

Supplemental File: Reported time allocation and emotional exhaustion during Covid-19 pandemic lockdown in Slovenia

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Institutional background

Presented empirical work exploits a survey we conducted during the first lockdown in Slovenia due to Covid-19 (spring 2020). In order to better understand the background context of the study, the article proceeds with a comparison of the key statistics on gender inequality of working population in Slovenia, EU-28 average, UK and Denmark, a brief account of the evolution of Covid-19 pandemic in Slovenia and the key government policies that likely affected the household allocation of time between genders during the lockdown.

Gender patterns before Covid-19: Slovenia within EU-28

Slovenia is an EU member state with a socialist imprint still reflected in institutions, policies, and behavioural patterns. Although Slovenians may be considered as a more traditional nation in terms of family roles (55% of Slovenians as opposed to 44% in the EU-28 viewed the most important role of females as taking care for children and family (EU Open Data Portal, 2017), the standard indicators measuring gender inequality reveal far more egalitarian society (see Table A1, top panel). The employment share gap, defined as the difference between males and females' employment shares, was mere 6.8 percentage points, a gap comparable to Denmark, one of the most egalitarian EU countries, and significantly lower than the gaps reported for the EU-28 and the UK. Moreover, in terms of part-time employment share and unadjusted wage, Slovenia is

among the most egalitarian EU countries with significantly lower gaps than those reported for Denmark and EU-28.

One of the key factors for low employment and wage gaps in Slovenia may be related to relatively small gender gaps in terms of family care responsibilities, which predominantly reflects care for children, but also includes care for elderly family members. As females are more likely to engage in family care this gap was negative, -12.6 percentage points for Slovenia, which is less than half of the EU-28 average and the UK in absolute terms and somewhat higher than the gap for Denmark. Indeed, access to full-time childcare (from 7 am to 5 pm) is practically guaranteed from 11 months of age (after a year of paid parental leave) to start of school. While childcare is not free of charge, the fees of both public and private childcare facilities are heavily subsidised using income-contingent schemes so that parents effectively pay only around one-quarter of full fees (see Stropnik, 2001). As shown in Table S1, the childcare participation rates of children under the age of 3 in Slovenia were around 44%, well above the EU-28 average (and Barcelona goals on affordable care set at 33%). In contrast, the corresponding share of children from age 3 to the start of school was around 90%, slightly lower than the EU-28 average (exactly in line with the Barcelona goal).¹ Similarly, Slovenian primary schools offer full-day (until 4:30 pm) supervision of children and offer elective meals, allowing full-time work to parents.

¹ According to European Commission (2019) 17 EU countries have compulsory early childcare and education.

Table S1: Gender gap indicators and childcare provision in Slovenia, EU28, UK and Denmark, 2019

	Slovenia	EU-28	UK	Denmark
Gender gaps [males-females]				
Employment share [percentage points]	6.8	11.4	9.4	7.2
Part-time employment share [percentage points]	7.5	22.7	28.7	18.3
Unadjusted wage* [percent]	8.7	15.7	19.9	14.5
Family care responsibilities [percentage points]	-12.6	-27.8	-28.7	-4.1
Childcare participation rates**				
Under age 3	44.8	34.2	33.2	71.7
Aged 3 and over	90.0	93.3	100.0	97.5
Childcare actual hours**				
Under age 3	35.8	27.4	16.5	34.7
3 years or more	36.6	29.5	21.0	32.7

Source: Eurostat (2020) and European Commission (2019).

Notes: The data are from 2019 unless indicated differently, * 2018, ** 2017

Policies during the first wave of Covid-19 pandemic in Slovenia

During the first wave of Covid-19 pandemic, Slovenia was one of the countries that exhibited an early surge in the number of Covid-19 infections, registering the first case and the peak number of positive tests on 4 and 26 March 2020, respectively.² After announcing an epidemic on March 12 2020, Slovenia successfully limited the spread of the virus using severe social distancing measures. One of the key measures was the closure of all kindergartens and schools from March 16 until May 18 2020, when we conducted our online survey. The parents of children in kindergartens and primary schools suddenly had additional tasks of caring for children, homeschooling and additional housework (e.g. preparing additional meals).

