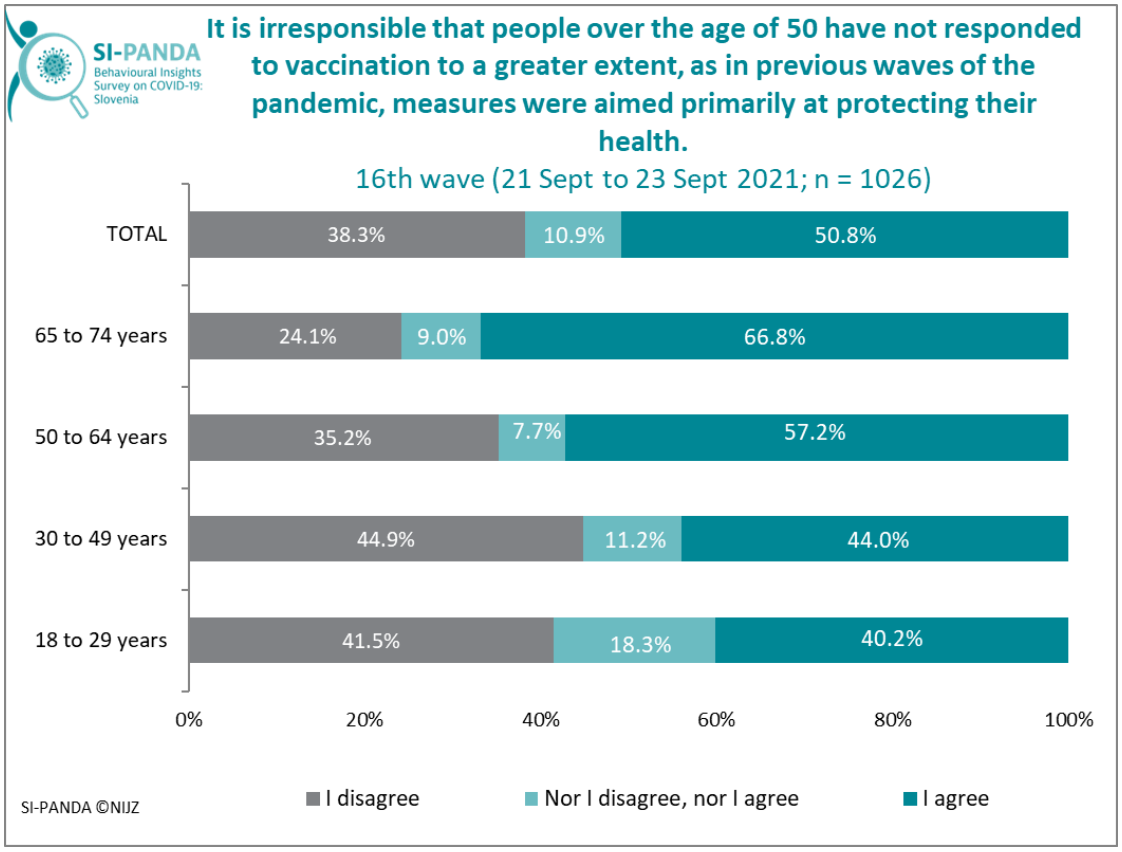

Figure 7: Opinion on the fact, that it is irresponsible for people over 50 years of age not to respond to vaccination to a greater extent, total and by age groups.

In the 16th wave, we also asked the respondents to what extent they support meeting the RVT condition as users of the listed services or activities. To the greatest extent, the respondents support meeting the RVT condition when visiting theatres or cinemas, watching live sports events and when visiting the interior of the bars or restaurants (Figure 8). Respondents least agree with the need to meet the RVT condition when visiting a doctor and dentist (30.8%) and when visiting the terraces of bars and restaurants (35.2%).

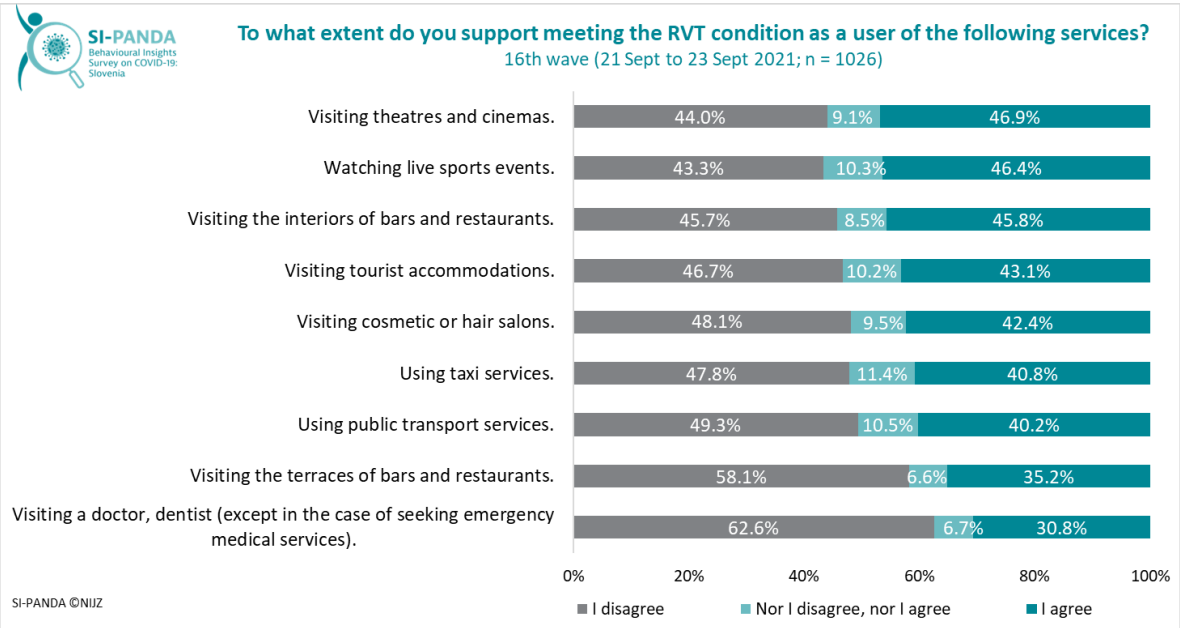

Figure 8: Supporting meeting the RVT condition as a user of various services, total.

For all listed services or activities, respondents from the oldest age group (65-74 years) agree in the largest share with the need to meet the RVT condition, while, as expected, respondents from both youngest age groups, ie. respondents up to 49 years of age agree with it in the smallest share.

Support for meeting and checking the RVT condition in the workplace varies greatly among respondents according to their vaccination status. Almost five times more respondents who are vaccinated than those who are not vaccinated support meeting and checking the RVT condition in the workplace. Overall, respondents express slightly greater support for meeting (45.3%) than checking (42.7%) the RVT condition in the workplace (Figure 9).

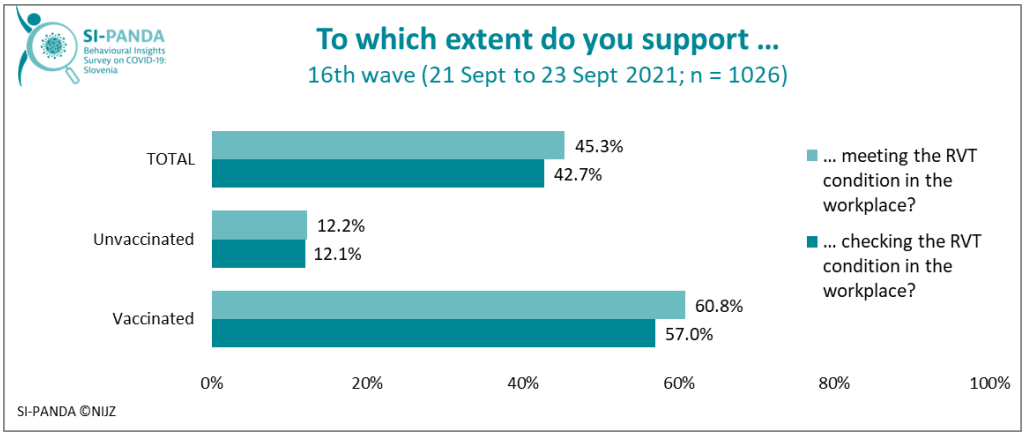

Figure 9: Supporting meeting and checking the RVT condition in the workplace, total and by vaccination status.

Supporting the possible measures

In the 16th wave of the survey, we asked the respondents on the support of some possible measures that could come into force in the event of a worsening of the epidemiological situation. In the largest share (45.6%), respondents would support the introduction of supervision over the implementation of at home quarantine, and almost a quarter would also support the restriction on gathering of up to 25 people by following the NIJZ instructions (Figure 10). The least support (6.1%) would be given to restriction of movement within municipalities. Respondents were asked about the same possible measures in the 10th wave of the survey (in early April 2021), when complete lockdown was in force in Slovenia; at that time, respondents were much more supportive of these possible measures.

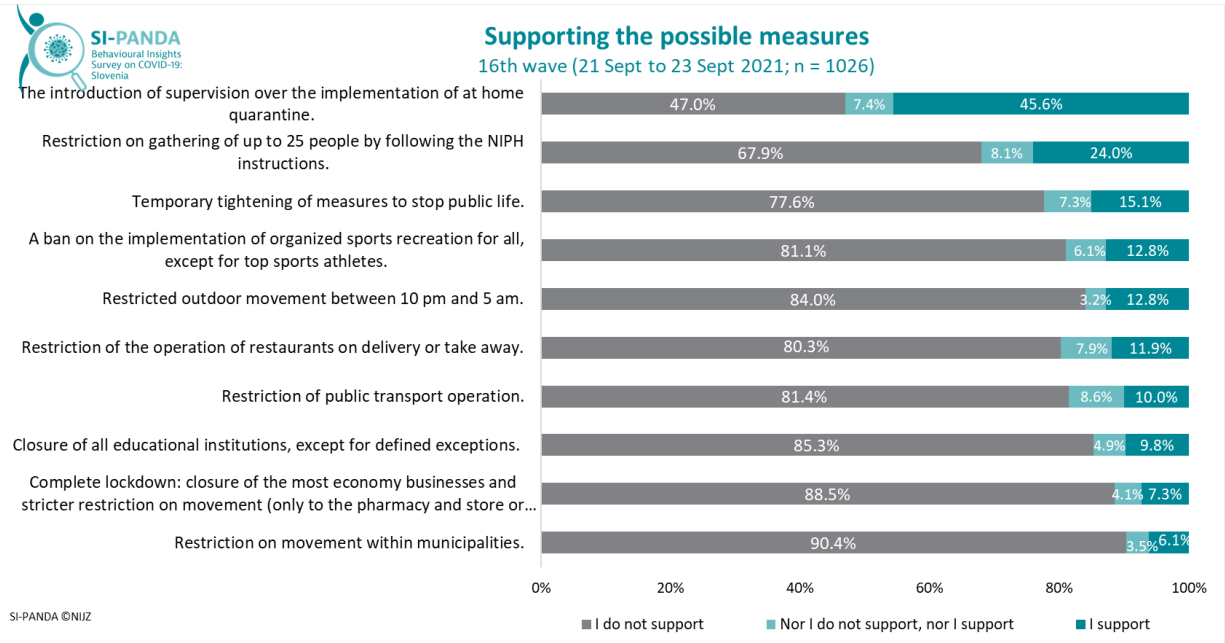

Figure 10: Supporting the possible measures, total.

Support for all possible measures has also decreased slightly compared to the previous wave of the survey. 3.7 percentage points fewer respondents would support a temporary tightening of measures to stop public life in 16th wave compared to the 15th wave, and almost 2 percentage

points fewer respondents would support a ban on the implementation of organized sports recreation in the 16th wave compared to the 15th wave of the survey (Figure 11).

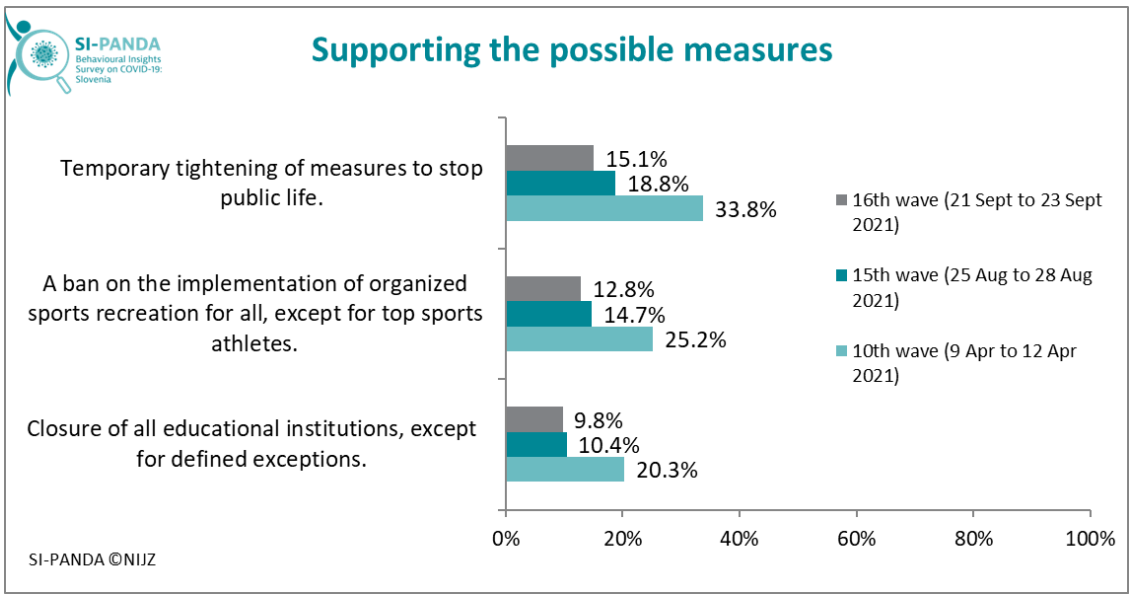

Figure 11: Supporting of possible measures, 10th, 15th, and 16th wave of the survey, total.

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 16th wave is 5.2. This is followed by trust in hospitals with an average of 5.0 and trust in employers with an average of 4.8 (Figure 12).

