



Women pay the price of COVID-19 more than men

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Accepted: 31 January 2021 / Published online: 15 February 2021

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Abstract

The COVID-19 pandemic is an unprecedented event with wide-ranging implications. Given that households are at the center of major changes affecting the entire world, the *Review of Economics of the Household* is publishing a series of issues on COVID-19 and the economics of the household. Here we review eight articles documenting the enormous costs of the COVID containment policies, in particular the school closures that ensued. Individuals paid a heavy cost in terms of disruption in their attachment to the labor force. Children could not go to school and parents were forced to provide extra childcare and spend significant amounts of time helping children continue to learn, while possibly working from home. Domestic violence became more common. These changes have often been traumatic, to the detriment of the well-being and mental health of large numbers of people. Women have paid a higher price than men, as many of the studies demonstrate. Our conclusion calls for policy-makers to prepare for the post-traumatic period: many households will need help.

Since households are at the center of major changes affecting the entire world, the *Review of Economics of the Household* called for papers related to the impact of COVID-19 on people's lives.¹ This essay discusses eight of these articles, including two published in December.

The COVID-19 pandemic is an unprecedented event with wide-ranging implications. Economists often emphasize the implications dealing with the monetized part of our lives, the so-called economy. The pandemic has brought huge recessions, unemployment has skyrocketed, incomes disappeared. The focus of this essay and the articles that inspired it is not on lost jobs or income reductions, but on

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¹ The journal received 85 submissions, many of which were of high quality. The editors of the COVID project—George Davis and us—decided to publish 17 articles. The last set of articles will appear in the June issue of REHO.

repercussions of COVID-related policies on the lives of individual men and women. Some of the articles look at the effects of the pandemic on labor supply and whether work is done from home or not, questions also of interest to more conventional economists. This journal emphasizes the non-monetized sides of life. In that spirit, we emphasize repercussions of a non-monetized nature, including time spent on childcare, personal wellbeing, mental health, and domestic violence. Data come from five countries: the US, Italy, Japan, Germany and the UK.

A striking conclusion that emerges from all the articles we discuss is that women tend to be more adversely affected by the pandemic than men. Gender gaps in the toll of COVID are reported for all five countries and they almost all go in the same direction: women are paying the price of COVID more than men. Domestic violence has increased, which hurts women more. Since COVID, relative to men, women have reported a deterioration in mental health and relatively worse well-being. Four out of eight papers—using data from the US, Germany, the UK and Japan—examine the heavy toll for women resulting from school closures and show more negative consequences for parents of young children. One of these school closure articles documents the extra childcare responsibilities undertaken by women; another the gender gap in choosing to work from home and be with home-bound children; three find that in Germany, the UK and the US school closures cause more unhappiness and mental health issues for women than for men. In one case, the analysis links increased unhappiness with extra parental responsibilities due to school closures.

It seems like it does not matter where the data were collected. The findings from country A about repercussion y seem to form a tapestry with those from country B about repercussion z . The size of the disruptions that COVID caused to people's lives may differ from one country or continent to the other, but the direction of the consequences reported in the evidence-based articles that we review is the same whenever they are covered by two studies from two different countries. Our major conclusion is that for millions of households the effects of COVID-19 and the ensuing lockdowns have been traumatic. It is not too early for policy-makers to plan strategies to alleviate painful long-run consequences to the mental health and well-being of parents and their children as well as that of victims from additional domestic violence due to COVID.

Section 1 examines consequences for labor supply and work-at-home. The topic of Section 2 is parental provision of childcare, wellbeing and mental health. Section 3 addresses domestic violence and Section 4 concludes.

1 Labor supply and work-at-home

Labor supply responses is the focus of “Estimating the Immediate Impact of the COVID-19 Shock on Parental Attachment to the Labor Market and the Double Bind of Mothers” by Misty L. Heggeness (2020). Exploiting state-level variation in the timing of stay-at-home orders and school closures in the US, Heggeness studies the impact of the COVID shock on parent's labor supply during the initial stages of the pandemic. Using monthly panel data from the US Census Bureaus' Current Population Survey (CPS), this article applies a difference-in-difference approach and compares several labor supply outcomes in early closure states to those in states with

delayed or no closures:² labor market attachment; unemployment; employed but not working last week; hours worked, weekly and hourly earnings if employed.