The government also introduced a furlough programme (similar to the Coronavirus Job Retention Scheme in the UK) that paid 80% of gross wage (capped at the average monthly gross

² According to the National Institute for Health (2020), the peak number of positive tests for Covid-19 among roughly 2,096,000 Slovenians was 61 on 26 March 2020, the total number of positive tests until 31 May 2020 was 1,483, while the total number of fatalities was 108. Slovenia was the first country in EU to declare the end of the Covid-19 epidemics on 15 May 2020, effective from 31 May 2020.

wage in 2019 amounting to 1,800 EUR).³ For furloughed workers, the additional burden imposed by kindergarten and school closures was met with additional leisure time. However, this was not the case for employees with younger children who continued to work from home. Such families suffered the most significant time allocation adjustments during the Covid-19 lockdown, and these patterns of adaptation are of the primary focus in this study.

Survey description

The survey's primary objective was to collect data to be able to quantify changes in time allocation and emotional exhaustion during Covid-19 pandemic lockdown in Slovenia between March 16 and May 18. The survey was conducted during the lockdown, specifically between April 16 and May 11 2020. The self-administered survey was available online and was executed through a well-known survey tool in Slovenia (1ka, 2020).

We designed the questionnaire to be completed in less than 10 minutes on average and to gather information on:

- personal background: gender, age, education, monthly income of a household, a share of the household's monthly income provided by the respondent, number of children by age, living area;
- individual's and partners employment (if an individual was in a relationship) before and during the lockdown;
- allocation of time before and during lockdown to paid work, unpaid work, leisure and sleep;
- emotional exhaustion (emotional drain, fatigue, strain).

Owing to the challenges associated with primary data collection during the pandemic, we resorted to non-random sampling. In order to gather a sample as

³ See Republic of Slovenia (2020a, 2020b).

representative and as large as possible, the e-mails asking individuals to complete the questionnaire were sent with the help of the University of Ljubljana, two public schools in Slovenia (one rural, one urban), the Slovenian Chambers of Commerce, the Association of free trade unions of Slovenia and a few medium-sized and large-sized companies. We also addressed individuals via social networks on Facebook and LinkedIn. Out of 3,160 individuals, who started responding to the questionnaire, 2,490 completed it (79%). Due to the used method of contacting individuals, no reminder e-mails could be sent.

The questions and the construction of the variables used in the analysis are presented in Table S2.

Table S2: Description of variable construction

Variable	Survey question	Description of variable construction
Female	Enter your gender.	The variable is equal to 1 for females and 0 for males.
Age	What age category do you fall into?	The variable has 3 categories: 35 years old or younger, 36-45 years of old, 46 years old or older
Children aged 0 - 5 years	Enter the number of children in the age group: less than 6 years old	The variable contains the number of children in this age group. Nonparents have the value of the variable equal to 0.
Children aged 6 - 14 years	Enter the number of children in the age group: 6 to 14 years old	The variable contains the number of children in this age group. Nonparents have the value of the variable equal to 0.
Children aged 15 - 18 years	Enter the number of children in the age group: 15 to 18 years old	The variable contains the number of children in this age group. Nonparents have the value of the variable equal to 0.
Parent	Constructed on questions on the number of children in specific age groups (see above)	Persons with at least one child aged 18 years or less have a value equal to 1. All other persons have a value equal to 0 (even if they have children, but are older than 18 years).
Living in an urban area	Where do you live? (possible answers: i) in a rural area; ii) in an urban area)	The variable is equal to 1 for those living in an urban area and 0 otherwise.
Number of employees	How many people does your employer employ? (possible answers: i) less than 10; ii) 10-49; iii)50-249 iv) 250 or more)	The variable is equal to 1 for those employed in an organisation with less than 10 employees, 2 for those employed in an organisation with 10-49 employees, 3 for those employed in an organisation with 50-249 employees and 4 for those employed in an organisation with 250 or more employees.
Occupation	What is your occupation?	The variable has 3 categories: managers, professionals and others.
Public sector	In which sector do you work? (possible answers: i) public; ii) private)	The variable is equal to 1 for those working in the public sector and 0 otherwise.
Net monthly income per household member	What is your approximate monthly net income per household member?	The variable is equal to 1 for those with net monthly income below 700 EUR, 2 for those with 700-999 EUR of net monthly income, 3 for those with 1000-1999 EUR of net monthly income, and 4 for persons with a net monthly income of 2000 EUR or more.
Main earner	What part of the family income is your salary?	The variable is equal to 1 if the individuals' salary presents half or more of family income and 0 otherwise.
Hours of paid work	What proportion of your awake time is/was allocated to paid work amid/before the epidemic COVID-19? How many hours a day do/did you spend sleeping amid/before COVID-19 pandemic?	Hours of paid work amid and before Covid-19 were calculated as: (proportion of awake time allocated to paid work) × (24 – hours of sleep)
Hours of unpaid work	What proportion of your awake time is/was allocated to unpaid work amid/before the pandemic COVID-19? How many hours a day do/did you spend sleeping amid/before COVID-19	Hours of unpaid work amid and before Covid-19 were calculated as: (proportion of awake time allocated to unpaid work) × (24 – hours of sleep)

