

Peer review: the unseen foundation of scientific quality

Revisão por pares: a base invisível da qualidade científica

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Since its foundation in 1938, the Portuguese Journal of Pediatrics (PJP) has predominantly relied on voluntary academic contributions. With the exception of the Executive Editor-in-Chief and the Editorial Assistant, members of the editorial board and reviewers serve without financial compensation. Their work reflects professional responsibility and commitment to advancing pediatric science.

The PJP employs a double-blind editorial review system, whereby author and reviewer identities remain concealed to each other. This approach aims to promote impartiality and reduce bias. As specified in the journal's editorial policies and reviewer instructions, reviewers are expected to provide constructive and confidential evaluations, disclose conflicts of interest and adhere to the established ethical standards.

The review process requires a detailed assessment of the scientific content, including the evaluation of study design, methodology, statistical analysis, interpretation of the results, and consistency between the objectives and the conclusions. The process is iterative: authors respond to reviewer comments, and revised manuscripts may undergo further independent critical appraisal to confirm that concerns have been appropriately addressed.

Recent data indicate that the editorial review system is under increasing pressure. In 2020, the global scientific output reached approximately 2.9 million published articles,¹ and reviewers collectively devoted over 130 million hours to manuscript review that year, which

is estimated to be worth 1.5 billion USD in uncompensated labor in the United States.² However, recruitment efficiency has declined. In 2013, editors required 1.9 invitations to secure one completed evaluation. This figure increased to between 2.4 and 2.7 by 2017, and is projected to reach 3.6 by 2025.³

The COVID-19 pandemic further reduced reviewer availability. Acceptance rates declined from approximately 35%-40% pre-pandemic to 9% in 2021-2022.⁴ Reviewer workload has become increasingly concentrated, with an estimated 20% of researchers conducting up to 90% of reviews in the biomedical sciences.⁵ Survey data from medical journals similarly report increased reviewer burden and recruitment challenges.⁶

In Portugal, Villanueva et al. described the editorial process in *Acta Médica Portuguesa*, highlighting the importance of independent expert evaluation.⁷

Last year, 95 manuscripts were submitted to the PJP, 48 of which were ultimately published. An average of 3.7 reviewers were invited to assess each accepted manuscript, and approximately 45% completed their assessments.

To improve efficiency, the PJP has implemented artificial intelligence-assisted screening tools.

The integrity and credibility of scientific publishing depend on rigorous independent reviews. Expert evaluation remains "the cornerstone of scientific publishing."⁸ Strengthening and valuing this process is therefore essential.

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Received: 17-02-2026

Accepted: 03-03-2026

<https://pjp.spp.pt>

Available online: 24-04-2026

Port J Pediatr. 2026;57(2):64-65

DOI: 10.24875/PJP.M26000463

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The Editorial Board thanks all reviewers for their commitment. The Portuguese Journal of Pediatrics remains firmly committed to recognizing and supporting reviewers whose expertise is fundamental to its scientific rigor.

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