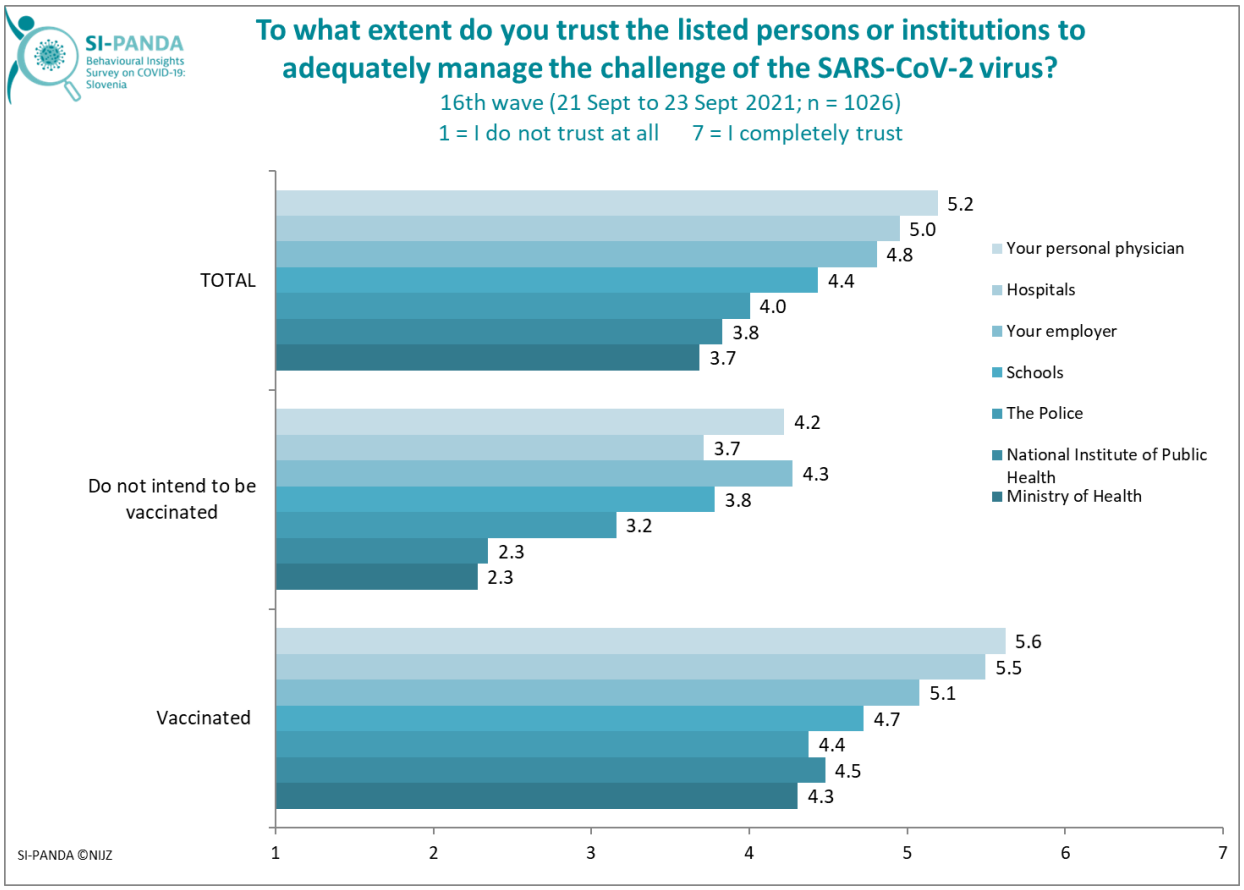

Figure 12: Trust in persons and institutions to manage the pandemic adequately, total and by vaccination rate.

People who have already been vaccinated with two doses of COVID-19 vaccine, characteristically have more confidence in all the above persons or institutions than those who will not be vaccinated (Figure 12). Both, vaccinated and those who do not intend to be vaccinated, trust the Ministry of Health the least. There is a significant difference between the vaccinated and those who do not intend to be vaccinated regarding trust in the NIJZ, which is twice as low for those will not be vaccinated.

Vaccination

Data from the 16th wave of the survey show that over 68% of respondents have already been vaccinated with 54.8% of people already receiving two doses of the vaccine and 12.8% receiving one dose of the COVID-19 vaccine, which is in line with the official data on the vaccination rate of the population of Slovenia aged 18 and over (Figure 13). 0.6% of respondents have already received the third (booster) dose of the vaccine. 2.2% of the respondents stated that they had not yet been vaccinated because the vaccine was not yet available for them, and a quarter (25.1%) of the respondents in the 16th wave of the survey stated that they do not intend to be vaccinated – the share of these persons has declined compared to the previous wave of the survey. Women (27.7%) are less in favour of vaccination than men (22.6%) (Figure 13).

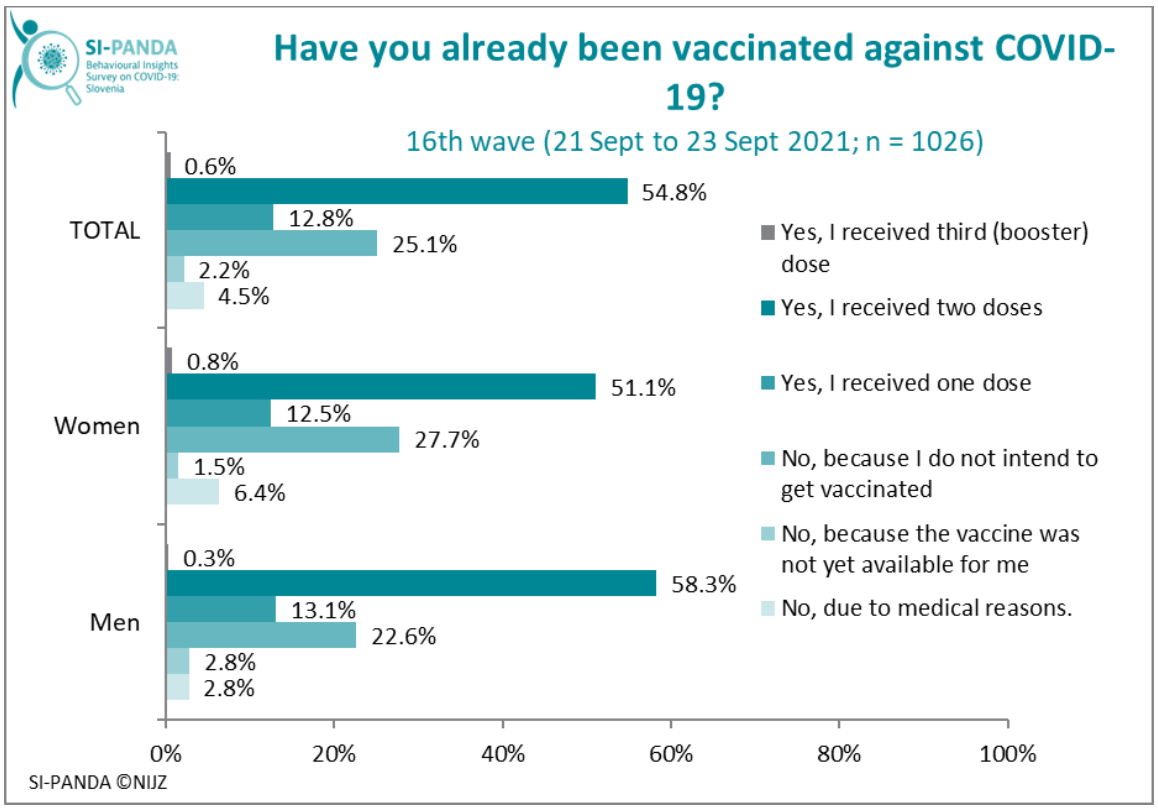

Figure 13: Vaccination against COVID-19, total and by gender.

The share of vaccinated persons (with one or two doses of COVID-19 vaccine) among the oldest group of respondents (65-74 years) already reached 82.8% (Figure 14). The share of those who do not intend to be vaccinated is the highest in the two youngest age groups, in which around on third of people share such an opinion. The third, booster dose was received by persons in 30 to 49 and 50 to 64 age groups, most of whom were health workers.

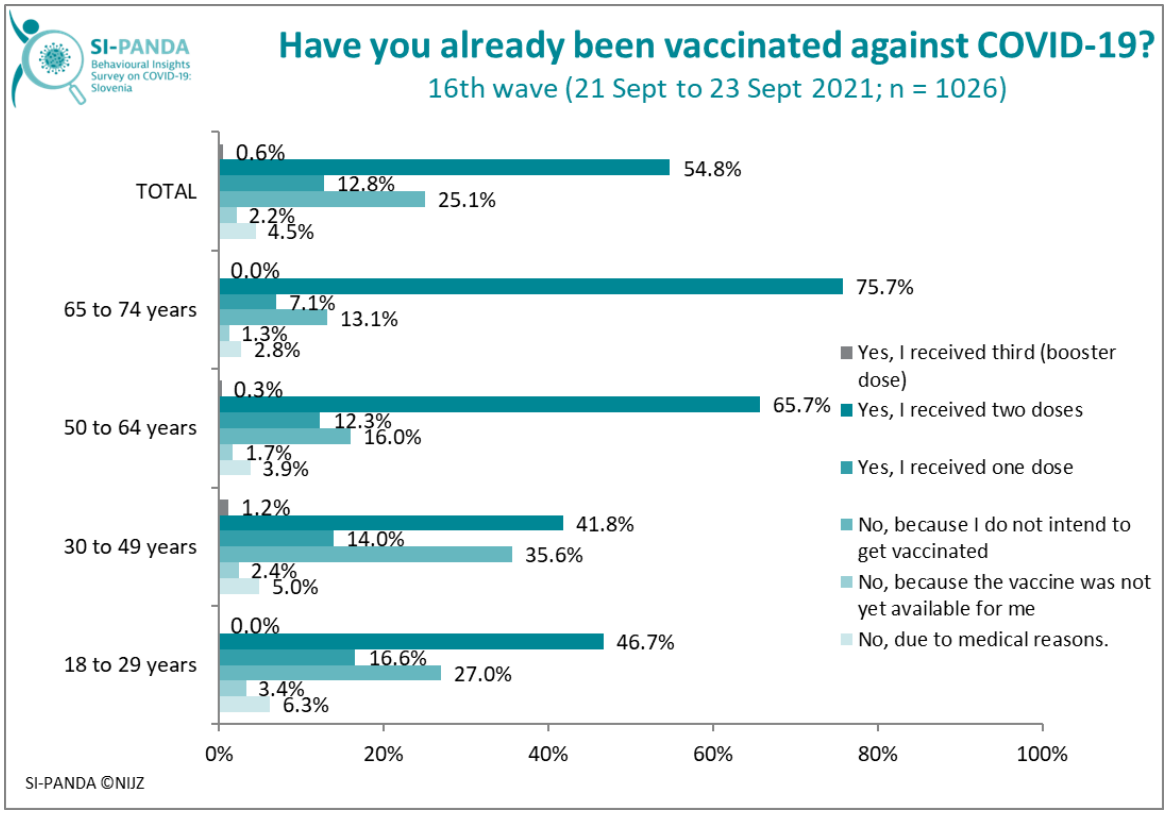

Figure 14: Vaccination against COVID-19, total and by age groups.

If we compare the last eight waves of the survey, we can see that the share of people who have already received both doses of the vaccine is steadily increasing. The share of people who do not intend to be vaccinated is 25.1% in this wave and is currently the lowest in the last eight waves of the survey (Figure 15).

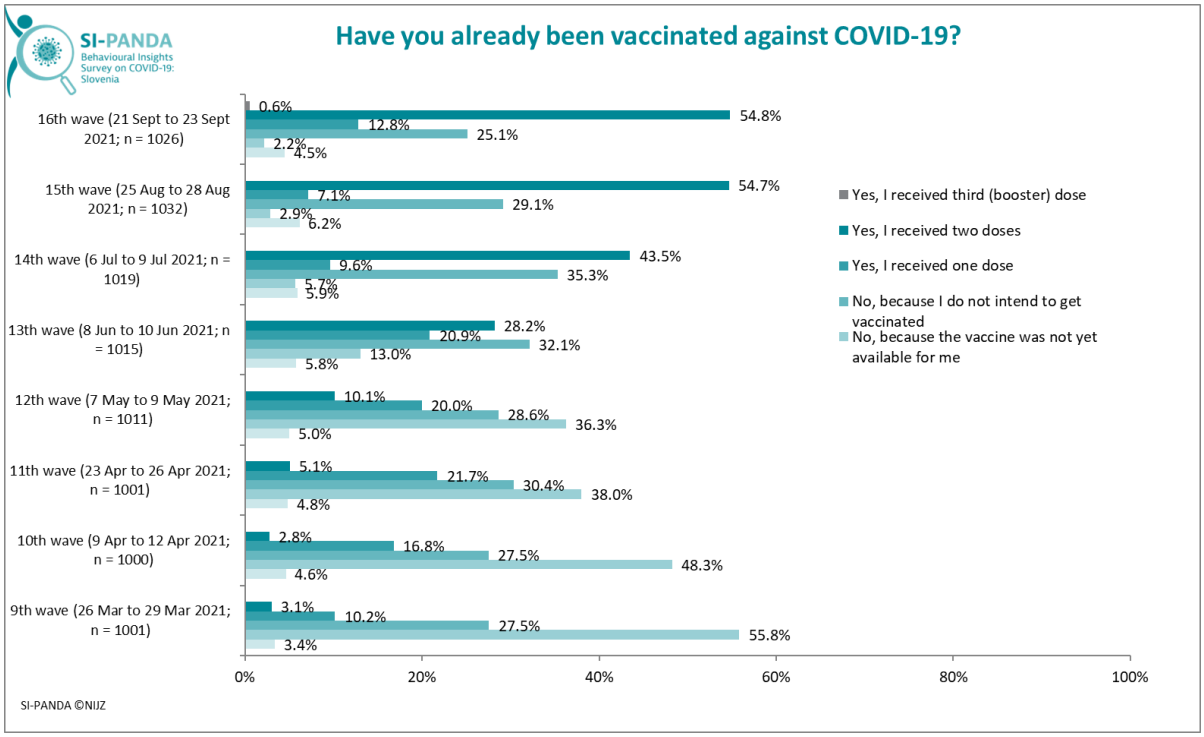

Figure 15: Vaccination against COVID-19, total and by survey waves.

As already mentioned, in the 14th wave of the survey, as many as 44% of respondents in the two youngest age group (18 to 29 years and 30 to 49 years) stated that they do not intend to be vaccinated against COVID-19, which was the highest share so far. On the other hand, in the 14th, 15th and 16th waves of the survey, a significant increase in the share of vaccinated persons with one or both doses of COVID-19 vaccine is observed in these age groups. In the 16th wave of the survey, 46.7% of respondents in the 18–29 age group were vaccinated with two doses, which is 14.2 percentage points more than in the 14th wave of the survey. A similar upward trend in the number of vaccinated persons was observed in the 30–49 age group, where the share of people vaccinated with two doses of vaccine increased by 11.9 percentage points in the 16th wave compared to the 14th wave (in the 14th wave: 29.9%; in the 16th wave: 41.8%). In the age group of 30 to 49 years, 1.2% of respondents reported that they had been vaccinated with the third (booster) dose.

