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Supplementary Information for

Economic Hardship and Mental Health Complaints during COVID-19.

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Fig S1. Descriptive Statistics: ISEI and Mental Health Complaints by Economic Hardship during COVID-19.

	Occupational prestige (ISEI mean)	**Mental Health Complaint**		
		Depression (proportion)	**Loneliness** (proportion)	**Health anxiety** (proportion)
Workload				
no change	57.2	.203	.293	.280
decreased	48.6	.248	.284	.406
increased	54.7	.298	.273	.440
Income				
stable	56.4	.214	.255	.310
losing	47.7	.336	.300	.439
Job				
keeping	55.2	.227	.259	.346
losing	44.5	.403	.371	.452
Sample	53.1	.262	.265	.372

Notes. ISEI = mean international socio-economic index of occupational status (range 10-89), where higher index numbers reflect higher-ranked prestige jobs. Study sample: active members of the labor force in Europe between ages 25 and 64 from Czech Republic, Slovakia, Spain, Italy, Germany, and Netherlands. European countries excluded because of a low number (<100) of survey respondents between March and the end of April (2020): Hungary (79 respondents), Portugal (65), Belgium (62), Ireland (43), United Kingdom (34), Austria (18), Switzerland (12), Ukraine (11), Poland (4), Greece (4), Sweden (3), Belarus (3), Serbia (3), Bulgaria (1), and Romania (1).

Fig S2. Estimated Margins of Control Variables on Economic Hardship Outcomes during COVID-19.

	Workload (ref = stable)		**Income loss**	**Job loss**
	decreased	increased	(yes = 1)	(yes = 1)
Age	.003	.008	.010	.013
	(.01)	(.01)	(.01)	(.01)
Gender: woman [1]	-.008	.067*	.019	.008
	(.03)	(.03)	(.03)	(.02)
Foreign-born [2]	.032	-.075	.071	.063*
	(.06)	(.06)	(.05)	(.03)
Employment type [3]				
freelance / self-employed	.322***	-.226***	.420***	.195**
	(.07)	(.05)	(.07)	(.07)
employer	.272*	-.196*	.557***	.249
	(.12)	(.09)	(.11)	(.14)
other	.281	-.203	.234	.093
	(.13)	(.09)	(.15)	(.10)
Firm size [4]				
small (<50 empl.)	.032	-.040	-.079*	.011
	(.04)	(.04)	(.04)	(.03)
medium (50-500 empl.)	-.015	.013	-.008	-.048*
	(.04)	(.04)	(.04)	(.02)
Urbanicity [5]				
small city / town	.047	.002	.009	.002
	(.03)	(.03)	(.03)	(.02)
village / rural	-.078	.120*	-.063	-.011
	(.05)	(.05)	(.05)	(.03)
Survey week #	-.010	.005	-.022~	.007
	(.01)	(.01)	(.01)	(.01)
ISEI (per 10pts)	-.065***	.021***	.068***	-.028***
	(.008)	(.009)	(.010)	(.008)

Notes. Marginal effects are drawn from multinomial logit (workload) and logit (income loss, job loss) with country-random intercepts. Estimates are equal to %-point change of a one unit change in the predictor variable on the propensity of decreased workload (2 vs. 1), increased workload (3 vs. 1), losing income (1 vs. 0), and losing job (1 vs. 0). Reference categories: [1] man, [2] native-born, [3] employee, [4] large firm (>500 employees), and [5] large city. ISEI = international socio-economic index of occupational status (range 10-89). The age predictor is adjusted with a suppressed non-linearity term (age squared). Standard errors between parentheses. ~ p <.1; * p <.05; ** p <.01; *** p <.001 (two-tailed tests).

Fig S3. Margins of Key Predictors (Reported) and Alternative Selections and Specifications.