Leisure	<p>pandemic? What proportion of your awake time is/was allocated to leisure amid/before the pandemic COVID-19? How many hours a day do/did you spend sleeping amid/before COVID-19 pandemic?</p>	<p>Leisure amid and before Covid-19 were calculated as: (proportion of awake time allocated to leisure) × (24 – hours of sleep)</p>
Emotional exhaustion	<p>How often are you emotionally drained during the COVID-19 pandemic compared to the pre-pandemic period? How often do you feel fatigued when you get up in the morning and have to face with obligations of another day during the COVID-19 pandemic compared to the pre-pandemic period? How often is work really a strain for you during the COVID-19 pandemic compared to the pre-pandemic period?</p>	<p>An individual could choose between 9 values. 0 was assigned to the answers for equal frequency during and pre-pandemic period. Negative values (up to -5) were given to each answer indicating lower frequencies and positive values (up to 5) for higher frequencies during Covid-19 pandemic than before it. Variable emotional exhaustion was then calculated as the total of the three values, with higher scores indicating a greater increase in emotional exhaustion.</p>

Additional empirical results

Table S3: Estimation results for daily hours of paid work, unpaid work and leisure using parents as treatment group

		Daily hours of paid work	Daily hours of unpaid work	Daily hours of leisure
Parents		-1.067***	2.586***	-1.483***
		(0.370)	(0.216)	(0.290)
Covid		-0.047	0.091	-0.375
		(0.415)	(0.180)	(0.326)
Covid x Parents		-0.849	1.543***	-0.150
		(0.520)	(0.340)	(0.388)
Age	36-45	1.407***	-0.456*	-0.825***
		(0.289)	(0.249)	(0.245)
	46 or more	1.001***	-0.804***	-0.207
		(0.292)	(0.209)	(0.235)
Net monthly income per household member	700 – 999 EUR	-0.079	-0.086	0.177
		(0.345)	(0.362)	(0.245)
	1000 – 1999 EUR	0.153	-0.360	0.227
		(0.349)	(0.314)	(0.203)
	2000 EUR or more	0.264	-0.663	0.446
		(0.549)	(0.488)	(0.393)
Number of employees	10 - 49	-0.553	0.099	0.171
		(0.500)	(0.451)	(0.295)
	50 -249	-1.110***	0.546	0.433
		(0.419)	(0.414)	(0.267)
	250 or more	-0.363	-0.097	0.338
		(0.415)	(0.412)	(0.250)
Occupation	Professionals	-0.287	0.054	0.068
		(0.446)	(0.292)	(0.289)
	Others	-0.545	0.267	0.019
		(0.555)	(0.389)	(0.339)
Constant		9.836***	3.255***	3.923***
		(0.723)	(0.566)	(0.435)
Adj. R-squared		0.126	0.428	0.233
Observations		2462	2462	2462

Notes: The table presents estimation results of regression presented in equation (1). The results are reported in hours. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table S4: Estimation results for daily hours of paid work, unpaid work and leisure using parents by gender as treatment groups

