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Overview

Reporting guidelines for different types of biomedical publications have existed for more than two decades. They ensure consistency & completeness in research report content

Many guidelines exist*:

- CONSORT - Consolidated Standards of Reporting Trials
- PRISMA - Preferred Reporting Items for Systematic Reviews and Meta-Analyses
- SPIRIT - Standard Protocol Items: Recommendations for Interventional Trials
- SRQR - Standards for Reporting Qualitative Research
- CARE - Case Reports

* See the Enhancing the Quality and Transparency of Health Research (EQUATOR) Network website (<https://www.equator-network.org/>) for more information on reporting guidelines.

Objectives

Reporting guidelines not only provide a framework for authors but they could help inform how peer reviewers assess research manuscripts. To improve the quality of biomedical publications, it is important to bridge the gaps in adopting and implementing reporting guidelines. Specifically:

1. Which biomedical journals have published the current major reporting guidelines?
2. Do these journals instruct authors and reviewers to adhere to the reporting guidelines?

Method

- Data were collected between May and June 2021 from the EQUATOR Network, Reporting Guidelines websites (eg, www.consort-statement.org/ and www.prisma-statement.org/), journals that published the guidelines, and journals' instructions for authors and reviewers.
- From the 11 EQUATOR network-listed guidelines for the main study types, there were 8 available guideline websites and 55 journals that published 1 or more current reporting guidelines.
- Additional data were collected from the 55 journals regarding endorsement of the specific guidelines and the journal's instructions for authors and reviewers, respectively.

Results

- The journals that endorsed specific guidelines ranged from 24 for Standards for Quality Improvement Reporting Excellence (SQUIRE) reporting guideline-friendly journals to 1047 for Animal Research: Reporting of In Vivo Experiments (ARRIVE).
- Only 55 journals that published 1 to 10 guidelines (mean=6.3, SD=3.0). Forty (72.7%) provided instructions for authors, mentioning between 1 and 8 guidelines. Only 9 journals (16.4%) instructed reviewers about 5 guidelines (see Table 1). The guidelines in instructions for authors occurred more in open access journals (median=5) than non-open access journals (median=2).
- Some journals published specific guidelines but did not give instructions regarding these guidelines; other journals did not publish specific guidelines but included them in instructions for authors and reviewers.
- Collaborations among guidelines showed that the same contributors were involved in the development of multiple guidelines. E.g., the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline website referenced the Consolidated Standards of Reporting Trials (CONSORT) reporting guideline, SQUIRE, and STARD.
- The level of implementation of adopted guidelines also varied by journal: answering yes or no questions about a relevant guideline, requiring authors to attach a guideline checklist, or citing guidelines.

Conclusions & Future Research

- There is varied adoption and implementation of published guidelines by medical journals.
- Open access journals that published guidelines were more likely to instruct authors about the guidelines.
- The varied levels of instructions for authors and almost no instructions for reviewers on adherence to reporting guidelines call for further study.
- It should be of concern if a journal publishes reporting guidelines but does not instruct authors to adhere to the guidelines.
- Both authors and reviewers can contribute to improving the quality of biomedical research publications through adherence to established reporting guidelines.
- Ongoing research is examining how reviewers are referencing reporting guidelines in their reviews for open access journals that include open peer review reports.

Table 1. Journals that Published Reporting Guidelines and Instructed Authors & Reviewers

Reporting guidelines ^a	Website (Y/N)	Journals that published the guidelines (N=55), No.	Journal instructions ^c (N=40)		Proportion of instructions for reviewers vs authors, %
			For authors	For reviewers	
AGREE II	Y	3	2	0	0
ARRIVE	Y	7	20 ^c	1	5.0
CARE	Y	7	8 ^c	0	0
CHEERS	N	10	11 ^c	0	0
CONSORT	Y	9	29 ^c	8	27.6
PRISMA	Y	5	22 ^c	4	18.2
SPIRIT	Y	6	6	0	0
SQUIRE	Y	10	8	0	0
SRQR	N	1	0 ^b	0 ^b	0
STARD	N	3	14 ^c	1	7.1
STROBE	Y	8	19 ^c	3	15.8
Mean (SD)	NA	6.27 (3.00)	13.9 ^c (9.03)	1.7 (2.54)	6.7 (9.6)

^a EQUATOR network listed Reporting Guidelines for 11 main study types (listed in first column)

^b SRQR published in one journal, which did not mention any guidelines for authors or reviewers

^c Number of journals mentioned reporting guidelines in journal instructions includes the guidelines which the journal did not publish

References

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