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Descriptive Finding

The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom

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The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom

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Abstract

OBJECTIVE

This study offers a descriptive overview of changes in fertility plans during the COVID-19 crisis in a sample of the young population (18–34) in Italy, Germany, France, Spain, and the United Kingdom. The data were collected between 27 March and 7 April 2020.

RESULTS

Our results show that fertility plans have been negatively revised in all countries, but not in the same way. In Germany and France fertility plans changed moderately, with many people still planning or postponing their decision to have a child. In Italy, however, the proportion of abandoners is much higher than in the other countries, and the proportion of those deciding to postpone their plans is lower. Moreover, across countries the demographic characteristics of individuals appear to be associated with fertility plans in different ways. In Italy, abandoners are common among individuals younger than 30 and those without a tertiary education. In Germany, abandoners are slightly more prevalent in the regions most affected by COVID-19. In the United Kingdom, the individuals that most frequently abandoned their fertility plans are those who expect the crisis to have a dramatic negative effect on their future income. Finally, in France and Spain we do not observe a clear pattern of revision of fertility plans.

CONTRIBUTION

These results suggest that different mechanisms are at work, possibly due to the different economic, demographic, and policy pre-crisis background and post-crisis prospects. Low-fertility contexts in particular appear to be more at risk of a fertility loss due to the crisis.

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1. Introduction

Historically, economic and health crises have never been preferred periods for a couple to decide to have a baby (e.g., Marteleto et al. 2020; Trinitapoli and Yeatman 2011; Sobotka, Skirbekk, and Philipov 2011; Vrachnis et al. 2014). Regarding health crises, the evidence shows that during and after major epidemics fertility declines strongly (Stone 2020; see e.g., Chandra and Yu 2015a, 2015b; Chandra et al. 2018 for the Spanish flu, and Marteleto et al. 2020 for the Zika epidemic). As for economic crises, an overall economic downturn and the loss of jobs create a climate of great uncertainty, which depresses family projects (Adsera 2011; Goldstein et al. 2013; Matysiak, Vignoli, and Sobotka 2018; Vignoli et al. 2020). Therefore, although the COVID-19 crisis has very special features compared with previous crises, we may expect similar demographic outcomes (see Aassve et al. 2020 for a recent discussion of possible post-pandemic fertility trajectories according to countries' income level).

The fertility consequences of the COVID-19 crisis are not expected to be equally distributed within and between countries. The pandemic itself has affected countries differently; e.g., in terms of timing. Furthermore, demographic as well as economic, contextual characteristics may support or further reduce individuals' pre-crisis fertility plans, reducing (or not) the uncertainty derived from the enduring health emergency and the negative economic trend (Adsera 2004; Kreyenfeld 2016; Caltabiano, Comolli, and Rosina 2017; Vignoli, Tocchioni, and Mattei 2019). In Europe, the uncertainty caused by the COVID-19 pandemic may have been amplified by the still-ongoing effect of the 2008 financial crisis, especially in Southern Europe, where young people's and women's employment and fertility levels are the lowest (Matysiak, Vignoli, and Sobotka 2018). Additionally, the physical distancing required by COVID-19 containment strategies has imposed restrictions on physical intergenerational support, and this could influence fertility plans more strongly in those countries such as Italy and Spain where grandparental childcare is more intensive (Bordone, Arpino, and Aassve 2017; Price et al. 2018) due to a lower availability of childcare services.

The aim of this study is to describe changes in young people's fertility plans – i.e., in couples' intention to have a child in the near future – due to the COVID-19 crisis at the start of the health emergency in Europe. We compare five countries (Italy, France, Germany, Spain, and the United Kingdom) that are characterized by different welfare regimes, pre-pandemic fertility levels, and impact of COVID-19. Within countries we contrast groups based on key sociodemographic characteristics.

2. Data and method

We use data from the Rapporto Giovani survey carried out by Istituto Giuseppe Toniolo and IPSOS. As far as we know, this is the first international survey of the impact of COVID-19 on fertility plans. It was conducted from 27 to 31 March 2020 in Italy and from 2 to 7 April, 2020 in the other countries. The interviews were conducted using a CAWI-administered (Computer Assisted Web Interviewing) questionnaire on a sample of young adults aged between 18 and 34 (6,000 respondents in total). Individuals were selected with a quota sampling technique: representativeness was guaranteed by defining the sample quotas in terms of a significant set of variables (gender, age, geographical origin, education, marital status, etc.) (more information available at: <https://www.rapportogiovani.it/osservatorio/>).

