

## I.

### OBJECTIVE

#### ➤ Purposes of the research

Population data are used to analyze the health-related quality of life of the population during the COVID-19 outbreak. This study examined socioeconomic determinants of health-related quality of life as well as the burden of COVID-19 pandemic in the general Hungarian population.

## II.

### METHODS

#### ➤ Data collection

A large-scale cross-sectional survey was conducted from May 25 to June 8, 2021. For online self-reported data collection, a professional survey company's panel data were utilized until a sample size of 2,000 participants was attained with respect to age, gender, educational level, occupational status, the COVID-19 symptom, and whether the participants had been quarantined or vaccinated.

#### ➤ Content of data

Using the EQ-5D-5L descriptive system, we evaluated the HRQoL of participants and utility value was estimated using the Hungarian value set. The following sociodemographic factors (characteristics related to COVID-19) were considered:

Age (years); Sex (female; male); Education (grouped into 'Primary school level', 'intermediate level', 'higher education level'); Occupational type ('full-time employed', 'part time employed', 'entrepreneur', 'unemployed', 'student', 'take care of family member', 'retired', 'disabled pensioner', 'inactive of looking for a job', 'other occupational status'), Income ('0-250 000 ft', '250 001 ft +', 'I don't know / I don't answer the income'), COVID-19-related characteristics:

Have you been infected with COVID-19? Has a member in your household contracted COVID-19? Have any non-household relatives been diagnosed with COVID-19? Where have you received COVID-19 treatment during your illness? Have infected individuals been quarantined? Have you received the COVID-19 vaccine?

