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Korfitsen, Christoffer Bruun; Hansen Nejtgaard , Camilla; Hróbjartsson, Asbjørn; Boutron, Isabelle; Bero, Lisa A; Lundh, Andreas

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# Peer reviewers' conflicts of interest in biomedical research: scoping review

**Christoffer Bruun Korfitsen, Doctoral Student<sup>1,2</sup>,**

**Camilla Hansen Nejstgaard, Postdoctoral Researcher<sup>1,2</sup>,**

**Asbjørn Hróbjartsson, Professor<sup>1,2</sup>,**

**Isabelle Boutron, Professor<sup>3,4</sup>,**

**Lisa Bero, Professor<sup>5</sup>,**

**Andreas Lundh, Associate Professor<sup>1,2,6</sup>**

*1: Cochrane Denmark & Centre for Evidence-Based Medicine Odense (CEBMO), Department of Clinical Research, University of Southern Denmark, Odense, Denmark*

*2: Open Patient Data Explorative Network (OPEN), Odense University Hospital, Odense, Denmark*

*3: Université Paris Cité and Université Sorbonne Paris Nord, Inserm, INRAe, Centre for Research in Epidemiology and Statistics (CRESS), F-75004 Paris, France*

*4: Centre d'Épidémiologie Clinique, Hôpital Hôtel Dieu, AP-HP, Paris, France.*

*5: Center for Bioethics and Humanities, University of Colorado Anschutz Medical Campus, Denver, Colorado, USA*

*6: Department of Respiratory Medicine and Infectious Diseases, Copenhagen University Hospital – Bispebjerg and Frederiksberg, Denmark*

## Contact

Corresponding author: Christoffer Bruun Korfitsen

E-mail: [ckorfitsen@health.sdu.dk](mailto:ckorfitsen@health.sdu.dk)

Address: Centre for Evidence-Based Medicine Odense (CEBMO) and Cochrane Denmark, Department of Clinical Research, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark

## **ABSTRACT**

**Background:** Peer review may improve the quality of research manuscripts and aid in editorial decisions, but reviewers can have conflicts of interest that impact on their recommendations.

**Objectives:** The objective was to systematically map and describe the extent and nature of empirical research on peer reviewers' conflicts of interest in biomedical research.

**Methods:** In this scoping review, we included studies investigating peer reviewers' conflicts of interest in journal manuscripts, theses and dissertations, conference abstracts, funding applications, and clinical guidelines. We searched MEDLINE, Embase, The Cochrane Methodology Register, Google Scholar (up to January 2024), and other sources. Two authors independently included studies and extracted data on key study characteristics and results, and we organised data by study domain (eg, journal manuscripts) and study aims. We included studies directly investigating peer reviewers' conflicts of interest in our primary analysis, and studies investigating other questions (eg, reasons for retraction), but reporting relevant data on peer reviewers' conflicts of interest, were solely included in a supplementary analysis.

**Results:** After screening 44,353 references, we included 71 studies, of which 41 were included in our primary analysis. The 41 studies were published between 2005 and 2023, and 34 (83%) were journal publications. Thirty (73%) studies investigated journal manuscripts, one (2%) conference abstracts, four (10%) funding applications, and six (15%) clinical guidelines. No studies investigated theses or dissertations. Thirty-seven (90%) studies used quantitative research methods, two (5%) qualitative, and two (5%) mixed methods. Twenty-one (51%) studies investigated both financial and non-financial interests, six (15%) solely financial interests, five (12%) solely non-financial interests, and nine (22%) did not report the type of interest. We organised included studies based on study aims, with some studies having multiple aims: impact on recommendations (one study), occurrence of peer reviewers' conflicts of interest (11 studies), stakeholders' experiences (13 studies), and policy and management (22 studies). One (2%) study investigated the impact of peer reviewers' personal connections with authors on reviewers' recommendations. Nine (22%) studies estimated prevalences of conflicts of interest among peer reviewers, ranging from 3 to 91%. Two (5%) studies both reported that conflicts of interest were a reason for declining to review in 1% of cases. Thirteen (32%) studies investigated stakeholders' experiences with peer reviewers' conflicts of interest, primarily using questionnaires of reviewers, editors and researchers. Sixteen (39%) studies estimated prevalences of having conflict of interest policies for peer reviewers, ranging from 5 to 96%, among journals, conferences and

clinical guideline organisations. Finally, six (15%) studies estimated prevalences of public availabilities of reviewers' conflicts of interest declarations, ranging from 0 to 71%.

**Conclusions:** Most studies addressed conflicts of interest in peer review of journal manuscripts, primarily through surveys of journal policies or questionnaires of researchers, editors, and peer reviewers. The impact of peer reviewers' conflicts of interest on recommendations and their prevalence is still poorly understood. Our results can guide future studies and be used to align policies and management of peer reviewers' conflicts of interest.

