

Is there Anything Good about the COVID-19 Pandemic? Perceptions of the Positive Consequences at the Beginning of the Pandemic

Marina Ajduković¹, Ines Rezo Bagarić¹, and Dean Ajduković²

¹ University of Zagreb, Faculty of Law, Department of Social Work, Zagreb, Croatia

² University of Zagreb, Faculty of Humanities and Social Sciences, Department of Psychology, Zagreb, Croatia

Abstract

The aim of this paper was to investigate the experience of possible positive consequences of the COVID-19 pandemic and their connection with indicators of mental health and well-being, and to identify themes by which people describe the positive consequences of the pandemic. As part of a broader longitudinal project, participants completed a comprehensive online survey on various aspects of the pandemic. This paper presents the results obtained from 1,201 adult participants (50.1% women) on a quantitative measure of the experienced positive consequences, and on the qualitative answers to an open question about the positive aspects of the pandemic. The quantitative measure was created for the purposes of this research. Measures of sociodemographic factors, mental health (DASS-21) and well-being (WHO-5) were also used. The results show that participants experience positive consequences of the COVID-19 pandemic through three factors: Awareness of life values, More time for oneself, and New job opportunities. Awareness of life values was ranked as the most important, then More time for oneself, and finally New job opportunities. Participants who were more aware of these three aspects of the positive effects of COVID-19 also showed significantly greater subjective well-being and resilience, while associations with depression, anxiety, and stress were negligible or low. Women were more aware of changes in their life values than men, while men had a greater experience of new job opportunities. The results of the qualitative responses show that 83.4% of participants recognised some form of positive consequences of the pandemic on their lives, on the lives of other people, and on society. Analyses revealed seven themes: better family relationships, reflection and personal growth, social well-being, digitalisation of work and education, improved personal life, environmental effects, and competent pandemic management. Together, the results point to the importance of thinking about and exploring positive consequences of crisis events in the context of individual resilience and well-being.

Keywords: positive consequences, COVID-19 pandemic, mental health, well-being

✉ Marina Ajduković, Department of Social Work, Faculty of Law, University of Zagreb, Nazorova 51, 10000 Zagreb, Croatia. E-mail: marina.ajdukovic@pravo.hr

Introduction

From the very beginning of the COVID-19 pandemic, in addition to caring for life and physical health, relevant international organisations have emphasised the risk of this health crisis on mental health and the need to take care to preserve psychological well-being. Based on the experience of previous pandemics during which increased rates of stress and anxiety were identified, as early as on 18 March 2020 the World Health Organization (WHO) published a document "Mental health and psychosocial considerations during the COVID-19 outbreak" in which it stressed the importance of mental health care. It warned that the introduction of new measures to stop the pandemic – especially quarantine and its psychosocial effects on limiting the normal activities, routines, social contacts and livelihoods of many people – was expected to increase loneliness, depression, alcohol and drug use and self-harm or suicidal behaviours (WHO, 2020a).

The day before (17 March 2020), the Inter-Agency Standing Committee (IASC)¹ published recommendations "Addressing mental health and psychosocial aspects of the COVID-19 outbreak" which summarised key guidelines on mental health care and psychosocial support regarding the new coronavirus. It emphasised that integrating mental health care and psychosocial aspects should be an integral part of all activities in response to the pandemic. It also pointed out that there was a need to address possible barriers to women's and girls' access to psychosocial support services during the pandemic, especially those who are exposed to violence or who may be at risk of violence.

In May 2020, the WHO warned of the importance of systematic mental health care and the provision of psychosocial support to vulnerable groups, including health workers and other front-line helpers, migrants and refugees, women and children exposed to abuse or violence, and people with pre-existing mental or physical health problems or disabilities. The document warned that while there was much uncertainty about how the pandemic would develop, the impact on the mental and psychosocial well-being of those most affected and their communities would be large and lasting (WHO, 2020b).

As these anticipated effects of the COVID-19 pandemic on mental health soon became apparent, the scientific community around the world quickly mobilised, which resulted in numerous scientific and professional papers on the effects of the COVID-19 pandemic on mental health. Numerous studies around the world and in Croatia have confirmed that the concerns about the mental health of the population are justified. We will list only the most important of these studies, with special emphasis on Croatian research. Given the long duration and dynamics of the

¹ The Inter-Agency Standing Committee (IASC) is a unique inter-agency forum for coordination, policy development and decision-making involving key UN and non-UN humanitarian partners.

COVID-19 pandemic and the differences in epidemiological constraints at different stages, we will primarily focus on examining its effects on mental health in the initial phase of the pandemic outbreak.

Research conducted in different countries has consistently shown that in the first phase of the pandemic, which in all countries was marked by lockdown and very rigorous measures that radically changed the way of life, there was increased depression, anxiety and stress (e.g., Necho et al., 2021; Ozamiz-Etxebarria et al., 2020; Parola et al., 2020). In some studies, an increase in the symptoms of trauma and stress-related disorders was also reported (Lotzin et al., 2021; Pieh et al., 2020). The first more complex analyses, as well as somewhat later meta-analyses, showed that the adverse effects of the COVID-19 pandemic particularly affected women, young people (<35 years), singles, the unemployed and people on low income (e.g. Al Dhaheri et al., 2021; Kolakowsky-Hayner et al., 2021; Pieh et al., 2020).

The First Croatian Studies on the Effects of the COVID-19 Pandemic on Mental Health

Croatian mental health professionals were quick to respond to the expected mental health challenges by providing practical advice on how to deal better with pandemic-related stressors, for different age groups, and for different areas of life. This is summarised in the online handbook "Coronavirus and Mental Health" (Bogdan, 2020).

