RESEARCH CULTURE

Figures and figure supplements

Co-reviewing and ghostwriting by early-career researchers in the peer review of manuscripts

Gary S McDowell et al
Figure 1. Demographics of survey respondents. (A) Distribution of responses by field of study and career stage. Of a total of 498 respondents, 488 were categorized as an early career researcher (ECRs; n = 407/488; 83%) or principal investigator (PIs; n = 81/488; 17%). Of these, 76% were in the life sciences (318 ECRs; 52 PIs), 13% were in the physical sciences (53 ECRs; 9 PIs), 9% were in the social sciences (31 ECRs; 14 PIs), and 2% were in the humanities/other (5 ECRs; 6 PIs). 10 respondents were neither ECR nor PI (e.g., “unemployed”; data not shown). (B) Distribution of responses by gender: 54% (271/498) of respondents were female, 43% (216/498) were male, and 3% (11/498) provided another or no response. (C) Distribution of responses by race/ethnicity: Of the 481 respondents who provided an answer to this question, 71% (342/481) were coded as white, 18% (84/481) Asian, and 11% (55/481) URM (underrepresented minority in the sciences).

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Figure 1—figure supplement 1. Search strategy for literature review with number of records remaining at each stage.
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Figure 2. Experiences of co-reviewing and being invited to review. (A,B) Responses to question: “How many times in your career have you contributed ideas and/or text to peer review reports where you are not the invited reviewer (e.g. the invited reviewer is the PI for whom you work)?” 73% of all respondents (366/498) had participated in co-reviewing: 63% of this subsample had carried out co-reviewing activities on 1–5 occasions; 33% on 6–20 occasions; and 4% on more than 20 occasions. (B) Number of co-reviewing experiences by career stage for 401 ECRs: the distribution of postdocs (n = 312) is skewed toward more co-reviewing experiences, whereas the distribution of PhD students (n = 89) is skewed toward fewer co-reviewing experiences. (C) Responses to question for ECRs: “How many times in your career have you reviewed an article for publication independently, i.e. carried out the full review and been identified to the editorial staff as the sole reviewer?” 55% of the ECR respondents (218/401) had never carried out independent peer review, and 46% (183/401) had carried out independent review as the invited reviewer: 115 had done so 1–5 times, 57 had done so 6–20 times, and 11 had done so more than 20 times.

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Figure 3. Training in how to peer review a manuscript. Responses to the question: “How did you gain training in how to peer review a manuscript?” Respondents were able to select as many options as applied to them. These data include responses from all survey participants, including those without any independent or co-reviewing experience.

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Figure 4. The actions of PIs during co-review. (A) Responses to the question: “To your knowledge, did your PI ever withhold your name from the editorial staff when you served as the reviewer or co-reviewer?” 46% of respondents (171/374) knew that their name had been withheld, and 32% (118/374) did not know. The remaining 23% (85/374) responded that they knew for certain their name had been disclosed. (B) Responses to the question: “To your knowledge, did your PI ever submit your reviews without editing your work?” 17% of respondents (66/375) answered “yes”, that they knew that their work had not been edited by the PI prior to submission to the journal. Another 35% of respondents (132/375) were unaware of whether their work was edited by their PI prior to their PI submitting it to the journal. Taken together, these 52% of respondents were not involved in editing, regardless of whether it took place. 48% of respondents (177/375) answered “no”, indicating that they knew their work had been edited for sure.

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Figure 5. Views on co-review, ghostwriting, and other aspects of peer review. Responses to the question: “Please indicate how strongly you agree with the following statements.” Data represent the opinions (not experiences) of all respondents regardless of whether or not they had participated in peer review. Respondents were also provided with a textbox to submit comments to expand and/or clarify their opinions.

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Figure 6. Reasons why journals might not know about co-reviewers. Responses to the question: “What do you think are the reasons why the names of co-authors on peer review reports may not be provided to the editorial staff?” Here our intent was to ask the respondents about the barriers that might cause names to be withheld (rather than asking whether they thought co-reviewers should be named). Respondents were able to select as many answers as they felt applied. The frequencies do not allow us to assess how important the barriers are, and respondents were not asked to rank barriers, but simply to surmise which ones they felt were relevant to the current practice of ghostwriting.

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