In this wave of the survey, we also asked the respondents a few questions to determine the level of preparedness for vaccination against COVID-19 on a 7-point scale, or the level of rejection of it. Men in the oldest age group were the most prepared to vaccinate (average 5.3 on a 7-point scale), while the vaccination is mostly rejected by women in the youngest age group (average 3.3 on a 7-point scale) (Figure **16**).

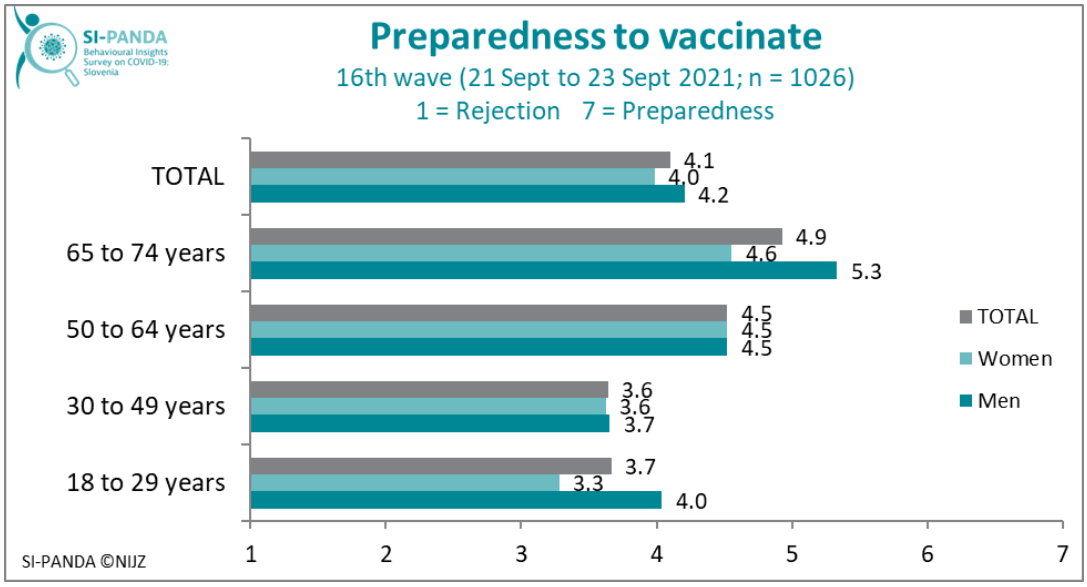

Figure 16: Preparedness to vaccinate against COVID-19, total, by gender and by age groups.

When asked what the decision to vaccinate depends / will depend on, respondents most agree on average that their decision to vaccinate depends / will depend on whether enough data is / will be available that the vaccine is safe (in the 16th wave, the average value on a 7-point scale is 4.5), whether sufficient data is / will be available on whether the vaccine is effective (4.4), and whether they will be able to choose the type of vaccine by themselves (4.2) (Figure 17).

However, if we look at what the decision to vaccinate will depend on among those who have already been vaccinated, the main reason for the decision to vaccinate was whether higher vaccination rate will lead to the release of restriction on movement and socializing in groups (4.9), while among those who will not be vaccinated[3], the decision on vaccination depended the most on whether there is sufficient data that the vaccine is safe (4.3) (Figure 17). Releasing restrictions on movement and socializing in groups is less important for those who do not intend to be vaccinated than for those who have already been vaccinated.

[3] Do not intend to be vaccinated or will not be vaccinated due to medical reasons.

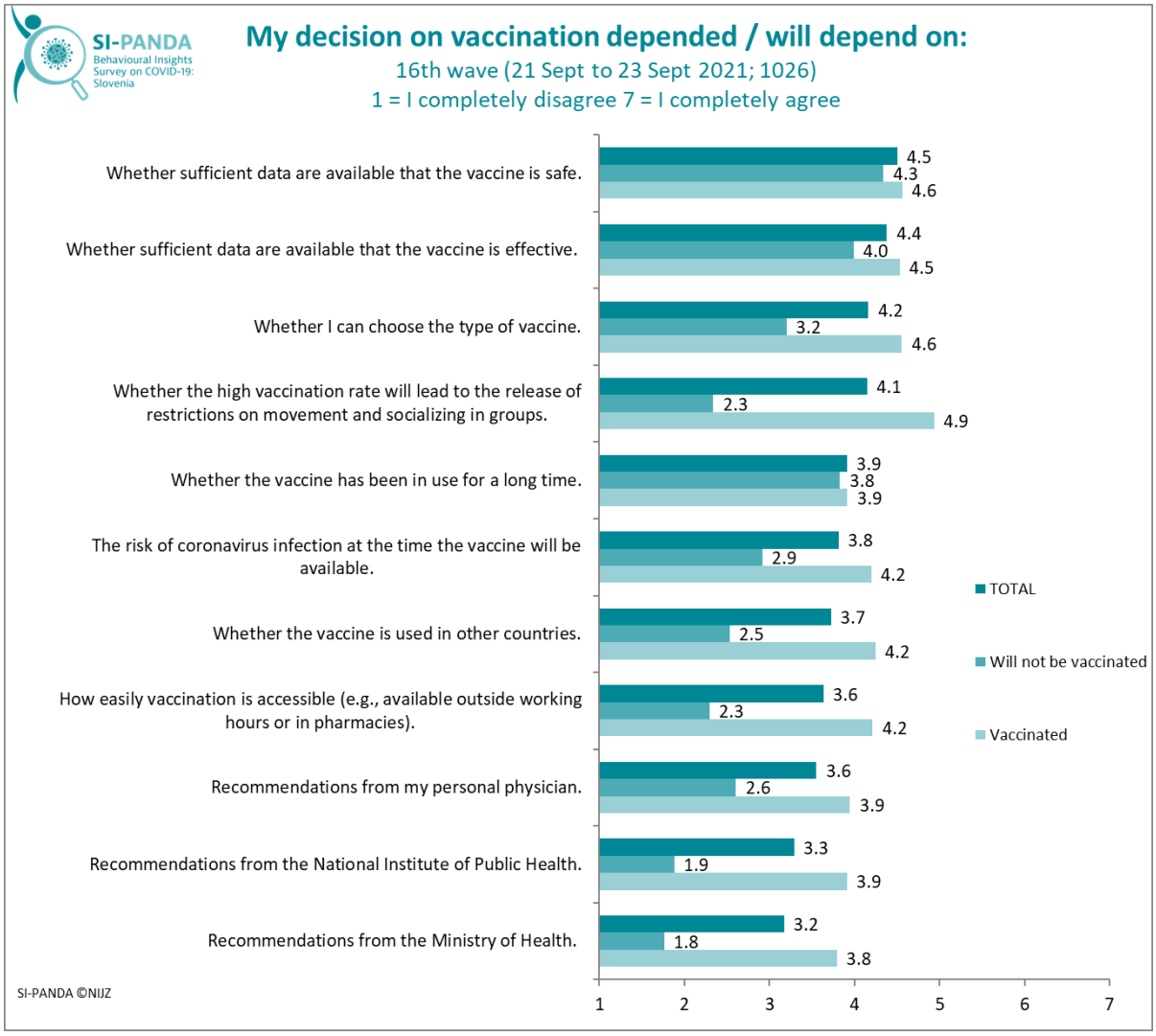

Figure 17: Reasons for the decisions to vaccinate, total and by vaccination rate.

If we compare the respondents who have already recovered from COVID-19 with those who have not yet, the share of those who will not be vaccinated is, as expected, higher among those who had already recovered from COVID-19 (35.9% among those who have recovered from the disease compared to 27.8% among people who have not yet recovered from the disease) (Figure 18).

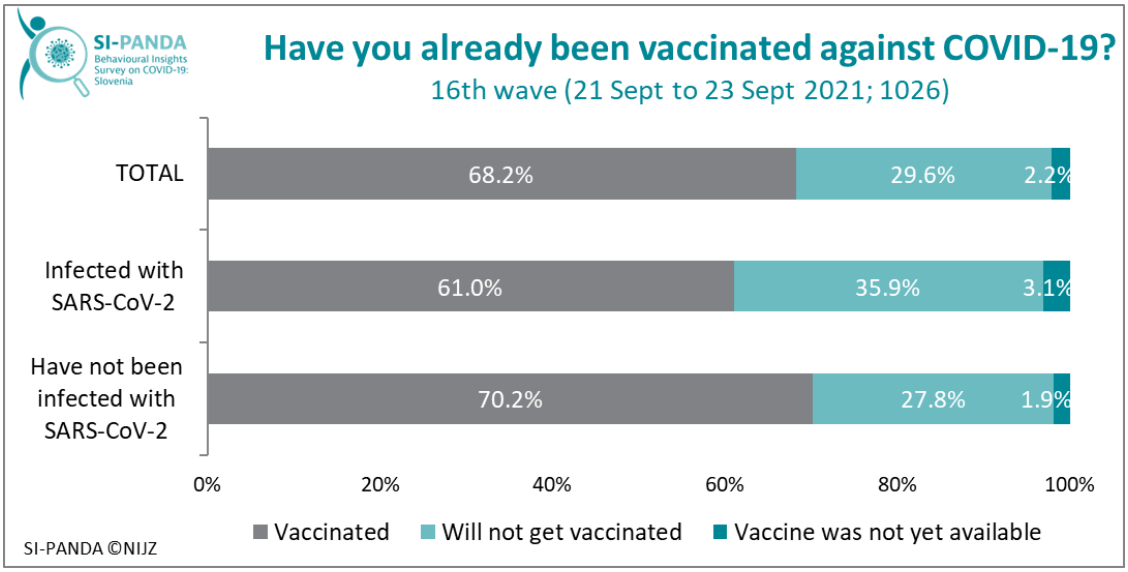

Figure 18: Vaccination against COVID-19, total and by recovery rate.

In the 16th wave of the survey, we also asked the unvaccinated respondents (respondents who do not intend to be vaccinated or were not vaccinated due to medical reasons or were not vaccinated because vaccine was not yet available for them) for more detailed reasons why respondents do not intend to be vaccinated. Concerns about long-term health effects, concern about the side effects after vaccination, and opinion that too much pressure is being put on vaccination are among the main reasons. The latter reason for the decision against vaccination (63.6%) prevails over the opinion that the vaccine is not safe (58.2%), which indicates major shortcomings in proper communication with the public regarding vaccination. About a fifth of felt that SARS-CoV-2 did not pose a risk to their health (Figure 19).

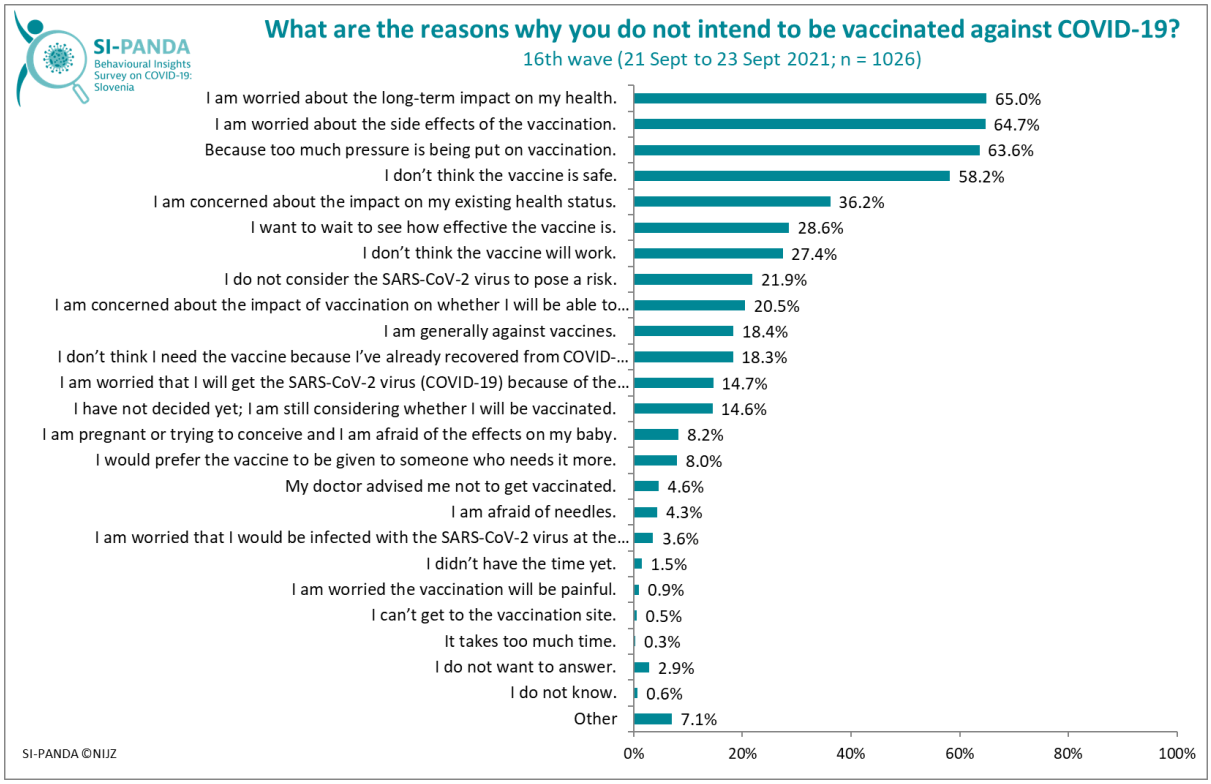

Figure 19: The reasons why respondents do not intend to vaccinate against COVID-19, total.

Respondents who have already been vaccinated reported that they decided to get vaccinated mainly to protect their own health (60%), to prevent a more severe course of the diseases or its consequences (54.9), contributing to curbing the epidemic as soon as possible and protecting the health of their loved ones (both around 54 percent) (Figure **20**).

