Impact of COVID-19 on Researchers and Research Productivity

January 2022

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The Virus Moved Female Faculty to the Brink. Will Universities Help?

The pandemic is a new setback for women in academia who already faced obstacles on the path to advancing their research and careers.
NYT Oct. 6, 2020

The COVID pandemic has harmed researcher productivity – and mental health

Surveys show that women, parents of young children and people of colour are most affected by pandemic-related disruptions and need more support.

Challenges for the female academic during the COVID-19 pandemic

Brooke Peterson Gabster, Kim van Daalen, Roopa Dhatt and Michele Barry

Surveys of scientists show women and young academics suffered most during pandemic and may face long-term career consequences

THE CONVERSATION
“PANDEMIC HAS AMPLIFIED PRE-EXISTING INEQUITIES IN ACADEMIA”
Publications on Impact of COVID-19 on Research and Researchers

Average decrease of 11% in total work hours

- **Differential impact** on total work hours
  - 55% reported a decline
  - 27% reported no change
  - 18% reported an increase

- **Time on research decreased by 24%**

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**Fig. 1** Changes in levels and allocations of work time. 

- **a**, Distribution of total hours spent on work pre-pandemic and at the time of the survey. 
- **b**, Distribution of changes in total work hours from pre-pandemic to time of survey. 
- **c-f**, Distribution of percent changes in the share of work time allocated to research (**c**), fundraising (**d**), teaching (**e**) and all other tasks (**f**).
“Heterogeneous Effects” of COVID-19

Significant impact on
- fields that rely on physical laboratories/bench sciences
- women and scientists with young dependents

**Notes:**
- Our survey results overall indicate that at the time of the survey, the share of time devoted to research (for example, planning experiments, collecting or analyzing data, writing, etc.) changed since the onset of the pandemic. On average, time devoted to research decreased by 11% from pre-pandemic levels. 
- These field- and individual-level differences appear to be having a young dependent: female scientists and scientists with young dependents reported that their share of time devoted to research has declined by 5% more than those in the 'bench sciences' and, especially, scientists with young children experienced a substantial decline. 
- We use a Lasso regression approach to select features that are most predictive of declines in research time (see Supplementary Methods 4 for more). Variable names with ‘Female’ suffix indicate that the variable is interacted with a female indicator; otherwise the variable describes the average change for all scientists. 

**Figures:**
- **Fig. 1a** Field and group-level changes in research time.
- **Fig. 1b** Field-level average changes in research time.
- **Fig. 1c** Field and group-level changes in total work hours from pre-COVID-19.

**Supplementary Information:**
- **Figures 2a, 2b, 2c** show the distribution of percent changes in the share of work time allocated to different types of work, time devoted to research has changed the most during the pandemic. 
- Table 1 provides a summary of the changes in work hours from pre-pandemic levels. Conversely, fields that are less affected di erently.
- Table 2 provides a summary of the changes in work hours from pre-pandemic levels. 

**Conclusion:**
- Taking action to gain some insight into the extent of disruptions scientists are experiencing, we have accommodated for their researchers, and many universities are making efforts to respond to mitigate the impacts of the pandemic. 
- The effects of the COVID-19 pandemic on time devoted to research could have important short- and longer-term effects on their careers, which is a wide range of institutions, career stages, and demographic backgrounds. Within a week, we received full responses from 4,535 respondents, and demographic information, presence of partners or dependents, as these features may change since the onset of the pandemic. 

**Acknowledgments:**
Gradual Recovery in Work Time & Decline in New Projects Initiated

- Gradual recovery in work hours
- Moderate decrease in new submissions
- Significant decline in new projects initiated

Women and Scientists with Young Children Impacted Most Significantly

“female academics, especially Black females and mothers (regardless of race) are absorbing the greatest costs of the pandemic”
Frontiers in Psychology, 2021, 12, Article 663252
**OCUR COVID-19 EDI Recovery Working Group**

**Membership:** Tammy Eger (Laurentian), Lesley Rigg (Western), Andy Dean (Lakehead), Cathy Bruce (Trent), Les Jacobs (Ontario Tech), Rebecca Pillai Riddell (York), Ashok Mathur (OCAD), and Christine Allen (UofT).

**Recommendations for Federal Tri-Council Granting Agencies:**

- Targeted support for those disproportionately impacted by the pandemic
- Re-assess grant funding application and adjudication processes during the pandemic
- Seize opportunities for dialogue and collaboration
- Review the Canada Research Chair program to support researchers disproportionately impacted by COVID-19
Supports for Faculty

• A range of supports tailored to individual context and needs existed prior to COVID.

• In addition, some COVID-specific supports have been added.
Flexibility with respect to workload assignments

• Faculty members and librarians may make requests for flexibility and/or formal accommodation related to COVID-19 for a variety of reasons including:
  o medical circumstances, including in relation to individuals who are at heightened risk from COVID-19 with whom members cohabitate or for whom members are the primary caregiver
  o childcare responsibilities (including when there exist disruptions to daycares, schools, and camps, or where a child is attending school via online learning)
  o elder-care responsibilities
COVID-related Supports for Faculty include:

• A minimum of 0.5 course teaching load reduction for those teaching more than 1000 students in aggregate and/or 6 or half courses that were transitioned online (5 or more half courses for pre-tenure/pre-continuing status faculty)

• Offering delays for tenure and continuing status reviews if the pandemic has significantly impacted one’s research and/or teaching

• A wide range of pedagogical, teaching, administrative and technological supports

• Research supports
More Supports

• Reminding/educating both faculty members and review committees about the wide range of ways one can demonstrate excellence in research, teaching and service

• Providing advice about how to identify, discuss and frame the way one has adapted to the challenge of COVID-19 as a way to demonstrate one’s creativity, problem-solving, ingenuity and impact