Respondents answered a question about what their fertility plans were in early 2020, before the start of the COVID-19 outbreak (retrospective question). Although this measure could be affected by recall bias, the very short time frame between the survey and the time reference for the initial fertility plan (January 2020) should greatly limit the extent of this bias. A further question on individuals' fertility plans at the time of interview was only asked of those who answered that they had some intention to conceive a child in the year 2020. Specifically, this last question was: "Did the coronavirus emergency interfere in any way with this plan?" with three possible answers from which we derived three groups of respondents: (1) "No, the plan remains confirmed for 2020" ('still planning'); (2) "The plan remains confirmed but I had to postpone it" ('postponers'); and (3) "I have abandoned the plan for now" ('abandoners').

We accounted for heterogeneity in fertility plans by gender, age (18–24, 25–29, 30–34), and education (tertiary vs. lower). To consider the possible economic effect of the crisis we also considered individuals' perceived uncertainty about their future income. This is likely to be a projection of both their occupational (in)security and the expected indirect effect of the crisis on the economic system and labour market. The question asked was "Thinking about your future, do you think the current coronavirus emergency will have a positive or negative impact on your (personal) income?" Answers were given on a scale of 1 (very negative) to 5 (very positive). The variable was dichotomized, taking value 0 if the respondent was not expecting any effect or a positive effect was expected (values 3–5), and value 1 if the respondent was expecting negative income shocks (values 1–2). Finally, we considered the possible contextual effect of living in a region with a high number of COVID-19 cases. The data were obtained at the regional level (NUTS2 or NUTS1 according to the level of aggregation available in the survey) in the period between 9 and 14 April 2020 (from <https://www.data.gouv.fr/fr/reuses/carte-devolution-du-covid-en-france/>, <https://coronavirus.data.gov.uk/#regions>, <https://github.com>).

[com/open-covid-19/data#metadata](https://open-covid-19/data#metadata)). We considered the tertiles of the cumulative number of confirmed COVID-19 cases per 1,000 inhabitants and generated a dummy variable for living in a region with a high number of the COVID-19 cases (regions above the second tertile).

We calculated the adjusted proportions (i.e., predicted probabilities) for the three alternative fertility plans by using multinomial models and including the sociodemographic variables of interest one by one, and controlling for gender. In preliminary analyses we also added interactions between gender and the other variables, but the results did not show any evidence of a relationship with fertility plans. When the results are commented on the corresponding p-value have been added in parentheses.

3. Results

A few days after the survey was conducted, the COVID-19 pandemic scenario was as described in Table 1. The cumulative number of positive cases at the country level gives a rough idea of how the pandemic had affected countries differently at that time. The same table shows the distribution of other indicators (before the pandemic) at the country level and at the regional level for regions with a high number of COVID-19 cases. Italy and Spain show the worst-case scenario in terms of both labour market and fertility indicators. Generally, the regions most affected by COVID-19 are also those in which women and young people show (on average) better labour market conditions than the country average. Regarding fertility indicators, only for Italy and Spain do we observe a higher fertility rate in the most affected regions compared to the country average.

The proportion of individuals who in January 2020 were planning to conceive a child within that year (Table 1) is roughly the same across countries, but slightly higher in Italy and France (26.6% and 27.5% respectively) than in Germany, Spain, and the United Kingdom (21.4%, 21.6% and 23.6% respectively). However, across the five countries the consequences of the crisis appear unequal. Our data show three alternative patterns (Table 1). First, the impact appears to be (relatively) less dramatic in some countries: in France and Germany there is quite a high number of postponers (those who were planning to have a child within 12 months and postponed their decision because of the pandemic), but a relatively small number of abandoners (those who were planning to have a child within 12 months and abandoned, at least temporarily, their decision because of the pandemic); more than 30% of the plans are still ongoing. The second pattern is observed for Spain and the United Kingdom, where around 20% are still planning (were planning a child within the next 12 months and maintained their plan) – less than in France and Germany – but most others are more prone to postpone than to abandon (even though in Spain the proportion of abandoners is 10 percentage points higher than in the United

Kingdom). Finally, in Italy the percentage of those still planning is in-between the two previous groups, but with an equally high proportion of postponers and abandoners. In particular, the prevalence of abandoners in Italy is substantially higher than in the other countries.