In this paper, we distinguish between *open online research* from online research conducted with probability samples. We consider *open online research* as data collection involving the sending of an invitation to participate in a survey, with a link to a questionnaire, to a wide and unknown group of potential respondents, e.g., through popular daily newspapers, Facebook profiles and various online groups. In such research, participants are often invited to share the link with their acquaintances or online groups of which they are members or which they know. As stated by Krajewski et al. (2021), the way the questionnaire is distributed affects the structure of the sample. Research practice has shown that women, highly educated participants, and participants from more urban areas are significantly more represented in such studies.

The first extensive open online study on psychological reactions and coping with the COVID-19 pandemic was conducted during the lockdown in April 2020 (Margetić et al., 2021). It was found, using the DASS-21 questionnaire (Lovibond & Lovibond, 1995) on a large convenience sample ($N = 2,860$) dominated by highly educated women (80.6%), that 15.9% of participants showed severe and very severe levels of depression, 10.5% had severe and very severe levels of anxiety, and 26.2% had severe and very severe levels of stress, which might indicate the development of clinically significant disorders (Lovibond & Lovibond, 1995). Based on their findings, the authors stressed that promoting active coping styles and social

interactions can be preventative and curative in the general population to help them maintain mental health.

This was followed by an extensive open online survey of the psychological status of individuals in May 2020, which was accessed by more than 3,500 people, immediately after the lockdown restrictions were lifted (Jokić Begić et al., 2020). Here, 17.8% of participants expressed a serious and very serious level of depression, 17.4% a serious and very serious level of anxiety and 19.1% a serious and very serious level of stress. This research team repeated the study in December 2020 during the peak of the 2nd wave of the pandemic. It turned out that there was a deterioration in mental health and that as many as 24% of participants showed serious and very serious levels of depression, 23% serious and very serious levels of anxiety, and 25% serious and very serious levels of stress (Jokić Begić et al., 2021). This survey was also dominated by women (81%), most of whom were highly educated and lived in Zagreb. It was shown that women, singles, and people in poorer economic conditions were at greatest risk of developing mental health issues (Jokić Begić et al., 2020).

At the beginning of July 2020, a longitudinal study "Psychological adaptation and coping during the coronavirus pandemic" was launched by a team gathered around the Croatian Society for Traumatic Stress, which was conducted over 18 months at four time points (Ajduković et al., 2021b). In this online probability survey ($N = 1,201$) the sample included an equal share of men and women (50%), and their educational structure and regional affiliation were representative of Croatia. The findings related to monitoring mental health at three time points have so far been presented only at scientific meetings of psychologists. At the first time point of the study (July 2020), 7.7% of participants reported severe and very severe levels of depression, 7.8% had severe and very severe levels of anxiety, and 7.2% had severe and very severe levels of stress. A repeated study in December 2020 (the peak of the 2nd wave of the pandemic) showed a statistically significant, but not a dramatic deterioration in mental health indicators, with small effect size ($t_{\text{depression}} = -3.542$, $p < .001$, $d = 0.15$; $t_{\text{anxiety}} = -3.425$, $p < .001$, $d = 0.15$; $t_{\text{stress}} = -3.011$, $p = .003$, $d = 0.13$). At that time, 9.7% of participants showed a serious and very serious level of depression, 10.1% severe and very severe levels of anxiety and 8.2% severe and very severe levels of stress. Seven months later (July 2021), there was a decrease in the proportion of the population whose mental health was severely or very severely affected by the effects of the COVID-19 pandemic, compared to the second point, again with small effect size ($t_{\text{depression}} = 2.263$, $p = .024$, $d = 0.09$; $t_{\text{anxiety}} = 0.505$, $p = .614$, $d = 0.02$; $t_{\text{stress}} = 1.130$, $p = .259$, $d = 0.05$). The first time point of the study showed that people with an earlier mental health diagnosis, people who assessed their health condition as at risk, people with below-average income and who followed the news for more than two hours a day were at higher risk. At the same time, psychological resilience was shown to be a protective factor (Ajduković et al., 2021a). Although younger people (18 to 25 years old) showed more psychological

difficulties due to the COVID-19 pandemic, they also showed more flexibility in adapting to new conditions (Bakić, 2021).

In September 2020, a study was launched under the title "(Re)building society: Longitudinal research of social recovery after the coronavirus in the general population of Croatia" which monitored changes in the social and mental health of the nation at three measurement points (September 2020, January and September 2021). The research was conducted online on a national probability sample ($N = 1060$). In terms of mental health, the research indicated that most people coped relatively well with the coronavirus crisis, with about one-fifth of participants experiencing more pronounced emotional coping difficulties with the changes brought about by the pandemic (Čorkalo Biruški et al., 2020). According to the authors, through three waves of research there were minor changes in the level of emotional difficulties - at the first two measurement points they were equal, and at the third point the emotional difficulties have decreased ($F = 10.00$, $df = 2.1732$; $p < .01$; $\eta^2 = .01$; $M1 = 1.41$, $SD1 = 0.69$; $M2 = 1.45$, $SD2 = 0.70$; $M3 = 1.36$, $SD3 = 0.69$). According to Čorkalo Biruški et al. (2021, p. 12), this indicates resilience and successful adaptation to long-term pandemic circumstances. In this study, women, those with the poorest education, and individuals with below-average living standards were at higher risk of mental health issues.