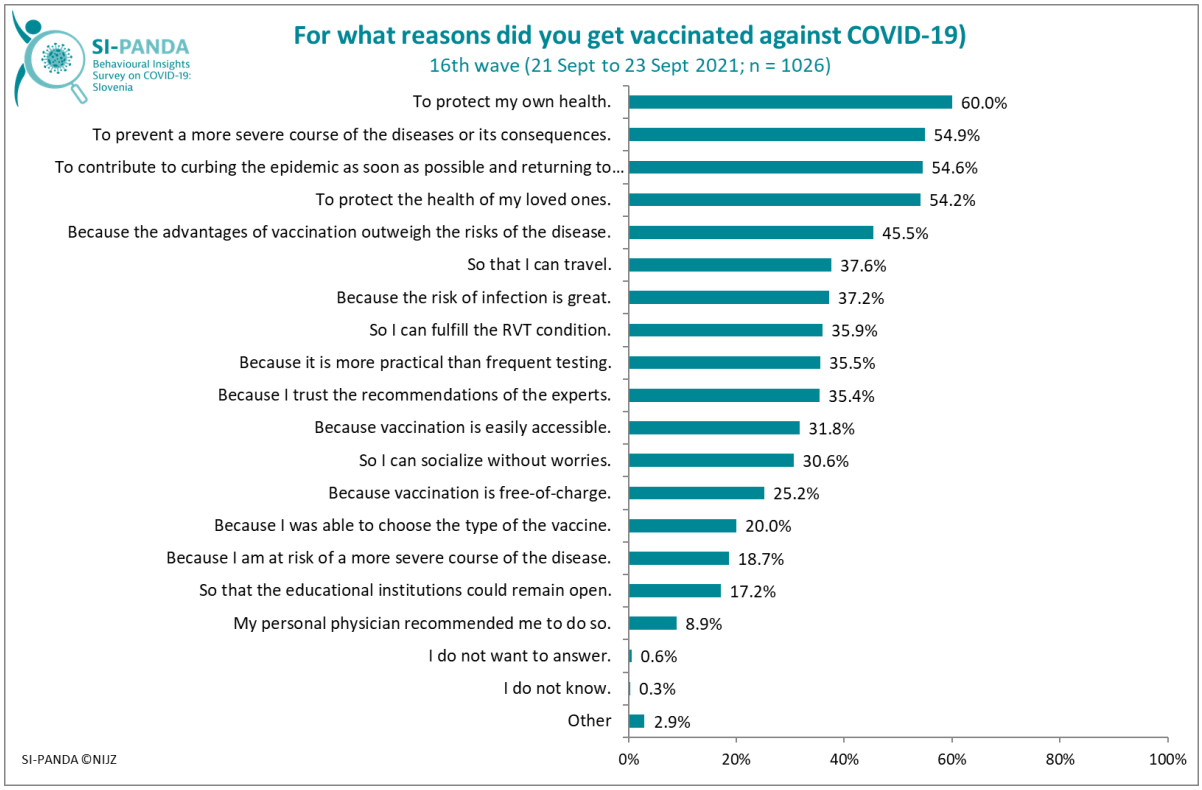

Figure 20: Reasons why the respondents decided to vaccinate, total.

Respondents are also asked throughout the survey whether they think that, in general, everybody should be vaccinated in accordance with the national vaccination programme (not vaccination against COVID-19 but other regular vaccinations). If we compare the respondents who have already been infected with the SARS-CoV-2 virus with those who have not yet been infected, the opinion of the latter fluctuates slightly around 50 percent throughout the survey. However, among those who have already been infected, there has been a decline from the 10th to the 12th wave of the survey in the agreement that, in general, everybody should be vaccinated in accordance with the national vaccination programme (the share has decreased by 16 percentage points); however, in the last three waves of the survey, the share is rising again and currently stands at 46.6% (Figure 21). At the time of the 10th wave of the survey, as already mentioned, a complete lockdown of the country was in force.

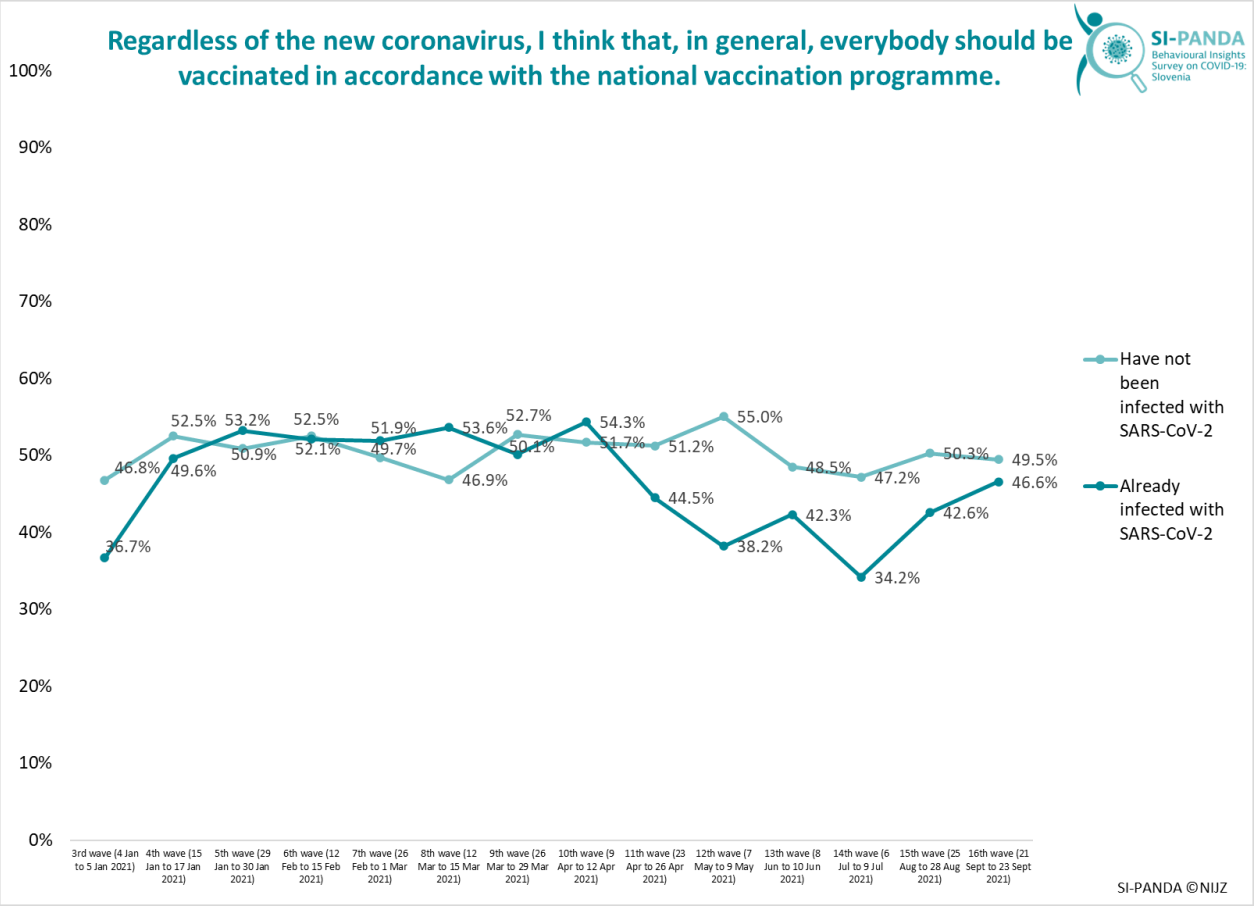

Figure 21: Opinion on whether, in general, everybody should be vaccinated in accordance with the national vaccination programme, by SARS-CoV-2 infection, total, and by survey waves.

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

In the 16th wave of the survey, 31.6% 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 49.1%. 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 were the least physically active (41.1%), avoided visiting a doctor due to a problem not related to SARS-CoV-2 virus (36.2%), ate more unhealthy food (32.7% of respondents aged 18 to 29), and drank more alcohol (12.2%) than before the pandemic (Figure 22).

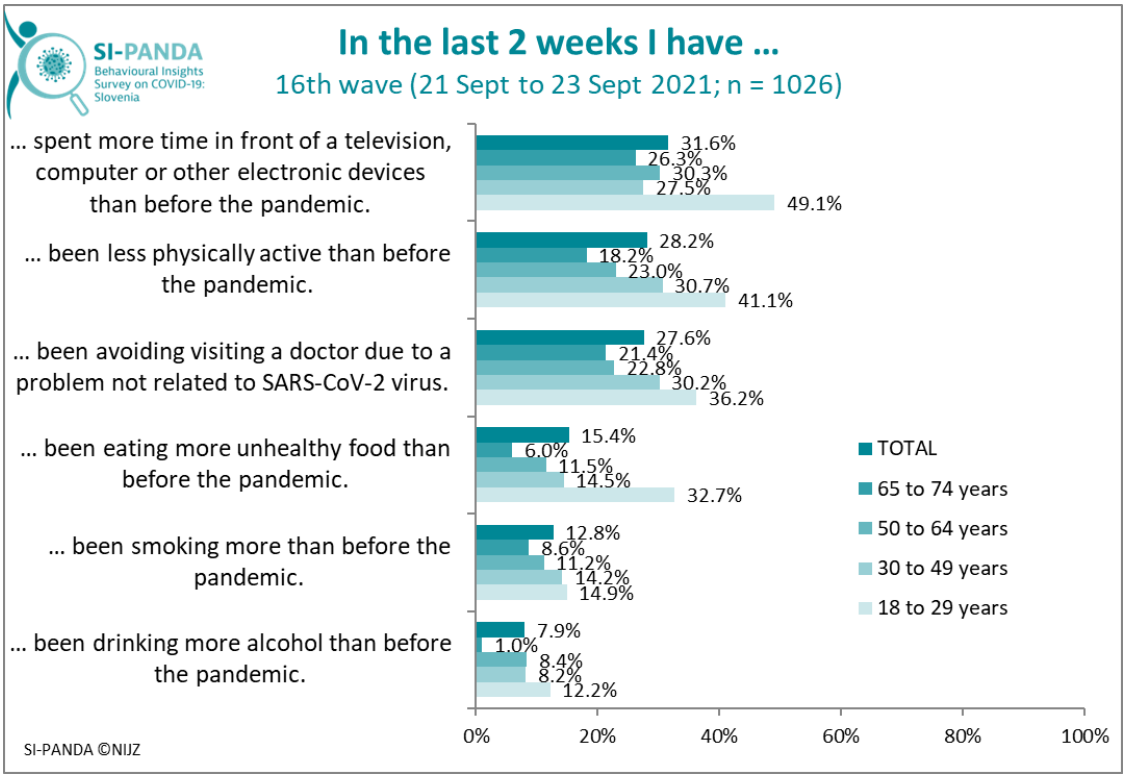

Figure 22: The impact of the pandemic on lifestyle in the past 2 weeks, total and by age groups.

If we compare all the waves of the survey, the lifestyle has improved the most in the field of physical activity – a decreasing share of people reported that they were less physically active in the last 2 weeks; the share decreased by 16.6 percentage points since the beginning of the survey.

Since the 13th wave of the survey onwards, we have also asked the respondents about the time spent in front of electronic devices – this factor is currently predominant in terms of deterioration compared to the time before the pandemic.

In the 16th wave of the survey, respondents were also asked about the impact of the pandemic on individual areas of life. As expected, the largest share (56.0%) 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 financial security (31.9%) and on physical activity (deterioration was reported by 28.0% of respondents) (Figure 23).

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 and this time also in the area of family relationships, which can be explained by the fact that they may have had more time for these activities and for their loved ones, because other activities, in which they would otherwise engage, were severely curtailed during the pandemic.

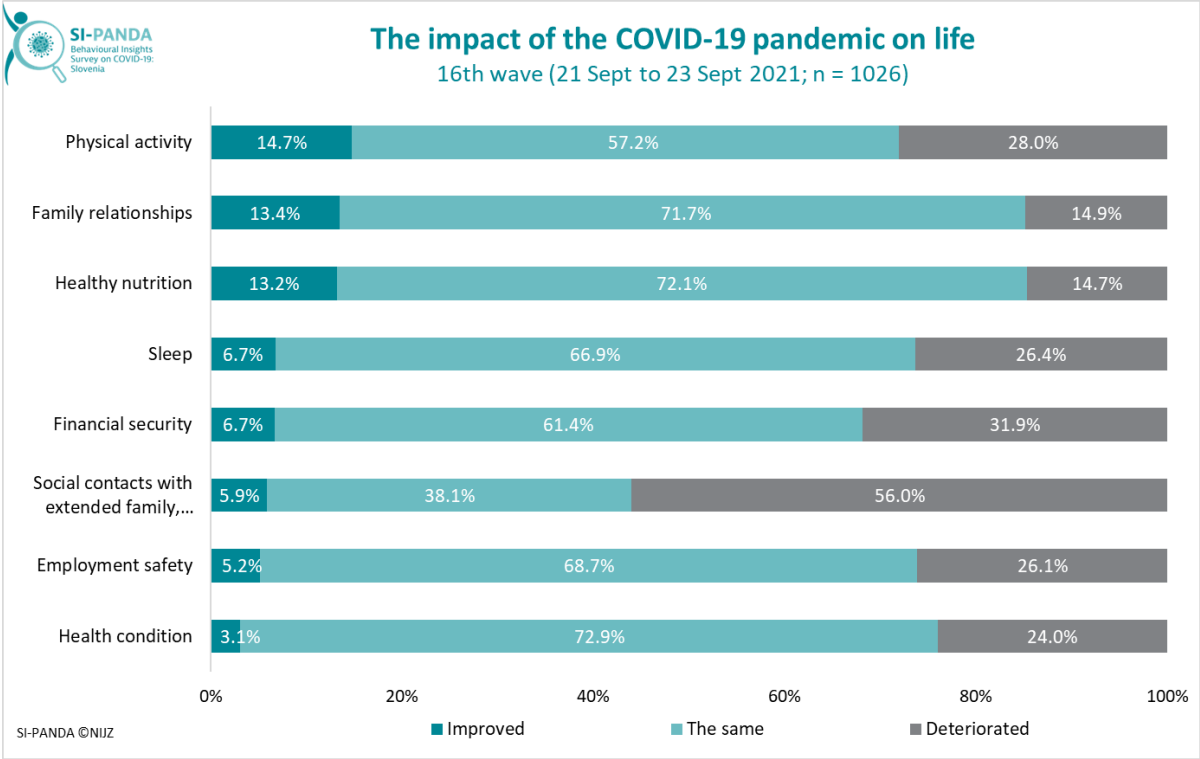

Figure 23: The impact of the COVID-19 pandemic on areas of life, total.

If we look at the impact of the pandemic on certain areas of life only in people without mental health problems, the deterioration of social contacts with extended family and friends stands out the most in this group of respondents also, as reported by 46.7% of persons (Figure 24). This was followed by a negative impact on financial security, which was reported by 22.6% of people without mental health problems.