Table 1: Sample distribution of fertility plans and some country- and regional-level indicators of COVID-19, young people and female employment conditions, and fertility

	Italy	Germany	France	Spain	UK
Data from <i>Rapporto giovani</i>:					
Original sample size	2,000	1,000	1,000	1,000	1,000
% not planning to have a child (January 2020)	73.4	78.6	72.5	78.4	76.4
Sample size of those planning to have a child (January 2020)	532	214	275	216	236
% Still planning ¹	25.6	30.7	32.0	21.2	23.0
% Postponers ¹	37.9	55.1	50.7	49.6	57.8
% Abandoners ¹	36.5	14.2	17.3	29.2	19.2
Contextual data:					
Number of COVID-19 cases in mid-April 2020 (1,000 inhabitants)					
in the country	2.7	1.6	2.0	3.9	1.5
in the regions with the highest number of cases ²	4.6	2.2	3.2	7.3	1.9
% of NEET³ (15–24) in 2019⁴					
in the country	18.0	5.7	10.6	12.1	11.5
in the regions with a higher number of cases	11.8	5.2	11.1	8.6	13.1
Female employment rate (25–34) 2019⁵					
in the country	50.2	73.0	62.9	58.4	71.5
in the regions with a higher number of cases	68.4	78.2	74.2	76.7	76.4
Mean age at birth 2018⁵					
in the country	32.0	31.1	30.6	32.2	30.6
in the regions with a higher number of cases	32.0	31.2	30.5	32.8	30.4
Mean age at first birth 2018⁵ (in the country)					
	31.2	29.7	28.7	31.0	29.0
Total Fertility Rate 2018⁵					
in the country	1.29	1.57	1.88	1.26	1.68
in the regions with a higher number of cases	1.40	1.55	1.74	1.29	1.64

Notes: ¹ Calculated for the sample of those who in January 2020 were planning to have a child.

² Average across regions. Regions with a high number of Covid-19 cases are those in the most affected third of the regional distribution for this indicator (Italy: Valle d'Aosta, Emilia Romagna, Liguria, Lombardy, Piemonte, Trentino Alto Adige, Veneto; Germany: Baden-Württemberg, Bavaria, North Rhine, Saarland; France: Bourgogne France Comte, Corsica, Grand Est, Hauts de France, Ile de France; Spain: Northeast, Madrid; UK: Greater London, Northeast, Northwest, Wales). Source: <https://www.data.gouv.fr/fr/reuses/carte-de-levolution-du-covid-en-france/>; <https://coronavirus.data.gov.uk/#regions>; <https://github.com/open-covid-19/data#metadata>.

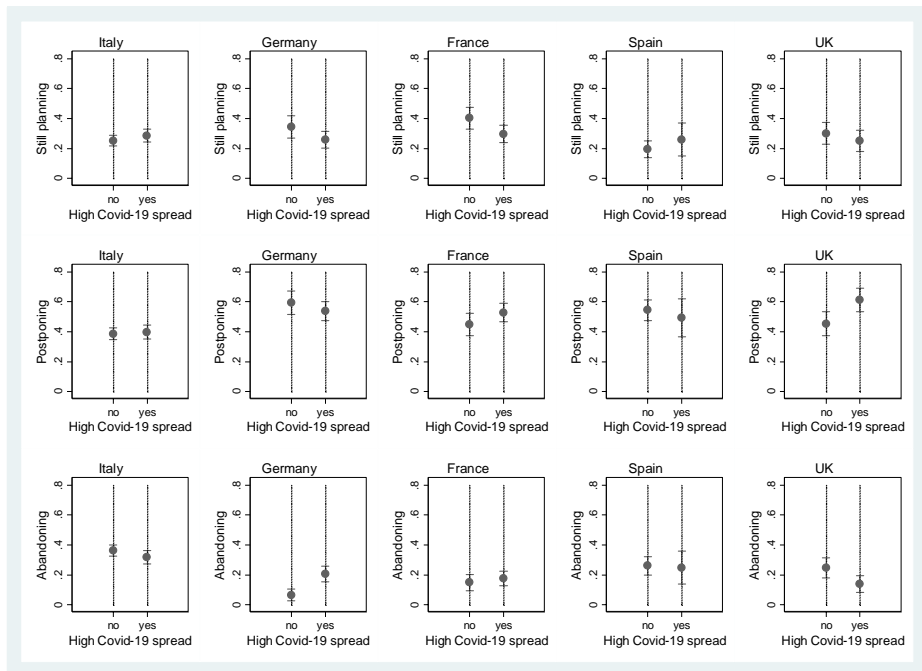
³ NEET: young people Not in Employment, Education or Training, according to Eurostat definition <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:NEET>.