		Daily hours of paid work	Daily hours of unpaid work	Daily hours of leisure
Fathers		-1.092*** (0.421)	2.217*** (0.278)	-1.173*** (0.329)
Mothers		-1.029*** (0.375)	3.119*** (0.217)	-1.941*** (0.270)
Covid		-0.047 (0.416)	0.091 (0.180)	-0.375 (0.321)
Covid x Fathers		-0.855 (0.662)	1.495*** (0.497)	0.092 (0.464)
Covid x Mothers		-0.843* (0.478)	1.608*** (0.289)	-0.476 (0.348)
Age	36-45	1.409*** (0.289)	-0.430* (0.240)	-0.854*** (0.237)
	46 or more	1.007*** (0.288)	-0.725*** (0.204)	-0.294 (0.228)
Net monthly income per household member	700 – 999 EUR	-0.081 (0.347)	-0.118 (0.353)	0.212 (0.228)
	1000 – 1999 EUR	0.155 (0.348)	-0.328 (0.305)	0.192 (0.198)
	2000 EUR or more	0.277 (0.540)	-0.480 (0.476)	0.245 (0.379)
Number of employees	10 - 49	-0.562 (0.505)	-0.016 (0.455)	0.297 (0.313)
	50 -249	-1.117*** (0.422)	0.448 (0.427)	0.540* (0.280)
	250 or more	-0.373 (0.415)	-0.228 (0.419)	0.481* (0.264)
Occupation	Professionals	-0.288 (0.446)	0.028 (0.291)	0.096 (0.271)
	Others	-0.551 (0.559)	0.193 (0.397)	0.100 (0.323)
Constant		9.840*** (0.726)	3.310*** (0.567)	3.863*** (0.422)
Adj. R-squared		0.125	0.448	0.282
Observations		2462	2462	2462

Notes: The table presents estimation results of regression presented in equation (1). The results are reported in hours. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table S5: Estimation results for daily hours of paid work, unpaid work and leisure using parents by gender, family-provision status and sector of employment as treatment groups

		Daily hours of paid work	Daily hours of unpai d work	Daily hours of leisur e
Main-providing fathers employed in private sector		-1.053* (0.587)	1.749*** (0.388)	-0.846** (0.424)
Non-main-providing fathers employed in private sector		-1.073** (0.506)	2.480*** (0.466)	-1.423*** (0.425)
Main-providing fathers employed in public sector		-1.300*** (0.414)	2.754*** (0.270)	-1.314*** (0.313)
Non-main-providing fathers employed in public sector		-1.299*** (0.413)	3.010*** (0.294)	-1.468*** (0.310)
Main-providing mothers employed in private sector		-0.758 (0.525)	2.433*** (0.326)	-1.810*** (0.335)
Non-main-providing mothers employed in private sector		-0.993** (0.448)	3.309*** (0.305)	-2.012*** (0.304)
Main-providing mothers employed in public sector		-1.194*** (0.410)	3.138*** (0.252)	-1.939*** (0.285)
Non-main-providing mothers employed in public sector		-1.284*** (0.368)	3.320*** (0.206)	-1.933*** (0.266)
Covid		-0.047 (0.417)	0.091 (0.181)	-0.375 (0.320)
Covid x Main-providing fathers employed in private sector		-0.448 (0.870)	1.320** (0.671)	-0.120 (0.615)
Covid x Non-main-providing fathers employed in private sector		-1.345 (0.985)	1.723** (0.835)	0.480 (0.638)
Covid x Main-providing fathers employed in public sector		-0.121 (0.550)	1.145*** (0.366)	-0.580 (0.414)
Covid x Non-main-providing fathers employed in public sector		-1.154** (0.571)	1.539*** (0.434)	-0.393 (0.401)
Covid x Main-providing mothers employed in private sector		-0.711 (0.719)	1.419*** (0.521)	-0.330 (0.427)
Covid x Non-main-providing mothers employed in private sector		-0.855 (0.594)	1.571*** (0.448)	-0.496 (0.405)
Covid x Main-providing mothers employed in public sector		-0.651 (0.524)	1.611*** (0.351)	-0.540 (0.361)
Covid x Non-main-providing mothers employed in public sector		-0.975** (0.455)	1.804*** (0.250)	-0.510 (0.337)
Age	36-45	1.403*** (0.290)	-0.384 (0.237)	-0.870*** (0.240)
	46 or more	1.030*** (0.281)	-0.739*** (0.193)	-0.294 (0.234)
Net monthly income per household member	700 – 999 EUR	-0.076 (0.353)	-0.161 (0.346)	0.237 (0.234)
	1000 – 1999 EUR	0.107 (0.376)	-0.243 (0.301)	0.171 (0.207)

