

Working Papers in Sociology 1 / 2020

ISSN 2453-6970

**Slovakia during the pandemic:
The first three months**

Miloslav Bahna - Robert Klobucký - Marianna Mrva - Jozef Zagraban

September 2020



SOCIOLOGICKÝ ÚSTAV
SLOVENSKEJ AKADÉMIE
VED INSTITUTE FOR
SOCIOLOGY OF THE SLOVAK
ACADEMY OF SCIENCES

Slovakia during the pandemic: The first three months

Miloslav Bahna - Robert Klobucký - Marianna Mrva - Jozef Zagraban¹

The global spread of the epidemic of a novel coronavirus causing the COVID-19 disease and the subsequent unprecedented quarantine measures and changes to everyday life have triggered a remarkable interest from social sciences and humanities scholars in Slovakia. Certain aspects of living through a pandemic have already been studied by psychologists² and cultural anthropologists³. Our study synthesizes results from a series of three online representative studies of the Slovak population performed during the first three months of quarantine measures. The paper aims to provide an overview of research findings that cover several areas.

The first area covers the topic of threat and risk perception related to the pandemic. Utilizing data from three research waves, the study attempts to explain the origins of people's concerns in Slovakia and compares them to the intensity of perceived concerns in neighbouring Austria. The analysis also covers changes to respondents' work and economic situation, their willingness to follow anti-epidemic measures, their beliefs on the origin of the virus, willingness to get vaccinated against it and respondents' views on which countries handled the pandemic well.

Data and methods

The study presents findings from the survey series 'How are you, Slovakia?' performed by the survey agency MNFORCE, the communication agency Seesame in cooperation with the Institute for Sociology of the Slovak Academy of Sciences and the Institute for Research in Social Communication of the Slovak Academy of Sciences. The survey was carried out via a quota sample drawn from a pre-existing online access panel provided by the survey agency MNFORCE, with the quota sample being selected to be representative of the following socio-demographic characteristics: gender, age, region, municipality size and respondents' education. Only the population with internet access is covered, thus, mainly older respondents with no internet access are underrepresented in the survey.

The 'How are you, Slovakia?' surveys were fielded via an online questionnaire on 24-26 March 2020, 21-23 April 2020, and 25-28 May 2020. Each research wave surveyed a sample of 1000

¹Contact: miloslav.bahna@savba.sk, robert.klobucky@savba.sk, marianna.mrva@savba.sk, jozef.zagraban@savba.sk, The Institute for Sociology of the Slovak Academy of Sciences, Klemensova 19, 813 64, Bratislava, Slovak Republic.

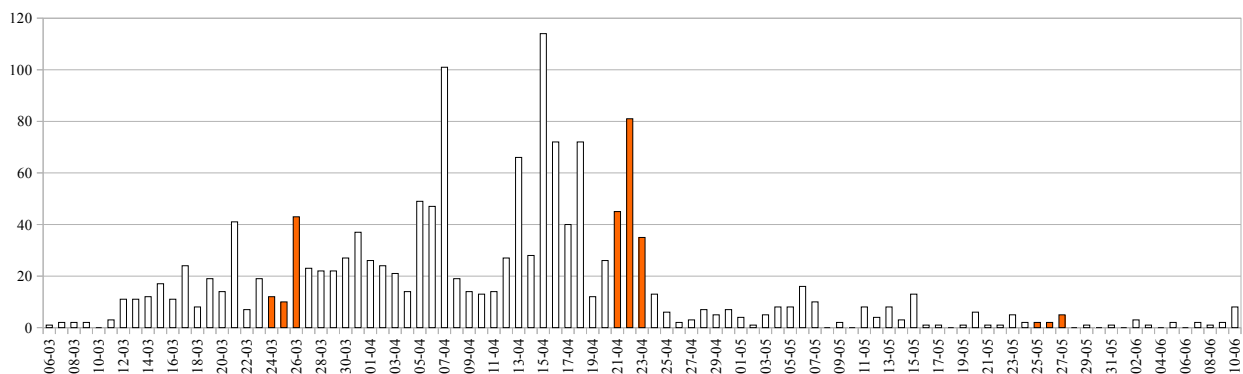
²<https://dennikn.sk/blog/1824121/preventivne-spravanie-v-case-corony/>

³https://uesa.sav.sk/files/1._sprava_ked_sa_zmenil_svet_i._pdf

respondents. As shown in Figure 1, the first wave was carried out 18 days after the first confirmed case of COVID-19 in Slovakia and approximately a week after nationwide school closures. The following wave was done one week after Easter when travelling across district borders in Slovakia was restricted and there were still dozens of new COVID-19 cases daily. The third wave of the survey was fielded when daily increments of the infected were in single digits, quarantine measures were being lifted, and schools were expected to reopen on 1 June 2020.

Figure 1

Daily increments of diagnosed cases of COVID-19 from 6 March 2020 to 10 June 2020.



Note: Bars of different colour indicate the dates of data collection within the ‘How are you, Slovakia?’ surveys.

Source: korona.gov.sk

Concerns about the epidemic

Concern about the spread and potential consequences of the epidemic was the main motive to introduce and subsequently follow quarantine measures once the disease arrived in Slovakia. Findings from opinion polls in the United Kingdom (Collignon 2020) or Canada (Thornson 2020) agree on the observation that women perceive the risks related to the spread of the coronavirus epidemic more intensely than men. A similar conclusion has been reached by the authors of a study which monitored people’s attitudes via a questionnaire promoted on a social network between 13 March and 19 April in Belgium, France, Germany, Italy, the Netherlands, Spain, the United Kingdom and the USA (Perrotta et al., 2020). Moreover, at the level of national politics, Garikipati and Kambhampati (2020) had analysed the response of politicians to the coronavirus pandemic in 194 countries around the world and concluded that countries with female leaders have handled the pandemic better, partly due to a more pro-active and better-coordinated response.

Even though for instance Freudenburg (1993) ignores the differences in risk perception among men and women and states that socio-demographic variables explain only little regarding risk perception, in a review article published several years later, Freudenburg and his co-author conclude that differences between levels of concern for the environment among men and women have the strongest empirical support of all hypotheses compared (Davidson – Freudenburg 1996). More recent studies also consistently confirm a higher risk perception in women when it comes to environmental threats (Xiao – McCright 2012), risks associated with consumption of illegal substances and traffic accidents (Pino – Herruzo – Raya – Herruzo 2016) or flood risk perceptions (Fox Gotham – Lauve-Moon -Powers 2017). The systemic differences among men and women can be explained by two main theories. The first one explains these differences by the contrast in the socialization of men and women, where closeness, empathy, and care are emphasized when socializing women (Davidson – Freudenburg 1996). The second theory argues that women are objectively more vulnerable due to their limited access to income and financial resources as well as due to an increased threat of poverty and lower education achieved (Fox Gotham et al., 2017).

In addition to explaining the difference in threat perceptions among men and women, two basic explanations – *cultural* – perceiving risk as an acquired and learned characteristic and *economical* – perceiving risk as a demonstration of objective vulnerability – can also be applied to the observed difference in the perception of coronavirus threat in individual countries. Our study compares Slovakia and Austria. The latter was hit significantly harder by the coronavirus than Slovakia during the period of our survey, however, its residents perceived the risk of coronavirus less intensively.

Table 1

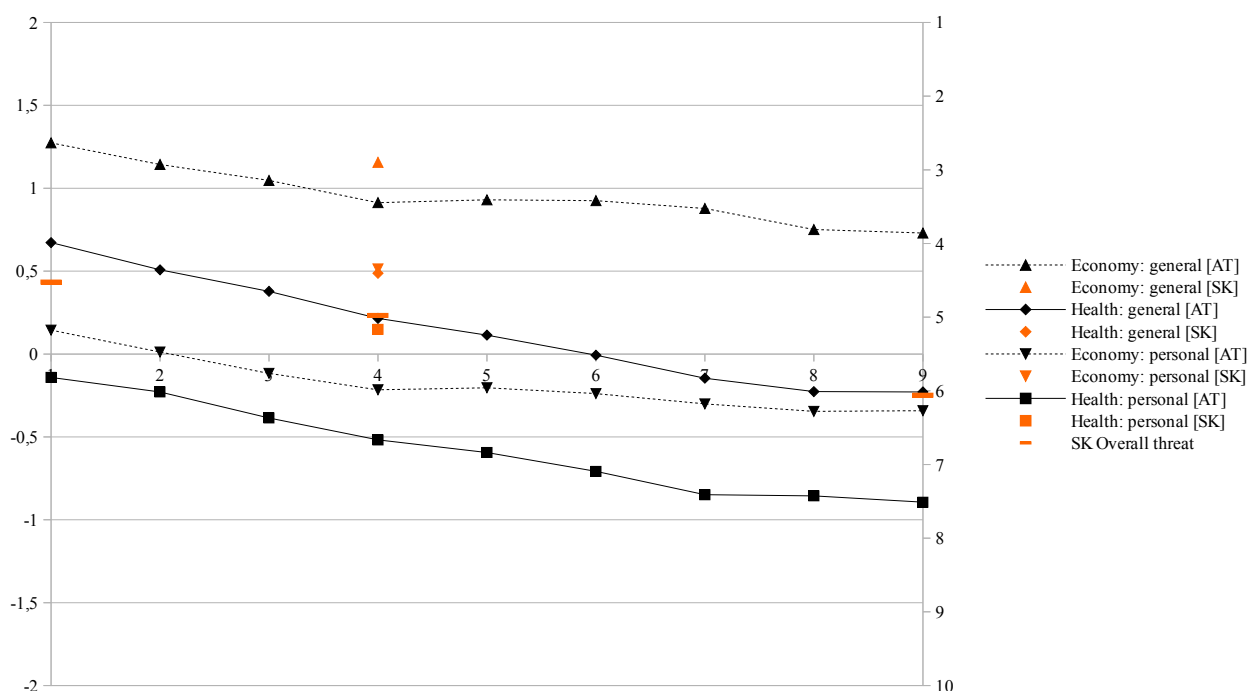
Do you feel threatened by the current coronavirus epidemic? The coronavirus epidemic makes me feel:

	March 2020		April 2020		May 2020	
1= very threatened	14,2%		10,8%		6,6%	
2	11,1%	38,9%	10,3%	32,7%	5,1%	19,6%
3	13,6%		11,6%		7,9%	
4	9,7%		8,6%		7,3%	
5	22,4%		22,2%		18,3%	
6	6,4%		7,4%		8,8%	
7	7,6%		8,1%		10,1%	
8	6,5%		9,9%		14,2%	
9	4,3%	15,0%	5,3%	21,0%	9,4%	35,9%
10= not at all threatened	4,2%		5,8%		12,3%	

Table 1 and Figure 2 show the changes in the perceived level of threat and worry related to the epidemic in Slovakia. Table 1 presents the evolution of the overall threat perceptions caused by the epidemic in three research waves in Slovakia performed at monthly intervals. Figure 2 shows the evolution of health and economical threat perceptions in Austria in nine research waves. The figure also allows us to compare the level of perceived threat in Slovakia and Austria at the time of the field survey ‘How are you, Slovakia?’ in April which coincided with the fourth wave of research in Austria. Figure 2 additionally reveals that respondents in Austria systematically (as with one case of measurement in Slovakia) assessed both economic and health risks for their country to be higher than for themselves. Authors of a survey carried out in seven Western European countries and in the USA (Perrotta et al., 2020) have observed similar tendencies in their respondents. The respondents seem to recognise the dangers of coronavirus for the health and economy but showed less-intensive perceptions of direct worries about falling victim to the virus themselves or experiencing economic consequences of the epidemic.

Figure 2

Levels of concern about economic and health impacts of the coronavirus on respondents personally and on Austria and Slovakia in general, the average value ranging from 2 to -2, March to May 2020.



Source: Austrian Corona Panel Project (2020): Austrian Corona Panel Data. Vienna: The University of Vienna, waves 1 to 9, How are you, Slovakia? March, April, May 2020.

The comparison of Slovakia and Austria further shows, that in Slovakia, the coronavirus concerns were higher in all four types of threat perception examined within the survey. There was a more significant difference in the assessment of personal threat levels than in the assessment of overall health and economic threat levels. The evolution of concerns in Austria demonstrates that as concern levels decrease over the analysed period, there is a relative decrease in the importance of health threats caused by the epidemic and a relative increase in the perception of economic threats.

Table 2

Explanation of concerns about the epidemic (1 = I feel very threatened; 10 = I do not feel threatened at all) in March, April and May 2020, working respondents only, multiple linear regression.

	March		April		May	
	Beta	Sig.	Beta	Sig.	Beta	Sig.
Male (dichotomous variable)	0,092	0,023	-0,010	0,812	0,012	0,788
Age (5 categories)	-0,148	0,000	-0,121	0,005	0,019	0,668
Municipality size (4 and 6 categories)	-0,040	0,413	-0,036	0,467	-0,058	0,249
Education (4 categories)	0,007	0,860	0,018	0,695	-0,010	0,822
Resides in Bratislava	0,095	0,052	0,053	0,287	0,040	0,414
Job position at risk (1 = max, 10 = min)	0,257	0,000	0,374	0,000	0,383	0,000
Household income is lower	-0,046	0,270	-0,056	0,212	-0,055	0,237
Governing party voter	-0,031	0,450	-0,017	0,688	0,021	0,627
R ²	0,118		0,173		0,169	
N	553		472		466	

What explains coronavirus concerns?

We use a multivariate analysis to further explain the origins of concerns about the coronavirus epidemic. Tables 2 and 3 represent two models explaining the overall perception of threat caused by the epidemic in working respondents. Both models may be interpreted as a gradual transition from health-related concerns to concerns about the economic impact of the epidemic. While we can still observe an increased level of concern about the epidemic among women in the first research wave in Slovakia, perceptions among men and women do not differentiate in the following waves of research. Likewise, the differences in the perception of concern by age decrease throughout March and April. Having considered the socialization theory explaining higher levels of risk perception among women due to their socialization and stronger prosocial feelings and the fact that older respondents were at a much higher health risk during the epidemic, we conclude that the observed

loss of relationship between the concerns and respondents' characteristics is associated with a gradual "fading" of the health aspect of coronavirus concerns throughout the monitored period. The narrowly nonsignificant coefficient of the variable "Resides in Bratislava" in the March wave of research could also suggest a higher level of concern in the capital city, which in the first weeks, had the highest incidence of COVID-19 cases.

On the other hand, from March to May, we can observe a stronger link between concerns and perceptions of threats regarding job security. This has led to an increase in the explanatory power of the model from 12% in March to 17% in April and May.

Table 3

Explanation of concerns about the epidemic (1 = I feel very threatened; 10 = I do not feel threatened at all) in April and May 2020, multiple linear regression.

