The Impact of the COVID-19 Pandemic on the Professional Lives of Women Academics: a Scoping Review

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Protocol

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Abstract

Background

Women academics face specific professional and personal challenges from the COVID-19 pandemic resulting from lack of access to adequate childcare, increased demands on women's time to address the needs of family members, and physical and mental health concerns. Prior to the pandemic, women academics faced disparities regarding merit, tenure and promotion. The COVID-19 pandemic has exacerbated inequalities in paid and domestic work resulting in a disproportionate effect on the personal and professional lives of academic women. The burden is even heavier for women academics who face intersecting systems of oppression, such as those based on ethnicity, skin colour, body size, sexual orientation, gender, age, economic class, dependent status, and/or ability. The objectives of this scoping review are to (a) identify the impact of the COVID-19 pandemic on the professional lives of women academics, and (b) explore the individual, organisational, and systems levels strategies that can support women academics during the COVID-19 pandemic.

Methods

The scoping review will be conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) following Joanna Briggs Institute scoping reviews guidelines. We will systematically search PubMed, EMBASE, CINAHL, medrxiv, Scopus, Web of Science, and Google Scholar for articles published from December 2019 to July 2021 in any language using key words and MESH terms, and search reference lists for additional studies. Two reviewers will screen articles using inclusion and exclusion criteria, review full articles, and extract data using a standardised form including study information, participant characteristics, effects of COVID-19 pandemic on professional life, and strategies to support women academics in a pandemic. A third reviewer will resolve conflicting decisions through discussion. Findings will be presented using narrative description, summary tables and illustrative quotes.

Discussion

The scoping review will provide evidence of how the COVID-19 pandemic has impacted on the professional lives of women in academia, and contribute to the development of strategies to reduce gender inequities. It is imperative that these issues be identified and strategies developed to address growing inequities in the professional wellbeing of women academics.

Systematic review registration

Open Science Framework: https://osf.io/9rxku, DOI: 10.17605/OSF.IO/9RXKU

Background

The scale of daily life disruption caused by COVID-19 public health measures is almost unprecedented in modern times (1). The public health actions taken by countries affected by COVID-19 have varied significantly, based on the socio-cultural, political, economic, and historical contexts (2). Such measures have included a combination of those for people who have tested positive for infection and their contacts, such as quarantine and self-isolation, and those applicable to the public, including wearing masks, downloading tracking applications, and maximizing physical separation from other people. Although the purpose is physical distancing, these measures are known as social distancing and are applied across whole populations to reduce the number of times people come into close contact with each other (3).

Social distancing measures including travel restrictions, orders to shelter in place or stay at home, closing parks, clubs, cafes, restaurants, businesses, schools and universities, cancelling concerts and sporting events, and limiting the number of people allowed in cars, buses, workplaces and supermarkets. Despite some areas of resistance, these public health actions have been associated with improved control of the COVID-19 outbreak (4). However, the potential population benefits of these public health measures must be weighed very carefully against the negative effects for different segments of the population and resulting inequities across the community.

Women academics are a population group facing specific challenges from the COVID-19 pandemic. These challenges result from lack of access to adequate childcare, increased demands on women's time to address the needs of family members (including remote schooling and eldercare), and other issues, such as physical and mental health concerns. Prior to the pandemic, research had established that women academics face disparities regarding merit, tenure and promotion, and that childrearing and household physical and emotional labour are primarily undertaken by women, thereby impacting women's academic careers more than men's (5).

These long-standing inequalities in both paid and domestic work have been exaggerated during the COVID-19 pandemic resulting in a disproportionate effect on the professional lives of academic women. Women academics are bearing a greater burden of this pandemic than men academics, but the burden is even heavier for women academics who face intersecting systems of oppression, such as those based on ethnicity, skin colour, body size, sexual orientation, gender, age, economic class, dependent status, and/or ability (6). A study that surveyed men and women academics found a number of factors associated with the effect of the lockdown on the work conditions of academics at home, including gender, having children, perceived threat from COVID-19 and satisfaction with the work environment. The study found that having children disproportionately affects women in terms of the amount of housework during the lockdown. (7)

According a consensus study report from the National Academies of Sciences, Engineering, and Medicine, the changes to women's lives resulting from the COVID-19 pandemic have jeopardized the engagement, experience, and retention of women in academic STEMM (science, technology, engineering, mathematics, and medicine) professions. The report identifies a range of concerns, including challenges

with work-life boundaries, a reduction in productivity, and the effects of institutional decisions that have disproportionately negative effects on women (8).

The report highlights various measures of academic productivity for which women have been disproportionately affected by COVID-19 compared with their male counterparts, including hours worked, authorship status, and attendance at conferences (8). The report echoes the stories on social media of women academics, particularly those with young children or caregiver roles, who are losing the battle to remain academically productive while the academic outputs of their male colleagues rises. Clear gendered differences in research initiation reports, preprint servers, and journal submissions are expected to become more pronounced over time and impact on academic women's career advancement for years to come (9).