**Study registration:** Open Science Framework (DOI: [10.17605/OSF.IO/9QBMG](https://doi.org/10.17605/OSF.IO/9QBMG))

**What is already known on this topic**

Multiple systematic reviews have found that authors' financial conflicts of interest and industry funding are associated with favourable study results and conclusions.

No previous studies have summarised and mapped the evidence on peer reviewers' conflicts of interest in biomedicine.

**What this study adds**

Studies address peer review of journal manuscripts, conference abstracts, funding applications and clinical guidelines on four aspects of conflicts of interest: impact of conflicts of interest on reviewer recommendations, the occurrence of conflicts of interest, the experience of stakeholders, and policy and management of conflicts of interest.

Most studies address conflicts of interest in peer review of journal manuscripts, primarily through surveys of journal policies or questionnaires of researchers, editors, and peer reviewers.

**How this study might affect research, practice or policy**

Future studies should investigate the prevalence of peer reviewers' conflicts of interest, how conflicts are managed and how they impact on reviewer recommendations. Further, more knowledge is needed on peer reviewers' conflicts of interest for conference abstracts, theses, and dissertations in biomedicine.

This study may guide journals, publishers, and other organisations in developing or revising conflict of interest policies for peer reviewers.

## **INTRODUCTION**

Peer review of journal manuscripts has existed for over two centuries, though its current form first evolved in the second half of the 20th century.<sup>1,2</sup> Each year, around five million peer-reviewed papers are published,<sup>3</sup> and reviewers use more than 100 million hours on peer review.<sup>3</sup> In biomedical research, different peer review models are utilised to improve the quality of submitted manuscripts and assist editors in decision-making. However, the quality and usefulness of peer review has been much debated.<sup>4–13</sup> Studies have shown that some reviewers request inappropriate references<sup>14</sup> and try to spin results by suggesting additional analyses or overinterpreting results in conclusions.<sup>15</sup> Although peer reviewers' conflicts of interest may influence their recommendations,<sup>8–10,16</sup> it is unknown which problematic practices may be due to reviewers' conflicts of interest.<sup>12</sup>

Conflicts of interest arise if reviewers have secondary interests (eg, financial relationships) that risk influencing their manuscript assessments.<sup>17</sup> Financial conflicts of interest are highly prevalent in biomedical research, with around two-thirds of drug trials being industry-funded and around half having authors with industry ties.<sup>18–20</sup> Similarly, editors may have financial relationships, and journals may have income from commercial sources through reprint sales and advertisements.<sup>21–24</sup>

Several studies have reported an association between industry funding or authors' financial conflicts of interest and favourable conclusions or recommendations in biomedical research publications (eg, randomised trials and editorials).<sup>18,25–27</sup> More attention has been given to conflicts of interest of funders, authors, and editors than peer reviewers, despite their role as gatekeepers of science.<sup>28</sup> In a recent proposal for the future of peer review research, Tennant and Ross-Hellauer recommended studies on peer reviewers' conflicts of interest as a priority.<sup>29</sup> Although several empirical studies have been published, no previous studies have systematically summarised and mapped the evidence.<sup>30–33</sup>

### **Objectives**

To systematically map and describe the extent and nature of empirical research on conflicts of interest in peer review of journal manuscripts, conference abstracts, theses and dissertations, funding applications, and clinical guidelines in biomedicine.

## **METHODS**

We conducted a scoping review in line with JBI's (former Joanna Briggs Institute) recommendations.<sup>34</sup> Our study is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for scoping reviews (supplementary appendix 1).<sup>35</sup>

### **Protocol**

Our protocol was prospectively published on the Open Science Framework platform (<https://osf.io/sg5wh>).

### **Terminology**

We used the Institute of Medicine's definition of conflicts of interest as "circumstances that create a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest".<sup>17</sup> Secondary interests include financial interests (eg, peer reviewers' financial relationships) and non-financial interests (eg, schools of thought or relationships between peer reviewers and authors).<sup>36–38</sup> We used the International Committee of Journal Editor's (ICMJE) definition of 'peer review' as "a critical assessment of manuscripts submitted to journals by experts who are not part of the editorial staff".<sup>39</sup> We did not consider comments or assessments by groups or organisations, for example, public comments on a clinical guideline draft, as 'peer review' in this study. However, our study also includes assessment of other research documents (eg, conference abstracts or funding applications). We defined 'biomedical research' as research related to basic medical sciences, clinical trials of therapeutic agents, the effectiveness of diagnostic or therapeutic techniques, or studies related to medicine's behavioural, psychological, epidemiological, or educational aspects.<sup>40</sup>

### **Eligibility criteria**

#### *Inclusion criteria*

We included primary research studies investigating any aspects of individual peer reviewers' conflicts of interest in journal manuscripts, conference abstracts, theses and dissertations, applications for research funding, or clinical guidelines in biomedicine. We included both qualitative, quantitative, and mixed methods studies. Studies reported in other languages than Danish or English were translated using Google Translate

(Google Inc., 2006). Multidisciplinary studies (eg, both social and biomedical research) and studies addressing multiple stakeholders (eg, both conflicts of interest of peer reviewers and editors) were included if separate data were available for the subgroup of peer review in biomedical research or if the majority of the included data in the sample was from these subgroups.