This is just some of the most significant research conducted or initiated in the first phase of the pandemic. Regardless of the differences in samples, incidence in mental health indicators, often measured by the same instrument DASS-21 (Ajduković et al., 2021a; Jokić Begić et al., 2020; Margetić et al., 2021), the research shows that COVID-19 had and still has unfavourable effects on the mental health of the population. The most vulnerable groups are women, people at a younger age, people of poorer physical health, those who have previously had mental health problems, people of lower economic status and those with a lower level of education, which is in line with the findings of the previously described international research.

All these studies point to the need for systematic and well-considered public health interventions aimed at the general population, but also targeted interventions for at-risk groups. The fact that lower rates of at-risk mental health seem to emerge fairly soon after quarantine restrictions are lifted and when there is a decrease in numbers of infected individuals, indicates resilience in periods of peril (Ajduković et al., 2021b; Čorkalo Biruški et al., 2021). The importance of resilience is also indicated by the findings of the Pačić-Turk et al. study (2020), which was also conducted in the early phase of the pandemic (15 May to 15 June 2020) through an open online survey which focused on health care workers – doctors and nurses who were working directly with people with COVID-19. Resilience has been shown to be a major predictor of stress, anxiety and depression in health care professionals, i.e. the more psychologically resilient health care professionals were less stressed, less anxious and less depressed. All these findings suggest that factors that promote resilience need to be better explored to deal effectively in this long-running crisis.

One resilience factor may be recognising the positive effects of the COVID-19 pandemic.

Perceptions of the Positive Effects of the COVID-19 Pandemic as a Factor in Mental Health Protection

Studies of the positive effects of the COVID-19 pandemic are rare, and the perception of such effects as a factor in mental health is only modestly appearing in research. This is usually done by posing open-ended questions about the positive and negative effects of pandemics as part of more extensive surveys (e.g. Krajewski et al., 2021; Zrnić Novaković et al., 2022). This neglect of looking for positive outcomes is surprising, given that the meta-analysis of 87 studies conducted before the COVID-19 pandemic showed that finding beneficial outcomes in stressful situations was associated with lower depression and better psychological well-being (Helgeson et al., 2006).

One of the first studies that included the positive aspects of the COVID-19 pandemic was conducted in Poland in early April 2020 (Krajewski et al., 2021). It was an open online survey in which mostly women (74.6%), residents of the largest cities and people with higher education (90.1%) participated. Positive aspects of the pandemic were recognised by 65.5% of participants. They identified nine themes with different frequency of responses: more quality time for close people (28.6%), slowing down the pace of life (26.3%), other personal benefits (26.2%), good habits (22.7%), environmental benefits (16.1%), reconsidering personal values (15.4%), strengthening social capital (15.1%), opportunities for systemic change (13.8%), and new skills and knowledge (8.7%).

In early September 2020, Van Kessel et al. (2021) conducted an open online survey in the United States in which, in addition to negative outcomes, they also asked about the unexpected positive outcomes of the COVID-19 pandemic. The vast majority of participants (89%) mentioned at least one negative change, while slightly fewer (73%) mentioned at least one unexpected positive change. The answers were analysed so that both positive and negative aspects were categorised into six areas of life: personal relationships – socialising with friends and family (41% negative outcomes, 33% positive outcomes), leisure (32% negative outcomes, 26% positive outcomes), physical and mental health (28% negative outcomes, 14% positive outcomes), society, policy and protective measures (26% negative outcomes, no positive outcomes), employment/workplace (33% negative outcomes, 13% positive outcomes), and the personal financial and general economic situation (22% negative outcomes, 13% positive outcomes). The analysis showed that the pandemic affected the lives of Americans in different ways and that there was no "typical" experience. For example, younger and better educated individuals were more likely to mention positive aspects, while women were more likely than men to mention the challenges or difficulties.

As part of an extensive qualitative international open online survey that began in mid-2020, Zrnić Novaković et al. (2022) conducted a qualitative analysis of responses from participants from six countries. They asked open-ended questions about the circumstances of the pandemic that posed the greatest burden for them, the positive and negative aspects of the pandemic, and recommendations for dealing with the pandemic. Participants' statements were largely similar in all countries. The most prominent themes related to the burdens and negative aspects of the pandemic included limitations and changes in daily life, emotional reactions and the area of work and finances. Responses on the positive consequences of the pandemic were most often related to reflection and personal growth, opportunities for meaningful/pleasant activities, and well-being at the interpersonal level (Zrnić Novaković et al., 2022).

As Trzebinski et al. (2020) have shown, a positive attitude (hope, pleasure, meaning) helps people cope with threatening events. Moreover, a positive outlook increases an individual's resilience during crises, especially when it comes to family well-being (Prime et al., 2020). Similarly, Al Dhaheri et al. (2021) in a survey conducted in May and June 2020 in Central and North Africa found that although people experienced high levels of stress due to the pandemic, they did not feel helpless because they were positively focused on their mental health and spent more time relaxing and resting during the pandemic. In addition, most participants reported increased support from family members and that their family became more significant during the pandemic.

In sum, the research on the awareness of the positive consequences of COVID-19 in the first phase of the pandemic highlights that in challenging times and during a crisis, a positive perception of small changes in life can be essential to maintain psychological well-being and successfully adapt to a prolonged crisis characterised by a forced change in daily and work routines. Although these findings are highly significant, there is a lack of research linking the perception of positive effects of COVID-19 with standard indicators of mental health and resilience.

Aims of the Study

Given that recognising various positive aspects of crisis and stressful situations has an adaptive function in dealing with difficulties and that it supports resilience processes in individuals, the primary aim of this paper was to explore the experience of the possible positive effects of the COVID-19 pandemic and their association with mental health indicators. The secondary aim was to identify the themes by which people described the positive consequences of the COVID-19 pandemic.