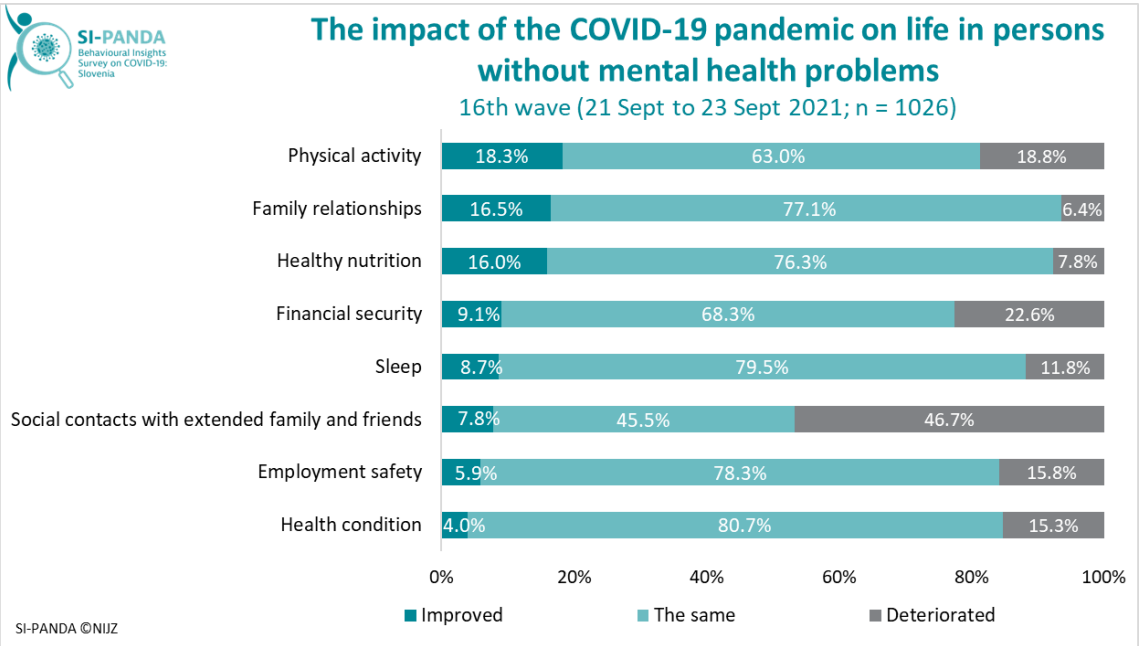

Figure 24: The impact of the COVID-19 pandemic on areas of life in persons without mental health problems, total.

Experiencing stress

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[4].

In the 16th 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. A quarter of respondents (24.8%) experienced stress daily or often, most often in the age group 18 to 29, where the share was 35.6% (Figure 25). The data is worrying, as this share has risen by almost 4 percentage points since the previous wave of the survey (Figure 26), and by almost 8 percentage points in the youngest age group. The frequency of experiencing stress decreases with age and is the lowest in the oldest age group, namely 6.7%. However, the distribution of frequencies by age groups remains approximately the same in all survey waves.

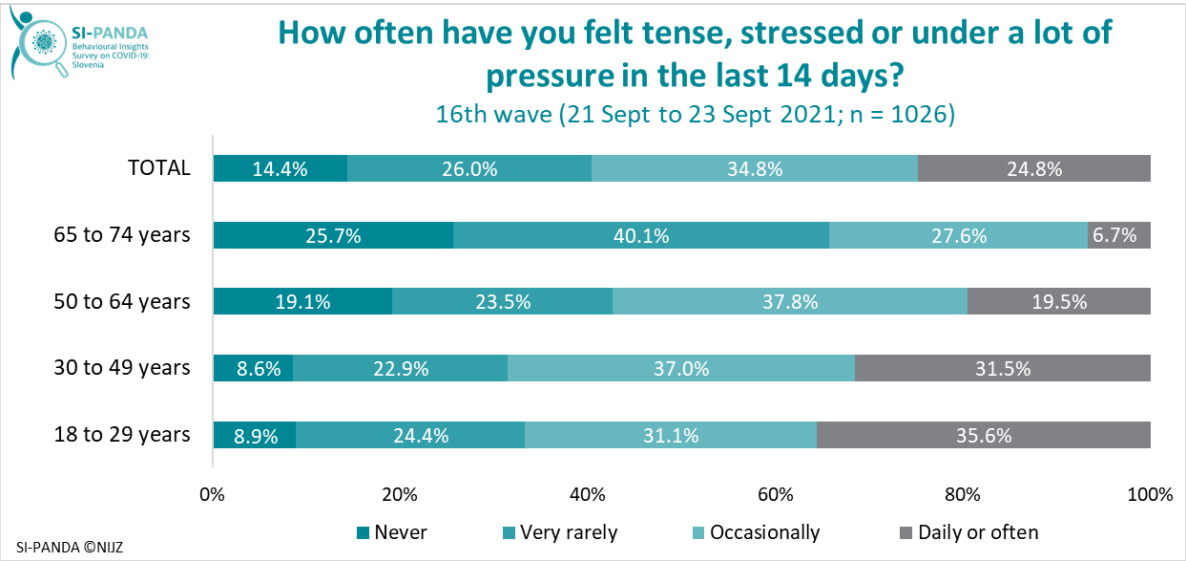

Figure 25: Frequency of experiencing stress in the last 14 days, total and by age groups.

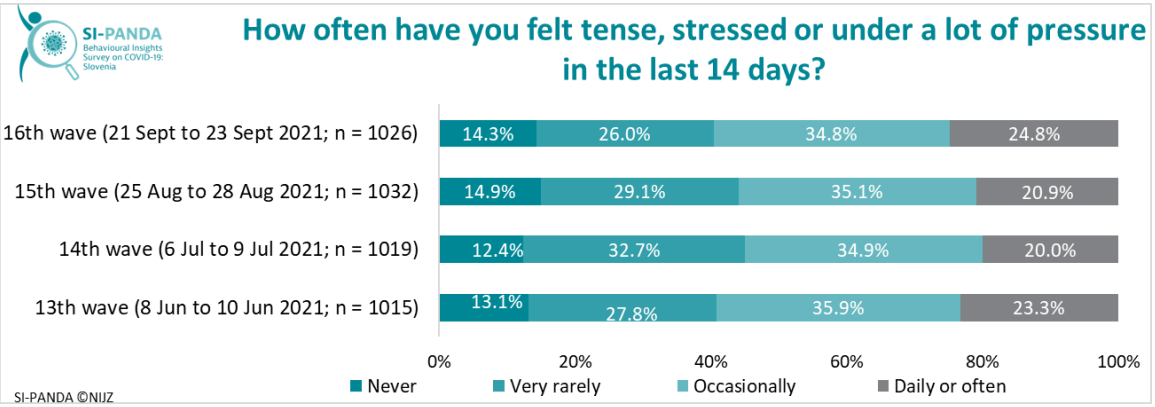

Figure 26: Frequency of experiencing stress in the last 14 days, total, 13th to 16th wave of the survey.

[4] (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 more often experienced by women, i.e., it is experienced daily or often by 29.5% of surveyed women and by 20.3% surveyed men. Similar results were obtained in the CINDI 2020 survey and in foreign studies[5].

Stress is, as expected, experienced more often by respondents who show signs of depressive disorder, namely by more than two thirds (68.5%) compared to those with mental health problems (39.9% experience stress daily or often) and those without mental health problems (only 9.9% experience stress often or daily) (Figure 27).

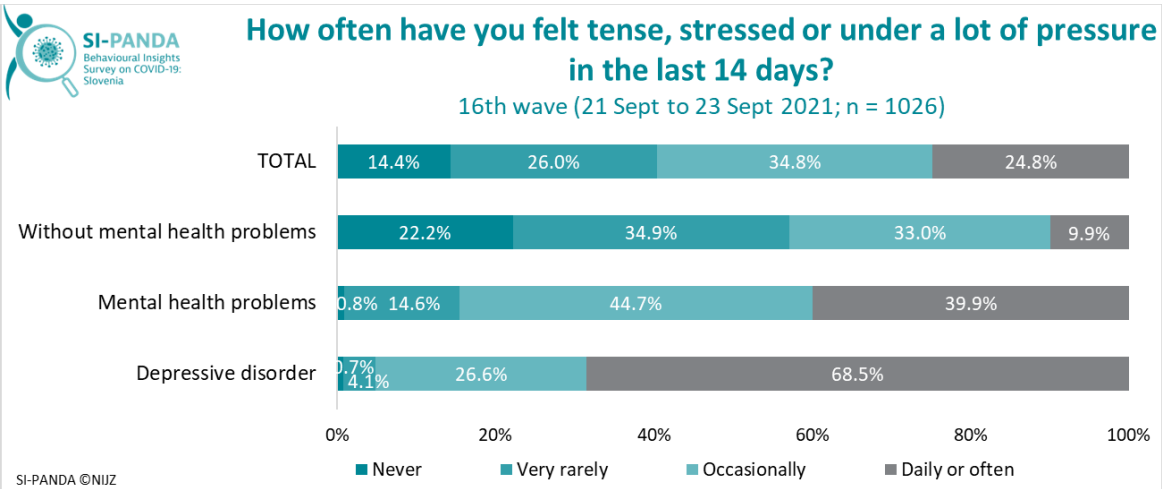

Figure 27: Frequency of experiencing stress in the last 14 days, total and by mental health problems.

Respondents cited workload as the most common reason for stress in the 15th and 16th waves of the survey (39.7% in 15th wave and 38.4% in the 16th wave). This is followed by concerns about untrue information about SARS-CoV-2 virus, which increased even more in the 16th wave (34.9% in the 15th wave and 37.1% in the 16th wave) and concerns about possible new restrictions and measures (35.0% in the 15th wave; and 36.0% in the 16th wave) (Figure 28).

[5] Kowal, M., Coll-Martín, T., Ikizer, G., Rasmussen, J., Eichel, K., Studzińska, A., Koszałkowska, K., Karwowski, M., Najmussaqib, A., Pankowski, D., Lieberoth, A. and Ahmed, O. (2020), Who is the Most Stressed During the COVID-19 Pandemic? Data From 26 Countries and Areas. Appl Psychol Health Well-Being, 12: 946-966. https://doi.org/10.1111/aphw.12234.

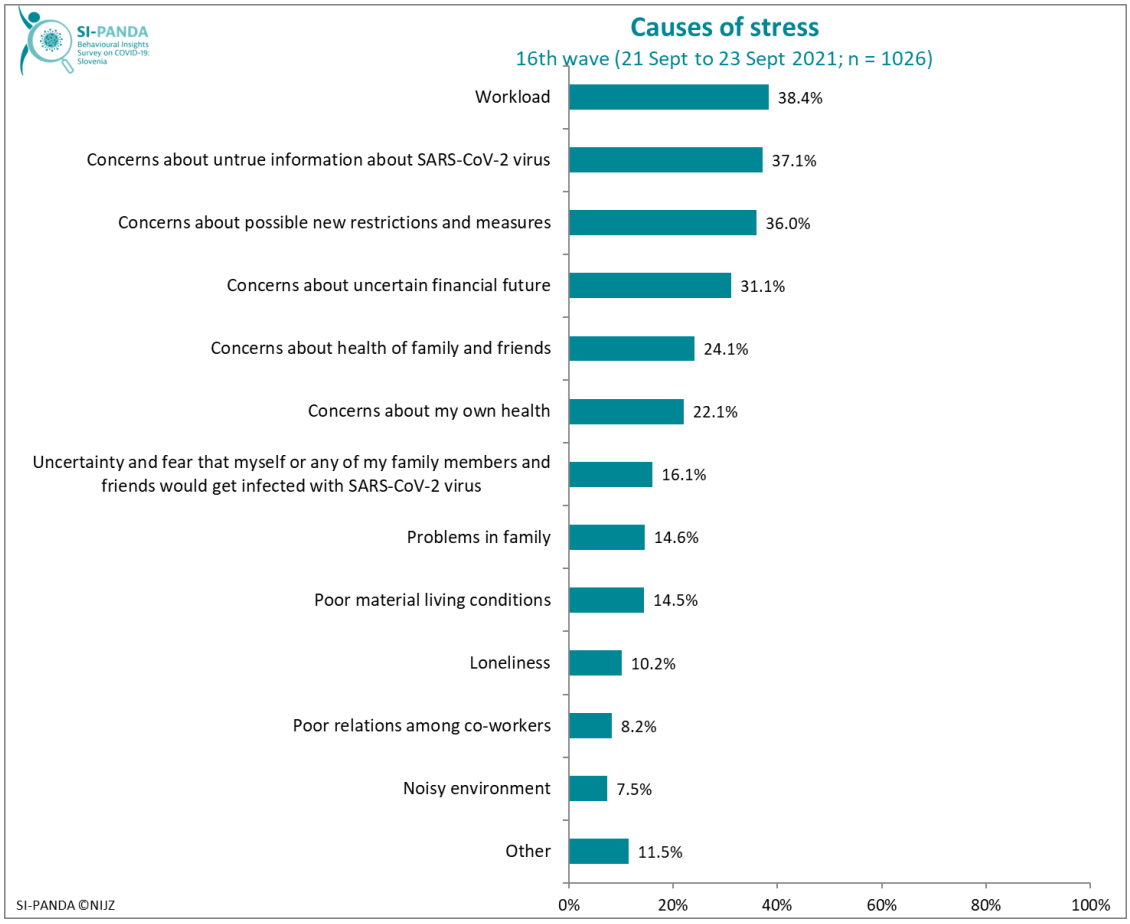

Figure 28: Causes of stress, total.

Loneliness was cited as a cause of stress by 10.2% of respondents, and the share is slightly lower among women in this wave compared to men (7.7% compared to 12.5%). The share of people concerned about loneliness has not changed significantly in the last three waves, but the youngest respondents (18 to 29 years) expressed the highest level of such concern, namely in 16th wave of the survey, one fifth of these respondents were concerned about loneliness. It is encouraging that the share of younger respondents (18-29 years) who are worried about loneliness decreased by 9.3 percentage points compared to the 15th wave of the survey.

The share of people who are concerned about untrue information about SARS-CoV-2 virus has been increasing steadily since the 13th wave of the survey, rising by 8.5 percentage points since the 13th wave. This share increased the most in the youngest age group of respondents, in which it is now more than 12 percentage points higher than in the 13th wave of the survey (Figure **29**).