⁴ Source: Eurostat (age: 15–24); UK Government for England (age: 16–24); Welsh Government for Wales (age: 16–24)

⁵ Source: Eurostat.

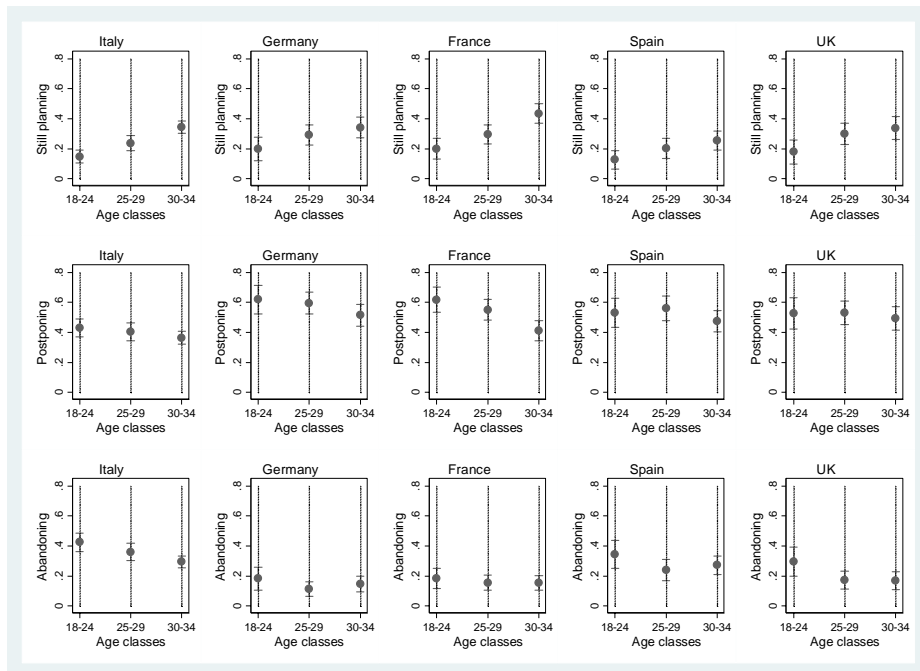
Only in Germany, France, and the United Kingdom do those living in regions with a high, cumulated prevalence of COVID-19 cases appear to change their fertility plans. In these countries we observe a lower proportion of those who are ‘still planning’ in ‘red’ regions with high Covid prevalence than in the other regions, and also a higher proportion of abandoners in Germany (p-value 0.017) and postponers in the United Kingdom (p-value 0.052). This is not the case in Spain and Italy, where the pattern appears to be the reverse (Figure 1).

Figure 1: Adjusted proportions of the three fertility plans according to the regional level of spread of COVID-19, by country (multinomial models, controlling for gender)