Method

Participants and Procedure

A total of 1,201 adults (Female = 50.1%; $M_{age} = 41.37$, $SD_{age} = 12.86$) from all regions of Croatia aged 18 to 65 participated in the research. A probability multiple stratified online sample was used to ensure national representativeness by gender, age, and regional affiliation of participants. Since in doing online surveys, education bias cannot be avoided, slightly more than half of the participants had a university degree (51.6%), a middle level of education (45.5%), a few had a PhD or specialisation (2.3%), while very few had completed only primary school (0.6%). Most of the participants, 70.5% of them, were employed, 11% were studying, 10.4% were seeking a job, and 9.6% were retired. The Ethical Research Board of the Department of Psychology, Faculty of Humanities and Social Sciences, University of Zagreb, approved the research. Participants were informed in detail about the study, data protection and privacy management, and gave informed consent before joining the survey.

Data were collected as part of the international longitudinal project of the European Society for Traumatic Stress, which is implemented in Croatia by the Croatian Society for the Traumatic Stress. The conceptualisation and methodology of the research were described in detail by Lotzin et al. (2020). The specificity of the study in Croatia is that in addition to open online research, as in the other nine countries participating in the project, research was also conducted in parallel on an online probability panel sample at four time points, every six months (July and December 2020, July and December 2021). In addition, the tools were extended in relation to the European study research protocol with additional mental health measures (DASS questionnaire) and a description of risk behaviours (e.g. alcohol use). The results of the first of four research points with a panel probability sample were used in this paper. Data collection was conducted by a market and public opinion research agency through an online survey in early July 2020.

Instruments

For the purposes of this paper, in addition to socio-demographic indicators and general questions about the experiences related to COVID-19, the following measures were used:

The COVID-19 Positive Consequences Experience Questionnaire (Lotzin et al., 2020). It consists of 13 items that examine opinions on the possible positive consequences of the pandemic. Participants responded on a scale from 0 (*not perceived at all*) to 3 (*highly perceived*). Examples of items are: "Increased cohesion in society"; "New job opportunities"; "More time for the activities I enjoy". The factor structure and the reliability of the scale will be analysed.

Immediately after this questionnaire, an open-ended question was asked about the positive consequences of the pandemic, which read: "In general, what do you consider the most positive thing about this pandemic?" Participants were able to provide written and multiple answers.

The Resilience Evaluation Scale (RES; van der Meer et al., 2018) comprises nine items answered on a scale from 0 (*completely disagree*) to 4 (*completely agree*). The total score can range from 0 to 36. Examples of items are: "I can easily adjust in difficult situations"; "I can cope well with unexpected problems"; "I have confidence in myself". The reliability of the scale in this sample is $\alpha = .94$.

The Depression, Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995) consists of 21 items that measure depression, anxiety and stress on three subscales of the same name, with seven items each. Participants answer on a scale from 0 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*) for the previous week. The scores on subscales can range from 0 to 21. A higher score shows a higher frequency of symptoms of depression, anxiety and stress. The scores can be further divided into categories: normal, mild, moderate, severe and very severe symptom level, with the latter two categories suggesting the development of clinically significant disorders (Lovibond & Lovibond, 1995). Examples of items read "I found it hard to make a move or start doing something"; "I had a tendency to overact in certain situations"; "I was very nervous, full of negative energy". The reliability of the subscales in this study is $\alpha = .93$ for depression, $\alpha = .92$ for anxiety, and $\alpha = .94$ for stress.

The Five Well-Being Index (WHO-5; World Health Organization, 1998) consists of five items that describe the extent to which participants have felt a certain way in the previous two weeks. Participants respond on a scale from 0 (*none of the time*) to 5 (*all of the time*). The score is the sum of the responses on all items multiplied by 4, so it can range from 0 to 100. A higher score indicates a higher state of well-being of participants. Examples of items are: "I have felt cheerful and in good spirits"; "I woke up feeling fresh and rested"; "My daily life has been filled with things that interest me". The reliability of the scale in this study is $\alpha = .93$.

Data Analysis

The analysis included quantitative and qualitative data processing. In the quantitative analysis, descriptive statistics of sample characteristics and used variables were first calculated in IBM SPSS 23.0. Then, a factor analysis of the Positive Consequences Experience Questionnaire was conducted to determine the factors that describe the positive consequences of the pandemic, and the correlation of mental health indicators with the results on these factors was calculated.

In the qualitative analysis of the answers to the open question about the positive consequences of the pandemic, a customised code plan developed within the ADJUST Study was used. A detailed description of the code plan was presented by

Zrnić Novaković et al. (2022). National data were independently coded by the first two authors of this paper to ensure a high level of credible coding. The third author was involved in the development of the initial international code plan, and participated in an agreement to revise it for our context. After several iterations of Croatian data coding, a minimal revision of the code plan was made so that from the subcategory "Adequate pandemic management by institutions", "Efficiency of the health system" was extracted. Specifically, as this is a longitudinal research plan, it is expected that changes in this area could occur over time. Furthermore, based on the analysis of our data, two themes were identified: "Quality family relations" and "Social well-being" instead of one, more comprehensive theme, "Interpersonal benefit", because these better reflect the responses of the participants.

Throughout the coding and analysis process, the authors adhered to the general process of the thematic analysis (Braun & Clarke, 2006). A variant of the thematic analysis known as the coding reliability approach described by Braun and Clarke (2021) was used to analyse responses on positive aspects of the pandemic. This approach best met the needs of the analysis in this study. As Braun and Clarke state (2021, p. 3), "Coding reliability approaches include early theme development and coding conceptualisation. Themes are usually understood as summaries or an overview of what participants said in relation to a particular topic or data collection question". Although this approach is similar to qualitative content analysis, the key difference is that it emphasises "themes", i.e. that which is intended to be achieved by qualitative analysis, rather than "contents" as facts. Thematic analysis included searching for patterns and organising participants' statements into coding categories. In this way, seven themes were identified.