Utility index score

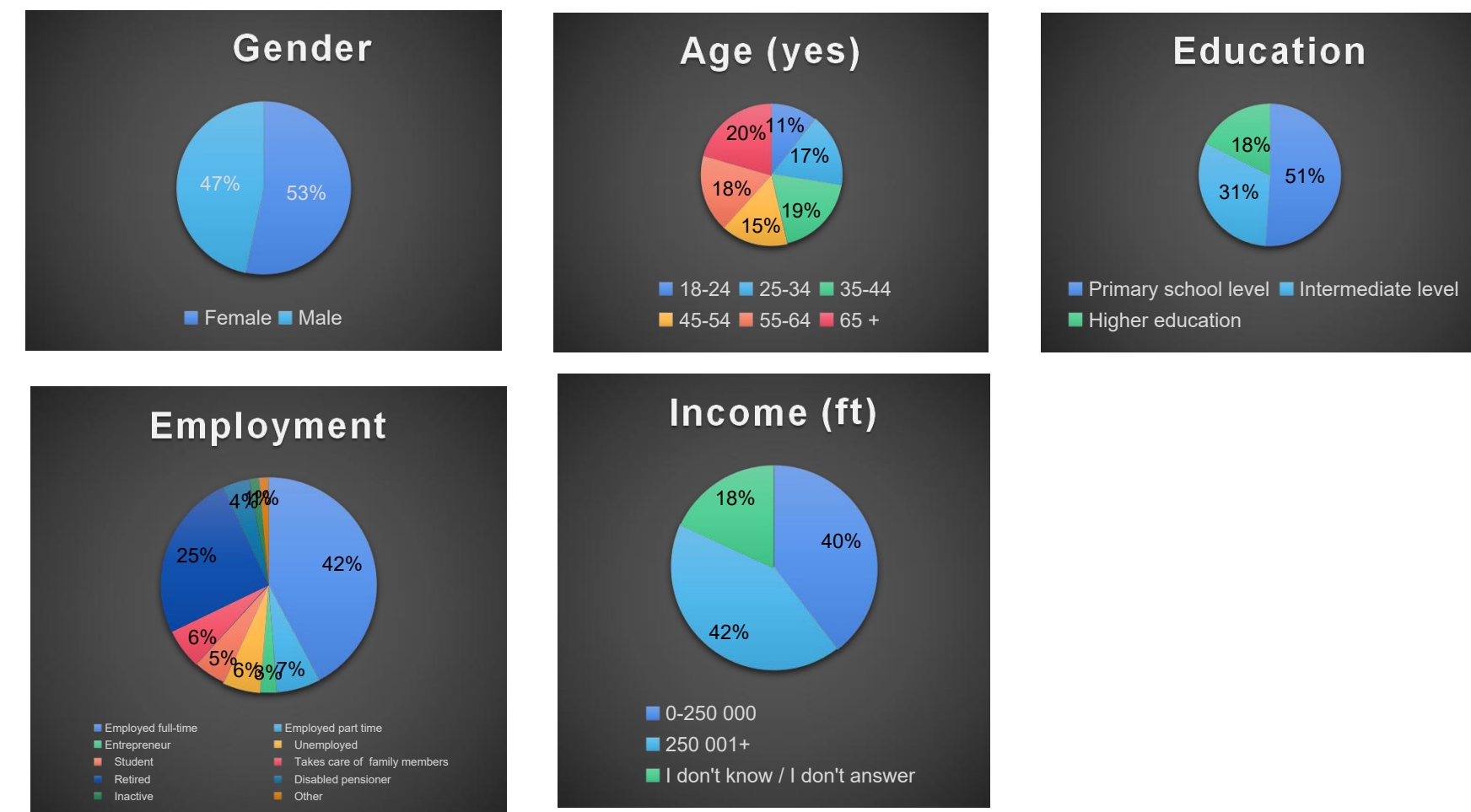
#### ➤ Data analysis

Linear regressions were used to study the factors that have a influence on the EQ-5D-5L index

In the regression modelling all independent