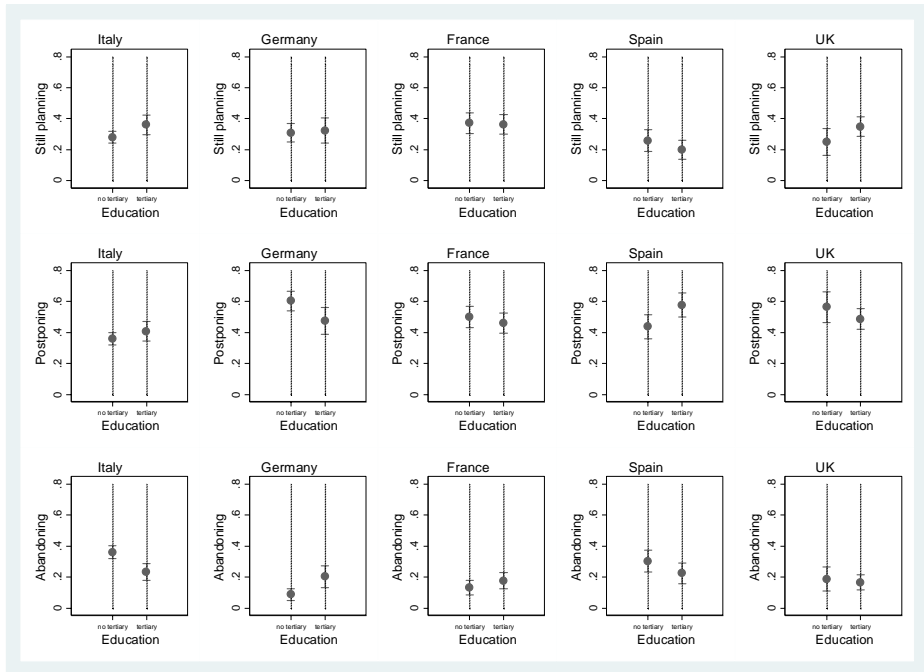
Fertility plans have not changed in the same way across age groups (Figure 2). A common trend across the countries is the increasing proportion with age of those ‘still planning’; i.e., the proportion is higher among individuals aged 25–29 and 30–34 than among their younger counterparts (18–24).

Figure 2: Adjusted proportions of the three fertility plans in the three age classes, by country (multinomial models, controlling for gender)



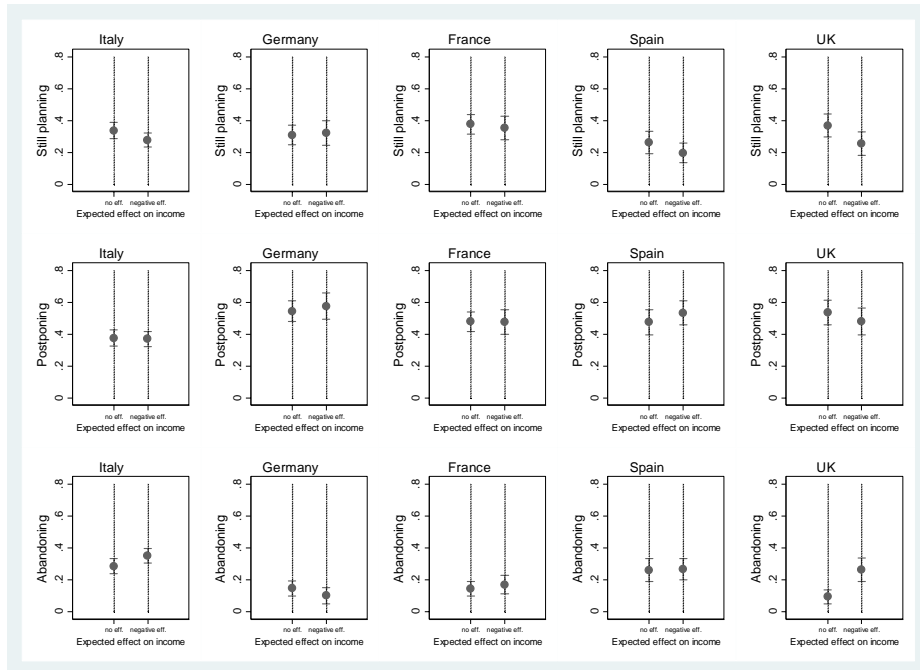
Because a high proportion of individuals aged 18–24 in our sample is still enrolled in school/university, to examine the role of education we restricted the sample to individuals aged 25–34. More specifically, we explored whether having a higher education is protecting pre-crisis fertility plans (Figure 3). Higher education may be associated with a higher socioeconomic status, which may reduce uncertainty arising from the economic crisis. A positive tendency appears only for Italy (p -value 0.045) and for the United Kingdom, where having a tertiary education is associated with a higher prevalence of those who are still planning, while in Italy there is a lower prevalence of abandoners. In Spain, having a tertiary education is associated with a higher proportion of postponers compared to those who do not have an academic degree, while in Germany (p -value 0.024) and France having a tertiary education is associated with a slightly higher proportion of abandoners. Having a tertiary education tends to level off the probability of abandoning original fertility plans in all countries, while among the lower-educated there are large cross-country differences.