	April		May	
	Beta	Sig.	Beta	Sig.
Male (dichotomous variable)	0,022	0,502	0,011	0,726
Age (5 categories)	-0,122	0,000	-0,095	0,007
Municipality size (4 and 6 categories)	0,012	0,754	0,037	0,312
Education (4 categories)	-0,002	0,957	-0,017	0,623
Resides in Bratislava	0,050	0,180	0,010	0,788
Governing party voter	0,004	0,904	0,004	0,914
	0,069	0,138	-0,093	0,058
Trust in ... (0 = min, 10 = max)				
healthcare	0,125	0,002	0,050	0,223
government	-0,041	0,445	0,004	0,942
scientific institutions	-0,155	0,001	0,008	0,868
Believes in a natural origin of the virus	-0,033	0,324	-0,045	0,176
Subjective household income situation	0,226	0,000	0,258	0,000
R ²		0,086		0,079
N		912		936

The extended questionnaire used in the second and third research wave in Slovakia provided a possibility to test the link between concerns about the coronavirus epidemic and trust in key institutions and economic uncertainty as well. Table 3 and the comparison of respondents' answers in April and May support the above-mentioned interpretation of the increasing importance of economic threats and the declining perception of coronavirus as a health risk. This change demonstrates itself not only in the decreasing importance of age and the growing importance of the unsatisfactory subjective income situation but also in the gradual loss of links to trust in healthcare

and scientific institutions when explaining concerns in the May wave of research. While the perception of health threat was still partly present at the end of April, when the daily increments of new cases continued to be significant, this aspect of threat ceased to be relevant as early as May, when the highest daily increments of new cases were in single digits. In April, the perceived threat of the epidemic was higher for people who showed trust in scientific institutions. Given the fact that scientists, especially health professionals and epidemiologists, were the strongest advocates for continued caution at that time, it is likely that the declared trust in scientific institutions should be interpreted as a tendency to take health risks which were brought to attention by scientists seriously. On the other hand, the perceived threat was lower among people who expressed a high degree of trust in healthcare. Models in Table 3 consistently confirm the link between perceived concerns and the subjective perception of uncertainty which was measured through household income situation. The more optimistic the perceptions of the subjective household income situation were, the lower levels of threat respondents perceived.

Table 4

The perceived health threat of coronavirus in Austria and Slovakia, multiple linear regression.

	for you personally				for your country			
	AT		SK		AT		SK	
	Beta	Sig.	Beta	Sig.	Beta	Sig.	Beta	Sig.
Male (dich. variable)	-0,068	0,012	-0,046	0,150	-0,122	0,000	-0,051	0,114
Education*	-0,048	0,084	-0,043	0,201	-0,094	0,001	-0,064	0,064
Age (5 categories)	0,106	0,000	0,107	0,001	-0,032	0,228	-0,084	0,011
Trust in government	0,082	0,028	0,092	0,007	0,258	0,000	0,034	0,316
Trust in healthcare	0,042	0,254	0,032	0,354	0,034	0,350	0,099	0,004
Resides in the capital	0,057	0,034	0,000	0,995	0,027	0,310	-0,026	0,424
Subj. income situation	-0,147	0,000	-0,250	0,000	-0,151	0,000	-0,214	0,000
R ²	0,059		0,091		0,118		0,073	
N	1297		922		1287		920	

* SK 4 categories, AT 5 categories.

The models in Tables 4 and 5 detailing data from Slovakia and Austria in April aim to provide answers to the question whether the variables explaining concerns about economic and health effects in Slovakia were the same or different from the factors relevant in Austria. The results confirm the repeatedly documented increased levels of concern among women. In both Austria and Slovakia, female respondents expressed higher levels of worry regarding economic as well as health threats of the epidemic (in this case, the difference between genders in Slovakia was not statistically

significant). In both countries, the perception of personal health threat was also linked to the respondents' age (Table 4). Older respondents in Slovakia assessed the health threat to their country more optimistically than the young ones. In Slovakia, older respondents expressed less intense perceptions of personal economic threat. Trust in government was linked to the perception of personal health threat in both countries, however, in case of Austria, it was also associated with the increased perception of a health threat to the country. At the same time, people who showed greater trust in government perceived a lower intensity of the economic threat to their personal situation (narrowly insignificant in Slovakia) and in case of Slovakia also a lower level of threat to the country's economy. Greater trust in healthcare in Slovakia meant more intense perceptions of health and economic threats to the country.

Table 4 also shows a link between education and health threat perception. At the end of April, Austrian respondents with higher education tended to declare a less intense perception of a health threat to their country. There is a possibility that education of the respondents in the model is to some extent related to the level of public awareness concerning the spread of the epidemic. Such respondents might have considered the worst of the epidemic to be over despite the ongoing anti-epidemic measures.

Table 5

Perceptions of the economic threat of coronavirus in Austria and Slovakia, multiple linear regression.

	for you personally				for your country			
	AT		SK		AT		SK	
	Beta	Sig.	Beta	Sig.	Beta	Sig.	Beta	Sig.
Male (dich. variable)	-0,067	0,013	-0,065	0,028	-0,119	0,000	-0,151	0,000
Education*	0,028	0,318	-0,016	0,619	-0,041	0,147	0,036	0,290
Age (5 categories)	-0,053	0,054	-0,082	0,007	0,037	0,183	-0,012	0,709
Trust in government	-0,078	0,035	-0,059	0,063	-0,044	0,242	-0,107	0,002
Trust in healthcare	-0,012	0,739	0,002	0,956	0,053	0,161	0,093	0,007
Resides in Bratislava	0,000	0,994	0,006	0,847	0,008	0,766	0,021	0,518
Subj. income situation	-0,213	0,000	-0,435	0,000	-0,114	0,000	-0,169	0,000
R ²	0,068		0,215		0,035		0,071	
N	1293		929		1422		923	

* SK 4 categories, AT 5 categories

Apart from the perception of a health threat of the coronavirus to Austria as a country, the subjective income situation was the most significant predictor of threat perception in all models. There is a

strong relationship (Beta=0,435) especially in case of the perception of personal economic threat in Slovakia, however, the income situation is also a significant predictor of the perception of coronavirus as a health threat. This indicates, as we have already mentioned in the analysis of the overall threat perception, that a sense of economic uncertainty is also present even in answers to the question determining the perception of health threat. Moreover, respondents in Austria and Slovakia provided dramatically different answers to the question on the subjective income situation. If we took only the answers of a minority of Slovak respondents from the data, who stated that it is easy or very easy for their household to live off their budget, their answers in Figure 2 would look very similar to those of Austrian respondents, where the vast majority say they find it very easy to live off their income.⁴ Nevertheless, this finding strongly suggests that the primary explanation for the rather dramatic difference in the respondents' assessment of the situation in Slovakia and Austria could probably be the significantly higher degree of subjectively perceived feelings of economic vulnerability in Slovakia.

Regional aspects of coronavirus concerns

Is the concern about the disease related to the current incidence rate of COVID-19 cases in the region where the respondent resides? Data from the surveys fielded in April and May do not confirm this hypothesis and thus demonstrate that infections within the respondents' district have only little effect on people's individual attitude towards the disease. Neither of these surveys show a significant correlation between concerns and the number of infections (April: $r = 0,29$; May: $r = 0,13$). There has been a slight increase in the average concern among respondents residing in districts that have experienced cases of quarantine. These occurred in five districts, either in retirement homes or socially excluded settlements within municipalities. Table 6 compares the average concern about the disease in the districts where cases of quarantine occurred, the districts that are adjacent to them, and the rest. The average number of infections was significantly higher in the districts with recorded quarantine cases and the districts adjacent to them, but the level of concern about the disease was higher only in the districts where quarantine cases occurred. However, neither of these cases presents a statistically significant difference. The situation was similar in April and May but the threat perception in May generally decreased even though the number of infections increased. This could be explained by the fact that the strictest quarantine measures had already been lifted even in the most-affected districts.

⁴The methodological problem of applying this comparison is the fact that questions in Slovakia and Austria were not formulated in the same manner and the question within the Austrian research was retrospective and thus focused on the situation in February 2020.

Multilevel linear regression models (Table 7, Table 8) provide a closer look at the impact which the contagion within the district could have on threat perception. At the individual level, the models use the independent variables of basic socio-demographic characteristics such as the respondent's gender, age and education as well as survey questions on the current subjective economic situation of the household and trust in institutions with respect to the COVID-19 disease. In the first case, there is a change to the regular monthly income of the household due to the coronavirus (0 = no change in income, 1 = income is higher, 2 = income is lower) and to the subjective economic situation, i.e. how difficult it is for the household to live off their total budget (0 = neither easy nor difficult, 1 = difficult, 2 = easy). In the second case, the questions focus on the respondent's trust in government and healthcare in Slovakia (1 = I do not trust at all, 11 = I have great trust). The independent variables used at the district level are the number of infections in the district, the occurrence of quarantine within the district, the adjacency to the district with quarantine cases, and the proportion of Hungarian and Roma minorities as well.

Table 6

Threat perception (1= very threatened; 10 = not at all threatened) defined by the occurrence of a quarantine case within a district.

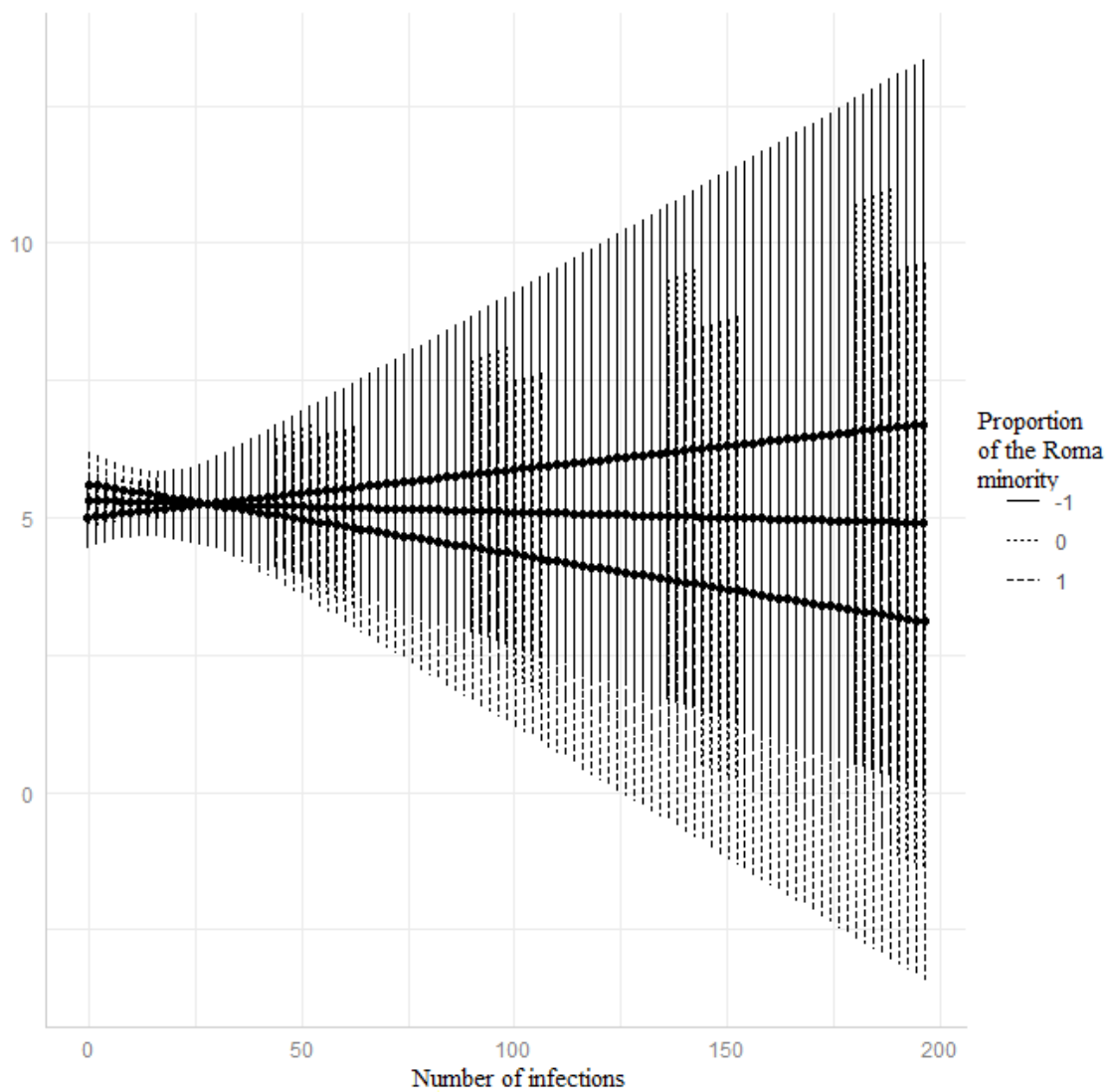
	April		May	
	Number of cases	Threat perception	Number of cases	Threat perception
District w/quarantine	53,6	4,9	77,9	5,7
Adjacent district	64,9	5,0	71,3	6,2
Others	12,3	5,0	17,5	6,1

The results show that the district characteristics account for only one or two percent of the variance in the dependant variable. Hence, the variables at individual levels play a significantly more important role in explaining coronavirus concerns. In April, higher levels of threat perceptions were to be expected among the elderly and people who stated they found it difficult to live off their household income (see also Table 3). Conversely, statistically much lower levels of threat perception were expected among respondents who cited that living off their total income was easy. District-level characteristics do not radically improve the models, yet a certain trend begins to emerge when interactions between variables are added. Socially excluded settlements that in some districts experienced the quarantine are inhabited mostly by Roma minority. While the concern about the disease slightly decreases with a higher proportion of the Roma minority in the district, it is influenced by the number of infections. There is no difference in the estimated threat perception in districts with a lower number of infections, but with the rising number of infections, the concerns

are more intense in districts with the above-average proportion of the Roma minority compared to districts where such proportion is below the average. However, the confidence intervals and Figure 3 indicate a rather weak effect. What is more, neither this relationship nor any other relationships can be identified at the district level in the data set from May.

Figure 3

The estimated threat perception in relation to the number of infections and the proportion of the Roma minority in the district.



Note: 0 = districts with an average proportion of the Roma minority, 1 = an above-average proportion, -1 = a below-average proportion

Table 7

Explanation of concerns about the epidemic (1= I feel very threatened; 10 = I do not feel threatened at all) in April 2020, multilevel linear regression.