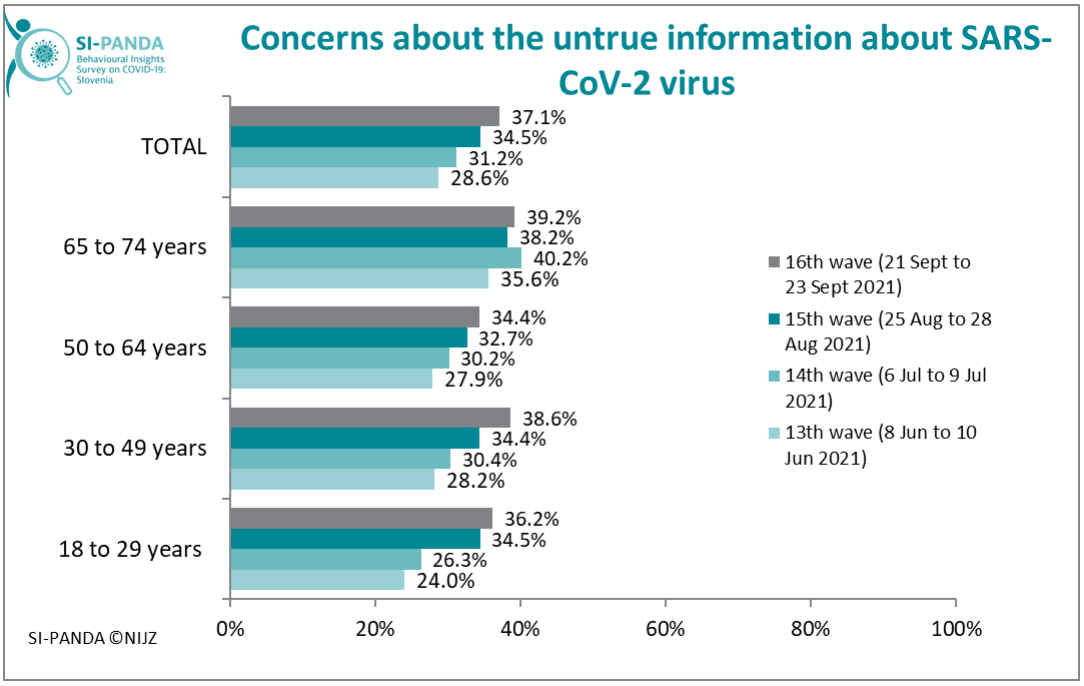

Figure 29: Concerns about the untrue information about SARS-CoV-2 virus, total and by age groups, by survey waves.

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 and poor relationships with co-workers; respondents with secondary and lower education were more likely to experience stress due to poor material conditions compared to more educated.

Most respondents (80.3%) managed tensions, stress and pressure easily or with some effort, 14.9% had major problems, and 4.7% had severe problems or did not manage stress. Respondents in 30-49 age group had more problems with stress management.

In the 16th wave of the survey, a good half of the respondents (54.4%) reported that they could always or often find a way to relax when they needed to, and 11.3% reported that this happened very rarely or never. In terms of mental health problems, those with signs of depressive disorder very rarely or never found a way to relax (31.1%), followed by those with mental health problems (13.3%) and those without mental health problems (6.4%) (Figure 30).

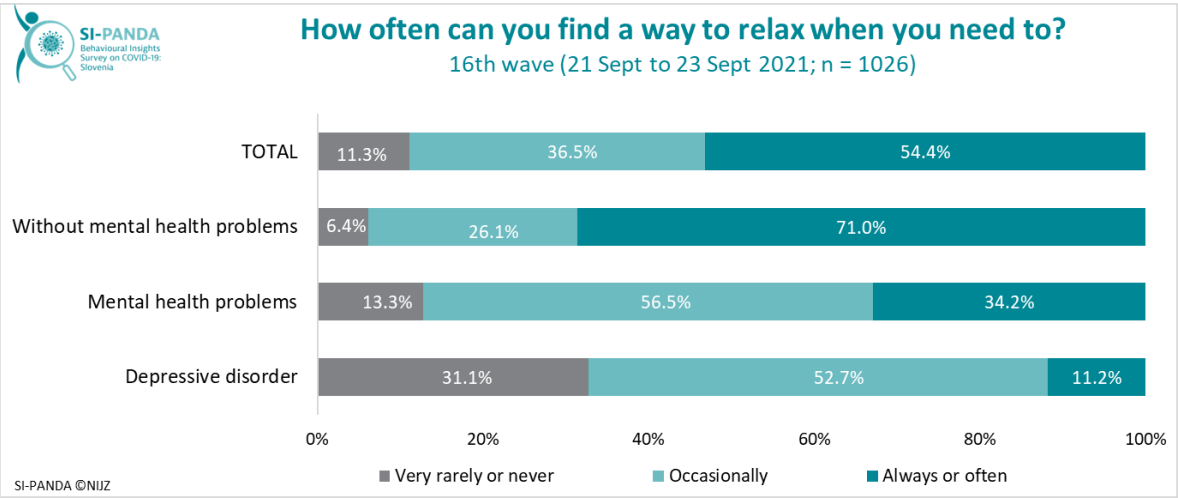

Figure 30: Frequency of relaxation, total and by mental health problems.

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[6]. 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.[7]

In the 16th wave of the survey, 21.9% of respondents report that they are or have been infected with the SARS-CoV-2 virus so far, of which 8.5% report that their infection was asymptomatic, 68.0% report that the course of the disease was mild, in 22.6% the course of the disease was more severe, but did not require hospital treatment, and 0.8% had been treated in the hospital. Respondents who are or have been infected with SARS-CoV-2 virus so far were asked from the 11th wave onwards 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[8]. 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 31).

We can find that in 16th wave most people (76.6%) 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; just under a third of respondents reported problems with the perception of taste and smell; around a fifth reported muscle and joint pains and problems with concentration and memory; and a fifth of respondents reported sleep disorders. Further they reported chest pains and shortness of breath, muscle and joint pains, unpleasant feelings of fear, sadness, heart palpitations, digestive problems, etc. (Figure 31). In all six 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.

[6] Brackel, CLH, Lap, CR, Buddingh, EP, et al. Pediatric long-COVID: An overlooked phenomenon? Pediatric Pulmonology. 2021; 56: 2495– 2502. https://doi.org/10.1002/ppul.25521.
[7] 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.
[8] 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.

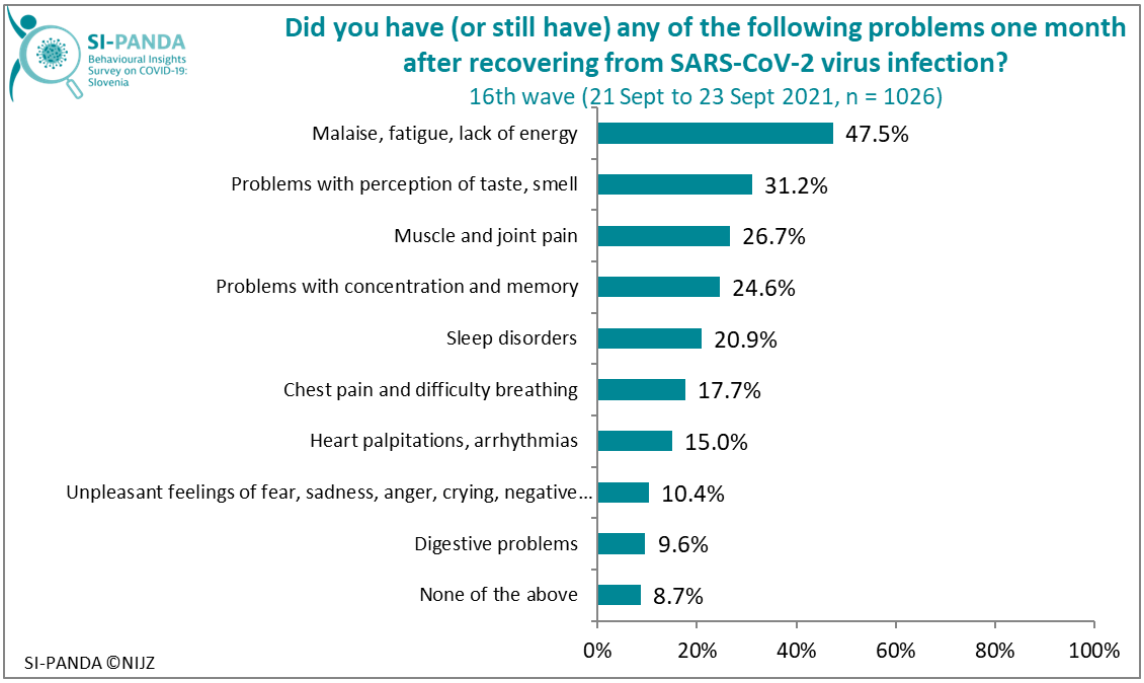

Figure 31: Health problems one month after the respondents had already recovered from SARS-CoV-2 virus infection, total.

Comparisons of the last five waves show that the share of people with one problem has risen by around 10 percentage points from the 11th to the 15th wave, while in the 16th wave it dropped to the lowest share so far (47.6%). The share of those with two problems in the 16th wave is 16.1% and has risen for four percentage points since the last wave of the survey. In the 16th wave, the share of people with three or four problems rose as well (Figure 32).

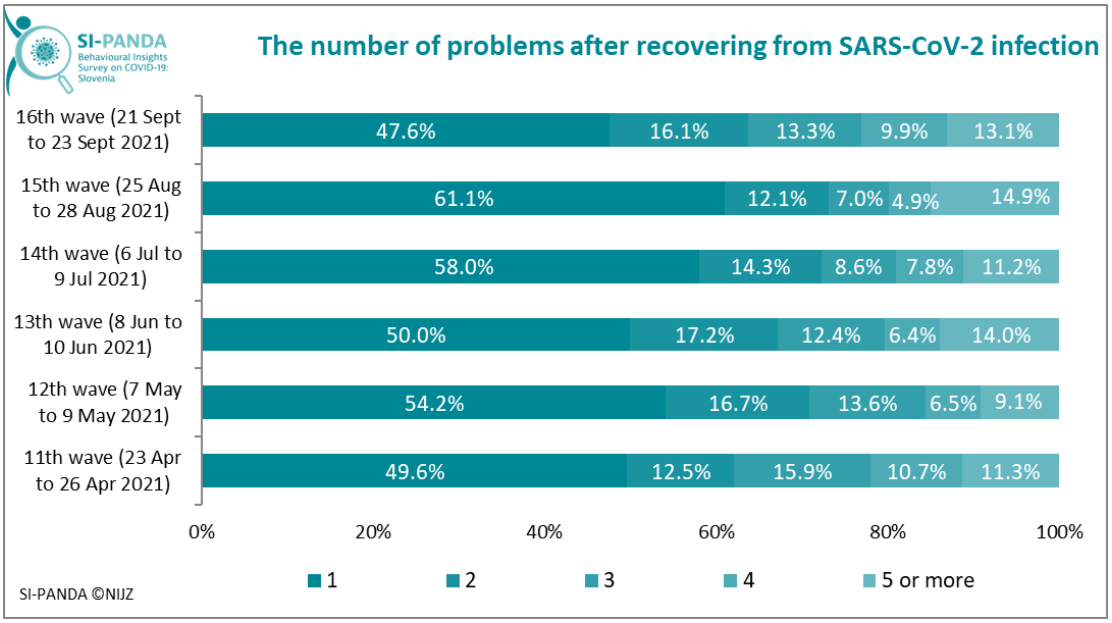

Figure 32: The number of problems after recovery from SARS-CoV-2 infection, by survey waves.

Surprisingly a large share of persons does not consult a doctor about problems after recovery from COVID-19. In the 16th wave there were 65% such respondents.

When asked how long the problems lasted after the recovery from infection, most of them (46.0%) answered that 3 months and more, a quarter (26.4%) answered that the problems lasted from 1 to 2 months and 27.6% answered that they lasted up to 1 month (Figure 33). Most respondents (74.7%) answered that the problems affected their work, caring for things at home and relationships with people; 24.3% stated that the problems had a great or an extreme impact on work, care for the home and relationships with people. These persons also consulted a doctor about these problems in the highest share. A quarter of recovered respondents (25.3%) reported that the problems did not affect their daily functioning.

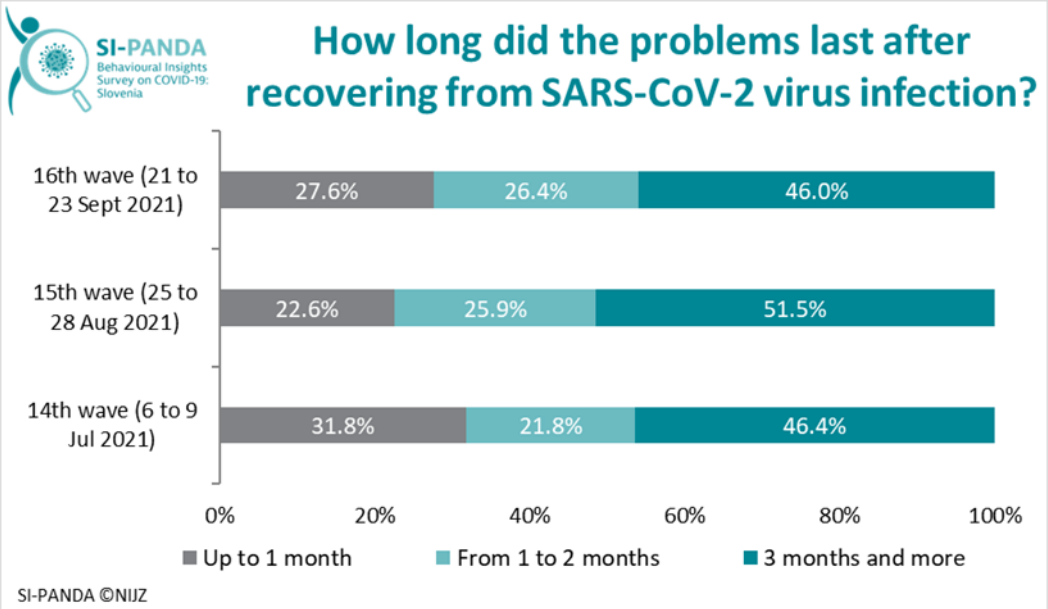

Figure 33: Duration of problems after recovering from SARS-CoV-2 virus infection, total 14th – 16th wave of the survey.

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 is currently not paying enough attention, namely from research and from clinical point of view. There is a lack of clear guidelines for the treatment of people with long COVID and their systematic monitoring.

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. 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 and probably not mentioned enough in the communication about the benefits of vaccination.