variables coded as categorical variables and compared to a reference group and 5% was chosen as the significance level for all statistical tests and regression analysis.

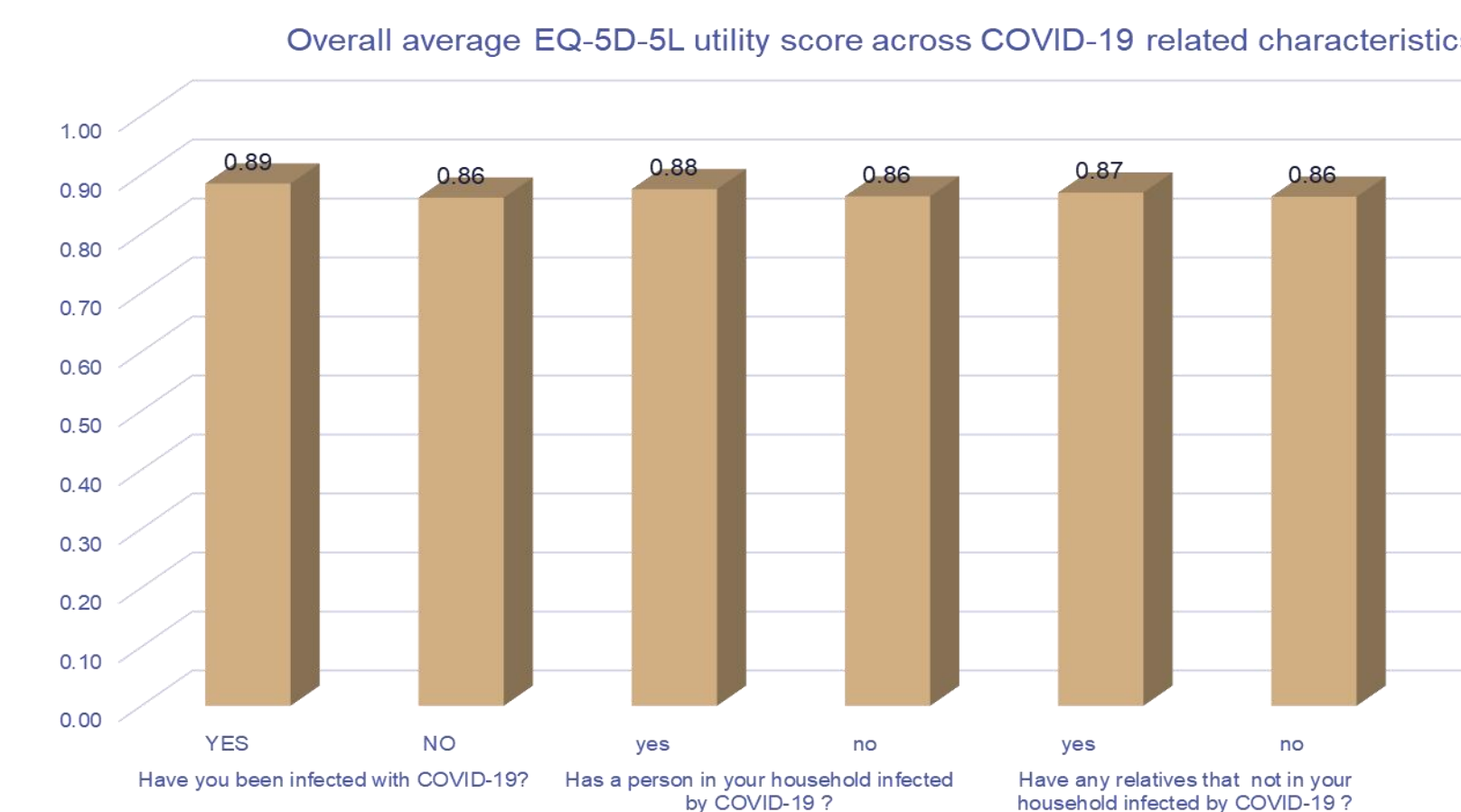
## III.