Variables	Coefficient	Conf. Interval	Sig.	Coefficient	Conf. Interval	Sig.	Coefficient	Conf. Interval	Sig.	Coefficient	Conf. Interval	Sig.
(Constant)	4,95	4,765 – 5,135	<0,001	5,335	5,000 – 5,669	<0,001	5,284	4,902 – 5,667	<0,001	5,315	4,806 – 5,824	<0,001
Male				0,144	-0,178 – 0,467	0,38	0,162	-0,163 – 0,487	0,329	0,189	-0,137 – 0,515	0,255
Age				-0,342	-0,513 – -0,171	<0,001	-0,344	-0,516 – -0,172	<0,001	-0,342	-0,514 – -0,169	<0,001
Education				-0,014	-0,184 – 0,155	0,871	-0,035	-0,208 – 0,138	0,692	-0,036	-0,209 – 0,138	0,688
Ref.cat.:no change in income												
Income is higher				-0,478	-1,402 – 0,445	0,31	-0,499	-1,424 – 0,426	0,291	-0,515	-1,440 – 0,411	0,276
Income is lower				-0,32	-0,673 – 0,034	0,077	-0,319	-0,674 – 0,036	0,078	-0,298	-0,654 – 0,057	0,1
Ref.cat.: neither difficult nor easy												
Living off budget: difficult				-0,778	-1,134 – -0,422	<0,001	-0,783	-1,140 – -0,426	<0,001	-0,767	-1,125 – -0,408	<0,001
Living off budget: easy				0,586	0,028 – 1,144	0,04	0,592	0,032 – 1,153	0,038	0,598	0,037 – 1,158	0,037
Trust: the government				-0,159	-0,332 – 0,015	0,074	-0,173	-0,347 – 0,002	0,053	-0,172	-0,347 – 0,003	0,054
Trust: health care				0,144	-0,029 – 0,317	0,102	0,152	-0,022 – 0,325	0,087	0,162	-0,012 – 0,336	0,068
<i>District variables:</i>												
Ref.cat.: other districts												
District with quarantine							0,007	-0,685 – 0,699	0,984	0,177	-1,356 – 1,709	0,821
Adjacent to a district with quarantine							-0,132	-0,606 – 0,341	0,584	-0,071	-0,709 – 0,568	0,828
Number of infections							0,003	-0,003 – 0,008	0,331	-0,002	-0,036 – 0,032	0,904
Proportion of Hung. minority							0,034	-0,163 – 0,232	0,735	0,087	-0,246 – 0,421	0,608
Proportion of Roma minority							0,097	-0,094 – 0,288	0,32	0,299	0,015 – 0,584	0,039
<i>Interactions:</i>												
Ref.cat.: others:infections												
quarantine:infections										-0,003	-0,049 – 0,044	0,915
Adj. quarantine:infections										-0,005	-0,043 – 0,033	0,79
Roma:infections										-0,011	-0,021 – -0,000	0,045
Hungarian:infections										-0,004	-0,023 – 0,014	0,64
ICC	0,01			0,01			0,02			0,02		
No. of districts	71			71			71			71		
No. of observations	1000			953			953			953		
Marg. R ² / Adjusted R ²	0,000 / 0,014			0,064 / 0,074			0,066 / 0,083			0,072 / 0,090		
AIC	4761,265			4486,76			4512,118			4544,811		
log-Likelihood	-2377,633			-2231,38			-2239,059			-2251,405		

Note: ref. cat. = reference category; quarantine:infections = the interaction of variables *a district with quarantine* and *the number of infections in a district*; Adj. quarantine:infections = the interaction of variables *a district adjacent to a district with quarantine* and *the number of infections in a district*; Roma:infections = the interaction of variables *the proportion of the Roma minority in a district* and *the number of infections in a district*; Hungarian:infections = the interaction of variables *the proportion of the Hungarian minority in a district* and *the number of infections in a district*

Table 8

Explanation of concerns about the epidemic (1= I feel very threatened; 10 = I do not feel threatened at all) in May 2020, multilevel linear regression.

Variables	Coefficient	Conf. Interval	Sig.	Coefficient	Conf. Interval	Sig.	Coefficient	Conf. Interval	Sig.	Coefficient	Conf. Interval	Sig.
(Constant)	6,061	5,871 – 6,252	<0,001	6,593	6,255 – 6,932	<0,001	6,505	6,123 – 6,887	<0,001	6,404	5,915 – 6,893	<0,001
Male				0,123	-0,202 – 0,448	0,46	0,133	-0,193 – 0,459	0,423	0,127	-0,199 – 0,453	0,445
Age				-0,227	-0,404 – -0,050	0,012	-0,232	-0,410 – -0,055	0,01	-0,229	-0,407 – -0,052	0,011
Education				-0,024	-0,199 – 0,151	0,787	-0,018	-0,194 – 0,158	0,844	-0,026	-0,203 – 0,150	0,772
Ref.cat.:no change in income												
Income is higher				-0,225	-1,192 – 0,742	0,649	-0,225	-1,192 – 0,743	0,649	-0,249	-1,218 – 0,719	0,614
Income is lower				-0,512	-0,878 – -0,146	0,006	-0,516	-0,883 – -0,149	0,006	-0,533	-0,901 – -0,166	0,004
Ref.cat.: neither difficult nor easy												
Living off budget: difficult				-0,942	-1,308 – -0,576	<0,001	-0,948	-1,315 – -0,582	<0,001	-0,933	-1,300 – -0,566	<0,001
Living off budget: easy				0,596	0,056 – 1,137	0,031	0,611	0,070 – 1,152	0,027	0,627	0,085 – 1,169	0,023
Trust: the government				-0,213	-0,402 – -0,025	0,027	-0,225	-0,414 – -0,035	0,02	-0,22	-0,410 – -0,029	0,024
Trust: health care				0,147	-0,042 – 0,335	0,127	0,152	-0,037 – 0,341	0,116	0,153	-0,036 – 0,343	0,113
<i>District variables:</i>												
Ref.cat.: other districts												
District with quarantine							-0,31	-0,975 – 0,356	0,361	0,283	-1,363 – 1,928	0,736
Adjacent to a district with quarantine							0,145	-0,319 – 0,609	0,54	0,158	-0,433 – 0,750	0,6
Number of infections							0,002	-0,002 – 0,006	0,384	0,009	-0,012 – 0,030	0,417
Proportion of Hung. minority							0,142	-0,049 – 0,333	0,146	0,114	-0,214 – 0,443	0,494
Proportion of Roma minority							0,135	-0,051 – 0,322	0,155	-0,028	-0,286 – 0,231	0,834
<i>Interactions:</i>												
Ref.cat.: others:infections												
quarantine:infections										-0,002	-0,026 – 0,023	0,899
Adj. quarantine:infections										0,006	-0,001 – 0,013	0,082
Roma:infections										0,001	-0,011 – 0,013	0,886
Hungarian:infections										0,283	-1,363 – 1,928	0,736
ICC	0,02			0,02			0,01			0,01		
No. of districts	71			71			71			71		
No. of observations	1000			973			973			973		
Marg. R ² / Adjusted R ²	0,000 / 0,015			0,071 / 0,087			0,079 / 0,091			0,084 / 0,090		
AIC	4808,84			4630,181			4651,25			4687,861		
log-Likelihood	-2401,42			-2303,09			-2308,625			-2322,93		

Note: quarantine:infections = the interaction of variables *a district with quarantine* and *the number of infections in a district*; Adj. quarantine:infections = the interaction of variables *a district adjacent to a district with quarantine* and *the number of infections in a district*; Roma:infections = the interaction of variables *the proportion of the Roma minority in a district* and *the number of infections in a district*; Hungarian:infections = the interaction of variables *the proportion of the Hungarian minority in a district* and *the number of infections in a district*

At the individual level, similar conclusions apply as in April, and moreover, a higher level of threat was declared by respondents whose household income has decreased. The relationship between the economic situation and the feeling of being threatened by the novel coronavirus was thus even more pronounced in May. Also, compared to April, respondents who expressed greater trust in government continued to show higher levels of concern. Overall, as in the case of comparison of Slovakia and Austria, no clear link has been confirmed between the real incidence rate of the epidemic and concerns about the COVID-19 disease.

Behavioural change: caution as the new norm

High levels of threat perception in Slovakia were also closely linked to high levels of compliance with epidemiologic measures. One of the most noticeable measures was the obligation to wear a face mask which was introduced right at the time of the first data collection and was still partly in force at the time this study was written. As the media pictures from that period show, a large part of the society was already wearing masks voluntarily at that time, with a great proportion of respondents from the research wave in May 2020 stating they had started wearing face masks before this requirement was introduced. Politicians in Slovakia were the first among politicians in the neighbouring countries to start wearing face masks in public even before such an obligation became officially effective. The Slovak president was also among the first Slovak citizens wearing a face mask in public, and as Picture 1 demonstrates, contrasted significantly with the heads of state in the neighbouring countries.

Picture 1

The Slovak president and presidents of neighbouring countries during their televised speeches at the beginning of the coronavirus crisis.⁵



Source: Footage of presidents' TV appearances

⁵The president of Ukraine also addressed the country's citizens not wearing a face mask at that time.

The first case of infection in Slovakia was confirmed on 6.3.2020. The reaction from the public, the media and politicians was quite swift, and within about ten days, calls for wearing face masks in public started appearing. The same trend could also be observed on the TV news, with one of the examples being a TV spot ‘A face mask is nothing to be ashamed of’ which aired in the prime-time news programme (RTVS 2020) on the public television station RTVS (also on the internet from 15.03.2020). Demands to wear masks in public could also be seen on social media or within political discussion programmes. The first one was the special programme by the private broadcaster TV Markíza on 13.3.2020 which hosted the future Prime Minister Igor Matovič and Health Minister Marek Krajčí⁶. There were thirty cases of infection recorded in Slovakia at that time (Kernová 2020). A day later, on 14.03.2020, the media published the first joint photograph of the Slovak president with the representatives of the future governing coalition wearing face masks and on 16.03.2020 the prime-time news presenters on the public broadcaster RTVS also wore face masks for the first time. The presenters on the Czech prime-time news programme in the public broadcaster ČT did not start wearing masks until 19.03.2020, the day on which this obligation became officially effective in the Czech Republic. Thus, at the time when the obligation to wear masks became officially implemented in Slovakia (25.3.2020), wearing masks had already been the new norm for over a week both in the Slovak media and for the country’s politicians. The formal introduction of the obligation to wear face masks did not cause any behavioural change even among respondents in the research. Respondents who answered a question about wearing face masks in public on the first day of the March wave of research when face masks were not yet mandatory, responded in the same manner as those who filled in the survey questionnaire the following two days of research when wearing masks was already mandatory. Therefore, we can say that wearing masks in public had become the norm in Slovakia before the formal introduction of this obligation.

Tables 9 and 10 show a high degree of declared compliance with quarantine measures which largely persisted until the time of research in May and single digit increments of daily infections in Slovakia. Given the changing nature of threat perception from a health threat to economic threat, it is relatively surprising that there is no decrease in the declared compliance with epidemiologic measures between the research waves in March and April.

⁶Parliamentary election in Slovakia took place on 29.2.2020.

Table 9

Have you eliminated social contact with family and other people due to the coronavirus epidemic? I have eliminated contact with people outside my household:

	March 2020	April 2020	May 2020
Completely	47,2%	46,0%	31,8%
Partially	48,3%	51,4%	62,5%
Not at all	4,5%	2,6%	5,7%

Table 10

When outside your home, do you wear a face mask or a respirator?

	March 2020	April 2020	May 2020
Yes, always	88,7%	93,2%	74,9%
Sometimes	9,7%	6,0%	22,4%
No, never	1,6%	0,8%	2,7%

Models in Tables 11 and 12 attempt to answer a question explaining a high degree of compliance with epidemiological measures. In both cases, the models explain the inclusion into the group of ‘the cautious’ – the people who, according to their statements, have completely eliminated contact with people outside their household and always wear a face mask when outside their home. The first model for all three research waves once again shows a clear difference among men and women. As expected, there was a higher proportion of women than men among the most cautious respondents – e.g., there were 50.3% of women and 38.3% of men in this category in the March wave of research. With similar consistency, the model confirms a higher level of caution among older respondents, which agrees with the commonly stressed fact that the elderly have a more dangerous course of the COVID-19 disease. Unlike the elderly whose concerns are based on the real course of the disease, the higher levels of concern among women disagree with observations of a more severe course of the COVID-19 disease in men than in women. In contrast to the differences in threat perception among various age categories, the explanation for differences in concerns among women and men must be sought outside the objective mechanisms of health threat.

The model in Table 11 provides an interesting finding that despite the changing nature of the perceived threat, the epidemiologically ‘cautious’ behaviour in May as well as in March and April was still clearly linked to the declared concerns about the coronavirus. This could mean that, although the declared concern in May is primarily associated with economic vulnerability, it still bears elements of concern about health risks related to the COVID-19

disease. In the March wave of research, residents of Bratislava have also proven to be more cautious. We can assume that this finding (see also Tables 2 and 4) reflects on the fact that Bratislava was the main epicentre of the contagion at that time, with half of all infections in Slovakia originating there.

Table 11

Respondents who have eliminated contact with people outside their household completely and always wear a face mask outside their home, binary logistic regression.

	March		April		May	
	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
Male (dich. variable)	0,652	0,001	0,669	0,003	0,747	0,048
Age (5 categories)	1,124	0,010	1,196	0,000	1,276	0,000
Municipality size (4 and 6 categories)	1,000	0,996	0,938	0,364	1,013	0,803
Education (4 categories)	0,967	0,687	1,266	0,005	1,146	0,146
Threat perception(1 = max, 10 = min)	0,889	0,000	0,878	0,000	0,836	0,000
Resides in Bratislava	1,952	0,024	0,952	0,872	1,441	0,204
Governing party voter	1,275	0,066	1,426	0,008	1,191	0,242
R ² (Nagelkerke)	0,070		0,099		0,119	
N	1000		1000		1000	

The results in Table 11 also show that the model for the April wave of research has some distinct features. In this model, there is a relationship between the ‘cautious’ behaviour and education as well as being a voter of one of the parties in the governing coalition. We suppose that this relationship reflects on the ongoing political struggle at the time to keep quarantine measures enforced by the Prime Minister Matovič. The link to education, which does not appear in the data from March and is below the threshold for statistical significance in May, could perhaps suggest that more educated respondents are more inclined to rational continuance in being ‘cautious’ and despite showing lower levels of threat perception (see Table 4) continue to follow measures and are less likely to become ‘fatigued’ from doing so.

The results of the models in Table 12 confirm the links observed in Table 11 - a higher level of caution among the elderly, a link to threat perception, higher caution rates among women (already beyond the threshold for statistical significance in May) and a link to education in the April wave.

Table 12

Respondents who have eliminated contact with people outside their household completely and always wear a face mask outside their home, binary logistic regression.