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	2000 EUR or more	0.223 (0.568)	-0.356 (0.475)	0.183 (0.367)
Number of employees	10 - 49	-0.588 (0.503)	0.028 (0.450)	0.298 (0.314)
	50 -249	-1.093** (0.428)	0.401 (0.434)	0.579** (0.291)
	250 or more	-0.331 (0.425)	-0.312 (0.423)	0.541* (0.279)
Occupation	Professionals	-0.157 (0.440)	-0.253 (0.295)	0.195 (0.280)
	Others	-0.412 (0.530)	-0.097 (0.419)	0.186 (0.339)
Constant		9.727*** (0.724)	3.540*** (0.575)	3.760*** (0.431)
Adj. R-squared		0.129	0.463	0.287
Observations		2462	2462	2462

Notes: The table presents estimation results of regression presented in equation (1). The results are reported in hours. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table S6: Estimation results for emotional exhaustion using parents by gender, family-provision status and sector of employment as treatment groups

	Treatment = Parents		Treatment = parents by gender		Treatment = Parents by gender, family-provision status and sector of employment	
	Without controlling for daily hours of paid and unpaid work	Controlling for daily hours of paid and unpaid work	Without controlling for daily hours of paid and unpaid work	Controlling for daily hours of paid and unpaid work	Without controlling for daily hours of paid and unpaid work	Controlling for daily hours of paid and unpaid work
Covid	0.062 (0.334)	0.033 (0.317)	0.062 (0.334)	0.033 (0.317)	0.062 (0.335)	0.033 (0.318)
Covid x Parents	0.963** (0.481)	0.505 (0.469)				
Covid x Fathers			0.604 (0.652)	0.192 (0.555)		
Covid x Mothers			1.446*** (0.444)	0.945* (0.536)		
Covid x Main-providing fathers employed in private sector					0.991 (0.956)	0.401 (0.822)
Covid x Non-main-providing fathers employed in private sector					0.096 (0.972)	-0.121 (0.854)
Covid x Main-providing fathers employed in public sector					1.563*** (0.521)	0.856 (0.548)
Covid x Non-main-providing fathers employed in public sector					0.306 (0.595)	0.077 (0.654)
Covid x Main-providing mothers employed in private sector					1.176 (0.925)	0.709 (0.897)
Covid x Non-main-providing mothers employed in private sector					1.351** (0.600)	0.883 (0.652)
Covid x Main-providing mothers employed in public sector					1.881*** (0.524)	1.236** (0.584)
Covid x Non-main-providing mothers employed in public sector					1.647*** (0.425)	1.105** (0.539)
Hours of paid work		0.739*** (0.132)		0.736*** (0.128)		0.728*** (0.125)
Hours of unpaid work		0.703*** (0.191)		0.697*** (0.195)		0.694*** (0.195)

Notes: The table shows the results of regression presented in equation (2). A positive estimated coefficient signifies an increase in emotional exhaustion compared to the pre-lockdown state and vice versa. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

