

Gender differences in online visibility of early-career researchers

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Social media in the digital era has become a powerful tool for disseminating research to a broad audience. Twitter is one of the most widely used platforms to increase the visibility of researchers, especially for underrepresented groups including female researchers. Gaining visibility is particularly important for early-career female researchers to accumulate scientific impact, thus helping narrow the gender gaps in academic careers.

To assess gender differences in online visibility and self-promotion, and their cumulative impacts, this paper identifies 567,162 early-career researchers who started publishing during the period of 2012-2016, combining bibliometric information on their publications from Scopus together with measures of online visibility through Altmetric and the Twitter API. We examine gender differences in online attention to the publications of early-career researchers to assess whether social media platforms contribute to the creation of a more inclusive space for female academics to get attention online, or whether they perpetuate gender inequalities already from an early-career stage. We especially assessed gender disparities in online visibility by disentangling self-promotion from general online dissemination and examine the impacts of these different forms of social media visibility on citation impacts.

We find that female researchers are more likely to receive Twitter mentions on their first publications. However, male researchers are more likely to self-promote their first publications. These gender gaps in the probability of self-promotion are more pronounced in Social Sciences and Humanities, especially when first publications appear in top-ranked journals. To further assess the impacts of Twitter mentions, we match researchers who received Twitter mentions with those who did not and find early-career female researchers gain more citations if their first publications are mentioned on Twitter compared with their male counterparts. However, the gender differences reverse for self-promotion, whereby early-career male researchers gain more citations from self-promotion than females. Our results highlight how social media can help improve the visibility of female researchers and amplify their scientific impact. Yet, persisting gender gaps in self-promotion may limit this potential and reproduce gender inequalities.

By drawing on the linkage of bibliometric and social media data, this study examines how processes of gender inequalities unfold at an early stage of academic careers in the digitalized era. This study contributes to a comprehensive understanding of gender disparities in online visibility by distinguishing the push and pull mechanisms at play within online academic dissemination. To further increase the online visibility of female researchers and help them receive more credit for their work, our research indicates the potential value of integrating training in self-promotion on

social media within graduate school curricula and encouraging early-career female researchers to self-promote their work.

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