	April		May	
	Exp(B)	Sig.	Exp(B)	Sig.
Male (dich. variable)	0,671	0,005	0,762	0,082
Age (5 categories)	1,170	0,002	1,284	0,000
Municipality size (4 and 6 categories)	0,976	0,750	1,032	0,570
Education (4 categories)	1,232	0,023	1,200	0,075
Threat of epidemic (1 = max, 10 = min)	0,877	0,000	0,845	0,000
Resides in Bratislava	0,773	0,427	1,473	0,196
Governing party voter	1,195	0,255	0,957	0,798
Satisfaction with government's response to the coronavirus	1,013	0,885	1,318	0,004
Trust in ...				
healthcare	1,052	0,156	0,984	0,664
government	1,057	0,126	0,988	0,787
scientific institutions	1,019	0,608	1,030	0,479
Believes in a natural origin of the virus	0,967	0,844	1,144	0,450
Subjective household income situation	0,983	0,843	0,751	0,003
R ² (Nagelkerke)	0,120		0,159	
N	912		936	

As opposed to concerns which were linked to trust in institutions in the April model in Table 3, trust in health care, government or in scientific institutions did not play any role in the case of caution. In the context of models explaining concerns in Slovakia and Austria, there is an interesting but unsurprising link between caution and the household income situation - respondents from households that find it easy to live off their budget were less often in the cautious group. A similar relationship can be observed in both models in Table 3 – respondents from households with a better budget situation declared lower levels of concern about the epidemic. These links seem to confirm the expectations of a theory which supposes that concerns (and the caution linked to them) are strongly associated with the perception of economic uncertainty (Fox Gotham et al., 2017). In the case of cautious behaviour, this link does not appear in the data until May, when the perceptions of health threat decreased, and coronavirus concerns were mostly of economic motivation.

As we have already suggested when explaining concerns, the analysis of cautious behaviour also supports the hypothesis that the subjective perception of economic uncertainty, which

was significantly higher in Slovakia than in Austria in April 2020,⁷ is the key to explaining greater levels of concern among respondents in Slovakia than among respondents in Austria.

Institutional trust in government and acceptance of epidemiologic measures

In May, the third wave of research also examined adherence to epidemiologic measures and recommendations. Data collection took place at a time when various measures were slowly being relaxed, either regarding the obligation to wear face masks in public or reopening various businesses. On the other hand, many measures continued to remain in force, such as wearing masks indoors, mandatory social distancing at public events, a restricted number of spectators at cultural and sporting events and quarantine at home after returning from the so-called high-risk countries. At this time, however, as the data from individual research waves indicate, the level of threat perception was already generally lower compared to the previous months. Part of the society was also questioning the persistent measures and their purpose. One of the questions in the survey ‘How are you, Slovakia?’ focused on the willingness to follow the recommendations of authorities during this very period.

Who was more willing to conform to instructions of authorities related to the disease? The dependant variable in binary logistic regression is the agreement with the statement ‘I would follow the recommendations of authorities even if I disagreed with them.’ (1= agreement). The independent variables include the respondent’s gender, age and education, the level of threat perception from contracting the virus, trust in health care, trust in government and the household economic situation (whether the household’s income has changed and how difficult the respondents find it to live off the overall household budget). The last variable is the respondents’ views on the origin of the virus, where respondents were asked to choose a statement that best describes what they believe happened and had the choice of opting for the natural origin of the virus (‘The virus was accidentally transmitted from an animal to humans in the Chinese city of Wuhan.’), two alternatives of the artificial origin of the virus (‘The virus was artificially created and accidentally escaped into the human population.’, ‘The virus was artificially created and was deliberately spread among people.’) and the answer ‘I do not know’.

⁷The comparison of respondents’ answers in Austria and Slovakia within ISSP 2017 research which was performed before the epidemic suggests that the difference in the perception of economic uncertainty has a long-term character.

Respondents' economic situation and opinions on the origin of the virus are the main predictors of a negative attitude towards following authorities' recommendations with which they disagree. The willingness to comply with measures one disagrees with was lower among the respondents whose financial situation improved during the coronavirus crisis and also among those who believe in the artificial origin of the virus, regardless of whether it accidentally escaped or was deliberately released into the population.

Table 13

Respondents who follow recommendations despite disagreeing with them, binary logistic regression.

	O.R.	95% Confidence Interval Lower limit - Upper limit		Sig.
(Constant)	0,348	0,149	0,812	0,015
Male	0,809	0,616	1,060	0,124
Age	1,062	0,960	1,174	0,241
Education	1,127	0,950	1,338	0,169
Threat perception	0,951	0,902	1,003	0,064
Trust: health care	1,054	0,996	1,115	0,067
Trust: government	1,153	1,100	1,209	< ,001
Living off budget: neither difficult nor easy				
Living off budget: difficult	1,015	0,747	1,378	0,925
Living off budget: easy	1,202	0,764	1,892	0,426
Income: no change				
Income: higher	0,377	0,158	0,899	0,028
Income: lower	0,854	0,631	1,156	0,306
Ref. cat.: the virus has a natural origin				
Artificial: escaped accidentally	0,621	0,406	0,952	0,029
Artificial: released deliberately	0,669	0,468	0,958	0,028
I do not know	0,770	0,509	1,166	0,217
Nagelkerke R ²		0,146		

Note: O.R. = odds ratio

By taking a closer look at the answers of a group of respondents divided by changes to household income, we find that the difference in the opinion on compliance with authorities' recommendations with which one disagrees, varies depending on the respondent's opinion on the origin of the virus. On average, the group of people whose income has increased is the least willing to follow recommendations. In the group with no change in income, there is a clear difference between those who believe the virus was created artificially and those who think it spread accidentally from an animal to humans. However, this difference is even more pronounced in the group of respondents who cited that their income has decreased. While more than 62% of those who believe the disease was caused by animal-to-human transmission are willing to follow the authorities' instructions, those whose income has

decreased and who believe the virus was deliberately spread declared a willingness to follow these recommendations in just over 36% of cases.

Table 14

Compliance with authorities' instructions even if a respondent disagrees with them defined by the change in income and opinion on the disease origin.

Virus origin	No change in income		Income is higher		Income is lower	
	%	N	%	N	%	N
From animal to human	61,5	135	23,1	13	62,9	105
Escaped by accident	47,1	70	50,0	2	43,7	87
Spread deliberately	47,6	145	38,5	13	36,4	242
I do not know	56,4	101	00,0	3	46,4	84
Total	53,7	451	29,0	31	44,6	518

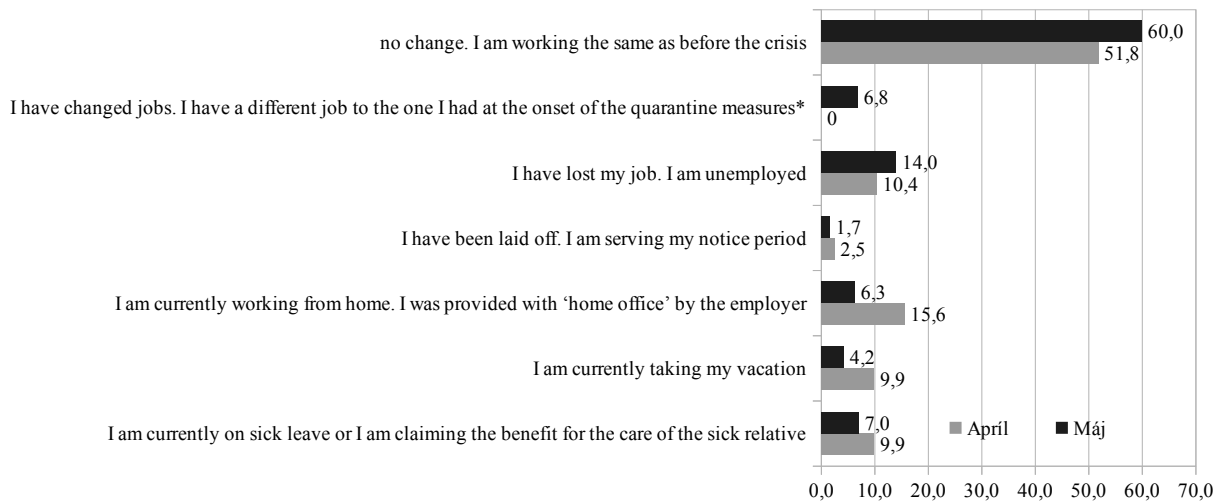
On the other hand, recommendations of authorities would be followed more often by people who trust the government. This conclusion confirms the well-known supposition that trust in government increases compliance with rules and regulations, reduces the costs of implementing them and is particularly important in situations of crisis that a country may face (OECD 2013). The average trust in government associated with the crisis caused by the spread of the novel coronavirus (on the scale of '1 = I have no trust at all' to '11 = I have great trust') is at 6.7 in the group of respondents who agreed with the statement, while in the second group of respondents it is only at 4.8.

Coronavirus and the labour market

Measures imposed due to the COVID-19 pandemic, particularly the closure of most shops and services and the move to online learning at schools, have affected the work situation and working conditions of many. Findings from the survey 'How are you, Slovakia?' show that, in April, only half of working respondents stated that their work situation has not changed compared to the period before the measures and they continued working as before. The May wave showed that, after the fourth phase of relaxing measures, some respondents were able to return to work, but still only 60% of them said they were working (again) as before the crisis. The second largest group of respondents were workers who worked from home instead of commuting to work and were given 'home office' by their employers.

Figure 4

Changes to work situation of respondents who were employed before the lockdown was imposed, in %.



* question asked only in the May survey wave

Home office

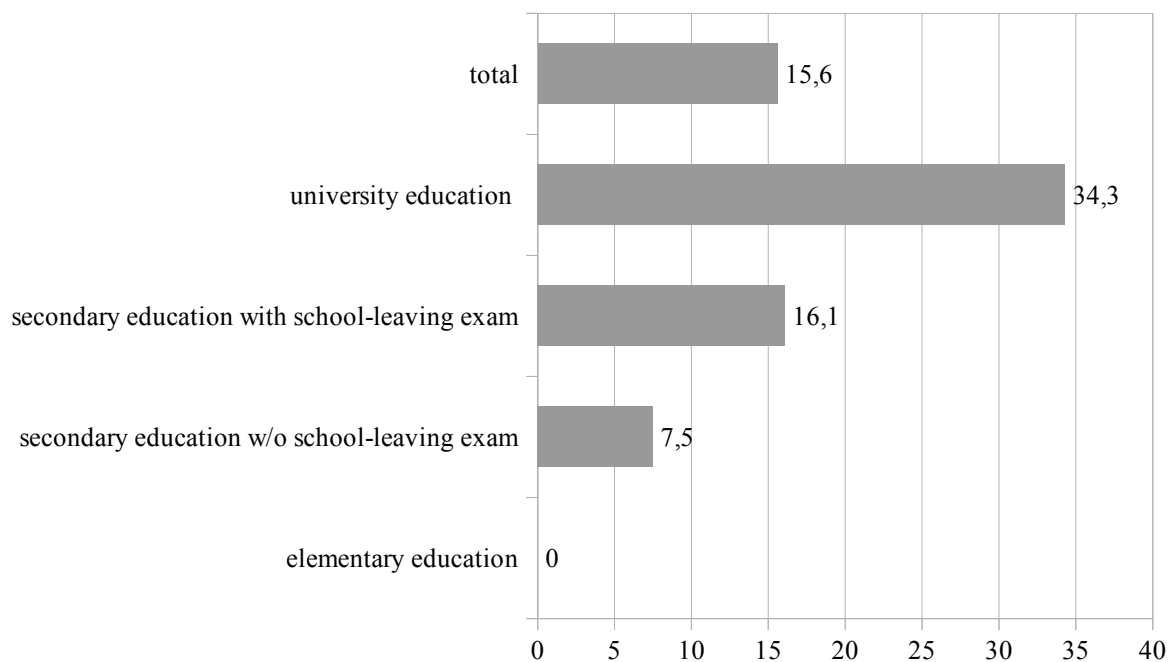
A European Commission report (Fana et al., 2020) states that 25% of workers in Slovakia have a job position which can be performed from home. According to the Commission's analysis, these job positions have the highest proportion of well-paid, highly skilled workforce. Sectors such as education, public administration, finance, telecommunications, high-skilled scientific and technical professions, etc. were included in this category.

In our research sample, workers who switched to 'home office' after the outbreak of the pandemic represented 16% of all workers in April, and 6% in May following the fourth phase of easing measures. In this context, Ulrich Beck (2011) talks about the duplication bifurcation of the labour market along the lines of standardized and de-standardized workforce deployment standards (from a temporal, spatial and socio-legal point of view). As he says, the labour market splits in two – the market characterized by work of industrial character attached to a certain place, with a fixed working time and the flexible, pluralized labour market of risk society characterized by work which is not attached to a specific place away from home or to a fixed time when it can be performed (Beck 2011, p. 223-229). In the context of a flexible labour market, Ulrich Beck draws attention to the transfer of health and mental risks associated with the profession into one's home (p.227), but at the time of the

coronavirus pandemic, work that did not require a daily commute and contact with others was generally perceived as less risky. However, this did not translate into respondents' perception of a health threat: there was no significant difference in the subjective perception of health threat from coronavirus between the respondents who worked from home and those who continued to work during the lockdown as they used to before.

Figure 5

The proportion of respondents working from home defined by their education, in %.



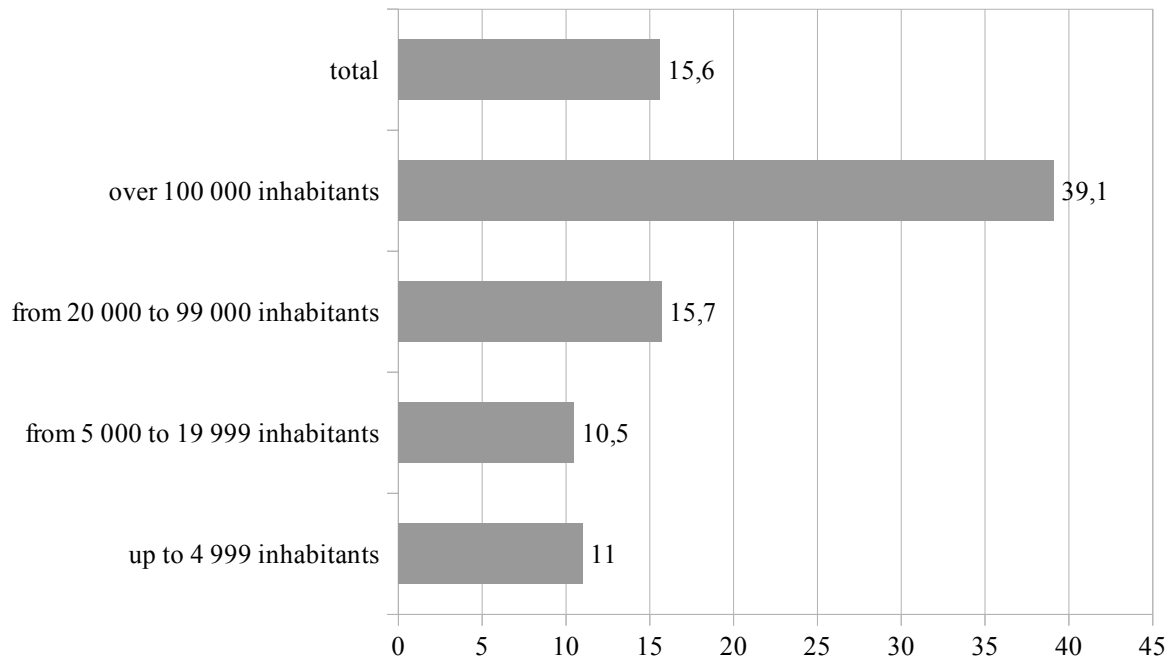
Findings from our research show that the flexible labour market in Slovakia is centred primarily in large cities and employs people with higher education. In the April wave of our research, a total of 16 % of respondents worked from home, however, every third respondent working from home had a university degree (Figure 5). Similarly, in villages and smaller towns, only every tenth respondent stated they had ‘home office’, while in large cities the proportion of such respondents was four times higher (Figure 6).