Heggeness finds that, compared to their counterparts in late closure states, mothers with jobs in early closure states were 68.8 percent more likely to not have worked in the last week before the interview. In contrast, there was no effect on working fathers or working women without school age children. More than working fathers and women without young children, working mothers were more likely to take temporary leave from formal work.³ At the same time, relative to fathers' hours, in early closure states, mothers who continued working increased their work hours by 1.8 percent. This effect is entirely driven by a reduction in fathers' hours worked. For instance, fathers working full-time reduced their hours worked by about half an hour a week.

Gema Zamarro and María J. Prados in "Gender Differences in Couples' Division of Childcare, Work and Mental Health During COVID-19" analyze labor supply responses to COVID using another US data set and obtain similar results. Their analysis is based on the first 8 waves of the new "Understanding Coronavirus in America" survey administered biweekly by the USC Dornsife Center for Economic and Social Research over a four months period—from March 10 to July 22—, a nationally representative sample. They focus on working age respondents living with their partners.

Zamarro and Prado find that among mothers and fathers in two-partner households who continued to work after the outbreak of COVID, the proportion of mothers who reduced their working hours (42%) is considerably larger than the proportion of fathers who did so (30%).⁴ As for changes in employment status, the gender gap in parents' loss of employment is relatively small: 4% more women lost their job, but after controlling for education the gap is not statistically significant. Low educated workers of both genders suffered larger job losses.

In addition, Zamarro and Prado also document a sharp gender gap in who takes care of the kids in these two-partner households: after schools closed, 48% of mothers, but only 14% of fathers, are their children's sole childcare providers. Many of these women had not been the only childcare provider at the beginning of the crisis. Conditioning on respondents currently working, 33% of working mothers and 11% of working fathers reported being the sole providers of childcare. The authors also examine how childcare arrangements are associated with changes in working hours and employment during the pandemic. Furthermore, they show that psychological distress increased significantly early into the pandemic.⁵ The proportion of respondents with at least some symptoms of psychological distress peaked at the beginning of April, when close to half of all mothers of school-age children reported at least some symptoms of psychological distress. A gender gap is also evident here:

² Specifically, Heggeness uses data for the months of January through May of 2019 and 2020.

³ It is also possible that more women lost their job due to demand-side factors. The COVID-19 crisis and the social distancing policies are having a harder impact on sectors that employ a large share of women, service sectors like retailing, personal care and hospitality (Alon et al. 2020; OECD, 2020).

⁴ The difference seems to be driven by college educated parents.

⁵ Psychological distress is measured using the PHQ-4 scale.

over the entire sample period, women are always more stressed than men, and women with children are more stressed than women without children.⁶ Interestingly, the reverse appears to be the case for men: fathers are less stressed than men without children.

Next, we compare the labor supply responses reported by Heggeness and Zamarro and Prado using two different data sets for the US to those reported by Del Boca et al. (2020) based on a relatively small Italian survey. More than 500 women and their partners were first interviewed in April and July 2019, before the pandemic, and re-interviewed in April 2020, while Italy was still under strict lockdown. Del Boca and coauthors find that 37% of women and 33% of men in their sample stopped working after the onset of the pandemic, implying a relatively small gender gap.

This Italian study also reports results on the number of workers who switched to working from home and find a gender gap there: among the workers still working at the same job after the onset of the pandemic, 44% of women but only 30% of men had switched to working from home. Furthermore, the study reports on amounts of housework and childcare. They find that after the pandemic started spreading both men and women spend more time on housework and childcare, but dramatically more so in the case of women than in the case of men. For the 350 couples with children in the sample, if both partners are still working at the usual workplace, the percentages of them spending more time on childcare during the pandemic are 45% for women and 40% for men. If both partners are not working because of the emergency, the percentages become 71% for women and 59% for men. Most of the additional housework associated to COVID-19 measures fell on women while extra childcare activities were more equally shared. Other results indicate that working mothers with children younger than 5 report more difficulties achieving work-life balance, especially when their partners work outside the house during the lockdown.