### *Exclusion criteria*

Regardless of the definition of non-financial conflicts of interest used in the included studies, we excluded studies solely investigating beliefs (eg, political or religious), personal experiences (eg, abuse or trauma), and ethnicity or gender of peer reviewers.<sup>38</sup> We excluded studies investigating recommendations of peer reviewers suggested by submitting authors unless the study focused on the personal relationships between authors and suggested reviewers (ie, non-financial conflicts of interest). We also excluded studies investigating conflicts of interest in informal pre-publication peer review (eg, preprints) and post-publication peer review (eg, letters to the editor). Lastly, for clinical guidelines, we excluded studies focusing on institutional conflicts of interest of stakeholders (eg, public comments on a guideline by patient organisations with ties to pharmaceutical companies).<sup>41</sup>

### **Information sources and search strategy**

We searched MEDLINE (Ovid), Embase (Ovid), Google Scholar (up to January 15, 2024), and The Cochrane Methodology Register (up to 2012). In collaboration with an information specialist, we developed the search strategy for MEDLINE and adapted it for the other databases (supplementary appendix 2).

We also searched the Open Access Theses & Dissertations, Proquest Dissertations & Theses Global, and the Networked Digital Library of Theses and Dissertations for theses or dissertations containing empirical studies (up to January 15, 2024). The Open Science Framework, Preprints.org, PeerJ, arXiv, bioRxiv, MedRxiv, MetaArXiv, NutriXiv, PsyArXiv, SocArXiv, and sportRxiv preprint servers were searched for unpublished studies or protocols (up to January 15, 2024).

Additionally, we searched the proceedings of the Cochrane Colloquia, PEERE International Conference on Peer Reviews, Evidence Live, World Conferences on Research Integrity, and the Congress on Peer Review



and Scientific Publication for conference abstracts published (up to January 15, 2024). Lastly, we searched reference lists of included studies and the Web of Science for studies citing any included studies and for publications by the first and last author of included studies (up to January 15, 2024).

### **Study selection**

One author (CBK) screened titles and abstracts for obvious exclusions, and two authors (CBK and CHN) independently assessed full texts for inclusion. Disagreements were resolved by discussion with a third author (AL) as arbiter. In case of clarification issues concerning study eligibility due to inadequate reporting, one author (CBK) contacted the corresponding study author by email and sent up to three reminders. Study selection was managed using Covidence (Veritas Health Innovation, Melbourne, Australia) and Excel (Microsoft Corporation, Redmond, Washington, USA).

### **Data extraction**

Two authors (CBK and either CHN or AL) independently extracted data using Covidence and Excel. Disagreements were resolved by discussion with a third author (AL) as arbiter. Our data extraction form (supplementary appendix 3) was pilot-tested by two authors (CBK and CHN) on the first ten included studies and modified accordingly. We extracted general information (eg, publication year, country of origin, and conflicts of interest and funding statements), study aim, study domain (eg, funding applications), biomedical discipline (eg, cardiology), study methods (eg, study design and data collection methods), and study results (ie, sample size and study findings). One author (CBK) contacted the corresponding author of the included studies by email in case of missing data or clarification issues and sent up to three reminders.

### **Assessment of methodological quality**

We anticipated the inclusion of studies of various designs, which would require assessing methodological quality using different tools. This makes comparing studies difficult, and as we were not focusing on the credibility of individual study results, we decided not to assess methodological quality in line with scoping review guidelines.<sup>34</sup>

### **Synthesis of results**

We organised the extracted data in the five prespecified study domains (ie, journal manuscripts, conference abstracts, theses and dissertations, research funding applications and clinical guidelines) and grouped them by study aims. In our primary analysis, we included studies directly investigating peer reviewers' conflicts of interest (ie, stated as part of the study aims, study objectives or described in the data extraction or data analysis sections). In some cases, the included studies did not directly investigate peer reviewers' conflicts of interest, but relevant data were reported. For example, a study exploring indicators of research fraud by interviewing 30 stakeholders did not have peer reviewers' conflicts of interest as a study aim, and the only relevant data was a quote from a single interviewee (ie, "Conflicts of interest not declared in peer review").<sup>42</sup> We decided only to include such studies in a separate supplementary analysis.