The relationship between the municipality size and the highest attained level of education is also confirmed by the regression analysis which shows that higher education and living in a city of more than 100 000 residents significantly increase the chances that the respondent worked from home once the quarantine measures were imposed. The regression analysis in Table 15 also confirms that respondents whose working conditions did not change as much

and who were able to continue working as before form a more heterogeneous group but are dominated by men and lack residents of cities, especially the ones of less than 100 000 residents.

Figure 6

The proportion of respondents working from home defined by the municipality size, in %.



Based on the hypothesis that jobs that can be performed from home are more resistant to crises, German researchers Irlacher and Koch (2020) warn that workers at such positions had been privileged even before the pandemic broke out. Hence, they voice concerns that the coronavirus pandemic will widen inequalities even further: in their opinion, the decrease in income will mostly affect workers unable to do their jobs from home whose income was, even before the crisis, lower than that of workers at positions that can be performed from home. Following their research carried out during the pandemic in Austria, Prainsack et al. (2020) also draw attention to the widening inequalities. As they write, Austria had become more unequal due to the coronavirus crisis. ‘People whose income had been low before the crisis had even less money available in the middle of April. People with lower levels of formal education had been more affected by job losses than others. And 20% of all children had to spend the lockdown in homes with very little personal space’ (Prainsack et al., 2020).

Table 15

Respondents who worked from home and respondents who continued working the same as in the period before the measures were imposed in April 2020, multiple linear regression.

	Working from home (1= yes; 0 = no)		Working as before the measures (1= yes; 0 = no)	
	B	Sig.	B	Sig.
Male	-0.267	0.311	0.595	0.003
18 – 29 years old (ref. cat.)				
30 – 39 years old	-0.088	0.836	0.097	0.775
40 – 49 years old	-1.038	0.040	0.575	0.097
50 – 59 years old	0.162	0.711	0.315	0.372
60 and more years old	0.101	0.834	0.041	0.918
Education (4 cat.)	0.606	0.000	0.059	0.646
Municipality size: fewer than 4 999 residents (ref. cat)				
Municipality size: 5 000 - 19 999 residents	-0.086	0.839	0.048	0.867
Municipality size: 20 000 - 99 999 residents	0.418	0.206	-0.589	0.015
Municipality size: over 100 000 residents	1.106	0.002	-0.457	0.152
Nagelkerke R ²		0.183		0.065
N		459		459

Our research did not examine respondents' total income, but the April wave showed that respondents working from home also suffered a fall in income. More than a half of them (57.3 %) stated that their household income has dropped since the lockdown was introduced which is almost 10 percentage points higher than for workers who worked the same as before the lockdown was put in place (48% of respondents in this group reported a decrease in income). This may be caused by the fact that although they were working, they received a lower salary than before or the fact that the income of other household members dropped. Changes to the number of hours people worked are not analysed in our research, however, the OECD Employment Outlook report (2020) suggests that in the ten countries surveyed, the drop in the number of hours worked reaches 12.2% on average.

Concerns about job loss and the growth of unemployment

Although most respondents have been affected by a drop in their income, respondents working from home have been able to live off their income better than other groups: while 9.5% of the entire sample said they find it easy or very easy make ends meet, they represent 17.3% of respondents working from home. At the same time, these respondents are also less worried about losing their jobs: in the April wave, 45.1% of those working from home reported they do not feel their jobs were at risk. This proportion was only 41.4% among

respondents who worked the same as before. Job losses have now become a new reality for millions of people around the world, with some considering this to be the biggest economic crisis since the Great Depression during the 1930s⁸.

The growth of unemployment is also confirmed by the number of job applicants in Slovakia – according to the data of the Central office of Labour, Social Affairs and Family (hereinafter as The Central Office of Labour), the registered unemployment rate was at 5.2 % in March, 6.6 % in April and 7.2 % in May⁹. This negative trend was also reflected in our research: 13% of respondents who were employed before the lockdown lost their jobs by April or were serving their notice period, and another 21% of them felt that their jobs were very much or quite at risk. The proportion of respondents who lost their jobs during the coronavirus crisis increased by another 2.9 percentage points between April and May. Overall, in May, 16% of respondents said they had lost their jobs during the coronavirus crisis or were under a notice period. However, the proportion of respondents who were very worried or quite worried about losing their jobs fell to 16.5% between April and May.

The proportion of respondents who reported they had lost their jobs during the pandemic is higher than the official figures provided by the Central Office of Labour. Although we did not ask respondents about the details of job losses or their formal employment relationships, we can assume that many of them were not included in the Jobseekers Register for various reasons e.g., they had temporary jobs, worked part-time or were self-employed and lost their costumers but did not register themselves as unemployed. The research has shown that job loss during a pandemic has certain characteristics: it affects mostly young adults and people with low-level education. 17.6 % of women and 11.6 % of men in our sample stated they had lost their job during the pandemic and were unemployed which is a statistically significant difference. However, the data from the Jobseekers Register do not confirm this difference. According to the data of the Central Office of Labour, in April, 29 275 jobseekers were added to the register, 49% of whom were women and a further 19 504 in May, 47% of them women. The data suggest that the hypothesis of American authors Alon et al. (2020) does not apply in Slovakia. They predict that, unlike at times of previous economic crises, more women than men will lose jobs as a result of the economic crisis caused by the pandemic as it will bring job losses for people working in the service industry, such as restaurants and hotels, which

⁸<https://www.theguardian.com/business/2020/may/28/us-job-losses-unemployment-coronavirus>

⁹https://www.upsvr.gov.sk/statistiky/nezamestnanost-mesacne-statistiky/2020.html?page_id=971502

employ more women than men. The data from the Central Office of Labour also confirm that a large group of people who lost their job in Slovakia had worked in the retail and service industries, but the second largest group was formed by unskilled labourers and machine operators and mechanics which presumably are occupations dominated by men.

Work situation of young workers

Many studies from other countries draw attention to the fact that young workers were hit by the economic consequences of the pandemic the hardest. For instance, based on the results of a research carried out during the pandemic in the United Kingdom, authors Adams-Prassl et al. (2020) state that young people are proportionately more affected by job losses, and those who remained in employment suffered from income losses and perceived a greater threat of losing their job than older respondents. The International Labour Organization (ILO) considers young people to be one of the most vulnerable groups. In its analysis (ILO Monitor 27.5.2020), ILO says that young people are the major victims of social and economic consequences of the pandemic for two reasons – the fact that their education process was disrupted by the pandemic and due to their vulnerability in the labour market. ILO also points out that a third of young people in Europe are in informal jobs and many of them are employed in sectors most affected by the consequences of the pandemic. It refers to the current generation of young people as the lockdown generation and voices concerns that the social and economic consequences of the pandemic will have a long-lasting effect on their lives (ILO Monitor 27.5.2020). An OECD report (2020) draws similar conclusions when it states that young people are exposed to the highest risk of losing jobs and decrease in income, and in addition have smaller savings compared to other age groups. In OECD countries, as much as 35% of young people aged 15-29 work at low-paid and unsecure job positions, which is significantly higher than in other age groups (15% in the 30-50 age group and 16% in the over-50 age group). Moreover, as the OECD Employment Outlook report (2020) adds, the economic crisis came at a time when many young people had just graduated and started looking for employment.

The data of the Central Office of Labour in Slovakia confirm concerns voiced in the international studies and analyses when it shows that in April and May, young workers people under the age of 29 who were added to the Jobseekers Register represented 31.5% and 32.5% of all newly unemployed people. The European Commission's report on the impact of the

pandemic on the labour market (European Commission 2020) adds that a high proportion of young workers among the newly unemployed could also be caused by the fact, that a large proportion of young people work in sectors forcefully closed during the pandemic, such as various non-essential services, hotel and hospitality industry etc. The report suggests that the proportion of 15- to 29-year-olds in Slovakia is 17.5% in all sectors, but up to 27% in closed sectors (the EU average is 28.3%). Moreover, the sectors closed during the pandemic are the ones which represent the areas of the economy with the highest prevalence of temporary contracts. While temporary contracts represent 8.3% of all contracts in Slovakia, they amount to 13.1% of all contracts in closed sectors (the EU average is 21.6%) where job positions are among the least paid (Fana et al., 2020). As Torrejón Pérez et al. (2020) say, coronavirus measures, such as the closure of certain areas of the economy, will mainly affect the most vulnerable and disadvantaged groups of workers. The reason for this is the fact that in most EU countries the sectors closed during the pandemic can be characterized by low wages, precarious working conditions, and a higher proportion of young people and women. According to our research findings, young people aged 18 to 29, along with respondents over 60, were among the most optimistic age groups back in March as they were less worried about losing their jobs than other respondents.

Table 16

The proportion of respondents, who perceived a great threat (answers 1 to 3 on a scale of 10) to their work situation due to the coronavirus pandemic, by age.

	18-29 years old	30-39 y/o	40-49 y/o	50-59 y/o	Over 60 y/o	Total
March	29,2	37,1	38,5	35,9	29,1	34,8
April	28,3	24,0	18,2	18,6	19,6	21,2
May	27,1	14,9	18,5	14,2	11,3	16,5

Nevertheless, this trend took a reverse turn in April. While the overall proportion of respondents who perceived a great threat to their work situation decreased by 13.8 percentage points between March and April, in the age group of 18- to 29-year-olds, this drop was significantly smaller – the proportion of young people who perceived a great threat fell by only 0.9 percentage points. Young people thus represented the most pessimistic group during this period and continued to do so also in May, when 27.1% of them felt a great threat to their job position.

Despite this, the regression analysis has shown that the most important predictor of the perceived threat to job position is not the age, nor education or municipality size but the change in household income.

Table 17

The perception of coronavirus threat to work situation (1 = at great risk; 10 = not at all at risk), multiple linear regression.

	March		April		May	
	Beta	Sig.	Beta	Sig.	Beta	Sig.
Male	-0.028	0.493	0.009	0.844	-0.156	0.000
18 – 29 years old (ref. cat.)						
30 – 39 y/o	-0.017	0.767	0.035	0.600	0.110	0.097
40 – 49 y/o	-0.052	0.366	0.142	0.041	0.155	0.022
50 – 59 y/o	-0.051	0.352	0.127	0.051	0.134	0.047
Over 60 y/o	0.004	0.930	0.087	0.133	0.036	0.526
Elementary education (ref. kat.)						
Secondary ed. w/o exam	-0.167	0.239	-0.309	0.017	-0.049	0.711
Secondary ed. w/ exam	-0.088	0.522	-0.146	0.250	0.004	0.976
University education	0.066	0.580	-0.098	0.400	0.018	0.874
Municipality size	0.003	0.935	0.035	0.441	0.008	0.859
Income is lower*	-0.221	0.000	-0.169	0.000	-0.256	0.000
Make ends meet is neither difficult nor easy (ref. cat.)*						
Make ends meet is difficult*			-0.203	0.000	-0.246	0.000
Make ends meet is easy*			0.131	0.005	0.190	0.000
Works from home*			0.002	0.967	-0.048	0.270
On sick leave / on benefit for the care of the sick relative*			-0.042	0.357	-0.071	0.093
Unemployment rate in the district*			0.013	0.762	0.041	0.329
R ²	0.102		0.210		0.290	
N	553		459		457	

*Examined only in the April and May wave.

Respondents who reported that their household income has decreased since the onset of the pandemic and they were struggling to make ends meet, perceived greater threats to their job positions. A lower income was a significant predictor of the perception of threat to the work situation in all waves of research. The ability to make ends meet was examined only in April and May, but both of these research waves have shown that respondents who find it difficult to make ends meet perceive a greater threat and by contrast, respondents who find it easy to

make ends meet perceive a smaller threat to their job position than those who stated that make ends meet is neither easy nor hard. In May, gender and age were among significant predictors as well: while men perceived higher levels of threat than women, workers aged between 40 and 59 years old considered their jobs to be less threatened than young workers. These findings concur with the official unemployment statistics according to which the group of the newly unemployed was dominated by young people. Our research has found that the subjective perception of financial situation and changes in income have a significant impact on the assessment of threat. This is consistent with other findings from our research which show that people in a more difficult financial situation perceive threats also in other areas of their life, for example, threats associated with health risks of the coronavirus. Therefore, we may conclude that the uncertainty triggered by a reduction in income and financial difficulties generates another uncertainty – the perception of threat to one’s job position. Moreover, as the regression analysis has shown, this finding applies regardless of the unemployment rate in the region where the respondent lives.

Our research has shown that although most people lost their jobs in the sectors most affected by the lockdown, the threat to one’s job position was perceived by a much wider population. This finding also generates many other questions related to the nature of work, working conditions, job security, etc. which may be the subjects of further research.

The origin of the virus, vaccination and views on how individual countries handled the epidemic

Our research has also examined respondents’ views on the origin of the coronavirus epidemic and has focused on determining what such views are based on or related to. The survey has shown that, besides other factors, the view on the virus origin is closely linked to the willingness to get vaccinated against it.

The beliefs of deliberate outbreaks of epidemics are no novelty in the history of mankind and every major epidemic seems to have been accompanied by conspiracies about its origin. Conspiracies about epidemics can be explained from the perspective of evolutionary psychology which claims that by evolution we have acquired a mind which seeks to attribute meaning to the world around us. For millennia, it has been essential for human survival to recognize patterns and contexts of potential dangers.