Outcome	Key predictor	Reported	Incl. 'blank' as 0 (no)	Incl. 18-24-year olds	Post-strat. weights	Estimates when excluding:					
						Czech Republic	Slovakia	Spain	Italy	Germany	Nether-lands
workload decrease	ISEI (per 10pts)	-.065***	-.063***	-.066***	-.064***	-.063***	-.073***	-.056***	-.060***	-.066***	-.068***
workload increase	ISEI (per 10pts)	.021	.021	.019	.017	.017	.018~	.027	.019	.025	.019
losing income	ISEI (per 10pts)	-.068***	-.055***	-.069***	-.080***	-.067***	-.074***	-.066***	-.060***	-.064***	-.081***
losing job	ISEI (per 10pts)	-.028***	-.020***	-.036***	-.044***	-.025***	-.025***	-.029***	-.036***	-.027***	-.028***
depression feeling	ISEI (per 10pts)	-.033***	n.a.	-.031***	-.038***	-.030**	-.038***	-.022*	-.032**	-.035***	-.036***
loneliness feeling	ISEI (per 10pts)	-.015	n.a.	-.012	-.020**	-.014	-.021*	-.003	-.014	-.018*	-.015
health anxiety	ISEI (per 10pts)	-.029**	n.a.	-.024**	-.036**	-.025*	-.035**	-.020*	-.029**	-.028**	-.036***
depression feeling	workload decrease	.086**	.085**	.080*	.108**	.072*	.077*	.093*	.091**	.087*	.103**
depression feeling	workload increase	.099**	.099**	.096**	.127**	.095*	.080*	.052*	.109**	.123**	.124**
depression feeling	losing income	.111**	.095**	.117***	.103~	.102**	.095**	.144**	.108**	.105**	.113**
depression feeling	losing job	.145**	.133**	.129**	.145	.124*	.108*	.202**	.143**	.141**	.159**
loneliness feeling	workload decrease	.054	.055	.061~	.081*	.065~	.072~	.048	.052	.047	.037
loneliness feeling	workload increase	.045	.048	.041	.056*	.041	.037	-.005	.045	.056	.060
health anxiety	workload decrease	.111**	.109**	.081*	.148*	.108**	.116**	.091*	.107**	.106**	.130**
health anxiety	workload increase	.149***	.147**	.133***	.178***	.132**	.184***	.122*	.159***	.141**	.172***

Notes. Marginal effects are drawn from multinomial logit and logit with country-random intercepts. Estimates are equal to %-point change of a one-unit change in the predictor variable. The table summarizes all theorized relationships between predictors and outcomes (main effects). Key predictor estimates are reported in the main text (Figures 2 thru 4), with exception of ISEI's association with loneliness and workload change (not significant). ISEI = international socio-economic index of occupational status. Column for including 'blank' as 0 (or 'no') replicates analyses whereby unanswered questions for workload change, income loss, and job loss were to be interpreted as 'stable workload,' 'stable income,' and 'keeping job' (see Fig S2). The workload change variable is nominal with 'no change' as the reference category. Reference categories of dichotomous outcomes 'losing income' and 'losing job' are 'stable income' and 'keeping job,' respectively. ~ p <.1; * p <.05; ** p <.01; *** p <.001 (two-tailed tests).

Fig S4. Estimated Margins of Control Variables on Mental Health Complaints during COVID-19.