Data were charted using frequencies and proportions. We summarised the evidence using an evidence map with a nested bubble plot of studies, ordered by study domain, aim, design, and analysis,<sup>43</sup> and produced an interactive Evidence Atlas<sup>44</sup> to provide an overview of the geographical distribution of studies and individual study characteristics. Furthermore, we present prevalence estimates for different aspects of peer reviewers' conflicts of interest (eg, availability of conflicts of interest policies in journals). We also present the main themes and supporting quotes by stakeholders from interview studies, as well as main results from questionnaire studies. We used the Clopper-Pearson method to estimate 95% confidence intervals for prevalence estimates.<sup>45</sup> We used STATA 18 (College Station, TX: StataCorp LLC) for data analyses and the EviAtlas tool<sup>44</sup> to produce the interactive Evidence Atlas.

### **Patient and public involvement**

There was no patient or public involvement in our study as the topic was not directly patient-relevant.

## **RESULTS**

### **Study inclusion**

Of 5,467 records identified from databases and registers and 38,886 from other sources, we included 71 studies from 79 reports. See supplementary appendix 4 for the PRISMA flow diagram illustrating study inclusion. We included 41 (58%) of the 71 studies in our primary analysis<sup>30–33,46–82</sup> and 30 studies in our

supplementary analysis (see supplementary appendix 5). See supplementary appendix 6 for the list of excluded studies. Three<sup>83–85</sup> of the 11 contacted authors provided additional data, and two<sup>86,87</sup> of seven clarified reporting issues.

### **Study characteristics**

The characteristics of all 71 studies are shown in supplementary appendix 6, accompanied by an interactive Evidence Atlas (<https://ckorfitsen.github.io/PRCOI/>).

The 41 studies in our primary analysis were published between 2005 and 2023 (supplementary appendix 7), with 34 (83%) studies published in journals, four (10%) as dissertations, and three (7%) were only available as conference abstracts (Table 1). Seventeen (41%) of the 41 studies investigated peer reviewers' conflicts of interest as their primary aim and 24 as a non-primary aim (eg, secondary aim). Thirty studies (73%) investigated journal manuscripts, one (2%) conference abstracts, four (10%) funding applications, six (15%) clinical guidelines, and no studies investigated theses or dissertations. Corresponding authors were typically from North America (39%), or Europe (37%) and university employed (59%). Most studies investigated a mix of biomedical disciplines (19 studies; 46%), with cardiology being the most frequent individual discipline (five studies; 12%), particularly for studies on peer review of clinical guidelines (four of six studies). Twenty-one (51%) studies investigated both financial and non-financial interests; six (15%) only financial interests, five (12%) only non-financial interests (eg, nepotism and specialty interests), and nine (22%) did not report the type of interests. Six (15%) studies used the Institute of Medicine's conflicts of interest definition, four (10%) the ICMJE definition, 13 (32%) other definitions, and 18 (44%) did not define conflicts of interest.

### **Study aims and methods**

We organised the included studies into four groups based on their study aims, with some studies having multiple aims: impact on recommendations (one study), occurrence of peer reviewers' conflicts of interest (11 studies), stakeholders' experiences (13 studies), and policy and management (22 studies), and further divided studies into additional subgroups (ie, more specific aims) (Figure 1). An evidence map provides an overview of the study aims and methods (Figure 2; supplementary appendix 9). Thirty-seven (90%) studies used quantitative research methods, mainly surveys of documents (n = 14), two (5%) used qualitative, and

two (5%) mixed methods. Table 2 provides an overview of the type of biomedical discipline and conflicts of interest, aim, study design and population in individual studies.

#### *Impact of peer reviewers' conflicts of interest on reviewer recommendations*

One study by Teplitskiy and colleagues investigated the association between personal connections of authors and reviewers and reviewer recommendations.<sup>59</sup> The study sampled 24,022 peer-review reports of 7,981 neuroscience manuscripts by 46,455 authors published in *PLOS ONE* in 2011-12. The study reported that the closer authors and reviewers were in their co-authorship network, the more favourable the reviewer's manuscript recommendation was (0.11 points (95 % confidence interval: 0.06, 0.16) decrease in reviewer scores on a 1-4 scale per step of proximity), corresponding to close reviewers recommending rejection of 7.1% of manuscripts and the most distant reviewers recommending rejection of 20.4%. The authors interpret the findings as an indication of influence from schools of thought (ie, intellectual conflicts of interest) rather than nepotism.<sup>59</sup> Some challenges with the study findings are multiplicity due to the use of several regression models, residual confounding, focus on a narrow aspect of conflicts of interest (ie, nepotism, and schools of thought), and limited generalisability due to only sampling neuroscience manuscripts from a single journal.

#### *Occurrence of peer reviewers' conflicts of interest*

Eleven studies reported the occurrence of different types of conflicts of interest among peer reviewers. We report the prevalence of these occurrences in Figure 3. There was substantial heterogeneity in prevalence estimates between studies.