The switch to work-at-home is also the focus of “The Impact of Closing Schools on Working From Home During the COVID-19 Pandemic: Evidence Using Panel Data From Japan” by Eiji Yamamura and Yoshiro Tsustsui. In Japan, national-wide school closures were introduced on March 2, when the country still had only a very few COVID-19 cases.⁷ In contrast to the US and Italy, the Japanese government did not mandate that workers stay home: workers could choose whether to go to their workplace or to work from home. The authors designed their own bi-weekly internet panel survey and collected three waves of data between mid-March (March 10), and mid-April (April 10). Their multivariate analysis indicates that during the period in which schools were closed having primary school aged children (younger than 12) is likely to have induced women to work from home, while inducing men to go to their usual workplace. During the sample period, about 30% of women and 15% of men in the sample reported working only from home, while about 45% of women and 55% of men did not work at home at all.

This effect is limited to parents of primary school children. It does not apply to older children. Having primary school children does not seem to have affected the

⁶ The fact that women tend to report higher levels of psychological distress than men is an empirical regularity (WHO, 2002).

⁷ In Japan, all elementary schools were closed in March 2020, while preschools were exempted from this nationwide school closure.

decision to work-at-home for parents in three-generation households. Presumably, this is because grandparents took care of children affected by school closures.

2 Parental provision of childcare, wellbeing and mental health

The effect of school closings is also the focus of “COVID-19 Shocks to Education Supply: How 200,000 U.S. Households Dealt with the Sudden Shift to Distance Learning” by Cynthia Bansak and Martha Starr. However, their focus is on consequences regarding the time that parents and children spend responding to school shutdowns and other school policies implemented right after the onset of the pandemic in spring 2020. Using data from the newly designed US Census Bureau’s weekly Household Pulse survey that was collected from April through July 2020, they constructed a sample of more than 200,000 households with K-12 children. The article focuses on how parents stepped in and spent time helping children learn after school closed and how these changes in parental behavior intersected with other consequences of the pandemic such as job losses and food insecurity.

Bansak and Starr find that almost three out of four households (with K-12 children) spent considerable amounts of time (2.6 hours on average per school day) helping children learn during this early stage of the pandemic. Single parents spent less time helping children relative to parents who were married. Single fathers were less likely to report having spent time helping children in the past week, while single mothers spent about 45 minutes less per week than married parents.

Given their focus, they view job loss as a mixed blessing: households that had lost employment income due to COVID-19 spent more hours helping children while working mothers reported helping children with schoolwork for 1.5 fewer hours less than men (working or not) or mothers who were not working. Among their other interesting findings: (1) Black parents spend more time helping their children with school work compared to white parents (except for the lowest education group); (2) other things being equal, the more resources (such as online teaching) provided by the school, the more time parents spent helping children, without major differences by parental education. In particular, adding live teacher hours to online learning was associated with a similar increase in parent’s hours, whether the parent had a college degree or not; and (3) live teacher hours facilitated children learning on their own.

The next two articles compare how parents –and mothers in particular– were affected by COVID more than respondents without children. The data come from Germany and the UK, and examine subjective well-being in the case of Germany; financial security and mental health in the case of the UK.

In “Parental Well-Being in Times of COVID-19 in Germany”, Mathias Huebener, Sevrin Waights, C. Katharina Spiess, Nico A. Siegel, and Gert G. Wagner investigate the effects of COVID-19 and related restrictions on the wellbeing of parents with dependent children. They combine data from the 2018 wave of the German Socio-Economic Panel (GSOEP), for the pre-pandemic period and data from COMPASS, a unique survey of well-being conducted in Germany in May and June 2020, after the onset of COVID. During this period, day care facilities and schools were still closed,

while most other COVID-19 restrictions had been relaxed. They then compare changes in well-being that occurred from the pre-COVID-19 to the post-COVID 19 period. In Germany, enrollment for children older than 3 is basically universal, so sudden need to care for children during their own working hours was a problem most parents of children aged 3 or older were faced with.⁸

Huebener and coauthors apply a difference-in-differences design and compare the change in measures of well-being for parents with children to that for individuals without children. They focus on three indicators of well-being: satisfaction with life in general, with family life, or with childcare. They find that the COVID-19 restrictions/school closures reduced the relative well-being of parents with children, especially when it comes to parent life satisfaction and satisfaction with family life.⁹ The negative effects are larger for parents of younger children (younger than 11), for women, and for persons with lower secondary schooling qualifications. Since most other COVID-19 related restrictions at the time of data collection had been relaxed, these effects can be attributed to school and day care closures.