The key to being successful in averting danger is to effectively search for something known, something we understand, which in turn gives us the capacity to defend and protect ourselves from it. Identifying the intentions of others comes to our mind naturally. We often even attribute human characteristics to animals or inanimate objects and most recently also to artificial intelligence. Such behaviour is called anthropomorphism and according to several studies (see e.g., Douglas et al., 2015) is associated with conspiratorial thinking. Therefore, it is human nature to attempt to identify enemy alliances and defend oneself from them. Thus, the most intuitive course of action in a situation of crisis is to attribute evil intentions to one's enemies. Believing in coincidence or perhaps admitting the lack of knowledge about a given threat could be too dangerous from an evolutionary point of view. At the same time, the inability to identify or acknowledge randomness in the world around us is associated with such errors of reasoning which lead to conspiracies or even belief in paranormal phenomena (Wiseman – Watt 2006).

Slovaks seem to have a greater perception of threat from the effects of the spread of the coronavirus than, for example, Austrians. However, any fear and in this case the fear of an epidemic, causes us to consider the threat less analytically and more intuitively. The fear of an epidemic is associated with feelings of helplessness, loss of control or uncertainty (Whitson – Galinsky 2008, Abalkina-Paap et al., 2002, van Prooijen – Jostmann 2012). In our mind, all these emotional states stimulate the processes of creating meaning and thus contribute to conspiratorial thinking.

Epidemics or even pandemics themselves cumulate several characteristics that contribute to the spread of conspiracies. Epidemics primarily rouse fear and, as a consequence, people react to them intuitively. One of the intuitive reactions is to try and find an enemy who wishes to cause harm by spreading the disease. However, understanding the origin and spread of a disease requires slow, abstract and analytical thinking and specialized knowledge.

The origin of the virus

Most respondents within the May wave of research (55.9%) do not believe that the animal-to-human transmission of the COVID-19 virus was accidental. Overall, up to 40% of respondents think the virus was created artificially and was spread among people deliberately, and another 15.9% of respondents believe the virus was created artificially but escaped into the population by accident. Only 25.3% of respondents opined that the virus was accidentally

transmitted from an animal to humans in the Chinese city of Wuhan. It is also interesting that the views on the origin of the virus hardly changed between the April and May wave of research.

Table 18

Beliefs on the origin of the virus, in %.

	April	May
The virus was accidentally transmitted from an animal to humans in the Chinese city of Wuhan.	23,5	25,3
The virus was artificially created and accidentally escaped into the human population.	17,0	15,9
The virus was artificially created and was deliberately spread among people.	40,6	40,0
I do not know.	18,9	18,8

Respondents who voted for the extreme-right Kotlebovci – ĽSNS party in the parliamentary elections are the ones most convinced about the artificial origin of the virus (81% - the percentage from the May wave of research). This finding is not surprising as international studies have also observed a link between political extremism and a belief in conspiracy theories (see e.g., van Prooijen et al., 2015). The voters of populist political parties Smer SD (64.9%), Sme rodina (64.5%) and OĽANO (46.9%) also expressed belief in the artificial origin of the virus. By contrast, the voters of more liberal parties PS/Spolu (64.5%), Za ľudí (42.9%) and SaS (40.5%) show a stronger belief in the natural, animal-to-human transmission of the virus.

The model of binary logistic regression shown in Table 19 provides information on predictors related to the belief in the artificial origin of the virus. The most significant factor in both the second and the third wave of research was the willingness to get vaccinated if a vaccine becomes available. In May 2020, only 18.2% of respondents who believe in the artificial origin of the virus would get vaccinated. In both research waves, more women than men believed in the artificial origin of the virus (coincidentally this distribution remained the same in April and May: women 54.7% vs. men 45.3%), however, this difference became statistically non-significant in the May wave. Other predictors were also education (only in the May wave) and trust in government.

Table 19

Respondents who believe in the artificial origin of the virus, binary logistic regression.

	April		May	
	Exp(B)	Sig.	Exp(B)	Sig.
Male (dich. variable)	0,572	0,001	0,796	0,155
Age (5 categories)	1,112	0,073	1,147	0,020
Municipality size (6 categories)	0,861	0,052	0,937	0,215
Education (4 categories)	0,848	0,120	0,769	0,009
Threat of epidemic (1 = max, 10 = min)	1,000	0,995	1,034	0,294
Subjective income situation	0,845	0,098	0,872	0,154
Would get vaccinated	0,389	0,000	0,403	0,000
Trust in ...				
healthcare	0,958	0,347	0,97	0,446
Government	0,905	0,003	0,905	0,002
scientific institutions	0,944	0,236	0,95	0,245
R ² (Nagelkerke)	0.179		0,158	
N	912		936	

Statistically, the belief in the artificial origin of the virus significantly increases in respondents with lower levels of education. This relationship may confirm the theory that lower analytic thinking is associated with an inclination to conspiracy theories (Swami et al., 2014) regarding the coronavirus. On the contrary, the belief in the artificial origin of the virus decreases with higher levels of attained education.

Table 20

The highest attained level of education versus the belief in artificial origin of the virus, in %.

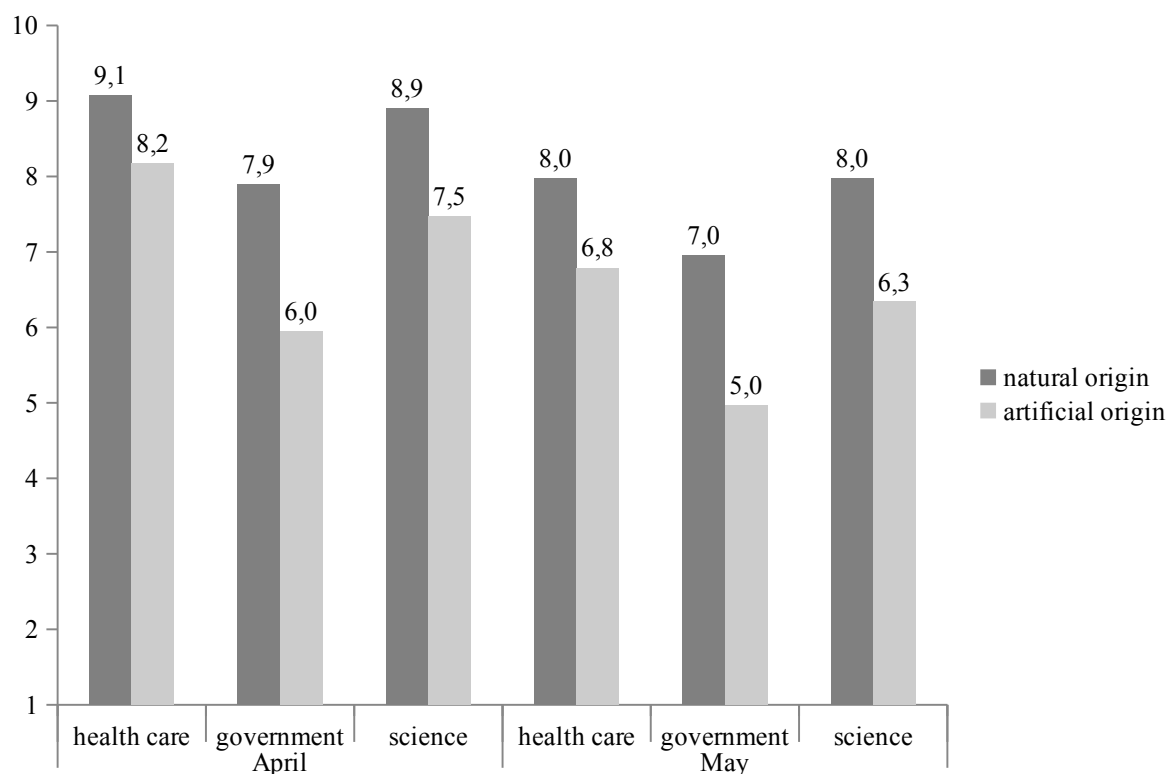
	April	May
Without school-leaving exam	65,9	65,1
With school-leaving exam	51,9	50,0
University degree	47,0	43,3

Our research has partially confirmed findings from international studies (Imhoff - Lamberty 2020, Swami - Barron 2020) which suggest that people who consider the coronavirus to be artificially engineered show less respect for epidemiologic measures imposed by the government. Our research has shown a relationship between a reluctance to wear a face mask and a belief in the artificial origin of the virus (in the April wave).

Respondents who are convinced of the artificial origin of the virus have also expressed a lower degree of trust in institutions such as health care, scientific institutions, the central crisis staff or the government. Figure 7 also supports findings from international studies which show higher degrees of trust in these types of institutions during the peak of the epidemic or during the lockdown (Sibley et al., 2020, Bækgaard et al., 2020), which corresponds with findings from the April wave of our research. Once the perception of an imminent threat had passed (in the May wave), there was a decrease in the degree of trust in these institutions (in this case the trust was measured in relation to the crisis caused by the spread of the virus).

Figure 7

The average trust in individual institutions defined by the belief in the natural or artificial origin of the virus. The scale: from 1 – *I do not trust at all* up to 11 – *I have great trust*.



Willingness to get vaccinated

When asked ‘Would you get vaccinated if a vaccine for the novel coronavirus was available today?’, 40.9% of respondents in the April wave gave a positive response while 27.9% would refuse to get vaccinated and 31.3% did not know. In May, the proportion of respondents

willing to be vaccinated dropped to 25.9%. The vaccination was rejected by 42.9% of respondents and 31.2% responded ‘I do not know’ (Table 21).

Table 21

Willingness to get vaccinated against the virus, ‘Would you get vaccinated if a vaccine for the novel coronavirus was available today?’, in %.

	April	May
Yes	40,9	25,9
No	27,8	42,9
I do not know	31,3	31,2

Table 22 offers one of the possible explanations for a decline in respondents’ willingness to be vaccinated. It shows the answers of respondents who did not respond positively to the question on vaccination and asks them to provide reasons for such an opinion. In both waves, the belief that any vaccine may cause more harm than the virus itself is cited as the most significant reason, followed by the belief that the coronavirus vaccine cannot help and the lack of trust towards pharmaceutical companies. However, the proportions of responses to these items did not change much between April and May. Nevertheless, there was an increase in the proportion of responses ‘The coronavirus is not as harmful as we are being told’ from 8.9% in April to 17.1% in May. This might be explained by examining the current situation at the time of the survey: In April, it was one week after Easter when travelling was restricted and there was a quite high number of daily new cases, while in May the respondents may have felt that the worst had already passed and coronavirus was slowly disappearing from Slovakia because the daily increments of new cases were minimal and lockdown restrictions were being lifted. In Slovakia, therefore, there may have been a strong feeling that the concerns about the coronavirus were exaggerated because the epidemic had bypassed us, and the vaccination may thus be useless. In the previous part of the text, we presented a significant decrease in the perception of threat from the epidemic between March and May.

The multivariate analysis which applies binary logistic regression (Table 23) also demonstrates that the willingness to get vaccinated is strongly linked to the perception of threat (unlike with the case of the natural or artificial origin of the virus, where the perception of threat did not play a significant role).

Table 22

Reasons for refusing vaccination, in %.

	April	May
Any vaccine may cause more harm than the coronavirus itself	26,4	26,7
I do not think that the coronavirus vaccine can help	22,5	24,6
I do not trust pharmaceutical companies	20,8	20
The coronavirus is not as harmful as we are being told	8,9	17,1
I cannot be vaccinated due to other health reasons	3,2	4,3
Other	5,8	4,3

The result of the logistic regression also suggests that men were more likely to get vaccinated (the statistical significance emerges only in the April wave) and the youngest respondents were the most willing to get vaccinated in both waves of the survey.

Table 23

Who would get vaccinated, binary logistic regression.

	April		May	
	Exp(B)	Sig.	Exp(B)	Sig.
Male (dich. variable)	1,354	0,04	1,288	0,112
Age (5 categories)	0,792	0,000	0,857	0,009
Municipality size (6 categories)	0,992	0,903	1,052	0,339
Education (4 categories)	0,985	0,875	1,019	0,854
Threat of epidemic (1 = max, 10 = min)	0,859	0,000	0,888	0,000
Believes in the natural origin of the virus	2,598	0,000	2,495	0,000
Subjective income situation	1,179	0,69	1,069	0,486
Trust in ...				
healthcare	1,095	0,017	1,057	0,156
Government	1,06	0,039	1,029	0,365
scientific institutions	1,078	0,056	1,099	0,029
R ² (Nagelkerke)	0,189		0,142	
N	912		936	

However, the most significant explanatory factor is the belief in the natural origin of the virus. In April, up to 63% of those who are convinced that the virus was accidentally transmitted from an animal to humans would get vaccinated. On the contrary, only 30% of those respondents who believe the virus was engineered artificially and spread deliberately would get vaccinated (see Table 24).

In this case, conspiratorial beliefs are markedly linked to the willingness to get vaccinated and it turns out that in Slovakia, as in other countries, conspiratorial beliefs may negatively interfere with efforts to eliminate the epidemic.

Although the regression analysis (Table 23) shows that trust in institutions such as government or health care played a statistically significant role only in the April wave of research and trust in scientific institutions only in the May wave, Figure 8 suggests that the correlation between trust in institutions and willingness to get vaccinated can be observed in both research waves. The link between institutional trust and willingness to get vaccinated is also presented by several international studies (e.g. Yaqub et al., 2014, Raude et al., 2016, Larson 2018, Jamison et al., 2019).

Table 24

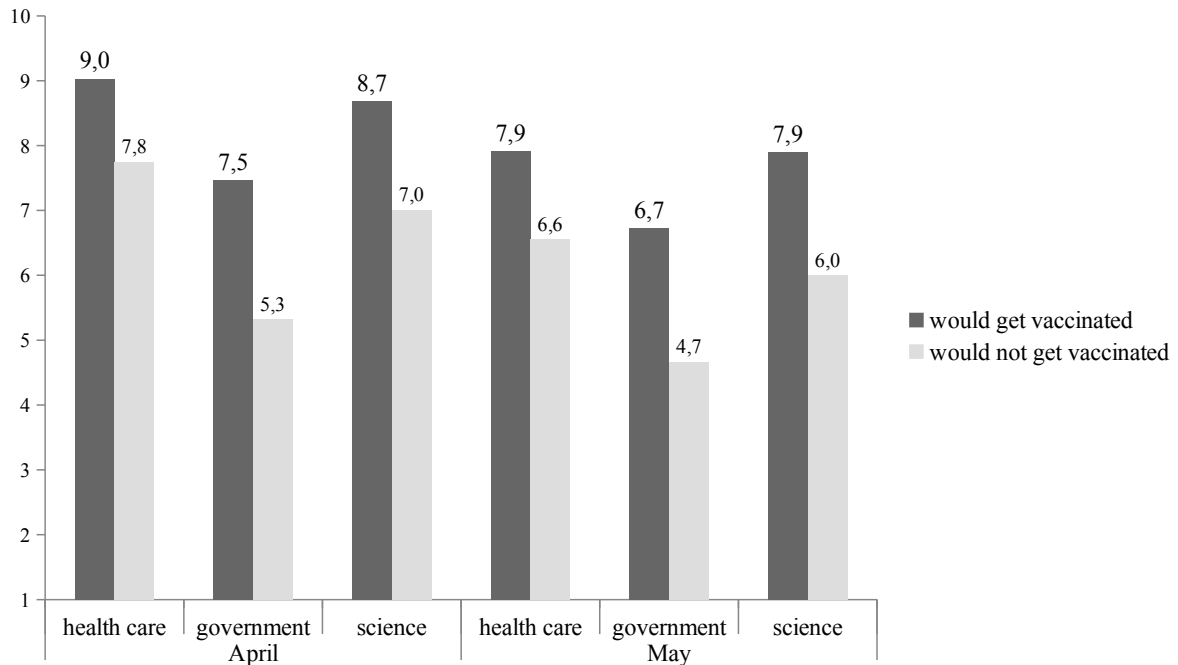
‘Would you get vaccinated if a vaccine for the novel coronavirus was available today?’, responses in %.