A study of the distribution of first authorships for over 40,000 publications on COVID-19 published over the one year period between February 2020 and February 2021 found that the gap between the percentage of articles on which men versus women were first authors widened by 14 percentage points. Many disciplines informing the response to the pandemic had near equal gender shares of first authorship in the year prior to the pandemic. The authors concluded that "the acute productivity drain with the onset of the pandemic magnifies deep-rooted obstacles on the way to gender equity in scientific contribution" (5). A study investigating submitted manuscripts in the 10 weeks after the lockdown in the United States, found that although total research productivity increased by 35% percent, women academics' productivity dropped by 13.2% relative to that of men academics. This productivity gap was more pronounced for assistant professors and for academics in top-ranked universities (10). Another study looking at published paper related to COVID-19 since January 2020 found that women accounted for about a third of all authors overall, but lower than that for first and last authorship positions. The authors concluded that "gender biases hint at wider gender inequalities in our global response to the pandemic, which may reduce the chance of dealing with it robustly and speedily" (11)

The productivity losses suffered by women academics has led to what has been labelled a 'secondary epidemic' of lost early career women scientists. Women scientists and, particularly those with young children, have experienced the greatest burden. For example, those with dependents under the age of 5 have lost over 45% of their research time during the COVID-19 pandemic (12). A qualitative study with early career academics in the UK concluded that gender was a major factor in the ability to instrumentalize and negotiate precarity during the pandemic in the UK (13). Some have concluded that academic work — in which career advancement is based on the number and quality of a person's academic publications, and their ability to obtain funding for research projects — is basically incompatible with tending to children (14). Other researchers have argued that it is not only academic women with young children that have been negatively impacted. Single women have also felt the burden (15).

These disparities are largely attributed to the increased care-giver responsibilities falling to women (16). However, additional university system-level factors that are highly gendered have also been proposed as

contributing to the increased inequity. Women academics on average have greater teaching responsibilities than men (16). As such, the shift to online teaching and the resulting curriculum, teaching, learning and assessment adjustments that it requires, disproportionately affects women academics. Many institutions have closed their campuses, and non-research university commitments may be reduced. These commitments, such as participation in hiring and curriculum committees, are often dominated by senior faculty members, more of whom are men (16). Women are also more likely to agree to perform additional service-related tasks compared to men; tasks that generally take significant time and effort but do not contribute to career advancement (17). As a result, men may have more time to write papers while women experience the opposite (16).

The burgeoning corpus of studies about the impact of the COVID-19 pandemic on women academics makes a major contribution to exposing old and new gender inequalities in academia. Women academics have had their work disrupted more intensely and extensively than men because of old and new, macro and micro, gendered inequalities in the distribution of care, and of reproductive labour (18).

However, some scholars argue that this intense focus on productivity risks reproducing problematic assumptions about gender and academic work (18). Studies on women's academic publishing are framed around the negative impact of the such changes on individual career progression in the short- and medium-term, and broader academic pipelines in the long-term. However, Pereira asks rhetorically "what are the risks of treating (publications) as the key manifestation, or the ultimate symbol, of pandemic gender inequalities in academia?" (18).

Various strategies have been proposed to prevent or mitigate the risk of negative professional outcomes for women academics during the COVID-19 pandemic. These include increased focus on equitable compensation and professional effort, greater provision of family support, broadening the metrics of academic productivity, and enhanced career development (19). A scoping review on occupational stress, burnout, and depression faced by women healthcare workers during the COVID-19 pandemic identified a range of individual, organizational, and systems-level factors, but a limited amount of evidence on effective strategies that prevent or mitigate the risk of these negative health outcomes (20). To date, there are no scoping reviews investigating the effect of COVID-19 pandemic on women academics.

Research Objectives

The objectives of this scoping review are to (a) identify the impact of the COVID-19 pandemic on the professional lives of women academics, and (b) explore the individual, organisational, and systems levels strategies that can support the professional lives of women academics during the COVID-19 pandemic.

Methods

Study design

A scoping review will be undertaken to map the range, scope and types of studies available on COVID-19 and women academics. A scoping review is the most appropriate review to identify the scope of the body of literature related to this topic, and identify knowledge gaps (21). This scoping review protocol has been developed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols 2015 statement (PRISMA-P) (22) (Additional file 1). The scoping review will be conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) (23, 24), following guidelines for scoping reviews from the Joanna Briggs Institute (25). This protocol was reviewed by the members of the research team and has been registered on the Open Science Framework (registration link: https://osf.io/9rxku).

Eligibility criteria

Studies that provide evidence that meets the following criteria for participants, concepts, context, and types of evidence sources will be included in this review (25).