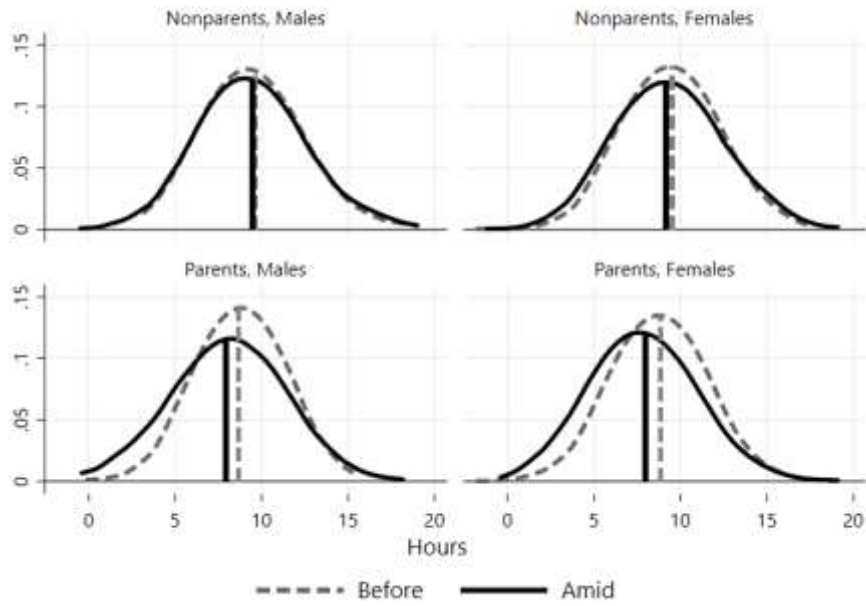


Figure S1: Distribution of hours of paid work

Notes: These plots compare distributions of paid work before and during the Covid-19 lockdown, by parental status and gender. Distributions are estimated using Epanechnikov kernel function and bandwidth equal to 3 hours.

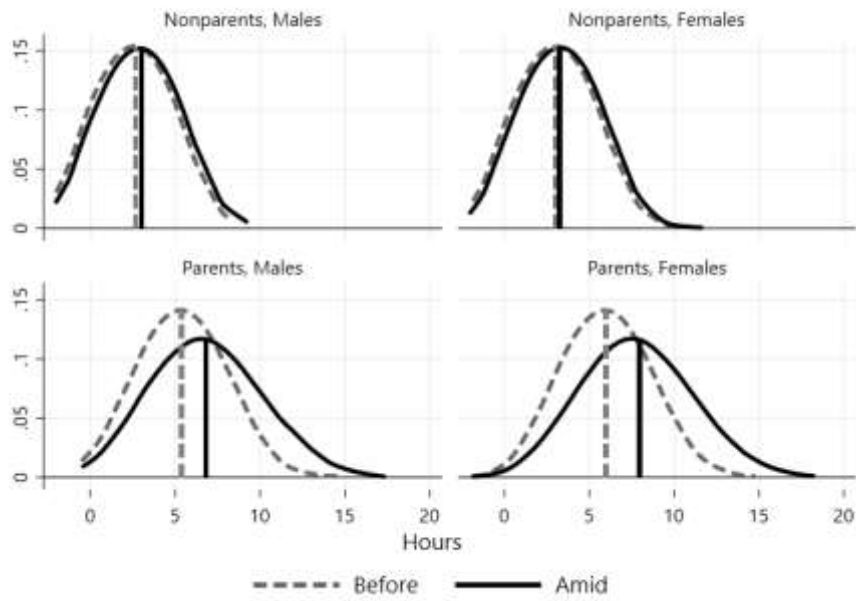


Figure S2: Distribution of hours of unpaid work

Notes: These plots compare distributions of unpaid work before and during the Covid-19 lockdown, by parental status and gender. Distributions are estimated using Epanechnikov kernel function and bandwidth equal to 3 hours.

