

Comparison of people with and without COVID-19 in their unfounded beliefs

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Abstract

The aim of the study was to examine changes in unfounded beliefs about COVID -19, powerlessness, and well-being during the pandemic and how people with varying severity of COVID -19 symptoms differed in these variables. A total of 1,420 adults aged 18-85 years ($M=46.88\pm 16.01$) participated in two waves measuring demographics, severity of COVID -19 and powerlessness, well-being, and levels of unfounded beliefs. The unfounded beliefs did not change, powerlessness increased, and well-being decreased. There were no differences in unfounded beliefs between persons with no or mild symptoms and those with moderate or severe symptoms, although powerlessness was lower and well-being was higher in people with no or mild symptoms.

1 Introduction

Various forms of unfounded beliefs related to COVID-19 began to spread during the pandemic (WHO, 2020). At the same time, apart from health problems, the pandemic caused a mental health decrease (Brooks et al., 2020) through the increase of anxiety, stress, and depression (Wang, et al., 2020). And most importantly, it turned out that people experiencing anxiety (Chen et al., 2020) or powerlessness are more susceptible to unfounded beliefs (Abalakina-Paap, et al, 1999; Chen et al., 2020). The results of a recent longitudinal study indicated that beliefs in conspiracy theories are relatively stable over time (Williams, et al., 2022). The aim of the study was to examine changes in unfounded beliefs about COVID-19, powerlessness, and well-being during the pandemic and how people with varying severity of COVID-19 symptoms differed in these variables.

2 Methods

Data were collected in two waves (T1 - Fall 2021, T2 - Spring 2022) using an online questionnaire created in Qualtrics. A total of 1,420 adults (53.6% women) aged 18-85 years ($M=46.81\pm 15.95$) completed demographic questions, COVID-19 *health status* (1=not infected,

2=mild symptoms, 3=moderate symptoms, 4=severe symptoms or hospitalisation), 4 items measuring *powerlessness* (Šrol et al., 2021), the *Satisfaction with life scale* (SWLS; Diener et al., 1985) and 18 items of *Scale of Covid-19 unfounded beliefs* (C19-UB; Teličák & Halama, 2022).

3 Results

The descriptive statistics are presented in Table 1.

Tab. 1: Descriptive statistics

	M	SD	min	max	α
age	46.88	16.01	18	85	-
T1 powerlessness	3.45	1.49	1	7	.87
T2 powerlessness	3.23	1.63	1	7	.91
T1 well-being	3.95	1.37	1	7	.90
T2 well-being	3.88	1.45	1	7	.91
T1 unfounded beliefs	2.41	1.02	1	5	.96
T2 unfounded beliefs	2.40	1.07	1	5	.96

Note: T1 – fall 2021, T2 – spring 2022, M – mean, SD – standard deviation, α – Cronbach's alpha

The level of unfounded beliefs did not change, powerlessness increased and well-being decreased from T1 – fall 2021 to T2 – spring 2022 (Table 2).

Tab. 2: Differences in powerlessness, well-being, and unfounded beliefs over time

	difference		t	p	d
	M	SD			
T1 powerlessness	0.22	1.60	5.35	<.001	0.14
T2 powerlessness					
T1 well-being	0.07	1.15	2.26	.024	0.06
T2 well-being					
T1 unfounded beliefs	0.01	0.58	0.86	.391	0.02
T2 unfounded beliefs					

Note: T1 – fall 2021, T2 – spring 2022, t – t-test value, p – the level of significance, d – Cohen's d

Participants were divided into two groups: those with no or mild symptoms from COVID-19 and those with moderate or severe symptoms. There were no

differences in unfounded beliefs between these groups, although powerlessness was lower and well-being was higher in those with no or mild symptoms (Table 3).

Tab. 3: Differences in powerlessness, well-being, and unfounded beliefs between people without or with mild symptoms and those with moderate or severe symptoms (Spring 2022)

	difference		t	p	d
	M	SE			
powerlessness	-0.34	0.10	0.567	.001	-0.21
well-being	0.23	0.09	3.256	.014	.16
unfounded beliefs	-0.04	0.07	2.449	.571	-0.04

Note: M – mean, SE – standard error, t – t-test value, p – the level of significance, d – Cohen’s d

4 Discussion

We found a reduction in the perception of powerlessness during the pandemic. Although the effect was weak, a certain trend of reducing feelings of powerlessness may be explained by the gradual easing of pandemic measures. Nevertheless, the perception of well-being decreased during the pandemic. A possible explanation is the exhaustion of the population after the winter emergency measures were introduced. However, this effect needs to be reflected against the backdrop of a weak to negligible effect. Finally, beliefs in unfounded beliefs remained unchanged and similar trends were highlighted in the findings by Williams et al. (2022). The results further suggest that people with moderate to severe symptoms felt more powerless and had low well-being compared to people with no or mild symptoms (there were weak effects). However, the difference in belief in unfounded beliefs was statistically insignificant.

Acknowledgement

This research was supported by the Slovak Research and Development Agency under contract No. APVV-20-0387.

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