Highlighted topic of the 16th wave: Diet

More frequent consumption of sweet / fatty / salty snacks during the pandemic

A good tenth (10.6%) of respondents started eating sweet / fatty / salty snacks more often during the pandemic. As in the 7th wave of the survey, this time too it was shown that this habit is most present in the group of people with assessed depressive disorder (23.8%) and mental health problems (17.4%) and in the youngest age group of 18 to 29 years (16.8%). As expected, this share is also higher in the group of people with higher education or less (13.4%), and a higher share is also indicated in the group of those who are limited by the current RVT condition in food supply (16.7%), among employed or self-employed (12.9%) and in the group of lower social class (12.2%), which is probably related to the more difficult implementation of healthier diet.

Uncontrolled consumption of large amounts of food during the pandemic

The share of respondents who started consuming large amount of food uncontrollably during the pandemic fell to just over a tenth of respondents (10.2%) in the 16th wave, in contrast to the 7th wave of the survey, when the share was 14.4%. This habit is most present in the group of people with assessed depressive disorder (24.6%) and mental health problems (15.8%) and among the youngest adults in the age group 18 to 29 years (20.4%). It is particularly pronounced in the group of high school and university students (24.5%), but the estimate is less accurate. This habit is more pronounced in the group of persons who assessed their personal financial situation in the last three months before the day of the survey as worse (16.7%), and it is also indicated among persons who are restricted by the current RVT condition in food supply (14.6%). Nearly half (45.4%) of those who reported consuming large amounts of food uncontrollably during the pandemic reported a general deterioration in dietary habits during the COVID-19 pandemic.

Overall, when asked whether they had changed their dietary habits as a result of the pandemic, a large majority (72.3%) felt that they had not changed them. About one-seventh of them believe that they deteriorated their dietary habits during the pandemic (14.3%), and about the same share (13.5%) believe that they managed to improve their dietary habits. Dietary habits deteriorated the most in the group of people with assessed depressive disorder (35.0%) and mental health problems (19.5%) and in the youngest adults in the age group 18 to 29 years (26.9%). As expected, Dietary habits deteriorated more in the group of people who assessed their personal financial situation in the last three months before the day of the survey as worse (20.2%), in the group belonging to the lower social class (17.5%) and in the group of persons with higher education or less (16.8%). In contrast, during the pandemic, mainly those in the group who assessed their personal financial situation in the last three months before the day of the survey as better (24.0%) and people without mental health problems (14.7%) managed to improve their dietary habits. Improvement of dietary habits is also indicated in persons living alone (17.7%) and in those living in the western part of Slovenia (15.9%).

The impact of the pandemic on the verification of food labels

During the COVID-19 pandemic, a good third of respondents were more likely to pay attention to food composition when buying food (35.6%); more attention is indicated in women (almost two-fifths of women and slightly less than one-third of men). Given the change in diet during the

COVID-19 pandemic, the composition of food is mostly checked by people who have improved their habits (62.8%), and the least by people who have not changed their habits (29.9%). The origin of food is checked by almost half of the respondents (47.0%), and again there is an increase in activity in women, as half of them check the origin / provenance. The shelf life of the food, which is the most common among the three criteria for checking the suitability of food (54.0%), is most often checked by the elderly (almost 70% in the oldest age group).

The impact of individual pandemic-related altered circumstances on the changes in dietary habits

When asked which circumstances, in their opinion, had the greatest influence on the change in dietary habits, the respondents thought that the following contributed the most to this: the restriction of movement (59.6%), limited access to certain service activities (52.9%), burdens at workplace and at work / study from home (51.8%) and greater concern for one's own health (49.7%). According to the respondents, the smallest impact was due to changed circumstances, such as the changes due to health reasons (31.2%), changes due to the effects of COVID-19 (32.4%) and increased opportunities to deliver ready meals to home and buy groceries online (32.9%) (Figure **34**).

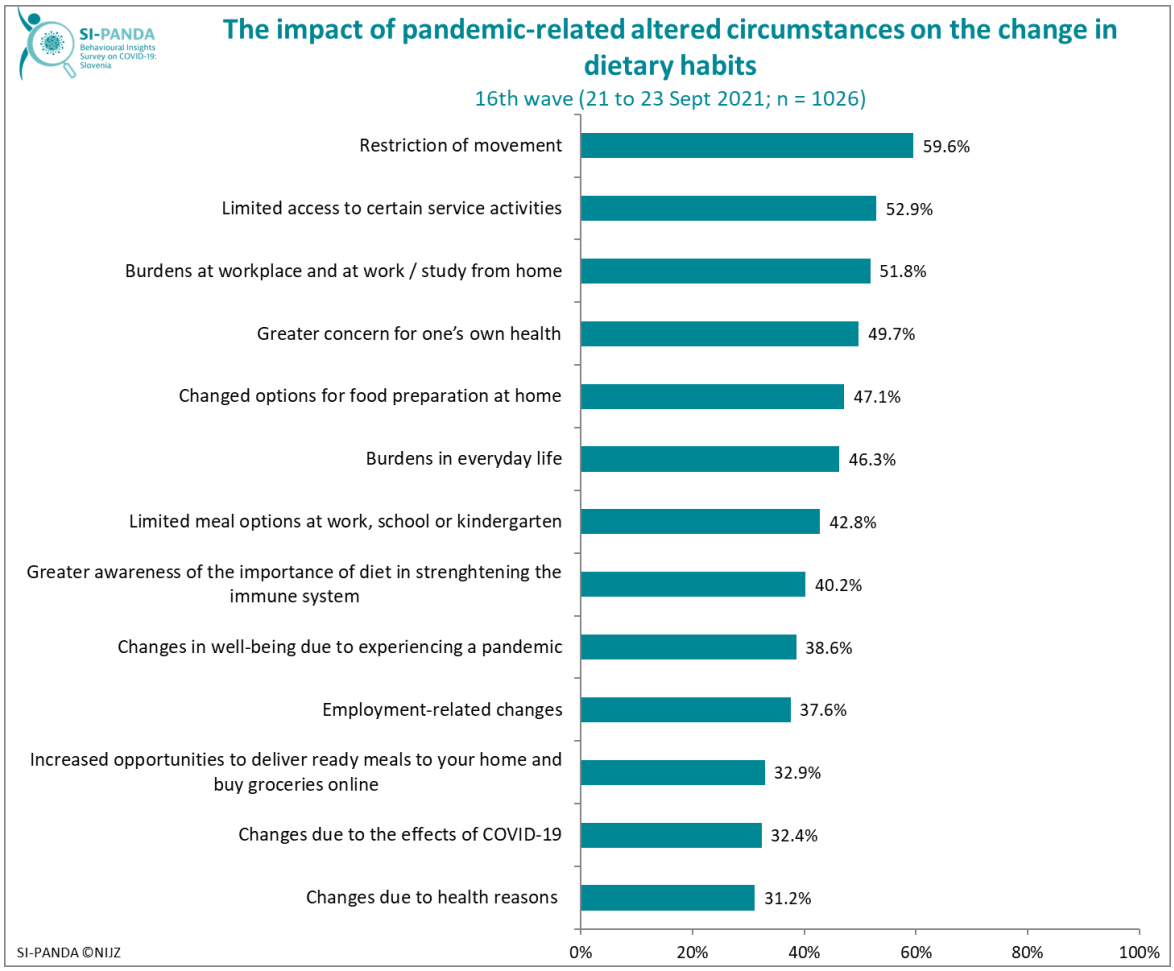

Figure 34: The impact of individual pandemic-related altered circumstances on the change in dietary habits, total

Food supplements

With the aim of improving the immune system during the COVID-19 pandemic, food supplements are more often used by women (38.1%) (Figure 35) and those with at least higher education (38.3%) (Figure 36), and it is also noticed among respondents living in the cohesion region of Western Slovenia.

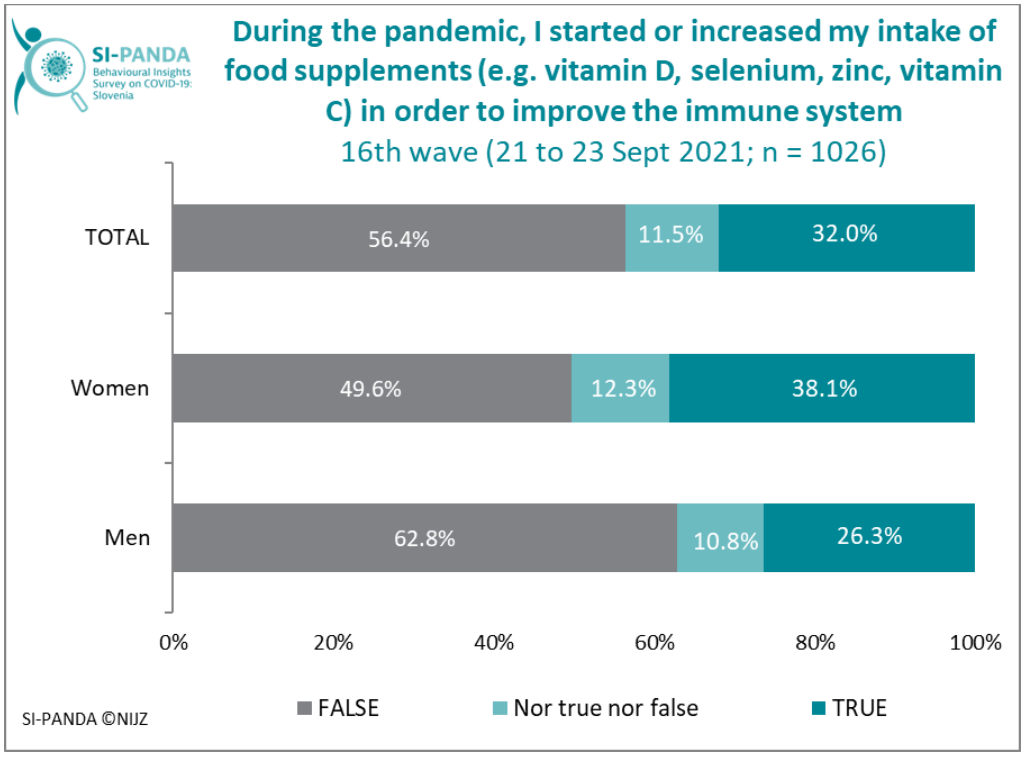

Figure 35: Increased intake of food supplements during the pandemic, total and by gender.

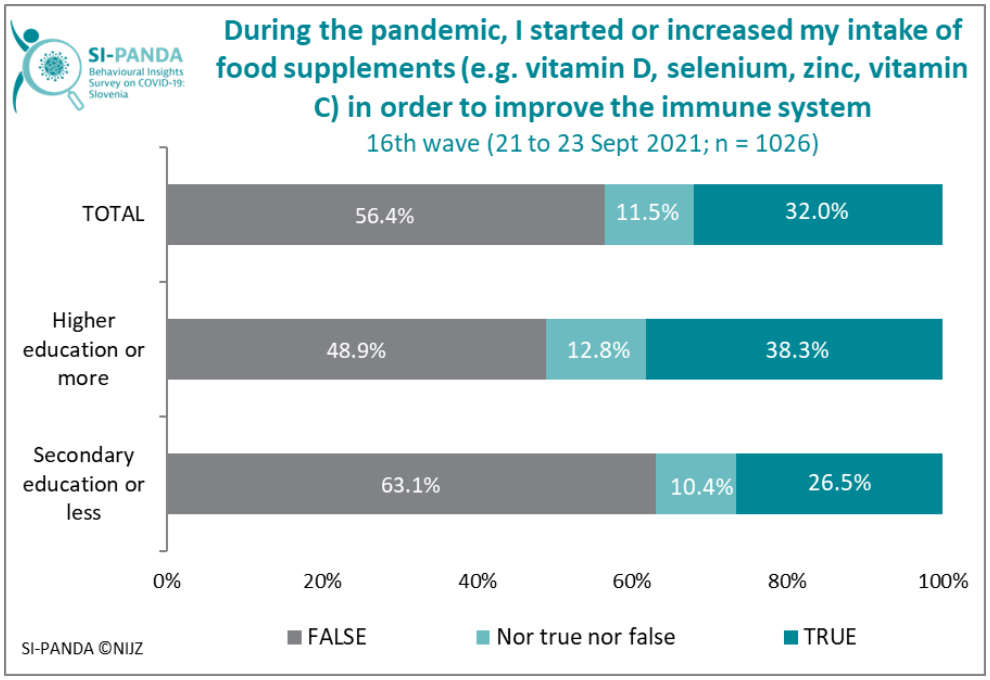

Figure 36: Increased intake of food supplements during the pandemic, total and by educational attainment.

Typically, however, it turned out that almost half (49.3%) of respondents who, in their opinion, improved their diet during the pandemic, increased or started taking supplements. 46.2% of respondents who improved their dietary habits during the COVID-19 pandemic perceived a higher number of advertisements for food and food supplements.

Perceived number of advertisements for food and food supplements

Approximately half of the respondents (52.3%) did not notice and increase in the number of advertisements for food and food supplements, however, a third of respondents (32.4%) perceived an increase in advertising. Mostly, this was perceived by women (37.4%). During this time, approximately the same share of respondents (32.0%) started or increased the intake of food supplements, which could be at least partially influenced by the perceived increased advertising of these products.

Dietary habits in families with children

Slightly more than a quarter of the surveyed parents / guardians (26.3%) reported that the dietary habits in their family improved during the COVID-19 pandemic, and slightly more than half (54.7%) reported that their children were more often involved in cooking, growing, processing and storing food. Children's daily meals included fruit (71%), vegetables (81.3%), milk, and dairy products (77.5%). A fifth of respondents answered that children missed school meals during their home schooling, and it appears that children whose parents / guardians have a high school education or less missed school meals more.

Eating in the workplace

In the 16th wave of the survey, we did not see a significant increase in bringing food to the workplace due to the COVID-19 pandemic. Only about a quarter of employees who performed their work at the workplace did so, and among them there are more women (31.7%) than men (18.3%). There is a difference between those with lower education (14.9%) and those with higher education level (9.5%). The share of those who started ordering food to their workplace due to the pandemic is even smaller (12.8%).

Food costs

38.3% of households reported that they had increased food costs during the COVID-19 pandemic, of which women reported higher food costs in their households more often (a good two fifths)[9]. Higher costs were more often reported in households where the respondents were individuals with a higher level of education (42.8%), compared to households with a respondent with a high school education or less (34.4%).