The virus...	April				May			
	Yes	No	Don't know	Total	Yes	No	Don't know	Total
was accidentally transmitted from an animal to humans in the Chinese city of Wuhan	63,0	12,3	24,7	100,0	44,7	25,3	30,0	100,0
was artificially created and accidentally escaped into the human population	42,9	32,9	24,1	100,0	24,5	46,5	28,9	100,0
was artificially created and was deliberately spread among people	30,0	39,7	30,3	100,0	15,8	59,0	25,2	100,0
I do not know	34,9	16,9	48,1	100,0	23,4	29,3	47,3	100,0
Total	40,9	27,8	31,3	100,0	25,9	42,9	31,2	100,0

A comparison with international surveys shows that the degree of willingness to get vaccinated against the coronavirus is exceptionally low in Slovakia. According to a European survey with a comparable question (Neumann-Böhme et al., 2020) conducted in seven countries of Western Europe in April 2020, the willingness to get vaccinated ranges from 62% in France up to 80% in Denmark (see Figure 9). This European research has also found that men are more willing to get vaccinated. Interestingly, within the Western European research, the greatest willingness to get vaccinated was observed among older men, whereas within our research, among the youngest men aged 18-29.

Figure 8

The average trust in individual institutions defined by willingness to get vaccinated against the coronavirus. The scale: from 1 – *I do not trust at all* up to 11 – *I have great trust*.



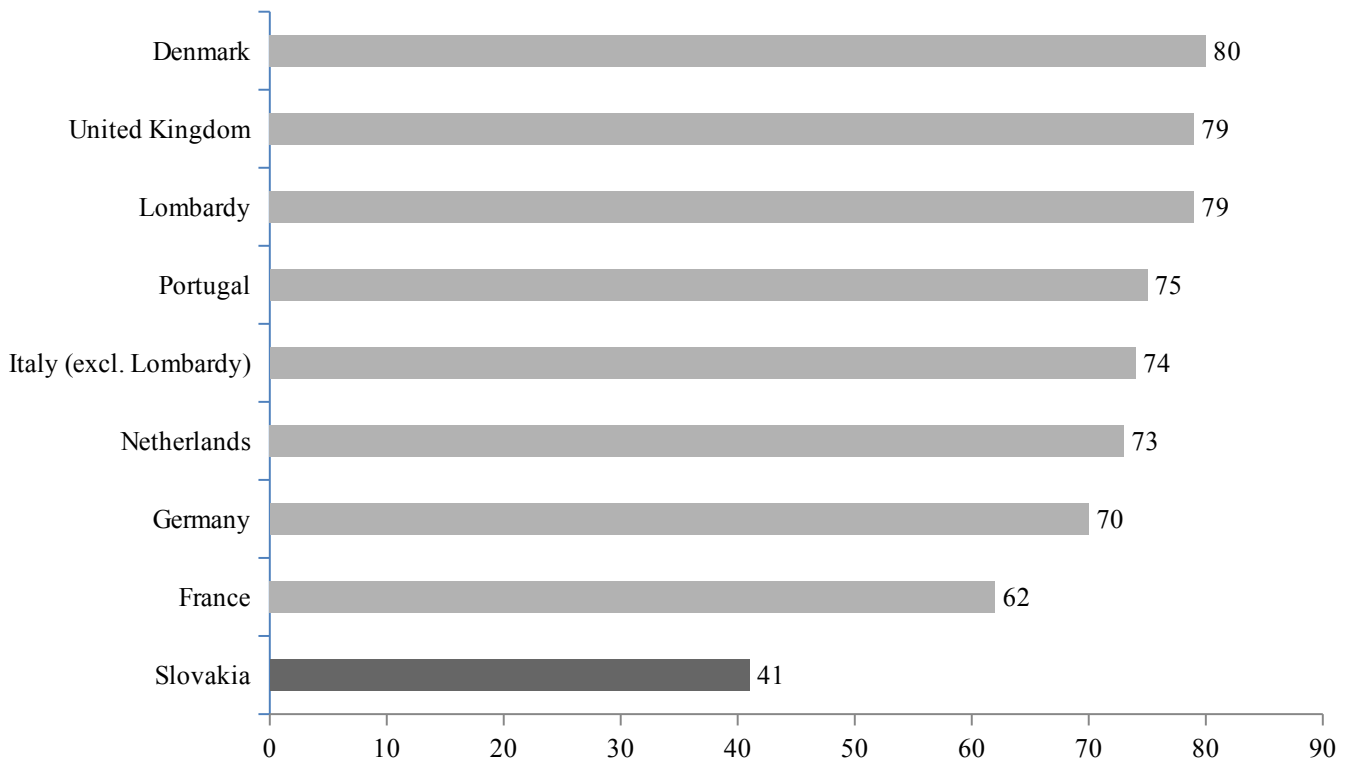
The source of data for countries other than Slovakia: Neumann-Böhme et al. (2020).

A similarly low figure regarding the willingness to get vaccinated as in Slovakia is reported by authors from Poland (Feleszko et al., 2020) where the research took place at the beginning of June and only 37% of respondents said they would get vaccinated. The Polish authors also created an analysis of multiple studies that asked a question on the willingness to get vaccinated. The analysis was done utilizing data from open web resources and the studies included in the analysis were performed between March and June 2020. This analysis shows that the highest proportion of respondents in favour of getting a vaccine is in Western European countries: 81% in the United Kingdom, 74% in France, 72% in Norway, 70% in Finland, 63% in Italy and 61% in Germany. A relatively high degree of willingness to get vaccinated can also be observed in developed countries outside Europe: 87% in Australia, 73% in Canada and 65% in New Zealand; the exception is the USA where the authors report only 49%. In general, the analysis indicates that the willingness to get vaccinated is lower in

post-communist countries: 37% in Poland, 41% in Slovakia, 44% in Romania, 49% in the Czech Republic, 52% in Hungary and 59% in Russia.

Figure 9

The proportion of respondents in each country who would get vaccinated if a coronavirus vaccine was available, in %, April 2020.



The source of data for countries other than Slovakia: Neumann-Böhme et al. (2020).

When explaining these differences, we may consider, above all, two causes. In all likelihood, the most important one is the different epidemiologic situation in each country. Not only in Slovakia but also in other countries (see Table 11), there may be a link between the willingness to get vaccinated and the perception of threat from the epidemic. In the spring of 2020, the coronavirus was far more widespread in Western European countries where the number of deaths was many times higher than in post-communist countries (the most affected Western European countries had 400 to 600 deaths per one million inhabitants and Romania, which was the most affected country among the post-communist countries included in the analysis, had 60 deaths per one million inhabitants, while in Slovakia there were only 6 deaths per one million inhabitants). The second cause to consider is a continuously higher

degree of institutional trust in the countries of Western Europe. As stated above, several studies confirm that the willingness to get vaccinated is related to the degree of institutional trust.

Which countries are handling the coronavirus epidemic well?

The May wave of our research also studied respondents' views on the handling of the epidemic in individual countries. Naturally, since most respondents did not possess detailed information on the epidemiologic measures imposed by each country, the answers they provided are thus most likely to be shaped by information from the media.

When asked how each country is handling the coronavirus pandemic, respondents answered on a scale of 1 to 5, where 1 means the country is handling the pandemic very well and 5 means that the country is handling the pandemic very poorly – similarly to grades given at school. The results can be seen in Figure 10.

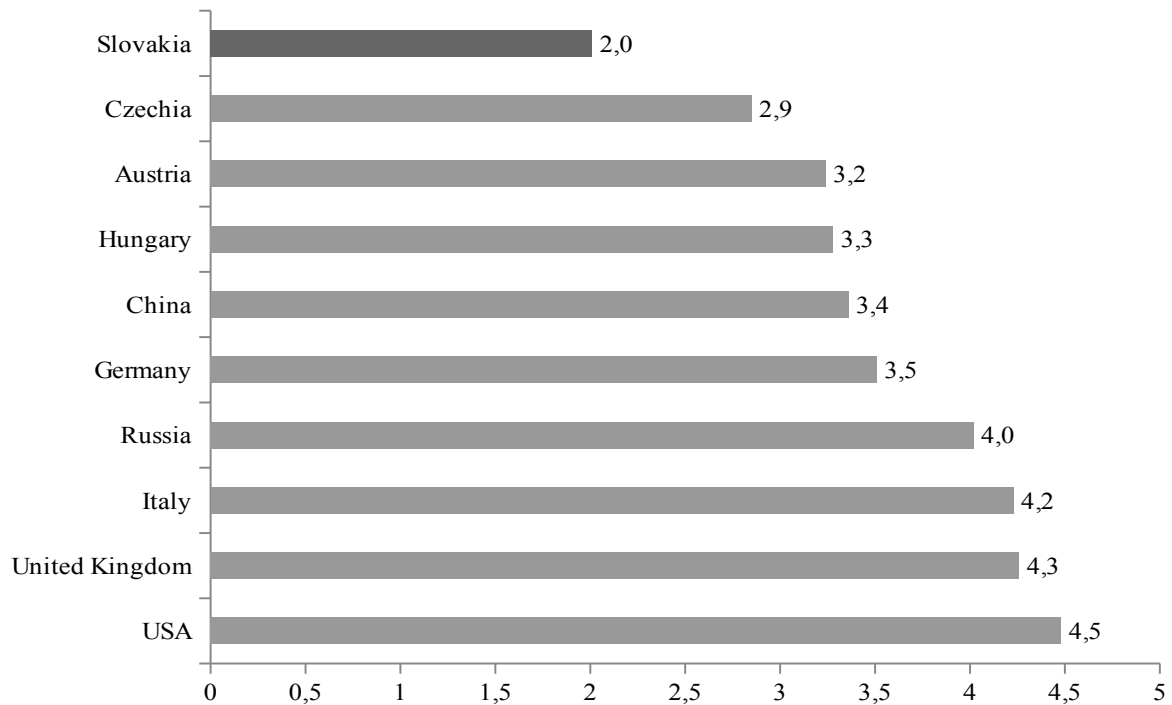
Respondents considered Slovakia to have done the best job in handling the pandemic (the average grade 2.0) and the country's handling of the epidemic was rated even better (the average grade 1.7) by respondents with university education.

The respondents' views were also relatively positive when evaluating the handling of the pandemic in the neighbouring countries (The Czech Republic 2.9, Austria 3.2, Hungary 3.3). Slovak respondents gave a good grade to China (3.4) as well, despite the doubts of experts about the appropriateness of the country's reaction at the onset of the epidemic. However, Germany, whose health care preparedness was often presented as a good example for others, was rated a little worse (3.5) in this assessment. Russia (4.0), Italy (4.2), the United Kingdom (4.3) and the USA (4.5) were given average grades worse than 4.

It is rather unsurprising that the views on each country were linked to the difference in how widespread the epidemic was in these countries. Of all countries assessed, at the beginning of June, the epidemic was the least widespread in Slovakia and countries with a higher number of cases and deaths were naturally rated worse.

Figure 10

How well the country is handling the coronavirus crisis. The average on a scale of 1 – 5. 1 = very well, 5 = very poorly.



Conclusion

Our study covers the period of the initial response to the onset of the epidemic of a novel coronavirus causing the COVID-19 disease in Slovakia. Utilizing data from three waves of the online representative survey series ‘How are you, Slovakia?’, we studied the perception of the threat and risk associated with the pandemic. Having evaluated the overall level of coronavirus concerns in March, April and May 2020, we may conclude that the overall threat perception has declined with time and the importance of health risk has also relatively diminished and worries about the deteriorating economic situation have become the dominant component of concerns. The presumption, which has already been formulated in the literature, about the more intense perception of concerns in women has also been confirmed, most notably in the persistence of a stronger inclination towards protective behaviour and adherence to quarantine measures among women. In Slovakia, there was an overall decrease in concerns in April when compared to March, however, when compared to April data from Austria, Slovak respondents declared significantly more intense perceptions of threat not only to their personal but also health and economic situation in April. The universal factor

explaining the intensity of the perceived threat in both countries was the declared subjective income uncertainty of the household which was associated with a higher level of concern in both Slovakia and Austria. The significantly higher level of declared threat perception in the Slovak sample can thus be explained by a considerably higher degree of subjective income uncertainty in Slovakia than in Austria which was, in fact, affected by the coronavirus more.

The analysis has not confirmed a possible difference in the perception of threat depending on the district in which the respondent resides. Just as the higher incidence of the disease in Austria than in Slovakia was not decisive for the overall level of concern about the virus, the number of infections or the fact that a case of disease-related quarantine occurred in the district have not played a statistically significant role either. The April wave shows that the expected threat perception is slightly higher in districts with a higher proportion of the Roma minority and a higher number of infections. However, this interaction is lost in May and no other contextual variables are associated with the existence of concerns among respondents. The perception of threat is therefore affected predominantly by individual characteristics such as socio-demographic variables and the economic situation of the respondents' households.

Due to the high level of compliance with quarantine measures in Slovakia, our research has also focused on the declared willingness to comply with instructions of authorities with which people disagree. The results show that this willingness is mostly linked to a higher degree of trust in government. On the contrary, a lower willingness is declared by those respondents whose income situation has improved. The willingness to follow the measures is also associated with the respondents' views on the origin of the virus. Regardless of whether respondents believed the virus escaped accidentally or was spread deliberately, their declared willingness to follow the rules was lower than the willingness of those who thought the virus was transmitted from an animal to humans. In the group of those who believe in the natural origin of the coronavirus, more than 60% of respondents whose income has not changed or those whose income has decreased state their willingness to comply with the instructions. By contrast, only approximately 36% of those respondents whose income has dropped and who believe the virus was spread deliberately expressed the willingness to follow instructions they disagree with.