Figure 3: Adjusted proportions of the three fertility plans for those having or not having a tertiary degree, by country (multinomial models, controlling for gender); age 25–34 only



Finally, individuals that expect an insecure future income due to the current economic crisis are more likely to have modified their fertility plans. Among those aged 25–34, this tendency appears in our data for the United Kingdom, Italy, and Spain (Figure 4). In these cases those who perceive their personal income to be at risk show a higher probability of postponing fertility plans in Spain and of abandoning fertility plans in Italy and the United Kingdom (p-value 0.063).

Figure 4: Adjusted proportions of the three fertility plans according to expected effect of the crisis on personal income, by country (multinomial models, controlling for gender); age 25–34 only



4. Discussion

Our study provides descriptive evidence of how young people's fertility plans have changed in five European countries during the first phase of the COVID-19 pandemic. There are differences both between and within countries. In countries where the previous economic and labour market situation was more positive (i.e., Germany and France), the proportion of those abandoning their fertility plans for 2020 is much lower than in the other countries; these countries show the highest proportion of people who are still planning to have a child during the year 2020. By contrast, in Spain, and even more dramatically in Italy (the first of the five countries to be affected by the pandemic), people are more often abandoning and not simply postponing their pre-crisis fertility plans.

The only stable within-country result is the ‘protective’ effect of age in maintaining original fertility plans. A possible explanation is that people in their 30s – and women in particular – are more prone to preserve their pre-crisis fertility plans (Sobotka, Skirbekk, and Philipov 2011), which is consistent with the lower tendency to postpone the decision to have a child among those aged 30–34 compared to the other two age groups. In Italy the tendency to abandon this decision is lower for the oldest age group, while in the other countries there is no difference with the 25–29 age group. This unique path could be due to the age of mothers at first birth being higher in Italy than in the other countries. Previous research has shown that in Italy the Great Recession did not change the propensity to have a first child of women in the last years of their reproductive period (Caltabiano, Comolli, and Rosina 2017), while fertility was more affected at younger ages (below 30) (Goldstein et al. 2013).

Economic uncertainty stemming from the crisis is not clearly associated with a higher probability of abandoning or postponing fertility plans within the countries, except in the United Kingdom, where those who perceive a greater future income-related risk from the COVID-19 crisis have the same probability of abandoning their original fertility plans as in Spain and Italy. The fact that the United Kingdom is the only country in our data with a liberal welfare state – i.e., where policy measures to protect personal income are less developed than in other types of welfare states – might explain why personal income expectations are so relevant in influencing fertility plans.

Even the regional prevalence of COVID-19 cases does not suggest a consistent path of association with the change in fertility expectation across countries. Only in Germany, France, and the United Kingdom do the ‘red’ regions show a higher prevalence of abandoners or postponers. Instead, in Italy and Spain the probability of abandoning fertility plans is lower in the regions most affected by the pandemic. However, in these cases the most affected regions are also among the economically best-performing regions in the country, with a fertility rate above the country average.

Our results suggest that the effects of the COVID-19 pandemic and the consequent economic crisis cannot be interpreted using the same mechanisms in all European countries. Previous economic and demographic conditions (as, arguably, the type of welfare state) seem to influence the fertility plans of the young population in all countries. However, the effects of the pandemic on fertility plans that we find will not necessarily translate into effects on fertility realisations. The differential effect between the consequences of the pandemic on fertility plans and realisations will depend on many factors, including how the pandemic develops and the policies that each country implements. Further studies using ongoing prospective surveys could test the effect of the COVID-19 pandemic on both fertility plans and realisations. Additionally, our descriptive results call for future theoretical and empirical research to better understand

the mechanisms behind the heterogenous impact of the COVID-19 pandemic on demographic outcomes.

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