Results

At the time of the survey, 47% of the participants reported a decrease in their income, by an average of 2.510 kuna, and 10% were receiving financial support from the Government to preserve their jobs. Changes in employment status were reflected in the fact that 6.2% of the participants had lost their jobs due to COVID-19, 3% had changed jobs, and 9.9% had started working part-time. A total of 78.5% had a job that involved contact with other people, 29.3% knew someone who was infected with COVID, and 18.3% thought they belonged to a group of people at high risk of developing severe COVID-19 symptoms. At that time (July 2020), only three participants were infected. Regarding social contacts, 24.4% of the participants did not have personal contact with people outside the household, and most had such contact less than once a week (31.6%). The vast majority of participants, 79.5%, did not use any services or activities to reduce stress, and 11.4% of them read professional literature or attended online courses (3.7%) on how to deal with stress. Other forms of support, such as telephone or online counselling, or psychotherapy, were used by between 1.4% and 2.2% of the participants.

Quantitative Analysis of the Experience of Positive Consequences and the Relationship with Mental Health

First, the answers of the participants in the Positive Consequences Experience Questionnaire were analysed. Table 1 lists the response frequencies.

Table 1

Frequency of Perceived Positive Consequences of the Coronavirus Pandemic (Percentage of Responses in Each Category)

Items	Not perceived at all	Slightly perceived	Moderately perceived	Highly perceived	Unable to assess
1. Increased cohesion in society	11.2	23.8	49.0	7.0	9.0
2. More quality time with loved ones, friends or pets	3.8	12.4	40.3	40.9	2.6
3. Appreciating own health or the health of loved ones	3.1	8.0	34.1	53.0	1.8
4. Appreciating the quality of health services	8.5	16.6	40.6	30.4	3.9
5. Work from home (home office)	12.7	13.0	31.6	31.6	11.1
6. New job opportunities	32.4	27.2	20.2	8.9	11.2
7. (Potentially) increased income	45.0	27.3	16.0	5.0	6.7
8. Learning new ways to solve problems	11.1	24.2	41.9	18.8	4.0
9. Learning new communication technologies, e.g. Skype, Zoom	11.2	17.0	33.1	35.1	3.6
10. Shorter working hours	29.9	22.1	27.7	9.3	11.0
11. More time for the activities I enjoy	13.5	25.6	39.4	18.7	2.8
12. Time to recover from the usual daily stress	16.2	27.1	38.6	13.5	4.6
13. Time to rethink priorities in life	10.0	21.5	37.7	27.4	3.4
14. Other	32.2	1.9	4.5	1.0	60.4

An exploratory factor analysis of the responses was performed using the principal axis method with oblimin rotation, which revealed three factors: "Awareness of life values" with seven associated items (range 0 - 21); "New job opportunities" with two items (range 0 - 6); and "More time for oneself" with four items (range 0 - 12), with an alpha-type reliability of .80 to .82. The Kaiser – Meyer

– Olkin measure of sampling adequacy showed corresponding values, KMO = .88 (Tabachnik & Fidell, 2007). These three factors had eigenvalues above the Kaiser criterion of 1 and, in combination, explained 61.5% of the variance. The results of factor saturation by items after rotation are shown in Table 2. The factors are moderately interrelated – Awareness of life values is significantly related to New job opportunities $r = .45, p < .001$ and Time for oneself $r = .60, p < .001$. The relationship between the last two factors is $r = .52, p < .001$.

Table 2

Summary of Results of the Exploratory Factor Analysis of the Positive Consequences Experience Questionnaire

Questionnaire items	Item saturation with three factors		
	Awareness of life values	New job opportunities	More time for oneself
1. Increased cohesion in society	.43		
2. More quality time with loved ones, friends or pets	.69		
3. Appreciating own health or the health of loved ones	.90		
4. Appreciating the quality of health care in my country	.51		
5. Work from home (home office)	.32		
6. New job opportunities		-.81	
7. (Potentially) increased income		-.77	
8. Learning new ways to solve problems	.44		
9. Learning new communication technologies, e.g. Skype, Zoom	.40		
10. Shorter working hours			-.43
11. More time for the activities I enjoy			-.82
12. Time to recover from the usual daily stress			-.92
13. Time to rethink priorities in life			-.56
Eigenvalues	5.418	1.528	1.048
Percentage of total variance	41.68	11.75	8.06
Cronbach α	.80	.81	.82

The scores in the three factors of the experience of positive consequences were correlated with the results on mental health measures, specifically with depression, anxiety, stress, well-being and resilience (Table 3). Participants who expressed a higher level of Awareness of life values also showed lower levels of depression ($r = -.13, p < .001$), while the association with anxiety ($r = -.08, p = .02$) and stress ($r = -.08, p = .02$) was negligible, although statistically significant. At the same time, they showed significantly higher levels of subjective well-being ($r = .27, p < .001$) and resilience ($r = .23, p < .001$). In terms of experiencing New job opportunities, the

association with anxiety was negligible ($r = .07, p = .02$), and there was no association with depression and stress. There were low correlations between the experience of New job opportunities and well-being ($r = .14, p < .001$) or negligible with resilience ($r = .07, p = .03$). Participants who reported a higher level of experience of Time for oneself as a positive consequence of the pandemic also reported a negligibly lower level of depression ($r = -.07, p = .02$), while there was no association with anxiety and stress. The levels of connection of the experience of Time for oneself with well-being and resilience were similar to the connections of the factors of Awareness of life values, and were $r = .24, p < .001$ and $r = .20, p < .001$, respectively. Overall, although these are statistically significant correlations, they show a negligible relation of the experience of positive consequences of the pandemic with classic mental health measures (depression, anxiety, and stress), and the correlations with well-being and resilience are low.