Two of the studies investigated the prevalence of peer reviewers' conflicts of interest at the individual journal manuscript level.<sup>80,81</sup> Makarem and colleagues investigated peer review reports for 259 publications in 115 open-access journals and found that 16 of 593 (3%) reviewers disclosed conflicts of interest (63% financial interests).<sup>81</sup> In addition, they found that three of 593 (0.5%) peer reviewers commented on their own conflicts of interest in the review report, but no authors or editors commented on reviewers' conflicts. Another case study of a special issue on fertility, pregnancy, and mental health in a journal published by Frontiers found that five of 12 peer reviewers for 15 publications had non-financial conflicts of interest, and all five had incomplete declarations.<sup>80</sup>

One questionnaire study<sup>51</sup> reported that 42 (75%) of 56 reviewers from Indian medical journals had reviewed manuscripts by authors with whom they had personal or professional ties (see summary of main results from questionnaire studies in supplementary appendix 10). Another questionnaire study<sup>52</sup> reported that 294 (14%) of 2,130 reviewers from Chinese medical journals reviewed manuscripts despite having relevant financial conflicts of interest. One study of a single hand surgery journal found that 351 (91%) of 387 US physician reviewers had financial relationships reported in the Open Payments database.<sup>33</sup> Four studies of cardiology guidelines estimated the proportion of peer reviewers disclosing financial conflicts of interest in guideline publications, with prevalence estimates ranging from 56% to 80%.<sup>58,66,69,73</sup> Finally, two survey studies used administrative journal data and reported that 55 (0.6%) of 9,366<sup>71</sup> and 6 (0.9%) of 680<sup>77</sup> peer reviewers, respectively, declined to review manuscripts due to conflicts of interest.

#### *Stakeholders' experiences with peer reviewers' conflicts of interest*

Three of the 13 studies investigating stakeholders' experiences with peer reviewers' conflicts of interest used semi-structured interviews<sup>30,60,78</sup> (see supplementary appendix 11 for themes and associated quotes reported in studies). Abdoul and colleagues highlighted rivalry, cronyism and disciplinary interests (ie, non-financial conflicts of interest) in the funding application review process.<sup>30</sup> Glonti et al. reported that most journal editors emphasised the importance of declaring or avoiding conflicts of interest of peer reviewers. Still, 'some editors explained that conflicts of interest could potentially contribute to increased review quality but stressed that transparency is key'.<sup>60</sup> Finally, Hendrick interviewed a variety of journal stakeholders and found that guidance on how to declare interests and how they are managed varied across high-impact journals and that low-impact journals rarely had policies addressing peer reviewers' conflicts of interest.<sup>78</sup>

Ten studies used questionnaires (supplementary appendix 10) with response rates from 12% to 62%.<sup>51,52,54,57,62,65,70,75,79,82</sup> Three of these studies investigated peer review of funding applications; one study surveyed funding administrators,<sup>57</sup> another surveyed researchers,<sup>65</sup> and one surveyed both funding organisations and reviewers.<sup>75</sup> For example, Glasspool-Malone reported that 31% of researchers believed there were never or only occasionally adequate protections against cronyism in the peer review process of funding applications at The National Institute of Health all or most of the time.<sup>65</sup> The remaining seven

questionnaire studies focused on journal peer review and surveyed reviewers,<sup>51,52,54,62</sup> editors,<sup>70</sup> and researchers.<sup>79,82</sup> For example, in a study by Müller, 71% of editors from biomedical open-access journals reported that reviewers with obvious conflicts of interest were excluded in advance in the editorial process.<sup>70</sup>

#### *Policy and management of peer reviewers' conflicts of interest*

Sixteen studies surveyed the availability of specific conflict of interest policies for peer reviewers: 14 of biomedical journals<sup>31,32,46–50,53,55,56,63,68,72,78</sup>, one of medical societies and conference abstracts<sup>67</sup> and one of funding organisations and funding applications (Figure 3 shows the prevalence of availability of policies and published declarations in the studies).<sup>75</sup> Of the 16 studies, seven also analysed the content of policies, and one study combined information on journal policies and disclosures in publications to assess policy adherence.<sup>32</sup> Five additional studies surveyed the availability of published peer reviewers' conflicts of interest declarations in journals<sup>61,74,81</sup> and clinical guidelines<sup>64,76</sup> but only one study also analysed the content of the declarations.<sup>81</sup>

#### *Supplementary analysis*

Thirty studies did not directly investigate peer reviewers' conflicts of interest but reported relevant data and were therefore included in a separate supplementary analysis (supplementary appendix 12-14). Overall, the 30 studies had characteristics and domains similar to the 41 studies in our primary analysis. However, more of these studies exclusively used qualitative methods than those included in our primary analysis (23% versus 5%).

## **DISCUSSION**

We identified 71 studies on peer reviewers' conflicts of interest in biomedical research, but only around half directly investigated the phenomenon. Most studies addressed conflicts of interest in peer review of journal manuscripts, primarily through surveys of journal policies or questionnaires of researchers, editors, and peer reviewers. Only one study investigated the impact of peer reviewers' conflicts of interest on manuscript recommendations, and one study investigated peer review of conference abstracts. No studies investigated peer review of theses or dissertations.

