Hungarians' Attitudes Toward the COVID-19 Disease and Vaccination: An Online Survey

Khatatbeh H[1], Zrínyi M[2], Vajda R[1], Verzár Z[1], Turcsán J[1], Takács K[1], Boncz I[1], Lukács M[1], **Pakai A[2]**

1 University of Pécs, Pécs, Hungary,
2 University of Pécs, Pécs, ZA, Hungary

OBJECTIVES

To assess the associations between attitudes toward the COVID-19 disease and attitudes toward the COVID-19 vaccination among Hungarians, and to compare these attitudes between health and non-health workers.

METHODS

This online-based survey has utilized a descriptive cross-sectional design. 1735 Hungarians have responded to a set of sociodemographic questions, 26 items assessing attitudes toward the COVID-19 disease, and 36 items assessing attitudes toward the COVID-19 vaccination. The SPSS 20.0 was used to run the basic descriptives and frequencies, Kolmogorov-Smirnov and Shapiro-Wilk tests, Spearman's correlation, multiple regression, and the Mann-Whitney test.

RESULTS

The results demonstrated that the data were not normally distributed. Spearman's correlation showed a positive association between the attitudes toward the COVID-19 disease and the attitudes toward the COVID-19 vaccination (R= .247, p < .01). According to the results of the multiple regression results, occupation was the only significant factor predicting the Hungarians' attitudes toward the COVID-19 vaccination (β = 0.086, p < .01). However, the occupation didn't significantly predict the Hungarians' attitudes toward the COVID-19 disease. Upon comparing the health and non-health workers, the Mann-Whitney test showed significant differences in terms of the attitudes toward the COVID-19 vaccination (Z= -4.43, p < .001) but not toward the COVID-19 disease itself (Z= -0.31, p =.761).

CONCLUSIONS

The health workers have better attitudes toward the COVID-19 vaccination than the non-health workers in Hungary. The knowledge of health workers might explain their positive attitudes toward the COVID-19 vaccination; as compared to the non-health workers. The Hungarian ministry of health should strategize to improve the public's willingness to be vaccinated against the COVID-19 disease. One of the possible strategies is to build a national health education program focusing on the non-health workers in Hungary.

Variable	n	%
Gender		
Male	268	15,4
Female	1467	84,6
Age		
18-29 years	207	11,9
30-49 years	873	50,3
>=50	655	37,8
Residence		
City	1308	75,4
Village	427	24,6
Marital status		
Single	206	11,9
Married	1248	71,9
Divorced/widow	281	16,2
Educational level		
8 general or less	21	1,2
vocational school/training	94	5,4
graduation certificate	570	32,9
college / university degree	1050	60,5
Employment status		
Worker	1341	77,3
Non-worker	394	22,7
The occupation		
Health worker	1026	59,1
Non-health worker	696	40,1

Table 1.
Participants characteristics (N=1735)

	Attitudes toward COVID-19		Attitudes toward vaccination	
Model Summary	F (2, 1364) = 0.054, p = 0.947, R2Adjusted = -0.001		F (2, 1599) = 8.34, p < .001, R2Adjusted = 0.009	
Predictors	*β*	*t*	*β*	*t*
Constant		55.81**		29.34**
Employment status	-0.003	-0.099	0.049	1.95
The occupation	0.009	-0.320	0.086	3.45*

** p < .01, ** p < .001*

Table 3.
Regression Results for Overall attitudes toward COVID-19 and vaccines (N = 1735)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender (1)	1.000								
Age (2)	-.014	1.000							
Living place (3)	.055*	-.089	1.000						
marital status (4)	.107**	.403	-.067**	1.000					
Education (5)	-.024	.009	-.165**	.001	1.000				
Employment status (6)	-.007	-.220	-.048*	-.076**	.079**	1.000			
Occupation (7)	.026	.018	-.019	.078**	-.003	.056*	1.000		
Attitudes toward COVID-19 (8)	.024	-.022	.043	.010	.010	-.008	.008	1.000	
Attitudes toward vaccination (9)	.035	.016	.001	.020	.018	.044*	.111**	.247**	1.000

** p < .05, ** p < .01*

Table 2.
Correlations among Study variables (N = 1735)

	Mean rank (Non-Health workers)	Mean rank (Health workers)	Z-score
Attitudes toward COVID-19	680.04	686.67	-0.31
Attitudes toward vaccination	738.98	843.42	-4.43*

** p < .001*

Table 4.
The Mann-Whitney test

ISPOR 2022
May 15-18, 2022
Washington, DC, USA Area and Virtual

PÉCSI TUDOMÁNYEGYETEM
UNIVERSITY OF PÉCS

Funding:

The research was financed by the Thematic Excellence Program 2021 Health Sub-programme of the Ministry for Innovation and Technology in Hungary, within the framework of the EGA-10 project of the University of Pécs.

Corresponding author:
Dr. Annamaria Pakai MSc, PhD, Habil
University of Pécs, Faculty of Health Sciences, Hungary
Institute of Nursing Sciences, Basic Health Sciences and Health Visiting
E-mail: annamaria.pakai@etk.pte.hu

PCR 158
SZÉCHENYI 2020
HUNGARIAN GOVERNMENT
European Union
European Social Fund
INVESTING IN YOUR FUTURE