Table 3

Descriptive Statistics and Correlations between Three Aspects of the Positive Consequences of the Pandemic and Mental Health Measures

	<i>M</i> (<i>SD</i>)	1.	2.	3.	4.	5.	6.	7.
1. Awareness of life values	1.97 (0.60)	-						
2. New job opportunities	0.93 (0.88)	.45***	-					
3. More time for oneself	1.54 (0.77)	.60***	.52***	-				
4. Depression	6.81 (8.57)	-.13***	-.05	-.07*	-			
5. Anxiety	4.01 (6.96)	-.08*	.07*	.01	.80***	-		
6. Stress	8.34 (9.08)	-.08*	-.06	-.06	.87***	.80***	-	
7. Well-being	56.50 (21.91)	.27***	.14***	.24***	-.51***	-.35***	-.51***	-
8. Resilience	24.88 (7.29)	.23***	.07*	.20***	-.32***	-.26***	-.27***	.43***

Note. * $p < .05$; ** $p < .01$; *** $p < .001$.

Gender differences were also analysed for all three factors of the positive consequences of the pandemic. Women showed higher levels of Awareness of life values ($F = 8.009, p = .005, \eta_p^2 = .009$), while men reported higher levels of the experience of New job opportunities ($F = 7.236, p = .007, \eta_p^2 = .008$). There were no gender differences for More time for oneself ($F = 0.962, p = .327, \eta_p^2 = .001$). The magnitudes of the partial eta effect indicate a small effect size, in accordance with

Cohen's (1988) guidelines for determining the effect size (small effect size .01, medium .06, and large .14).

Qualitative Analysis of the Positive Outcomes of COVID-19

Out of a total of 1,201 participants, 102 did not answer the open question about the positive consequences of the COVID-19 pandemic at its onset (about three months after the first lockdown), and another 19 wrote a non-pandemic-related response. These participants were excluded from data processing, so the analysis was conducted for 1,080 participants. A minority of participants cited more than one consequence, so the number of statements (i.e., units of analysis) coded was 1,222.

Only a small number of participants, 16.1%, stated that there were no positive consequences of the pandemic. This is illustrated by such statements:

I do not find anything positive. I think that people are social beings who must move, socialise, work and live off their work, and all this is denied to them by the pandemic and what is worse, it continues to be denied, sometimes more, sometimes less, but in any case people are limited and cannot organise or control their lives, but the government does this for them.

There is nothing positive unless washing your hands is deemed progress.

There are no positive things. I thought people would connect a little, but I was wrong.

However, 83.4% of the participants recognised some form of positive consequences of the pandemic on their lives, on the lives of other people, and on society. The coding of these responses resulted in seven themes containing 18 categories. The results of organising coded material into categories, umbrella themes and response frequencies are shown in Table 4.

Table 4

Themes Related to the Positive Consequences of the Pandemic

Theme	Categories	Frequency	%
1. Quality family relationships	Family connection and quality time with family	245	20.05
2. Reflection and personal growth		205	16.78
	Re-examining/rethinking life priorities	77	6.30
	Gratitude/appreciation of health and life	63	5.16
	Personal growth	38	3.11
	(Self-)awareness	27	2.21

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Theme	Categories	Frequency	%
3. Social well-being		198	16.20
	Social cohesion	114	9.33
	Awareness of better hygiene	47	3.85
	Benefit from social constraints due to the pandemic	21	1.72
	Risk/awareness of hazards	16	1.31
4. Digitalisation of work and education		119	9.74
	Possibility of work and education from home	68	5.56
	Digitalisation	51	4.17
5. Quality personal life		114	9.33
	More time	73	5.97
	Meaningful and pleasant daily activities	38	3.11
	More peace in life	3	0.25
6. Environmental effects		68	5.56
	Impact on climate change and nature	51	4.17
	Reduction of travel, traffic jams and tourism	17	1.39
7. Competent pandemic management		45	3.68
	Competent pandemic management by institutions	29	2.37
	Effective health care	16	1.31
Other		25	2.05
There are no positive consequences		203	16.61
Total		1222	

The theme "Quality family relationships" (20.05% of statements) was the most prominent, containing only one category (family connection and quality time with family), which the following statements illustrate:

The fact that we were with loved ones most of the time.

We were with the family, together, more than usual.

We were able to spend quality time within our families and improve our relationships.

Parents with smaller children were able to spend more time with their children, which they should have done even without a pandemic.

My husband was at home, so it was easier for me, because he helped me more with household chores.

During the full lockdown the family spent more time together. A person from the family did not spend time every day at the cafe bar because these were closed.

The time I spent with family. We talked a lot, spent time together, practised, learned new skills, were creative ... We enjoyed being a family.

This is followed by the theme "Reflection and personal growth" (16.77% of statements) which refers to re-examining/rethinking life priorities, gratitude/appreciation of health and life, personal growth and (self-)awareness. Illustrative statements are:

Changing life values, suddenly some values (family, togetherness, love and children) became the most important - changing priorities - due to uncertainty and reduced finances, we suddenly realised that we did not need half of the luxuries of life...