In “Working Parents, Financial Insecurity, and Childcare: Mental Health in the Time of COVID-19 in the UK”, Zhiming Cheng, Silvia Mendolia, Alfredo R. Paloyo, David A. Savage, and Massimiliano Tani also use a panel study that was available prior to the onset of COVID and that was supplemented by post COVID data. Their data combine the ninth wave of the UK Household Longitudinal study (UKHLS), collected in 2017–2018, with data from the first two waves of the new UKHLS COVID-19 special survey conducted in April and May 2020 with selected respondents of the original UKHLS panel. Cheng and coauthors also compare working parents to workers without children and use pre-COVID-19 information to control for pre-existing characteristics of working families.

Their findings on mental health complement the findings on well-being reported by the German study. During the pandemic, compared to working individuals without children, the mental health of working parents deteriorated, especially in the case of mothers.¹⁰ The negative effects were also disproportionately borne by parents with small children and poorer households.

These effects of the pandemic on mental health seem to be driven by both increased financial insecurity and time spent with children. Using different measures of financial insecurity, Cheng and coauthors also show that (1) working parents experience more financial distress than working non-parents, before as well as after the start of the pandemic, and that this financial distress has increased after the onset of the pandemic; and (2) spending longer hours with children during the pandemic predicts worse mental health outcomes.

⁸ OECD family database: <http://www.oecd.org/social/family/database.htm>, last accessed on January 27, 2021.

⁹ Their standardized estimates indicate that life satisfaction of parents with children declines by between 0.13 and 0.28 standard deviations (depending on age of the youngest child) relative to individuals without children.

¹⁰ Mental health is measured using the General Health Questionnaire (GHQ) score.

3 Domestic violence

The policies confining people to their homes aim at protecting the public and preventing the spread of the virus. Like school closures and workplace closures, confinement and work-at-home have also had unintended consequences. In “COVID-19, Staying at Home, and Domestic Violence”, Lin-Chi Hsu and Alexander Henke use daily mobile device tracking data and police dispatch and crime data from 36 police and sheriff’s departments in 22 states to analyze how staying at home during the pandemic affects the rates of domestic violence in the US. They show how some of these policies have raised the risk of domestic violence as potential victims are forced to spend more time with their potential abusers.

Hsu and Henke first document a strong co-movement between police reports of domestic violence and staying at home from March to May. As more people stay at home, the number of reported incidents of domestic violence increases. They then estimate that staying at home during the COVID-19 crisis increased domestic violence by over 5% from March 13 to May 24, 2020. To the extent that victims are less inclined to report while staying at home, this is an underestimate of the true effect of staying at home on domestic violence. The final toll of COVID on domestic violence may be higher, growing with time involuntarily spent together.

4 Conclusions and policy implications

Based on articles published in this and the previous issue of the *Review of Economics of the Household*, this essay has summarized major repercussions of COVID-19 and of the policies that governments implemented to limit its spread. It covers a range of outcomes related to traditional gender roles and it applies to all five countries covered in this survey: women pay the price of COVID more than men. For more than a century most parents have relied on schools teaching their children; large portions of the population rely on nursery schools, kindergartens, daycare centers. Suddenly COVID sent children home, for months. For most parents, this became an impossible situation. Whether it is in Japan, the UK, Germany, Italy or the US, women are the ones who ended up replacing teachers and paid caregivers more than men.

A Japanese study found that twice as many working women as working men (30% versus 15%) opted for working from home after schools closed and the government offered a choice between working from home or from a workplace. A study from Italy, where choice may have been more limited than in Japan, reports that among workers still working at the same job, after the onset of COVID, 44% of women and only 30% of men had switched to working from home. In the US, large numbers of working women stopped work on a temporary basis or quit their job, so they could take care of their school-age children. Few men did that, according to Heggeness. She finds that in the US, compared to their counterparts in late closure states, mothers with jobs in early closure states were 68.8 percent more likely to not have worked in the last week. Also for the US, Zamarro and Prado report that after the outbreak of the pandemic 42 percent of working mothers reduced their working hours, but only 30 percent of working fathers did.