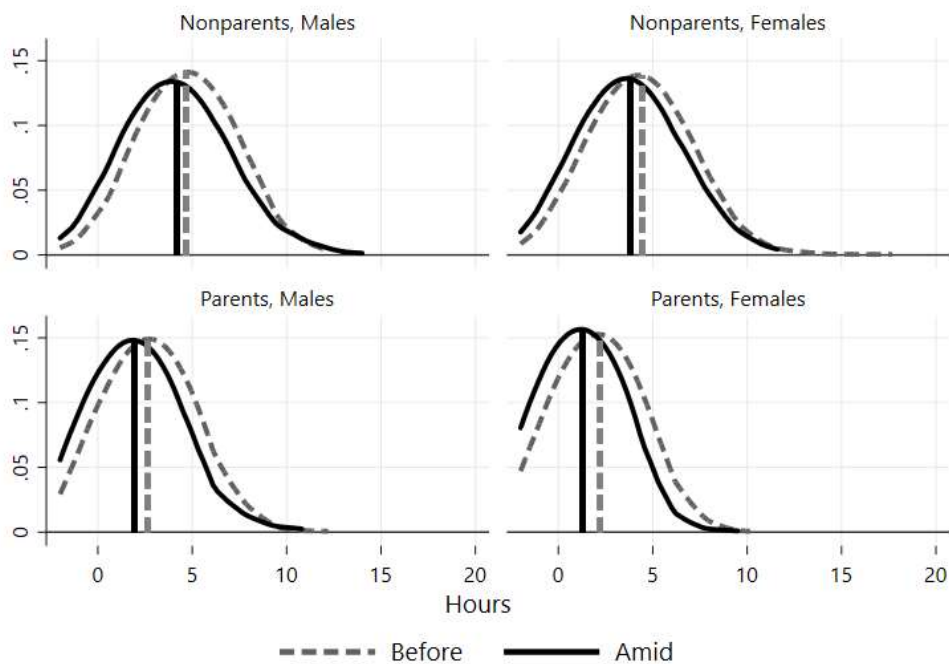


Figure S3: Distribution of leisure

Notes: These plots compare distributions of hours of leisure before and during the Covid-19 lockdown, by parental status and gender. Distributions are estimated using Epanechnikov kernel function and bandwidth equal to 3 hours.

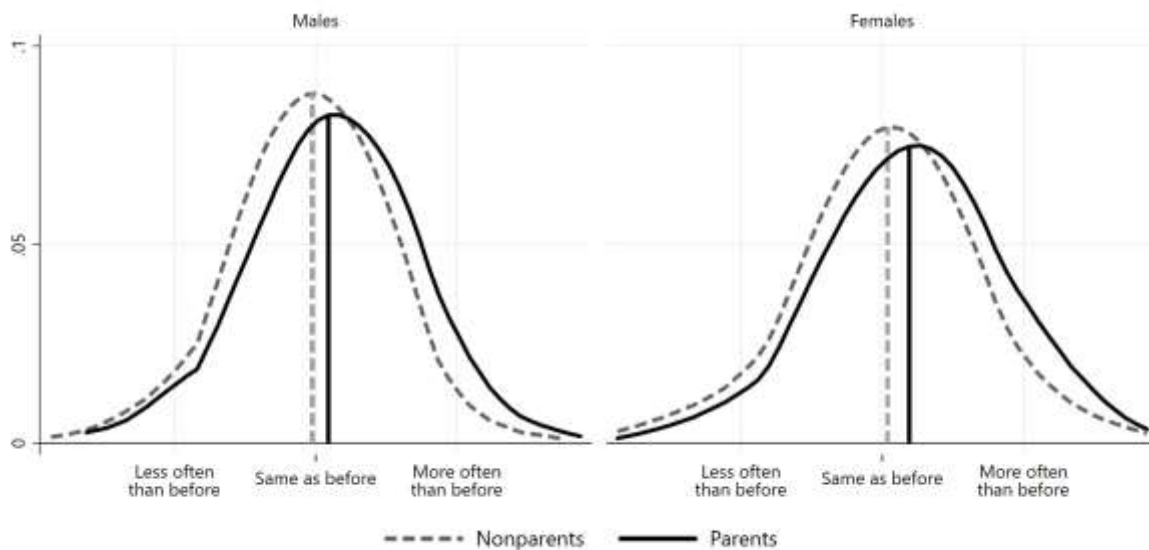


Figure S4: Distribution of emotional exhaustion

Notes: These plots the distribution of the share of employees that report more frequent/less frequent feeling of emotional exhaustion during the Covid-19 lockdown, by parental status and gender. Distributions are estimated using Epanechnikov kernel function and bandwidth equal to 3 hours.

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