## Strengths and limitations

This review is the first study to systematically identify and map the entire field of research on peer reviewers' conflicts of interest in biomedicine. We used rigorous methods with duplicate study inclusion and data extraction, and our methods were prespecified in a published protocol. Our comprehensive search strategy, using multiple information sources, was developed in collaboration with a search specialist, and we retrieved a considerable number of unpublished studies. Furthermore, we included 30 studies not directly investigating peer reviewers' conflicts of interest but where relevant data were reported. Insights from those investigations supplement the findings of the primary analysis, thus strengthening the mapping purpose of our review.

Our review also has some limitations. First, despite including various synonyms related to conflicts of interest in our search strategy, we may have missed relevant studies. In biomedicine, there is no general consensus regarding conflicts of interest terminology or which secondary interests may result in conflicts of interest.<sup>36–38,88</sup> For example, some studies used the term nepotism<sup>59</sup> or cronyism,<sup>65</sup> which may also be described as personal or professional relationships.<sup>38,88</sup> In order to avoid identification of too many irrelevant records in our search of bibliographic databases, we pragmatically only included terms most commonly used within biomedicine. While this initial strategy may have missed relevant studies, we suspect that it would not impact our main findings or qualitative conclusions since we searched comprehensively beyond databases and had a low barrier for retrieving full-text records. Second, our choice of databases may have resulted in missed studies published in non-biomedical journals. Nonetheless, we only included four studies from non-biomedical journals that were not indexed in our databases. This low number suggests that it is unlikely that searching additional databases would have contributed importantly. Third, we only included studies if separate data for peer reviewers in biomedicine could be obtained or if the majority of data were related to biomedicine. Fourteen of 19 identified multidisciplinary studies were excluded because of this cut-off.<sup>89–102</sup> Our pragmatic choice of cut-off is debatable and somewhat limits the generalisability of our findings beyond biomedicine.<sup>42</sup> Fourth, we only included studies that did not directly investigate peer reviewers' conflicts of interest but had relevant data in a supplementary analysis. While this analytical strategy may be questioned, we thought it problematic to include them in the primary analysis since the studies mainly investigated other research questions. Thus, they are not essential studies in the field of peer reviewers' conflicts of interest and would, therefore, be given too much weight and contribute with too much noise had they been included

in the primary analysis. In many cases, the data were not reported in the abstract and only discovered when reading the full-text in detail. These types of studies are therefore more likely to have been missed.

### **Comparison with other studies**

Previous reviews in the field have been non-systematic, with the majority focusing on the quality and ethics of peer review of funding applications and not specifically on conflicts of interest.<sup>29,103–107</sup> One non-systematic review from 2017 by Guthrie and colleagues concluded that there was evidence that assessment of biomedical funding applications by funding committees suffers from cronyism and conflicting evidence as to whether cognitive particularism (favouring your field or way of thinking) is a problem.<sup>106</sup> While we only identified a single study on the impact of peer reviewer's non-financial interests on neuroscience manuscripts from a single journal, several systematic reviews and empirical studies have reported an impact of industry funding and authors' financial conflicts of interest on favourable conclusions and recommendations in biomedical research publications.<sup>18,25–27</sup> In the case of peer reviewers' conflicts of interest outside the biomedical field, only a few primary studies from psychology, sociology, natural sciences, and engineering have investigated the impact of schools of thought and nepotism on reviewer recommendations.<sup>108–110</sup> One of the first studies on non-financial interests, an experiment by Mahoney from behaviouristic psychology, found that when reviewers assessed fictive manuscripts with identical methods but different results, reviewers had unfavourable views on manuscripts when the results were contrary to their theoretical perspective.<sup>108</sup> Others have argued, that in contrast to financial interests, researchers cannot separate themselves from their intellectual positions and personal beliefs and such interests cannot be managed in the same way as financial interests.<sup>38</sup>

### **Implications for research**

While we identified many studies investigating peer reviewers' conflicts of interest, our review also highlights important topics that have received little or no attention. We did not identify any studies investigating conflicts of interest in peer review of theses or dissertations and only included a single study of conference abstracts. Importantly, only a single study investigated the impact of peer reviewers' conflicts of interest on review recommendations from a single journal and only on a narrow aspect of conflicts of interest (co-authorship proximity). Interestingly, while seven studies estimated the prevalence of peer reviewers' conflicts of interest,



five did it using a pool of reviewers, and only two studies investigated how frequent peer reviewers' conflicts of interest were at the journal manuscript level. Prevalence estimates varied considerably between studies, and a systematic review assessing study quality and exploring reasons for heterogeneity is highly relevant. While many studies surveyed journals' conflict of interest policies for peer reviewers, less than half analysed the actual content of policies, and only one study checked whether reporting of conflicts of interest in journal publications adhered to journal policies. Moreover, we excluded many studies investigating journal retractions as they did not report on whether retractions were due to peer reviewers' conflicts of interest, and only a single study on retractions could be included in our supplementary analysis.<sup>111</sup> Finally, we find it important to consider the impact of conflicted peer reviewers in the different study domains. For example, a negative review of a funding application may have a larger personal impact than a negative review of a journal manuscript since the manuscript can be submitted elsewhere. Despite these considerations, we identified only one study on policies and practices on peer reviewers' conflicts of interest in funding applications.<sup>75</sup> We suggest that future studies focus on the prevalence and impact of peer reviewers' conflicts of interest across study domains, how journals and other organisations manage peer reviewers' conflicts of interest, and whether organisations adhere to their policies.