	Depression		**Loneliness**		**Health anxiety**	
	main	adjusted	main	adjusted	main	adjusted
Age	.022˜	.010	.014	.010	.025˜	.023˜
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Gender: woman [1]	.065*	.016	.070*	.041	.073*	.049
	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)
Foreign-born [2]	.017	-.015	-.018	-.040	.063	.052
	(.05)	(.05)	(.05)	(.05)	(.06)	(.06)
Partner: no [3]	.035	.031	.157***	.156***	-.028	-.027
	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)
Employment type [4]						
freelance / self-employed	.126˜	.119˜	.032	.018	.042	.029
	(.07)	(.06)	(.07)	(.07)	(.07)	(.07)
Employer	.230*	.221*	.078	.065	-.016	-.030
	(.12)	(.11)	(.11)	(.11)	(.11)	(.11)
Other	.331*	.296˜	.202	.168	.017	-.020
	(.16)	(.15)	(.15)	(.15)	(.14)	(.13)
Firm size [5]						
small (<50 empl.)	.013	0.12	-.019	-.022	.017	.016
	(.04)	(.03)	(.04)	(.04)	(.04)	(.04)
medium (50-500 empl.)	.041	.057˜	.022	.029	.021	.029
	(.04)	(.03)	(.04)	(.04)	(.04)	(.04)
Urbanicity [6]						
small city / town	.023	.041	.019	.023	-.081*	-.073*
	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)
village / rural	-.023	-.008	-.071	-.070	-.008	-.007
	(.05)	(.04)	(.04)	(.04)	(.05)	(.05)
Survey week #	.018˜	.019*	.018˜	.016	-.008	-.012
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Ever depressed / anxiety	-	.410***	-	.206***	-	.226***
		(.03)		(.04)		(.04)
ISEI (per 10pts)	-.033***	-.020**	-.015	-.010	-.029**	-.022*
	(.008)	(.007)	(.009)	(.009)	(.009)	(.009)

Notes. 'Adjusted' column adds history of self-reported feelings of depression or health anxiety to the model (attenuating the occupational prestige [ISEI] associations). Marginal effects are drawn from multinomial logit (workload) and logit (income loss, job loss) with country-random intercepts. Estimates are equal to %-point change of a one-unit change in the predictor variable on the propensity of decreased workload (2 vs. 1), increased workload (3 vs. 1), losing income (1 vs. 0), and losing job (1 vs. 0). Reference categories: [1] man, [2] native-born, [3] partner in household, [4] employee, [5] large firm (>500 employees), [6] large city. ISEI = international socio-economic index of occupational status (range 10-89). The age predictor is adjusted with a suppressed non-linearity term (age squared). Standard errors between parentheses. ˜ p <.1; * p <.05; ** p <.01; *** p <.001 (two-tailed tests).

Fig S5. Margins of Key Predictors (Reported) and Alternative Selections: Sub-Industries.

Outcome	**Key predictor**	**Reported**	**Estimating when excluding:**				
			(a) buildings/ public transport	(b) customer service	(c) healthcare	(d) cleaners / helpers	(a) thru (d)
workload decrease	ISEI (per 10pts)	-.065***	-.065***	-.062***	-.068***	-.062***	-.062***
workload increase	ISEI (per 10pts)	.021	.020	.018	.021	.019	.016
losing income	ISEI (per 10pts)	-.068***	-.067***	-.065***	-.073***	-.066***	-.066***
losing job	ISEI (per 10pts)	-.028***	-.029***	-.027***	-.028***	-.029***	-.028***
depression feeling	ISEI (per 10pts)	-.033***	-.032***	-.035***	-.032***	-.031***	-.032***
loneliness feeling	ISEI (per 10pts)	-.015	-.015	-.015	-.016	-.012	-.015
health anxiety	ISEI (per 10pts)	-.029**	-.030**	-.030**	-.031**	-.028**	-.032**
depression feeling	workload decrease	.086**	.080*	.084*	.089**	.086*	.080*
depression feeling	workload increase	.099**	.099**	.097**	.100**	.100**	.099**
depression feeling	losing income	.111**	.109**	.115**	.113**	.107**	.112**
depression feeling	losing job	.145**	.148**	.145**	.145**	.140**	.141**
loneliness feeling	workload decrease	.054	.052	.052	.052	.050	.046
loneliness feeling	workload increase	.045	.042	.042	.044	.041	.047
health anxiety	workload decrease	.111**	.113**	.111**	.109**	.107**	.106**
health anxiety	workload increase	.149***	.149***	.149***	.144***	.149***	.145***