People's focus on what matters most. On a more modest, but safer and more stable, future.

Appreciate some of the things we took for granted.

Awareness that we need to be happy with what we have and appreciate our health and the people we love.

Greater self-control and self-confidence.

An equal number of responses were grouped under the theme "Social well-being" (16.22% of statements), which includes the categories of social cohesion, awareness of better hygiene, benefits from social constraints due to the pandemic and risk/awareness of hazards. Here are the statements that illustrate this theme:

The most positive thing for me is that scientists have started to collaborate much better and share information about their knowledge of the virus.

Caring for loved ones and the big hearts of many who dedicated their time to help others.

A sense of togetherness and empathy among people, discipline shown at the time of the lockdown.

A huge opportunity for politicians around the world to join forces and start working for the benefit of the planet and its inhabitants. Unfortunately ... I'm not too optimistic ... but who knows?!

The theme "Digitalisation of work and education" (9.74% of statements) contains the categories of opportunities for work and education from home and digitalisation. Illustrative statements:

Digitalisation overnight, it turned out that many things can be done online, without having to stand in line and waste time.

Many, especially in education, have learned to use the opportunities of the Internet, and private manufacturers and companies have discovered more modern ways of functioning.

Evidence that it is possible to digitalise business, work from home and reduce the need for public/civil servants in business.

My child has learned to be more independent and responsible because of distance learning.

The older ones adopt new technologies, the younger ones see that there is life without technology.

The theme "Quality personal life" is equally represented (9.32%), in which the positive aspect of the pandemic refers to more time, meaningful and pleasant daily activities (such as walking, reading...), more peace in life. For example:

For me personally, the most beautiful thing was that everything was closed and we were at home, those few weeks of forced annual leave and the feeling of boundless freedom and all the time in the world (when you disconnect from the news that is increasingly false news and is becoming more toxic) and then when you regretfully see again traffic jams, races and crowds.

On the positive side, I did not feel the worst consequences of the pandemic. I spent time in quarantine in the company of family and other neighbours, at most outside the house (in the yard, walking the dog) (...) Also, I found time for all the little things that I had put off for a long time.

A lot. I spent a lot of time in nature, walking, hiking, cycling. My home office was on the balcony and I got beautifully suntanned before the summer. (...) Influencers lost contracts, people read more. It seemed to me that we were finally getting back on track. Too bad it did not last long.

Relatively few participants cited as a positive outcome "Environmental effects", which includes the categories of impact on climate change and nature, and the reduction of travel, traffic jams and tourism (5.5%). For example, they stated:

Cleaner air, less pollution of the planet.

Environmental effects on the recovery of some polluted parts of the country, enhanced hygiene not only of persons but also of space.

Reduction of pollution in nature, cars, trains, planes, everything stopped, and nature breathed.

"Competent pandemic management" (3.68% of statements) is the least frequently cited positive outcome, with the categories competent pandemic management by institutions and effective health care:

As for the Republic of Croatia, I think it is important to have a professional headquarters that kept things under control in the first wave of the virus, and I hope that the same will happen in the autumn.

Health system and health professionals.

Government measures to safeguard jobs.

Good information by experts and transmission of information through the media.

Discussion

One may initially ask whether it makes any sense at all to explore and highlight the positive aspects of a pandemic that has so many severe negative outcomes on a social, economic and personal level. Is thinking about the positive aspects of a pandemic just rationalisation, a wish to bring comfort in difficult times, even though real positive effects are impossible to achieve?

However, an analysis of the answer to the open question about the positive consequences of COVID-19 after the first lockdown showed that the majority of participants, 83.4%, recognised some form of positive consequences of the pandemic in their lives and the lives of others, while 16.6% of participants saw no positive consequences. These findings are consistent with research conducted during or immediately after the first phase of the pandemic. Thus, for example, 65.5% of participants in Poland (Krajewski et al., 2021), 89% in the USA (Van Kessel et al., 2021), and an average of 82.7% of participants in a large pan-European survey recognised positive aspects of the pandemic (range from 91% in Austria to 60.9% in Poland) (Zrnić Novaković et al., 2022).

In all these studies, as in our study, most participants highlighted the positive aspects of the pandemic in the individual sphere of life, such as enjoying leisure activities like reading, gardening, cooking, playing sports and spending time in the natural environment (Zrnić Novaković et al., 2022), the slower pace of life and more peace (Kowalski et al., 2021; Krajewski et al., 2021), and strengthening family relationships (Evans et al., 2020). In our study a positive outcome is most often quality family life (20.05%), followed by reflection and personal growth (16.77%) and a quality personal life (9.32%), which is best described by more free time for enjoyable activities. Nevertheless, social benefit (16.22%) and digitalisation, as well as work/learning from home (9.74%), were also highlighted. Although a number of papers from this period emphasise the positive effect of COVID-19 on climate and nature (Khan et al., 2020; Lal et al., 2020), only 5.5% of participants stated this in our survey. The smallest number, or 3.68% of participants, highlighted competent pandemic management, including well-organised health care.

The factor structure of the COVID-19 Experience Questionnaire and the thematic analysis of the responses to the open question showed a high content match, emphasising the perception of individually oriented beneficial aspects as compared to wider social benefits. The similarity of the perception of the positive aspects of the COVID-19 pandemic in different studies indicates the universal behaviour of people in this crisis. As stated by Krajewski et al. (2021), the crisis has "forced" people to focus on themselves and on protecting their well-being. Therefore, the most prominent themes are those related to personal benefit. The positive aspects of COVID-19 related to general social well-being, such as environment, are perceived much less frequently.