### RESULTS



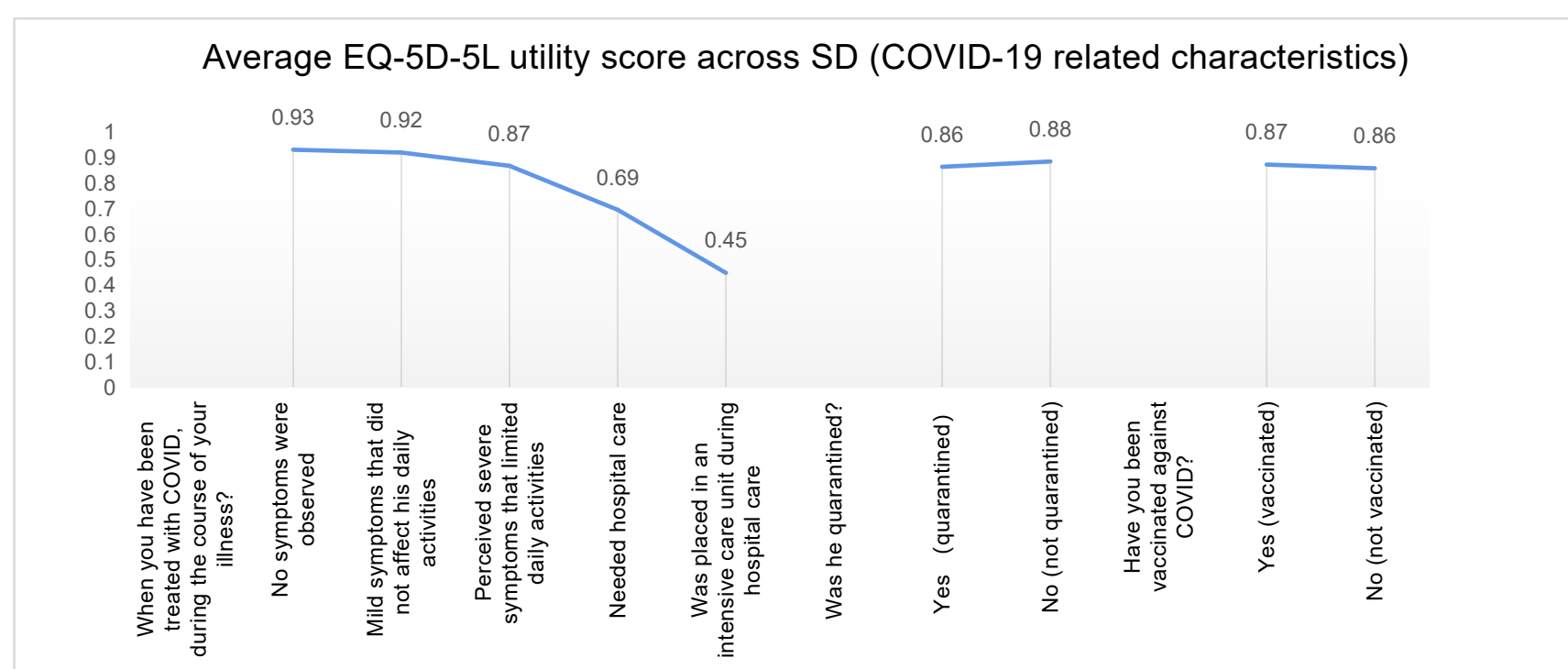
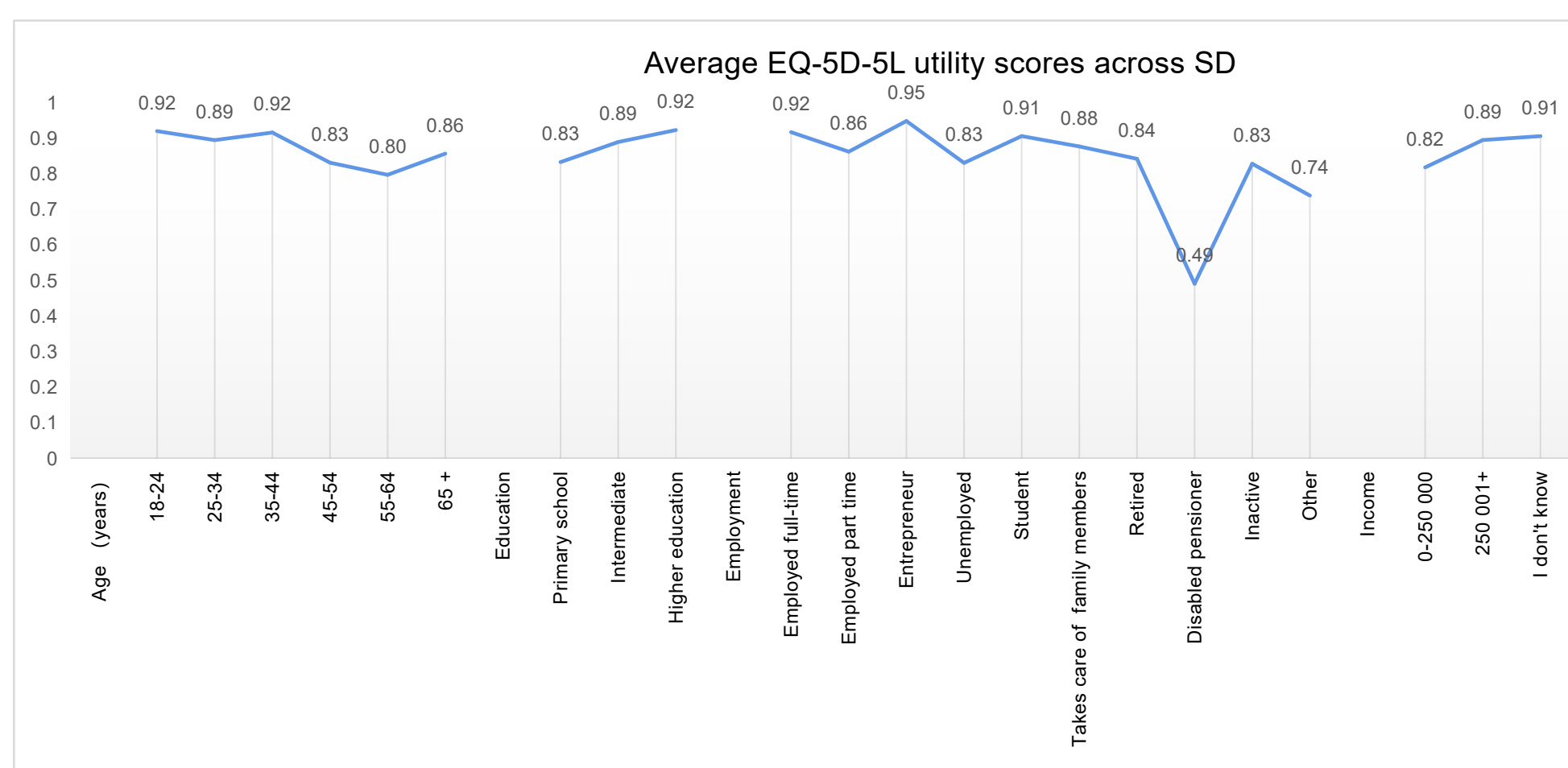
#### ➤ Socio-demographic characteristics of the sample