## **CONCLUSION**

We identified 71 studies investigating peer reviewers' conflicts of interest in biomedical research, and only about half investigated the phenomenon directly. Most studies addressed conflicts of interest in peer review of journal manuscripts, primarily through surveys of journal policies or questionnaires of researchers, editors, and peer reviewers. Little is known about the prevalence, management, and impact of peer reviewers' conflicts of interest. We identified few studies investigating peer reviewers' conflicts of interest in funding applications and conference abstracts and none for theses and dissertations. Our review can direct future studies and be used to align policies and management of conflicts of interest of peer reviewers.

**Contributors:** CBK, CHN, AH, IB, LB, and AL designed the study. CBK conducted the searches, CBK, CHN, and AL included the studies and conducted data extraction, and CBK and AL conducted the analyses and wrote the first draft of the manuscript, which was then critically reviewed and revised by the other authors. All authors approved the final version of the manuscript for submission. The corresponding author (CBK) is the

guarantor, had the final responsibility for the decision to submit for publication and accepts full responsibility for the work and the conduct of the study. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

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**Table 1. Characteristics of the 41 included studies**

	Study domain				
	Journal manuscripts (n = 30)	Conference abstracts (n = 1)	Funding applications (n = 4)	Clinical guidelines (n = 6)	All (N = 41)
<b>Study characteristics</b>					
Type of report					
Journal publication	26 (87%)	1 (100%)	3 (75%)	4 (67%)	34 (83%)
Dissertation	3 (10%)	0	1 (25%)	0	4 (10%)
Conference abstract	1 (3%)	0	0	2 (33%)	3 (7%)
Peer reviewers' conflicts of interest investigated as					
Primary aim	14 (47%)	0	2 (50%)	1 (83%)	17 (41%)
Non-primary aim	16 (53%)	1 (100%)	2 (50%)	5 (17%)	24 (59%)
Location of corresponding author					
North America	12 (40%)	1 (100%)	2 (50%)	1 (17%)	16 (39%)
Europe	9 (30%)	0	2 (50%)	4 (67%)	15 (37%)
Asia	8 (28%)	0	0	1 (17%)	9 (22%)
South America	1 (3%)	0	0	0	1 (2%)
Primary institution of corresponding author					
University	18 (60%)	0	3 (75%)	3 (50%)	24 (59%)
Hospital	6 (20%)	1 (100%)	0	2 (33%)	9 (22%)
Publisher or journal	4 (13%)	0	1 (25%)	0	5 (12%)
Private organisation	1 (3%)	0	0	1 (17%)	2 (5%)
Governmental	1 (3%)	0	0	0	1 (2%)
Biomedical disciplines*					
Mixed	14 (47%)	1 (100%)	3 (75%)	1 (17%)	19 (46%)
Cardiology	1 (3%)	0	0	4 (67%)	5 (12%)
Public health and health systems	4 (13%)	0	0	0	4 (10%)
Neuroscience	2 (7%)	0	0	0	2 (5%)
Nursing	2 (7%)	0	0	0	2 (5%)
Radiology	1 (3%)	0	0	1 (17%)	2 (5%)
Bioethics	1 (3%)	0	0	0	1 (2%)
Emergency medicine	1 (3%)	0	0	0	1 (2%)
Fertility and pregnancy	1 (3%)	0	0	0	1 (2%)
Ophthalmology	1 (3%)	0	0	0	1 (2%)
Orthopaedic surgery	1 (3%)	0	0	0	1 (2%)
Not reported	1 (3%)	0	1 (25%)	0	2 (5%)
Type of research method					
Quantitative**	27 (30%)	1 (100%)	3 (75%)	6 (100%)	37 (90%)
Qualitative	1 (3%)	0	1 (25%)	0	2 (5%)
Mix-methods	2 (7%)	0	0	0	2 (5%)
Types of conflicts of interest addressed					
Financial and non-financial	19 (63%)	0	0	2 (33%)	21 (51%)
Financial	4 (13%)	0	0	2 (33%)	6 (15%)
Non-financial	2 (7%)	0	3 (75%)	0	5 (12%)
Not reported	5 (17%)	1 (100%)	1 (25%)	2 (33%)	9 (22%)

\*Four of the 41 included studies also sampled non-biomedical disciplines.