12.3% of households cannot financially afford a meat or equivalent vegetarian meal at least every other day, this is more often in households where the respondent had a high school education or less (16.9%), compared to the household of a respondent with a higher education or more (7.3%). It is also indicated that this is more often the case for households where persons with chronic

[9] It is reporting for the entire household, which makes it difficult to draw conclusions about statistical characteristics by gender.

diseases were the respondents. The inability to provide a meat or equivalent vegetarian meal due to financial reasons is particularly characteristic of households that reported a worsening of the financial situation (32.5%) (Figure 37), or households where the respondent has a mental disorder (23.1% (Figure 38).

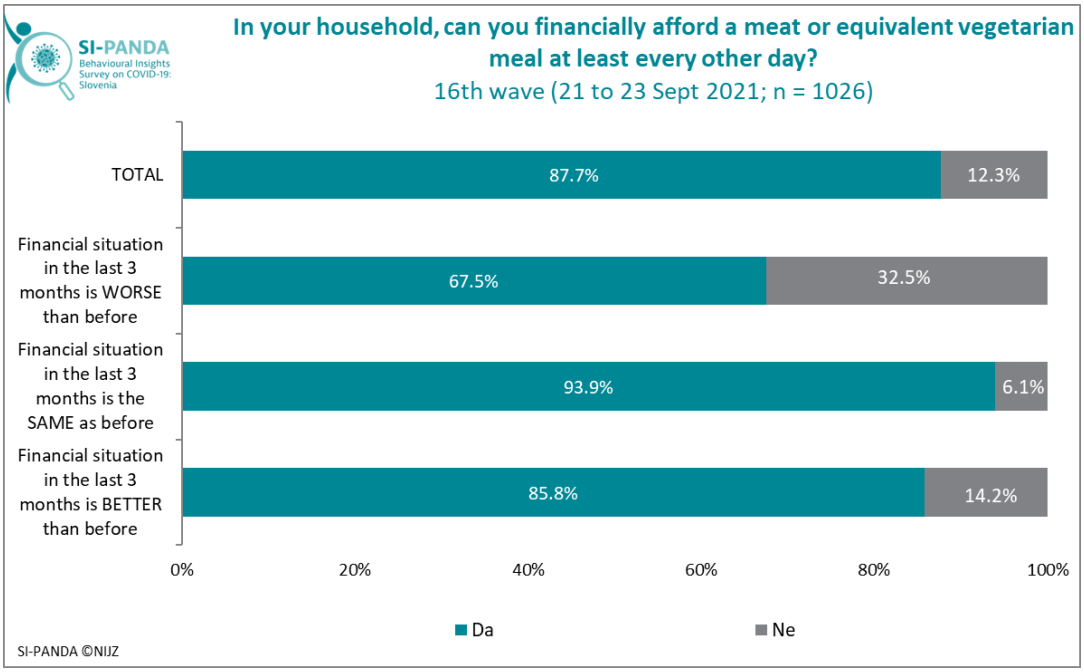

Figure 37: Financial ability of a protein meal at least every other day, total and by financial situation in the last 3 months.

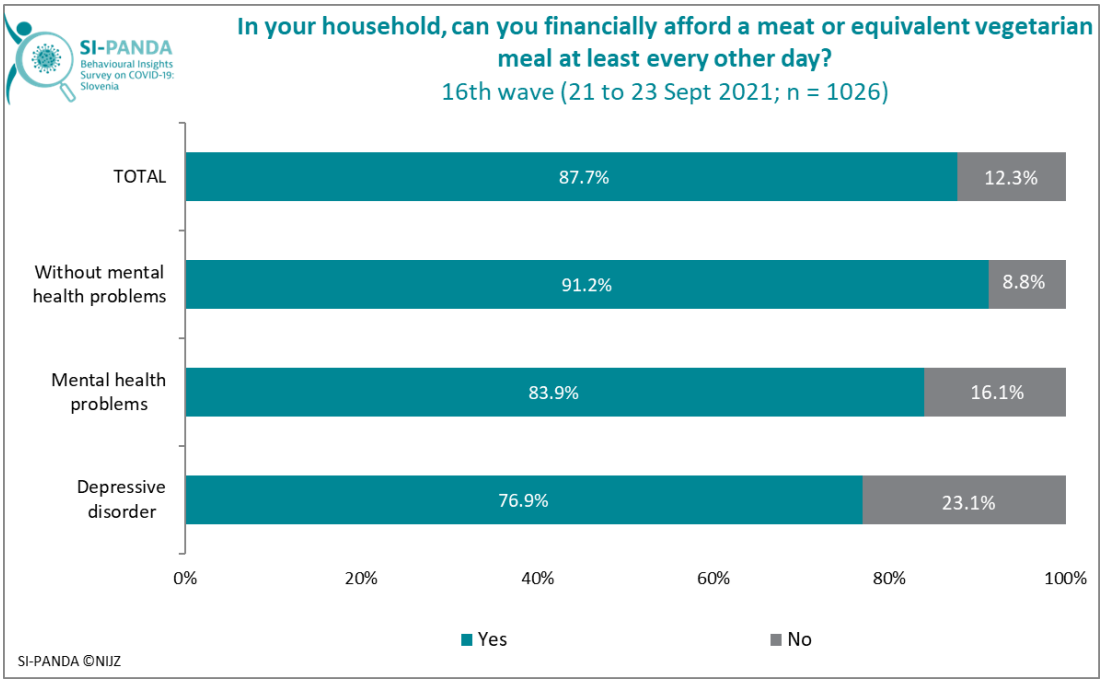

Figure 38: Financial ability of a protein meal at least every other day, total and by the presence of mental health problems.

RVT condition as an obstacle to purchase food

The RVT condition obstructs about a tenth of the respondents (11.5%) and partially another fifth (20.9%) when purchasing food. It more often completely or partially constructs younger people (about a third to two-fifths) than older people (a good fifth). It is indicated that it obstructs those with a high school education or less somewhat more, but it obstructs people with chronic diseases less. People who report mental health problems (37.9%) or depressive disorders (41.2%) are also more likely to be obstructed compared to people without mental health problems (28.3%).

Trust in nutrition and lifestyle information sources

Nearly half of the respondents (44.9%) believe that during the COVID-19 pandemic, there were not enough credible recommendations regarding healthy nutrition. The share of people who believe they have enough credible recommendations increases by age group, namely, the share in the 18 to 29 age group is 19.5% and then gradually increases to 47.2% in the 65 to 74 age group.

Respondents trust expert publications and recommendations in the field of healthy nutrition and lifestyle the most – the average trust on a 7-point scale is 4.2 (Figure 39). The result indicates the need to prepare additional recommendations or to improve the accessibility of those already prepared.

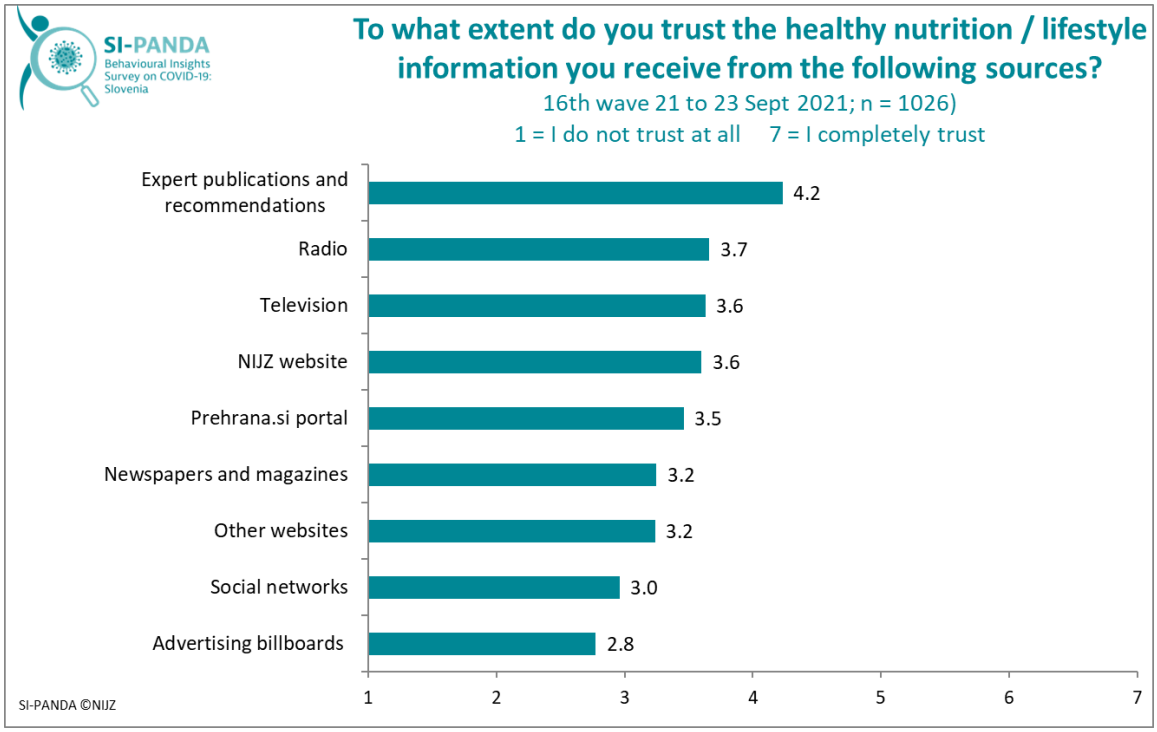

Figure 39: Trust in sources of information regarding healthy nutrition and lifestyle, total.

This is followed by trust in information on radio (3.7), television and the NIJZ website (3.6) and the Prehrana.si portal (3.5). The results thus show approximately the same level of trust in official professional websites compared to information on television. Trust in social networks (3.0), where one can find a lot of professionally inappropriate information, is second to last, and billboards are in last place with an average of 2.8. Taken as a whole, the values of confidence in the given

options are low, and official verified sources do not deviate significantly from other sources of information in this case.

The results show that the respondents trust information obtained through personal contacts to a greater extent than publicly available information. Respondents trust health professionals (average 4.3) and relatives (4.3) and friends (4.3) to the same extent.

Body mass

When asked about body mass gain during the pandemic, the majority (57.3%) of people answered that only this remained the same, but as many as 25.6% of respondents reported body mass gain (27.3% of women and 24.3% of men). Body mass gain is more often reported in the 30 to 49 (28.2%) and 18 to 29 (27.8%) age groups. It appears that people from urban areas (29.6%) and those with chronic diseases (29.3%) reported body mass gain more. Again, it was indicated that the greatest burden of the increase in obesity is observed in the group of people with mental health problems (35.8%) and in people with a depressive disorder (42.4%).

People attribute the reason for gaining extra body mass during the pandemic to a too low level of physical activity or a sedentary lifestyle (77.2%), stress (57.3%), unhealthy nutrition (42.9%) and only to a lesser extent (22.6%) to health condition or medication.

87.3% of women and 75-1% of men who gained body mass during the pandemic decided to loose body mass. Among the persons who are concerned about their gained body mass and want to normalize it, there are mainly people with a higher level of education (87.8%). Among the reasons with which the respondents lost body mass or decided to reduce it, they mainly cite more physical activity (71.3%), healthier nutrition (58.5%) and stress (19.0%) (Figure 40). Among the options listed, 7.3% decide to visit a fitness centre or hire a personal trainer, 6.9% mention nutritional supplements intended for weight loss, and 5.4% a special strict diet (e.g. LCHF). 10.5% of the respondents reported that their weight had decreased or they expected it to decrease due to their health condition or due to medication, and only 3% by joining the obesity treatment programme, which is carried out in health care centres. The reason for the latter is probably also the greatly reduced functioning of the aforementioned programmes due to government decrees that limit preventive activities in the field of adults in the healthcare system at the primary health care level.

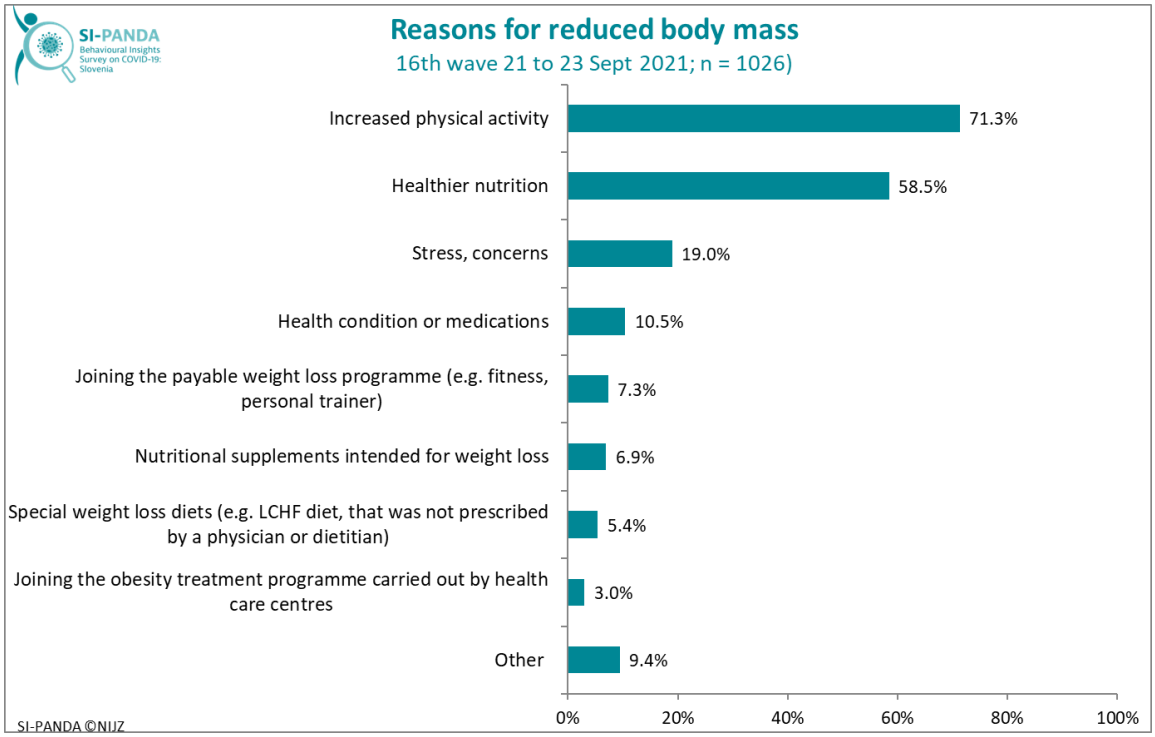

Figure 40: Reasons for body mass loss among respondents who reported that they reduced their body mass during the pandemic, total.

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