This analysis utilized information from 2000 respondents. The majority of the sample was female (53%, n=1067) and had a primary education (51%, n=1020). Altogether 845 (42%) were employed full time and 505 (25%) were retired. There were 351 people infected with COVID-19, and 83.5% (n=1670) of respondents answered that some of their relatives were quarantined.



#### ➤ Overall average EQ-5D-5L utility score across COVID-19 related characteristics

Those who were positively associated with COVID-19 have an approximatively higher utility score.



#### ➤ The average EQ-5D-5L utility score across variables that related to socio-demographic variables and COVID-19 characteristics

There were no statistically significant variations in EQ-5D-5L utility scores between scenarios of quarantine and vaccination status. However, statistically significant differences showed in age groups, levels of education, occupational status, household income, and COVID-19 symptoms. The EQ-5D-5L scores of all respondents follow a similar pattern across age groups, with somewhat higher scores for the 18-to-24-year age group and the 35-to-44 age group compared to the other age groups.

The scores decrease marginally for the age categories 25-34, 45-54, and 55-64, but they increase significantly for the age groups older than 65.

All utility scores showed a linear increase in health with increasing degrees of education, from elementary school to college. Those who were employed scored higher than those who were unemployed or not in the workforce. Household income correlates favorably with EQ-5D-5L. Positive associations were found between EQ-5D-5L and COVID-19 infection in symptom-free individuals.

Variable	B	P	VIF
Exact age	-0.001	0.016	2.706
Intermediate - education	0.021	0.064	1.321
Higher - education	0.043	0.002	1.331
Primary - education	0		
Employment - works part-time	-0.037	0.060	1.132
Employment - Entrepreneur	0.025	0.418	1.061
Employment - unemployed	-0.065	0.002	1.126
Employment - student	-0.036	0.145	1.315
Employment - Takes care of family members	-0.019	0.346	1.128
Employment - retired	-0.043	0.011	2.507
Employment - disable pensioner	-0.388	<0.001	1.180
Employment - Inactive	-0.068	0.088	1.054
Employment - other	-0.148	<0.001	1.060
Employment - full-time	0		
Income - over 250 001	0.042	<0.001	1.545
Income - Not answer	0.049	<0.001	1.355
Income - 0 – 250 000	0		
I have been infected	-0.042	0.295	10.82
I have not been infected	0		
Family member in house has not been infected	0.005	0.788	1.927
Family member in house has been infected	0		
Family member not in house has not infected	0.01	0.334	1.141
Family member not in house has been infected	0		
When you went through COVID, while your illness - experienced mild symptoms that did not affect his daily activities	-0.007	0.878	5.050
When you went through COVID, while your illness - perceived severe symptoms that limited daily activities	-0.047	0.252	6.625
When you went through COVID, while your illness - needed hospital care	-0.203	0.011	1.346
When you went through COVID, while your illness - placed in an intensive care unit during hospital care	-0.494	0.067	1.025
When you went through COVID, while your illness – no symptom	0		
I have not been quarantined	-0.003	0.827	1.618
I have been quarantined	0		
I have not been vaccinated	0.016	0.339	3.221
I have been vaccinated	0		

#### ➤ The linear regression of the EQ-5D-5L index for the socio-demographic

Age had a negative impact (-0.001), along with retirement (-0.043), unemployment (-0.065), disabled pensioner (-0.388), other work types (-0.148), and people who need hospital care when they went through the COVID-19 (-0.203).

Higher education (0.043), income more than 250,001 (0.042), and participants who have not answered their income (0.049) have a positive impact.

## IV.

### CONCLUSION

The findings of this study offer demographic norms for the EQ-5D-5L index value established during COVID-19 pandemic. It can be used to monitor population health, assess the HRQoL of patients, and evaluate the (cost-) effectiveness of health interventions.