

What do authors and editors think about peer review? A cross sectional study in 12 journals across research fields

Shelly Pranic, Mario Malicki, Ana Marusic, University of Split School of Medicine, Croatia

Stjepan Marusic, Rogor, Croatia

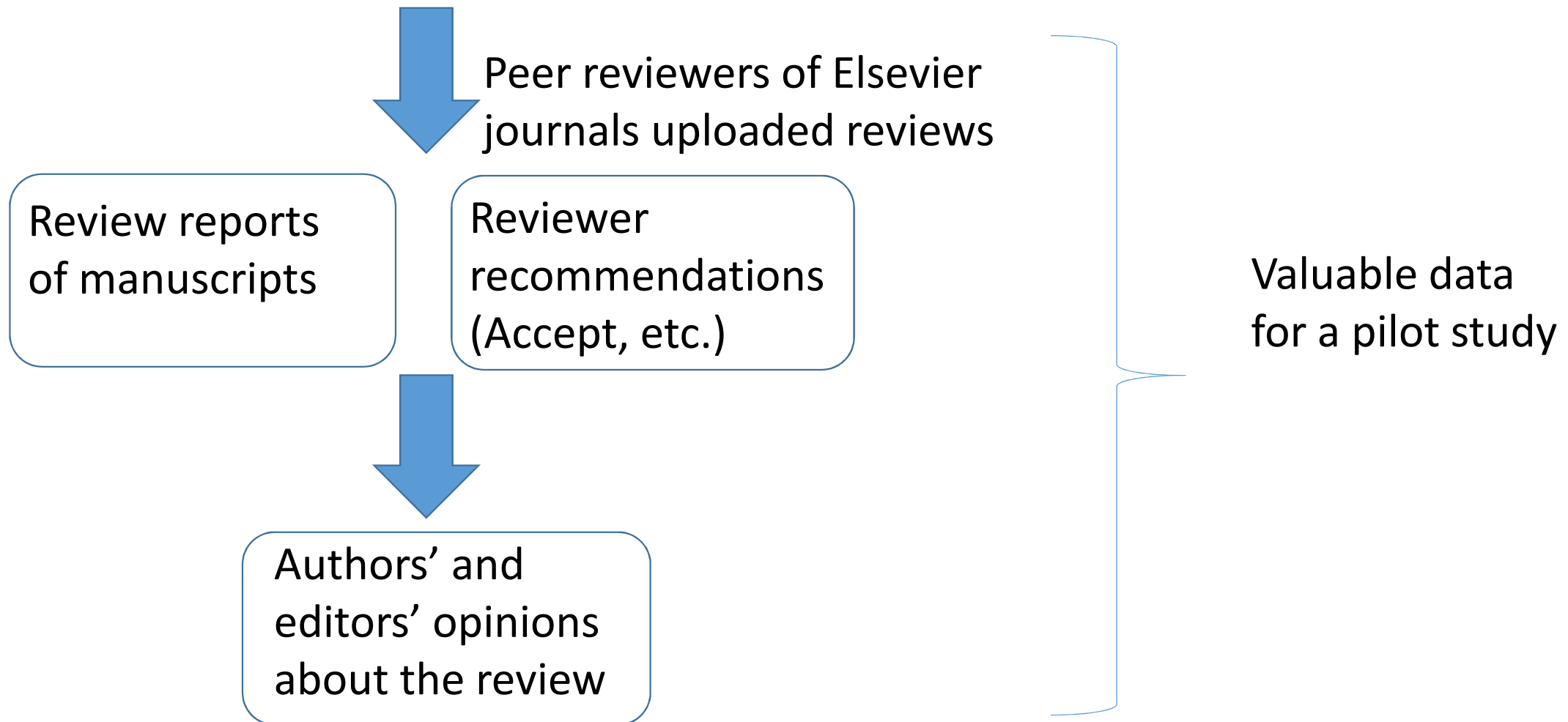
Bahar Mehmani, Elsevier, Netherlands

PEERE International Conference on Peer Review, March 7-9, 2018





May-December 2014 Elsevier Reviewer Recognition Platform



Review reports



Reviewer 1

— Revise

— Reviewer 1

Please provide your rating as handling editor

How timely was the delivery of the review report? (give 5 if the report was submitted within deadline.):

★ ★ ★ ★ ★

Did you feel confident to follow the reviewer(s) recommendation for this article?:

★ ★ ★ ★ ★

Other comments or feedback:

Editor's
questions:

Author's question:

How useful was the review report in terms of improving the quality of your manuscript? ★ ★ ★ ★ ★

1 = poor, 2 =, 3 = neutral, 4 = very good, 5 = excellent

793 original Elsevier research manuscripts from May-December 2014 (1338 reviews)

-Agriculture
-Clinical medicine
-Computer science
-Physical sciences

Review reports of manuscripts

Reviewer recommendations (Accept, etc.)

Editor & author review opinions and comments

Evaluated review quality with the RQI*

Responses:
336 (25%) authors
1086 (80%) editors

*Review Quality Instrument (RQI), according to van Rooyen et al. J Clin Epidemiol 1999;52(7):625-9. The RQI has 10 items rated on a scale from 1 to 5, giving a score range from 10 to 50.

For this study

Purpose



Determine associations among:

- 1) authors' perception of the reviews;
- 2) editors' opinions regarding review timeliness;
- 3) editors' opinion on review's impact on decision;
- 4) review quality, measured by RQI; and
- 5) reviewers' recommendation (accepted, revise, rejected).