Notes. Marginal effects are drawn from multinomial logit and logit with country-random intercepts. Estimates are equal to %-point change of a one-unit change in the predictor variable. The table summarizes all theorized relationships between predictors and outcomes (main effects). Key predictor estimates are reported in the main text (Figures 2 thru 4), with exception of ISEI's association with loneliness workload change (not significant). ISEI = international socio-economic index of occupational status. Sub-industries based on 3- and 4-digit the International Standard Classification of Occupations (ISCO) codes: (a) building supervisors, conductors, bus and tram drivers, (b) tellers, client information workers, (c) medical doctors and nursing, and (d) domestic/hotel cleaners/helpers and laundry cleaners. The workload change variable is nominal with 'no change' as the reference category. Reference categories of dichotomous outcomes 'losing income' and 'losing job' are 'stable income' and 'keeping job,' respectively. * p <.05; ** p <.01; *** p <.001 (two-tailed tests).

Fig S6. Coding of Outcome, Predictor, and Control Variables from WageIndicator Dataset.

Variable	Category	Survey question(s)	Coding
Workload	outcome, predictor	How is your job affected? Has increased / Has decreased (exclusive categories), Neither (by default)	Stable (1), decreased (2), increased (3)
Income loss	outcome, predictor	How is your job affected? I (will) receive less income (0/1)	Stable income (0), less income (1)
Job loss	outcome, predictor	How is your job affected? I (will) lose my job (0/1)	Keeping job (0), losing job (1)
Depression feeling	outcome	Because of the coronavirus: I feel mentally depressed, rating 1 (28%), 2 (20%), 3 (22%), 4 (23%), 5 (7%)	Not depressed (0), depressed (1) if rating 4 or 5
Loneliness feeling	outcome	Because of the coronavirus: I feel lonely, rating 1 (23%), 2 (27%), 3 (23%), 4 (20%), 5 (7%)	Not depressed (0), depressed (1) if rating 4 or 5
Health anxiety	outcome	Because of the coronavirus: I feel afraid that I get sick, rating 1 (15%), 2 (27%), 3 (22%), 4 (27%), 5 (9%)	No fear (0), fear (1) if rating 4 or 5
Occupational prestige (ISEI)	predictor	What is your occupation? Coded to International Standard Classification of Occupations (ISCO)	ISCO converted to ISEI by WageIndicator (continuous: range 10-89)
Age	control	When were you born? Date:	Age (continuous), coded by WageIndicator
Age squared	control	When were you born? Date:	Age (continuous), coded by WageIndicator
Gender	control	What is your gender?	Man (0), woman (1)
Survey week / timing	control	Week of survey	13 thru 18 (continuous)
Migration background	control	Constructed based on: In which country do you live? + In which country were you born?	Born in country of residence (0), foreign-born (1)
Partner (in household)	control	With whom do you live in your household? Spouse / partner	No partner (0), partner (1)
Children (in household)	control	With whom do you live in your household? One or more children	No children (0), children (1)
Employment status	control	What is your employment status? Employee / Self-empl, no employees, freelance / Self-employed, employees / Family worker / Casual / Other	Employee (1), freelance/casual (2), employer (3), other (4)
Firm size	control	How many people are employed at your place of work? Alone, 2-4, 5-9, 10-20, 20-50, 50-100, 100-200, 200-500, 500-1000, 1000-2000, 2000-5000, 5000+	Self-employed (1), -2-50 (2), 50-500 (3), 500+ (4)
Urbanity	control	You live in the region of… (country-specific) Metropole, large city, medium-sized city, small city, town, village, rural	city or metropole (1), small city or town (2), village or rural (3)
Ever depressed / anxious	control	Have you recovered from the disease? Depression or anxiety	Never depressed / anxious (0), ever depressed / anxious (1)