Participants

Inclusion criteria

Studies that focus on women academics or female academics

Exclusion criteria

Studies that focus on researchers in institutes not associated with a tertiary level academic institution.
Studies that do not differentiate between academic and non-academic employees.

Concept

Inclusion criteria

Studies that address any aspect of academic professional life and gender including concepts related to gender inequality and gender inequity; professional life concepts include productivity, work conditions, tenure, promotion, publication, research output, research submissions, and authorship

Exclusion criteria

Studies that do not specifically address academic professional life

Studies that do not address gender-related impact

Context

Studies that relate to the impact of COVID-19

Studies on women academics in tertiary level academic institutions including colleges and universities

Studies published in any language

Studies published from December 2019 onwards

Types of evidence sources

Inclusion criteria

Qualitative, quantitative, mixed methods studies

Exclusion criteria

Case reports, editorials, opinion pieces, points of view, commentaries, reviews, media articles

Search strategy

In accordance with the JBI guidelines for scoping reviews, the search strategy will be conducted in three phases. First we will search EMBASE and Google Scholar and analyse the text words in the titles and abstracts and the index words used to describe the retrieved papers. A second search will then be undertaken across seven databases for optimal coverage: PubMed, EMBASE via OVID, CINAHL, medrxiv, Scopus, Web of Science, and Google Scholar (26). Reference lists of relevant articles will be searched for additional studies. The search strategy will include free text terms or keywords and truncations (Additional file 2). Finally, we will search the reference lists of all papers identified for review. If necessary, we will contact the authors of primary sources for further information.

Study selection

Eligible studies identified from the search will be imported into Rayyan online software program, where duplicate records will be identified and removed. A study eligibility form will be used for screening the studies based on the inclusion and exclusion criteria. Two independent reviewers will screen the title and abstracts of five percent of the studies, and then meet to discuss discrepancies. The team will make modifications to the eligibility criteria and definitions as necessary. After consensus has been reached, the titles and abstracts of remaining studies will be screened independently by two reviewers using the final study eligibility form. Studies will be classified as included, excluded or pending. If eligibility is unable to be ascertained from the title and abstract, the full text will be obtained and screened independently by the reviewers. Inter-rater reliability for screening of all studies will be calculated. Any disagreements will be discussed and resolved through consensus. If no consensus is reached, an additional reviewer will be used. After reviewing the full text, specific reasons for the exclusion of studies will be recorded. All screening procedures will be presented using a PRISMA-ScR flow diagram.

Data charting

A standardised data extraction form will be developed and pilot tested independently on two or three studies by two reviewers. The data extraction form will include items in four major categories: general

study information, characteristics of participants, effects of COVID-19 pandemic on professional lives, and strategies to support women academics during the COVID-19 pandemic. A draft data extraction form has been developed (Additional file 3). After pilot testing, the reviewers will meet to discuss discrepancies. If necessary, the data extraction form will be revised. The final form will be used to extract the data from the studies independently by two team reviewers. If there are missing data in the record, the study authors will be contacted to request access to the data. Disagreements in extracted data will be resolved by discussion between the reviewers. If no consensus is reached, an additional reviewer will conduct the data extraction independently and contribute to the discussion. It is expected that the data extraction form will be refined throughout the data extraction phase.

Data analysis and presentation

Quantitative and qualitative analyses will be used to synthesized the data. Where relevant, descriptive statistics such as mean, frequencies, and percentages will be provided for quantitative. Qualitative data will be inductively categorised using content analysis. Findings will be tabulated and presented in narrative form, using illustrative quotes where appropriate. Members of the review team will work collaboratively to rigorously examine the results and present the findings in a comprehensive manner. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) (23, 24) will be used to guide the presentation of results.

Discussion

Women academics face specific professional and personal challenges from the COVID-19 pandemic. This scoping review aims to identify the impact of the COVID-19 pandemic on the professional lives of women academics, and explore the strategies that can support the professional lives of women academics during the COVID-19 pandemic. Studies included in this review will include qualitative, quantitative and mixed methods studies published in any language since December 2019 when COVID-19 was first discovered. The search for studies will be performed in seven databases, and there is potential for studies not included in any of those databases to be omitted from the study. The review will provide evidence of the impact of the pandemic, and highlight where that had led to greater inequities for women academics. It is imperative that these issues be identified and strategies developed to address growing inequities in the professional wellbeing of women academics.

Abbreviations

JBI: Joanna Briggs Institute

PRISMA-P: Preferred Reporting Items for Systematic reviews and Meta-Analyses for Protocols

PRISMA-ScR: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews

Declarations

Availability of data and materials

Not applicable

Ethics approval and consent to participate

Not applicable

Consent for publication

Not applicable

Competing interests

The authors have no competing interests to declare.

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Authors' contributions

All authors contributed to the design of the study, wrote the manuscript, and read and approved the final draft. LOH is the guarantor of the protocol.

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