Author Perception of Peer Review

Impact of Review Quality and Acceptance on Satisfaction

Ellen J. Weber, MD; Patricia P. Katz, PhD; Joseph F. Waeckerle, MD; Michael L. Callahan, MD

JAMA. 2002;287(21):2790-2793. doi:10.1001/jama.287.21.2790.

(Obstet Gynecol 2008;112:646–51)

Author Perception of Peer Review

Mark Gibson, MD, Catherine Y. Spong, MD, Sara Ellis Simonsen, RN, MSPH, Sheryl Martin, and James R. Scott, MD

Scientometrics
DOI 10.1007/s11192-017-2310-5



Duration and quality of the peer review process: the author's perspective

Janine Huisman^{1,2} • Jeroen Smits^{2,3}

Received: 26 July 2016

© The Author(s) 2017. This article is published with open access at Springerlink.com

American Journal of Infection Control 40 (2012) 701–4



ELSEVIER

Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org



Major article

Assessing the quality of the peer review process: Author and editorial board member perspectives

Christina Bunner BA^{a,*}, Elaine L. Larson RN, PhD, FAAN, CIC^b

Modified Review Quality Instrument (RQI) designed by van Rooyen et al. Each item assesses quality using a 5-point Likert scale from 1 (low) to 5 (high).

1. Importance
2. Originality
3. Strengths of the methodology
4. Weaknesses of the methodology
5. Adequate use of English
6. Organization of the manuscript
7. Presentation of tables and figures
8. Constructiveness of comments
9. Reviewer comments supported
10. Results interpretation

Independent Inter-rater
correlation (Kappa) =
0.65, 95% CI 0.50 – 0.80

	Number of reviews per manuscript						
	1	2	3	4	5	6	
Subject areas (No. of manuscripts)	N = 793	N = 466	N = 67	N = 10	N = 1	N = 1	No. of review reports (%), N = 1338
Agriculture (20)	20 (2.5)	15 (3.2)					35 (2.6)
Clinical medicine (60)	60 (7.6)	54 (11.6)	1 (1.5)				115 (8.6)
Computer science (72)	72 (9.1)	49 (10.5)	9 (13.4)				130 (9.7)
Physical sciences (641)	641 (80.9)	348 (74.7)	57 (85.1)	10 (100.0)	1 (100.0)	1 (100.0)	1060 (79.1)

Overall ratings	Score (median, 95% CI)
Author	
Satisfaction with the constructiveness of the review	4.3 (4.0 – 5.0)
Editor	
Opinion about the timeliness of the review	5.0 (5.0 - 5.0)
Opinion on the review's impact on a final decision	5.0 (5.0 - 5.0)
Review quality*	18 (17.0 - 18.0)

*The RQI has 10 items rated on a scale from 1 to 5, giving a total score range from 10 to 50.

Author satisfaction

- Across all disciplines, paradoxically authors were satisfied with the constructiveness of reviews that recommended rejection

→ median RQI of 5 (IQR 4-5), $P < 0.0001$ *

* vs. accept and revise ($P < 0.05$, Conover's post-hoc test)

- There was no significant correlation of author satisfaction with RQI or editors' perceptions regardless of number of reviews per manuscript.



Editor satisfaction

- Across all disciplines, editors were most satisfied with the influence of reviews with 'accept' recommendations on their final decision
 - median rating of 5, IQR 4-5, $P=0.021^*$
- * vs. reject and accept ($P < 0.05$, Conover's post-hoc test)
- No significant correlations existed between the opinion that editors found the review influential in their review decision for the first review and RQI or author satisfaction.



Reviewer recommendation vs. quality of the review

- Overall RQI scores were poor for reviews recommended for revision with a median score of 2, IQR 2-2, $P < 0.0001$ *
- * vs. reject and accept ($P < 0.05$, Conover's post-hoc test)
- No association was found between RQI scores and reviewer recommendations regardless of number of reviews per manuscript.
- Corroborates with previous studies



Poor agreement between reviewers

- Inter-rater agreement between reviewers was low ($\kappa=0.233$ 95% CI 0.097-0.369).

OPEN ACCESS Freely available online



A Reliability-Generalization Study of Journal Peer Reviews: A Multilevel Meta-Analysis of Inter-Rater Reliability and Its Determinants

Lutz Bornmann^{1*}, Rüdiger Mutz², Hans-Dieter Daniel^{2,3}

¹Max Planck Society, Munich, Germany, ²Professorship for Social Psychology and Research on Higher Education, ETH Zurich, Zurich, Switzerland, ³Evaluation Office, University of Zurich, Zurich, Switzerland

Review quality by subject area

- We found higher quality reviews in agriculture compared to other disciplines (median=22, IQR 20-26, 95% CI 21-24) vs. median=18, IQR 15-21, 95% CI 17-18).
- Although small sample in agriculture compared to other subjects



Limitations

- No reviewer characteristics collected
- RQI intended its use for clinical medicine
- No data on the number of invitations to review originally sent out to reviewers
 - Our assessment of review quality may not be comprehensive



Conclusions

- Paradoxically, authors were most satisfied with reviews recommending rejection, perhaps reflecting their perception that such reviews were more detailed and helpful
- Moderate correlations between the quality of the review and editors' opinion about the influence of the review indicate that better reviews are more helpful to editors
- Continual assessment needed of both review quality and authors' perception of those reviews
- Use of the same instrument to assess the quality of reviews in one field may be unsuitable for another

Thank you! Questions...?



Contact the team:

Shelly.Pranic@mefst.hr

Mario.Malicki@mefst.hr

Stjepan.Marusic@gmail.com

Bahar Mehmani, bmehmani@elsevier.com

Ana.Marusic@mefst.hr