We don't have representative and comprehensive data on how COVID affected time in household production, including parental provision of childcare. Based on their Italian sample, Del Boca et al. (2020) report that among couples with children where both partners are not working because of the emergency, women did 71% more childcare; men 59% more. Zamarro and Prado find that after schools closed in the US, 48% of mothers, but only 14% of fathers, became their children's sole childcare providers. As for housework, Del Boca and coauthors find that the additional housework associated with COVID-19 measures fell on women, not men. So far, it does not seem like the clock went back 100 years, but the COVID crisis reveals that couples following traditional gender roles continue to be the majority.

As some of the news about these gendered effects of COVID has been disseminated, many of those active in bringing more gender equality into their environment have been shocked by the extent to which women have paid the price of COVID-19. We, among them, are surprised by the extent to which women left their jobs to care for children, even among dual-working couples living in industrialized countries. The amount of time parents spent helping their school-age children is enormous. For example, Bansak and Starr find that almost three out of four households (with K-12 children) spent considerable amounts of time (2.6 hours on average per school day) helping children learn during the early stage of the pandemic. This includes many dual-earner couples. It is also apparent that domestic violence has increased as a result of COVID, as reported by Hsu and Henke.

For parents of young children suddenly in need of care during working hours, this shock was not just an intellectual realization. It often brought distress and affected their mental health. Since mothers have taken more of that extra care on their shoulders than men, it is not surprising that, relative to fathers and childless women, mothers have also experienced more psychological distress since the onset of COVID.

The papers by Zamarro and Prado, Huebener and coauthors, and Cheng and coauthors document the adverse effects of the pandemic on mental health and well-being in the US, Germany and the UK, and how these effects were more negative for parents, and especially mothers with young children. In the US, Zamarro and Prado find that psychological distress increased significantly early into the pandemic for both men and women, and that women with children are more stressed than women without children. In Germany, Huebener and coauthors find that the COVID-19 restrictions and in particular school closures reduced the relative well-being of parents with children, especially when it comes to parent life satisfaction and satisfaction with family life, and that these negative effects are larger for women. According to Cheng and coauthors, it is also true in the UK: compared to working individuals without children, the mental health of working parents declined, especially in the case of mothers of young children. They specifically find that spending longer hours with children during the pandemic predicts worse mental health outcomes. In addition, they find that the financial distress brought by the pandemic and its aftermath also contributed to mental health issues. One solution to this extra burden placed on parents was available in Japan, but not much elsewhere: grandparents pitched in, as evident from the article by Yamamura and Tsustsui. Two factors helped Japanese parents of young children: the low prevalence of COVID and

therefore the lesser danger of exposing grandparents to young children and the high proportion of three-generation families.

Our role here has mostly been to bring together a number of scientific papers that clearly show the enormity of what COVID has brought to households, and mothers of young children in particular. Since most of the studies surveyed here were performed at an early stage of the pandemic, it is very possible that they underestimate the cost of COVID.

To some degree, the world now has hundreds of millions of parents either in a trauma or post-trauma situation. When the war against COVID is finally won, will individual men and women rebound as fast as the economy? How long will it take to heal emotional scars? To rebuild careers interrupted by the need to care for young children? As vaccinations are proceeding and the light is appearing at the end of the tunnel, we need to prepare for the post-trauma rehabilitation of large portions of the world's population. Here those in need are the youngest members of society: children and their parents. We hope that the papers on COVID published by REHO provide some solid empirical evidence to guide policymaking and help individuals overcome the residues of these traumatic experiences.

Acknowledgements We are greatly indebted to all the anonymous referees who helped us in the reviewing process by providing valuable insights, comments, and suggestions. We thank Cynthia Bansak and Martha Starr for helpful comments on the introduction.

Compliance with ethical standards

Conflict of interest The authors declare no competing interests.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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