Notes. Updated with survey data through April-30, 2020 (downloaded May-1, 2020). After selections (active labor force, ages 25 thru 64 in selected countries) the study sample consists of 1,012 cases. Cases were listwise-deleted from the analysis if data were missing on the outcome variable and (key) predictor variable(s). Within these selections 2 cases miss an ISEI score and no control variables have additional missingness with exception of valid missing (i.e. recently furloughed). Valid missingness was only observed when predicting job loss, whereby employment status had been updated to 'not working' if the job was already lost. Hence, models predicting job loss exclude employment status. Regarding economic hardship outcome variables, 16 cases had missing data on workload change, 2 cases had missing data on income loss, and 2 cased had missing data on job loss (no additional missingness among control variables). Furthermore, 29 cases (workload change), 156 cases (income loss), and 254 (job loss) had blank answers to key questions about economic hardships. Robustness checks indicated that interpreting these blank answers as "don't know" and classifying them as no change (1) or no income/job loss (0) does not lead to different results (see Supplement 3).

Data access

An overview of the surveys in the participating countries is available on https://wageindicator.org/salary/living-and-working-in-times-of-the-coronavirus. Description of the data project: https://wageindicator.org/Wageindicatorfoundation/projects/living-and-workingin-coronavirus-times. Data are accessible for academic researchers after registration with IZA – Institute of Labor Economics.

Fig S7. Correlation Matrix Including All Outcome and Predictor Variables Theorized and Considered.

	DEP	LON	FEAR	WORKL	INCL	JOBL	ISEI	AGE	AGES	GEND	WEEK	FOR	PART	CHLD	EMPL	FIRMS	URB	EVERD
DEP	1.000																	
LON	.349*	1.000																
FEAR	.173*	.070*	1.000															
WORKL	.088*	.023	.133*	1.000														
INCL	.133*	.049	.128*	.048	1.000													
JOBL	.115*	.071	.062	.020	.413*	1.000												
ISEI	-.101*	-.009	-.130*	-.070*	-.249*	-.184*	1.000											
AGE	-.100*	-.221*	.112*	.074*	-.003	-.040	-.169*	1.000										
AGES	-.102*	-.220*	.101*	.070*	-.013	-.047	-.163*	.993*	1.000									
GEND	.073*	.074*	.055	.085*	-.034	.004	-.042	.026	.030	1.000								
WEEK	.046	.041	-.026	.027	-.115*	-.008	-.046	.145*	.157*	.191*	1.000							
FOR	.009	-.002	.022	-.051	.043	.113*	.071*	-.040	-.034	.018	.049	1.000						
PART	-.045	-.191*	.052	.047	.014	.032	-.050	.118*	.108*	-.026	-.017	-.016	1.000					
CHLD	.004	-.148*	.023	.021	.015	.089*	-.096*	.186*	.151*	-.002	-.011	-.046	.555*	1.000				
EMPL	.040	.025	-.016	-.035	.183*	.164*	.003	-.066*	-.058	-.005	-.096*	.064*	.005	-.051	1.000			
FIRMS	-.035	.009	-.015	.016	-.051	.029	-.049	-.054	-.047	.050	-.041	.012	.010	-.025	.503*	1.000		
URB	.013	-.018	-.045	.069*	-.017	.003	-.084*	.010	.014	.074*	.003	-.062	-.011	-.018	.053	.026	1.000	
EVERD	.402*	.216*	.197*	.028	.152*	.122*	-.108*	-.051	-.057	.059	.006	.044	.308*	.363*	.028	-.015	-.023	1.000

Notes. DEP = complaint: depressed, LON = complaint: lonely, FEAR = health anxiety, WORKL = workload change, INCL = income loss, JOBL = job loss, ISEI = international socio-economic index of occupations, AGE = age, AGES = age squared, GEND = gender, WEEK = survey week number, FOR = foreign-born (country of birth), PART = partner (in household), CHLD = children (in household), EMPL (employment status), FIRMS (firm size), URB (urbanicity), EVERD = ever depressed or anxious. See Supplement 6 for variable coding. * denotes significant correlation with $\alpha = .05$.