Lockdown measures put in place to curb the spread of the coronavirus have significantly affected the area of work and employment as well. During the strictest measures in April

2020, only half of the respondents continued to work as before the epidemic and the rest switched to working from home, took days off or claimed care of a sick relative benefits and many have lost their jobs. The official statistics from the Labour Office and the results of our research confirm that the economic impact of the coronavirus crisis has hit the most vulnerable groups the hardest – young and lower-skilled workers – many of which were employed in sectors that were closed overnight as a result of the imposed lockdown. By contrast, a large proportion of high-skilled workers was able to do their jobs from home via ‘home office’. As our study has already shown, most job losses were suffered by workers in the sectors most affected by the lockdown, however, the feeling that one’s employment is at risk was perceived by a much wider part of the population. The perception of threat was triggered mainly by a drop in household income. Therefore, it seems that uncertainty generates more uncertainty and, in this case, a fall in income triggers fear of losing employment altogether.

A large majority of virologists in Slovakia and around the world presume that the novel coronavirus causing the COVID-19 disease was transmitted accidentally from animal to humans. However, in Slovakia, only a quarter of respondents considers this explanation to be the most likely and most of them believe that the virus was created artificially. More women than men believe in the artificial origin of the virus, as do the respondents with lower education and respondents who trust the government less. There is also a striking correlation between the willingness to get vaccinated and one’s views on the origin of the virus. In April, 41% of respondents (26% in May) would get vaccinated overall, but up to 63% (45% in May) of respondents who believe the virus was accidentally transmitted from animal to humans were in favour of getting vaccinated. By contrast, only 30% (only 16% in May) of those who are convinced that the virus was created artificially and spread deliberately would be willing to get vaccinated. The willingness to get vaccinated is also strongly associated with the perception of threat from the epidemic. A higher willingness to get vaccinated can be observed in men, younger respondents, as well as respondents who have greater trust in institutions such as government, health care and scientific institutions.

The degree of the spread of the epidemic plays the greatest role in evaluating how well did a country handle the epidemic. In this context, Slovak respondents rated Slovakia to have handled the epidemic very well. Slovakia’s neighbouring countries, where the epidemic was

not as widespread in the spring of 2020 as in some Western European countries (Italy, United Kingdom), were given a similar rating (although a worse one than Slovakia).

Our study covers the period of the first three months of the pandemic, followed by several months of minimal daily new cases and a gradual return to normal life, which in hindsight appears to be a relatively clearly defined period of time covering the first response to the new situation. Comparing the society's response to the repeated spread of the disease in autumn 2020 after Slovakia's experience with a lockdown in spring offers a number of interesting research stimuli for the future.

Acknowledgements

This work was supported by the Slovak Research and Development Agency (SRDA) under Grant APVV-18-0218.

Bibliography

- ABALKINA-PAAP, M., et al, 2002: Beliefs in Conspiracies. In: *Political Psychology* 20(3), 637-647. <https://doi.org/10.1111/0162-895X.00160>
- ADAMS-PRASSL, A. - BONEVA, T. - GOLIN, M. - RAUH, C., 2020: Inequality in the Impact of the Coronavirus Shock: Evidence from Real Time Surveys. In: *IZA Discussion Papers* 13183.
- ALON, M.T. - DOEPKE, M. - OLMSTEAD-RUMSEY, J. - TERTILT, M., 2020: The impact of COVID on gender equality. In: *NBER Working Paper Series No. 26947*.
- ARATANI, L., 2020: US job losses pass 40m as coronavirus crisis sees claims rise 2.1m in a week., *The Guardian* 28.5.2020
- BÆKGAARD, M., et al, 2020: Rallying around the flag in times of Covid-19: Societal lockdown and trust in democratic institutions. In: *Journal of Behavioral Public Administration* 3(2). <https://doi.org/10.30636/jbpa.32.172>
- BECK, U., 2011: *Riziková společnost. Na cestě k jiné moderně*. Praha: SLON.
- COLLIGNON, S., 2020: Women more worried than men about the spread of coronavirus [WWW Document], *The Conversation*. URL <https://theconversation.com/women-more-worried-than-men-about-the-spread-of-coronavirus-136580> (accessed 6.18.20).
- DAVIDSON, D.J. - FREUDENBURG, W.R., 1996: Gender and environmental risk concerns: a review and analysis of available research. In: *Environment and Behavior* 28(3), 302-339. <https://doi.org/10.1177/0013916596283003>
- DOUGLAS, K. M., et al., 2015: Someone is pulling the strings: hypersensitive agency detection and belief in conspiracy theories. In: *Thinking & Reasoning* 22(1), 57-77. <https://doi.org/10.1080/13546783.2015.1051586>

- EUROPEAN COMMISSION, 2020: The impact of COVID confinement measures on EU labour market. Science for Policy Briefs.
- FANA, M. - TOLAN, S. - TORREJÓN PÉREZ, S. - URZI BRANCATI, M.C. - FERNÁNDEZ-MACÍAS, E., 2020: The COVID confinement measures and EU labour markets, JCR Technical Reports.
- FELESZKO, W. ET AL, 2020: Flattening the Curve of COVID-19 Vaccine Rejection—A Global Overview (June 20, 2020). Available at: SSRN: <https://ssrn.com/abstract=3631972> or <http://dx.doi.org/10.2139/ssrn.3631972> (accessed 6.26.20)
- FOX GOTHAM, K. - LAUVE-MOON, K. - POWERS, B., 2017: Risk and Recovery: Understanding Flood Risk Perceptions in a Postdisaster City—The Case of New Orleans. In: *Sociological Spectrum* 37(6), 335-352. <https://doi.org/10.1080/02732173.2017.1365029>
- FREUDENBURG, W.R., 1993: Risk and Recreancy: Weber, the Division of Labor, and the Rationality of Risk Perceptions. In: *Social Forces* 71(4), 909-932.
- GARIKIPATI, S. - KAMBHAMPATI, U., 2020: Leading the Fight Against the Pandemic: Does Gender ‘Really’ Matter? In: *SSRN Electronic Journal*, 1-16. <https://doi.org/10.2139/ssrn.3617953>
- ILO MONITOR, 2020: International Labour Organization Monitor: COVID-19 and the world of work. 4th edition. Updated estimates and analysis.
- IMHOFF, R.- LAMBERTY, P., 2020: A bioweapon or a hoax? The link between distinct conspiracy beliefs about the Coronavirus disease (COVID-19) outbreak and pandemic behavior. In: *Social Psychological and Personality Science*. <https://doi.org/10.1177/1948550620934692> (accessed 7.27.2020).
- IRLACHER, M. - KOCH, M., 2020: Working from Home, Wages, and Regional Inequality in the Light of COVID-19, CESifo Working Paper No.8232.
- JAMISON, A. M., et al., 2019: “You don't trust a government vaccine”: Narratives of institutional trust and influenza vaccination among African American and white adults. In: *Social Science & Medicine* 221, 87-94. <https://doi.org/10.1016/j.socscimed.2018.12.020>
- KERNOVÁ, M., 2020: Markíza odvysiela ďalšiu mimoriadnu reláciu ku koronavírusu. <https://www.omediach.com/tv/17421-markiza-odvysiela-dalsiu-mimoriadnu-relaciu-ku-koronavirusu-video>
- KITTEL, B. - KRITZINGER, S. - BOOMGAARDEN, H. - PRAINSACK, B., EBERL, J. M. - KALLEITNER, F. - LEBERNEGG, N. S. - PARTHEYMÜLLER, J. - PLESCIA, C. - SCHIESTL, D. W. - SCHLOGL, L., 2020: The Austrian Corona Panel Project: Monitoring Individual and Societal Dynamics amidst the COVID-19 Crisis, Working Paper. Available at SSRN: <https://ssrn.com/abstract=3654139>
- LARSON, H. J., 2018: Measuring trust in vaccination: A systematic review. In: *Human Vaccines & Immunotherapeutics* 14(7), 1599-1609. <https://doi.org/10.1080/21645515.2018.1459252>
- NEUMANN-BÖHME, S., et al, 2020: Once we have it, will we use it? A European survey on willingness to be vaccinated against COVID-19. In: *The European Journal of Health Economics* 21, 977-982. <https://doi.org/10.1007/s10198-020-01208-6>

- OECD, 2013: Trust in government, policy effectiveness and the governance agenda. Government at a Glance 2013. Paris: OECD Publishing. https://doi.org/10.1787/gov_glance-2013-6-en
- OECD, 2020a: OECD Employment Outlook 2020.
- OECD, 2020b: Youth and COVID-19 Response, recovery and resilience.
- PERROTTA, D. - GROW, A. - RAMPAZZO, F. - CIMENTADA, J. - DEL FAVA, E. - GIL-CLAVEL, S. - ZAGHENI, E., 2020: Behaviors and attitudes in response to the COVID-19 pandemic: Insights from a cross-national Facebook survey. In: medRxiv 2020.05.09.20096388. <https://doi.org/10.1101/2020.05.09.20096388>
- PINO, M.J. - HERRUZO, C. - RAYA, A. - HERRUZO, J., 2016: Legal and Illegal Substance Consumption and Traffic Accident Risk Perception Among Spanish Young People. In: Social Indicators Research 129(2), 835-845. <https://doi.org/10.1007/s11205-015-1121-4>
- PRAINSACK, B. - KITTEK, B. - KRITZINGER, S. - BOOMGAARDEN, H., 2020: From Acute Crisis to Long-Term Coping? Further insights from the Austrian Coona Panel Project. URL <https://medium.com/@bprainsack/from-acute-crisis-to-long-term-coping-b36d0cefd0ef> (accessed 9.18.20).
- RAUDE, J., et al, 2016: Opening the 'Vaccine Hesitancy' black box: how trust in institutions affects French GPs' vaccination practices. In: Expert Review of Vaccines 15(7), 937-948. <https://doi.org/10.1080/14760584.2016.1184092>
- RTVS, 2020: Rúško nie je hanba. Rozhlas a televízia Slovenska. <https://www.rtvsk.sk/televizia/clanky/219871/rusko-nie-je-hanba>
- SIBLEY, C. G., et al, 2020 (in Press): Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes towards government, and wellbeing. In: American Psychologist 75(5), 618-630. <https://doi.org/10.1037/amp0000662>
- SWAMI, V., et al, 2014: Analytic thinking reduces belief in conspiracy theories. In: Cognition 133(3), 572-585. <https://doi.org/10.1016/j.cognition.2014.08.006>
- SWAMI, V. - BARRON, D., 2020: Analytic Thinking, Rejection of Coronavirus (COVID-19) Conspiracy Theories, and Compliance with Mandated Social-Distancing: Direct and Indirect Relationships in a Nationally Representative Sample of Adults in the United Kingdom. In: OSF Preprints. April 16. <https://doi.org/10.31219/osf.io/nmx9w>
- THOMSON, S., 2020: COVID-19: Canadian women far more worried about pandemic than men are, poll shows [WWW Document], National Post. URL <https://nationalpost.com/news/politics/canadian-women-are-far-more-worried-about-covid-19-than-men-poll> (accessed 6.18.20).
- TORREJÓN PÉREZ, S. - FANA, M. - GONZÁLEZ-VÁZQUEZ, I. - FERNANDÉZ-MACIÁS, E., 2020: The Asymmetric Impact of COVID-19 Confinement Measures on EU Labour Markets. VOX CERP. URL <https://voxeu.org/article/covid-19-lockdown-and-eu-labour-markets> (accessed 9.18.20).
- ÚSTREDIE PRÁCE, SOCIÁLNYCH VECÍ A RODINY: Nezamestnanosť - mesačné štatistiky. URL https://www.upsvr.gov.sk/statistiky/nezamestnanost-mesacne-statistiky.html?page_id=1254 (accessed 9.18.20).

- VAN PROOIJEN, J. W. et al., 2015: Political extremism predicts belief in conspiracy theories. In: *Social Psychological and Personality Science* 6(5), 570-578. <https://doi.org/10.1177/1948550614567356>
- VAN PROOIJEN, J. W. - JOSTMANN, N. B., 2012: Belief in conspiracy theories: The influence of uncertainty and perceived morality. In: *European Journal of Social Psychology* 43(1), 109-115. <https://doi.org/10.1002/ejsp.1922>
- WHITSON, J. A. - GALINSKY, A. D., 2008: Lacking Control Increases Illusory Pattern Perception. In: *Science* 322(5898), 115-117. <https://doi.org/10.1126/science.1159845>
- WISEMAN, R. - WATT, C., 2006: Belief in psychic ability and the misattribution hypothesis: A qualitative review. In: *British journal of psychology* 97(3), 323-338. <https://doi.org/10.1348/000712605X72523>
- XIAO, C. - MCCRIGHT, A.M., 2012: Explaining Gender Differences in Concern about Environmental Problems in the United States. In: *Society and Natural Resources* 25(11), 1067-1084. <https://doi.org/10.1080/08941920.2011.651191>
- YAQUB, O., et al, 2014: Attitudes to vaccination: A critical review. In: *Social Science & Medicine* 112, July 2014, 1-11. <https://doi.org/10.1016/j.socscimed.2014.04.018>

Data Files

- KITTEL, B. - KRITZINGER, S. - BOOMGAARDEN, H. - PRAINSACK, B., EBERL, J. M. - KALLEITNER, F. - LEBERNEGG, N. S. - PARTHEYMÜLLER, J. - PLESCIA, C. - SCHIESTL, D. W. - SCHLOGL, L., 2020: "Austrian Corona Panel Project (SUF edition)", <https://doi.org/10.11587/28KQNS>, AUSSDA.
- MNFORCE, s.r.o. SEESAME, s.r.o. SOCIOLOGICKÝ ÚSTAV SAV. ÚSTAV VÝSKUMU SOCIÁLNEJ KOMUNIKÁCIE SAV, 2020: Ako sa máte, Slovensko?, Marec 2020. [dátový súbor]. Slovenský archív sociálnych dát, 2020. SASD2020001. Verzia 1.0. DOI: <https://doi.org/10.34877/sasd-2020001>.
- MNFORCE, s.r.o. SEESAME, s.r.o. SOCIOLOGICKÝ ÚSTAV SAV. ÚSTAV VÝSKUMU SOCIÁLNEJ KOMUNIKÁCIE SAV, 2020: Ako sa máte, Slovensko?, April 2020. [dátový súbor]. Slovenský archív sociálnych dát, 2020. SASD2020002. Verzia 1.0. DOI: <https://doi.org/10.34877/sasd-2020002>.
- MNFORCE, s.r.o. SEESAME, s.r.o. SOCIOLOGICKÝ ÚSTAV SAV. ÚSTAV VÝSKUMU SOCIÁLNEJ KOMUNIKÁCIE SAV, 2020: Ako sa máte, Slovensko?, Máj 2020. [dátový súbor]. Slovenský archív sociálnych dát, 2020. SASD2020003. Verzia 1.0. DOI: <https://doi.org/10.34877/sasd-2020003>.