As stated by Zrnić Novaković et al. (2022), the COVID-19 crisis in its initial period, which was marked by a lockdown in all countries, led to fears for health, restrictions on daily routine and related impaired mental health. But at the same time, the opportunity arose for people to appreciate more what they have, to pay more attention to their families, to think about their priorities, to devote themselves to activities they had neglected or taken for granted, to appreciate available natural resources.

Social cohesion, the (re)considering of life values, and a sense of gratitude for what we have in life are significant factors in reducing burnout, anxiety, and depression caused by fear, isolation, insecurity, and uncertainty (Shaw et al., 2021). Similarly, Evans et al. (2020) emphasise that strengthening family relationships through shared experiences was a significant factor in maintaining mental health in the initial period of COVID-19. Some research suggests that the perception of positive consequences may be associated with post-traumatic growth and coping (Kowalski et al., 2021; Schmiedeberg & Thönnissen, 2021), but the interaction of these factors must be examined in more detail, as indicated by the qualitative findings of our study.

Our data show that the association between all three factors of the experience of positive consequences of the COVID-19 pandemic – Awareness of life values, New job opportunities and More time for oneself with mental health measures is negligible (correlations range -.13 to .07). But the association of these three factors of the experience of positive consequences with resilience and well-being is statistically significant and slightly higher. There is a greater connection with the factors that relate positive aspects in personal life compared to the professional sphere. We emphasise that this research was conducted in the first phase of the COVID-19 pandemic when the awareness of new job opportunities had only just begun to emerge.

On the other hand, the association of resilience, and especially well-being, with mental health measures (depression, anxiety, stress) is of a medium level and ranges for resilience from -.26 to -.32, and for well-being from -.35 to -.51. The hypothesis on the mediating effect of the positive perception of the outcome of the pandemic on the association between well-being and resilience and classic indicators of mental health needs to be tested in the future.

Interesting gender differences were also found in our study. While women are more perceptive of the positive effects of the COVID-19 pandemic in the area of awareness of life values, men tend to highlight new job opportunities. However, in terms of having more time for oneself, no gender differences were found. This is consistent with the finding of Krajewski et al. (2021) where women were more aware of the positive aspects of the pandemic related to self-realisation, and men in terms of instrumental and material values that are associated with security and meeting basic needs.

The importance of research on the perception of positive aspects and resilience during a pandemic is evidenced by preliminary findings of longitudinal research which in all three measurement points (July and December 2020 and July 2021) showed that greater resilience was a protective factor for depression, anxiety and stress (Ajduković et al., 2021a). The perception of positive consequences, specifically the experience of new job opportunities, in the first measurement point was a protection factor for depression and anxiety, and in the second only for anxiety. In terms of stress, only the experience of time for oneself as a positive consequence of COVID-19 in the second measurement point was a protection factor at the peak of the second wave of the pandemic. These results are consistent with the warning of Budimir et al. (2021) that although adaptive coping strategies, such as acceptance and positive thinking, can mitigate the negative effects of COVID-19, given that pandemic circumstances are changing rapidly and that coping effectiveness depends on the context, their role in different phases of the pandemic may differ. Thus, at different points in the pandemic, different components of coping had an effect on mental health.

As Helgeson et al. (2006) point out, in the initial periods of troubling and crisis events, recognising positive effects may stimulate the coping process rather than the actual outcome. Apparently, starting from the theory of cognitive adaptation (Taylor, 1983), these are cognitive processes in which the perception of positive aspects is used as a way to alleviate distress. However, over time, real personal growth can be expected, which has long-term positive effects on mental health. We emphasise real growth because perceived growth that is not real can be a source of new distress (Helgeson et al., 2006).

Here we come to the area of optimism as one of the measures that would be useful to include in research on the protective factors of mental health in times of crisis. Kardum et al. (2018) emphasise the usefulness of a moderate level of optimism, i.e. realistic optimism that on the one hand allows people to see reality and themselves better than they really are, but which generally does not lead to behaviour that is based on false beliefs. Thus, with realistic optimism, there are positive outcomes that are characteristic of optimism, but all the while avoiding the negative consequences that can sometimes result from excessive optimism.

It has also been shown that in the relationship between the effects of the crisis on mental health and the perception of the positive outcomes of the crisis, the moderator of particular conceptual interest is time. More precisely, it is hard to imagine that real growth can happen within a few days of a crisis event. Thus, a meta-analysis of the effects of finding utility in crises and mental health has shown a good outcome when a long time has passed since the crisis (Helgeson et al., 2006). The question remains of what happens in long-lasting crises and when the end is uncertain, as is the case with the COVID-19 pandemic.

In addition to the standard limitations like the lack of possibility for causality assessment, which is characteristic of surveys with one measurement point, this

paper has some other specific limitations. Due to the scope of work in which the data of the qualitative and quantitative part of the research were presented, we were unable to tackle the qualitative analysis of the negative outcomes of the pandemic and link them to the positive ones. For the same reasons and in the part that is related to the analysis of the results obtained by the questionnaires, we analysed the effect of only one socio-demographic variable, and that is gender.

Conclusion

This paper provides a new and different perspective on the effects of the COVID-19 pandemic, as well as ideas for further research in this and similar large-scale crises. We emphasise that this paper discusses the initial period of the pandemic. At the time of writing, two years after the outbreak of the pandemic, due to pandemic fatigue (WHO, 2020c), it is important to continuously study and promote the strengthening of resilience and awareness of the positive aspects of the pandemic. Only longitudinal research can help differentiate these processes from the outcome of pandemic effects on mental health, where actual personal growth can have long-term positive effects on mental health.

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Received: February 8, 2022

