

Transparency and Openness in Research: a Survey Among Researchers, Peer Reviewers and Editors Across Scientific Disciplines

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METHODS

- Survey on 100,000 randomly selected Scopus authors

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reminders: 9 & 24 May 2018

closed: 12 June 2018

SURVEY

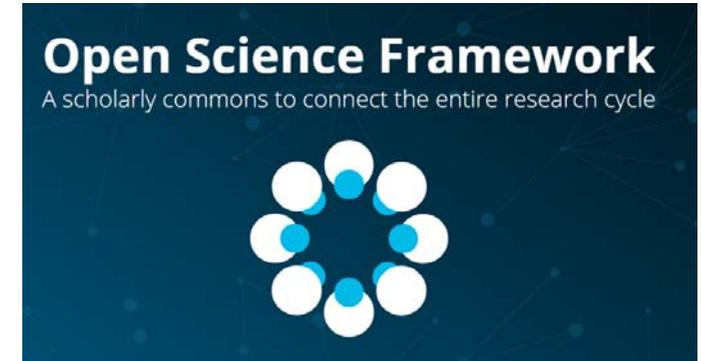
1. 1 Q to distinguish peer reviewers, authors and editors
2. Attitudes towards the TOP guidelines – 11
3. Perceptions of work climate – 13 + 2 OE
4. Prevalence of detrimental research practices – 14 + 1 OE
5. Knowledge of statistics – 1 to 3
6. Socio-demographic data – 8
7. Final 1 OE : any comments on the survey or its questions

Project website and protocol: <https://data.mendeley.com/datasets/53cskwwpdn/2>

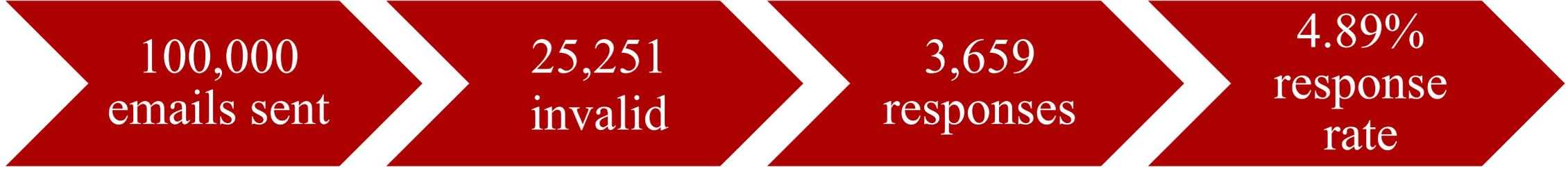
TOP Guidelines

- Citation Standards
- Data Transparency
- Analytic Methods (Code) Transparency
- Research Materials Transparency
- Design and Analysis Transparency
- Study Preregistration
- Analysis Plan Preregistration
- Replication

Center for Open Science 2015



>5000 signatories



20 MINUTES

FOR RESULTS

Authors	3459 (94%)	1389
Reviewers	2209 (60%)	1833
Editors	434 (12%)	434

Male	2037 (64%)
Female	1055 (33%)
Prefer not to say	76 (2%)

126 Countries
USA, India, UK, Brasil, Spain, China

University	1976 (62%)
Research institute	607 (19%)

6099 Open Ended (OE) Responses

TOP Guidelines – Authors must:	Authors	Reviewers	Editors
Cite all data, methods, code and materials	93	96	95
Indicate if data will be made available/shared	82	85	83
Deposit all data and code in a repository	62	60	55
Follow appropriate reporting guidelines	75	74	71
Pre-register their studies	26	18	17
Include full data analysis plan in pre-reg.	26	21	21
Journals must replicate analysis	58	46	38
Journals must encourage replication studies	59	64	57

Perceptions of the work climate

Authors

Reviewers

Editors

Having access to others data would benefit me

77

81

76

1163 OE for agreeing and **39** OE Answers for disagreeing (4%)

“We lean on information from each other to produce more information.”

“It is crucial to compare research findings; access to others' research data is paramount to achieve that goal.

“As taxonomists, we plod through the material we have to hand. It is now impossible to ship specimens so obtaining others' material or types is not possible.”

“I think it is impractical and to some extent unfair--someone has worked really hard to gather that data and to make it open and available means others will use it for their own gain.”

Perceptions of the work climate

Authors

Reviewers

Editors

It is difficult to publish null or negative results

69

76

70

1016 OE for agreeing and **354** OE answers for disagreeing (19%)

“Because journals and referees are not going to give a positive response to it.”

“Because they are not useful to the community.”

“It can be difficult to know whether negative results truly refute an hypothesis or just represent a lack of power for the analysis. Publishing such results may discourage others to tackle the problem.”

“There are unlimited number of problems with null or negative results. I never liked mathematical paper that prove that something is impossible.”

Perceptions of the work climate

Authors

Reviewers

Editors

Authors should recommend peer reviewers

57

51

55

114 OE for agreeing and **344** OE Answers for disagreeing (19%)

“Authors recommend friends, which undermines the objectivity of the peer-review process. This is a sure sign of corruption.”

“This might foster reciprocal favours, and is hard on newcomers.”

“Editors should select the expert unbiased reviewer. If you recommend names, you are involved in the review process.”

Perceptions of the work climate

Authors

Reviewers

Editors

Funders interfere in study design or reporting

16

13

12

114 OE for agreeing and **1188** OE for disagreeing (56%)

“The real interference is in our heads, fear of loosing subsequent contracts.”

“I design the study to fit their interests”

“They control what results can be published”

“They require to be listed as authors”

“They favour specific networks of researchers”

“They don’t allow deviations from the protocol”

“They mandate open access publishing, which is expensive”

Perceived prevalence in resp. field	Authors	Reviewers	Editors
Guest or gift authorship	34	40	39
Not citing prior relevant research	27	35	46
Ghost writing	15	13	15
Undeclared conflicts of interest	17	12	14
Plagiarism	16	10	15
Fabrication or falsification (incl. image m.)	12	9	12
Publication of null or negative results	8	5	5

Don't Know	Authors	Reviewers	Editors
Guest or gift authorship	16	10	8
Ghost writing	23	23	19
Undeclared conflicts of interest	20	18	9
Plagiarism	12	8	5
Use of reporting guidelines	26	24	18

Feedback (810 comments)

Praise 29%

No comment 24%

Additional comments 18%

Suggestions 7%

“Your survey is probably the worst I’ve encountered. Presupposed answered, limited response options. If I were your supervisor I’d fail you immediately.”

Did you do what you are encouraging, and actually plan out your questions with the data and analysis technique in mind prior to collecting the data?

“I teach a module of surveys. This survey uses all the best practices. It's length is about right for an online survey. Questions have appropriate response options.”

“I found the questions well written and clear, without feeling biased. Not always the case for surveys! Thanks or a job well done.”

Limitations (using reviewers comments)

“All questionnaires are limited!”

“I wish you'll enjoy the statistical analysis of your Survey ;-)”

“These are my impressions and biased opinions, not facts!”

“Some of the questions are misleading and weighted. For example, asking whether studies should be preregistered. Yes, they should - in research fields that need it. And no they should not where they are not needed. This will create bias in your survey results. If these issues not amended, I will make sure that others are aware of this when the results are published. “

“Please be aware that you do not mislead the public when publishing your results. Good luck!”

Preliminary Conclusions

Researchers, peer reviewers and especially editors have not yet embraced all the principles of the top guidelines, especially in regards to pre-registration of studies and data sharing.

Respondents reported many detrimental research practices, of which most common was manipulation of authorship.



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