\*\*Two studies also used qualitative analyses, however, the analyses were mainly quantitative which is why they were not considered as mix-methods studies

**Table 2. Study domain, types of biomedical disciplines, types of conflicts of interest, aim, study design and population of the 41 included studies**

Study	Study domain	Types of biomedical disciplines	Types of conflicts of interest*	Aim	Study design and population
<b>Qualitative research methods</b>					
<i>Abdoul (2012)</i>	Funding applications	Mixed	Non-financial	Peer reviewers' and applicants' experiences with PRCOI	Interviews of 38 internal and 27 external reviewers and 33 grant applicants in France
<i>Glonti (2019)</i>	Journal manuscripts	Mixed	Not reported	Editors' experiences with PRCOI	Interviews of 56 journal editors
<b>Quantitative research methods</b>					
<i>Alfonso (2012)</i>	Journal manuscripts	Cardiology	Any	Prevalence of journal PRCOI policies and journal practices	Questionnaire of 46 editors-in-chief from the European Society of Cardiology's national cardiovascular journals
<i>Ancker (2007)</i>	Journal manuscripts	Mixed†	Any	Prevalence and content of journal PRCOI policies	Survey of policies of 84 high-impact journals from 12 scientific disciplines and questionnaire of 49 journal representatives
<i>Anraku (2009)</i>	Journal manuscripts	Ophthalmology	Not reported	Prevalence of journal PRCOI policies	Survey of policies of 42 ophthalmology journals
<i>Barnsteiner (2020)</i>	Journal manuscripts	Nursing	Any	Prevalence and content of journal PRCOI policies	Survey of policies of 116 nursing journals and questionnaire of 82 editors
<i>Bose (2022)</i>	Journal manuscripts	Mixed	Any	Prevalence of journal PRCOI policies	Survey of policies of 106 Indian medical journals
<i>Bou-Karroum (2018)</i>	Journal manuscripts	Public health and health systems	Any	Prevalence of published PRCOI declarations	Survey of declarations in systematic reviews on health policy and health systems from 152 journals
<i>Broome (2010)</i>	Journal manuscripts	Nursing	Any	Reviewers' experiences with PRCOI	Questionnaire of 1675 reviewers from 52 nursing journals
<i>Cooper (2006)</i>	Journal manuscripts	Mixed	Any	Prevalence of journal policies	Questionnaire of 91 editors from 91 general and specialty medical journals
<i>Dal-Ré (2018)</i>	Journal manuscripts	Mixed	Any	Prevalence of journal PRCOI policies	Survey of policies of 350 journals following the ICMJE recommendations
<i>Das (2013)</i>	Journal manuscripts	Mixed	Not reported	Peer reviewers' and editors' experiences with PRCOI	Questionnaire of 56 reviewers and 35 editors from 15 Indian medical journals
<i>Ferret (2011)</i>	Clinical guidelines	Radiology	Financial	Prevalence of published PRCOI declarations	Survey of declarations in 14 national and international radiology guidelines
<i>Glasspool-Malone (2005)</i>	Funding applications	Mixed‡	Non-financial	Applicants' experiences with PRCOI	Questionnaire of 206 National Institute of Health applicants from US universities
<i>Grandizio (2020)</i>	Journal manuscripts	Orthopaedic surgery	Financial	Prevalence of PRCOI	Survey of industry payments to 462 reviewers from the <i>Journal of Hand Surgery</i>
<i>Hinton (2021)</i>	Clinical guidelines	Cardiology	Financial	Prevalence of PRCOI	Survey of disclosures of 142 reviewers in five European Society of Cardiology guidelines
<i>Ji (2019)</i>	Journal manuscripts	Mixed	Financial	Peer reviewers' experiences with PRCOI	Questionnaire of 2,130 reviewers from the Chinese Medical Association Publishing House
<i>Khurana (2012)</i>	Journal manuscripts	Mixed	Any	Prevalence and content of journal PRCOI policies	Survey of policies of 40 high-impact psychiatric and general medical journals
<i>Kuczmarwski (2015)</i>	Conference abstracts	Mixed	Not reported	Prevalence of conference PRCOI policies	Survey of policies of 27 large medical society conferences
<i>Lippert (2011)</i>	Journal manuscripts	Emergency medicine	Financial	Peer reviewers' experiences with PRCOI	Questionnaire of 218 reviewers from one emergency medicine journal
<i>Lotbiniere-Bassett (2019)</i>	Journal manuscripts	Neuroscience	Any	Prevalence and content of journal PRCOI policies	Survey of policies of 19 high-impact neurosurgical journals

<i>Makarem (2023)</i>	Journal manuscripts	Mixed	Any	Prevalence of PRCOI, published PRCOI declarations and addressing PRCOI in peer review reports	Survey of reviewer reports by 593 reviewers for 259 publications from 115 open-access medical journals
<i>Master (2018)</i>	Journal manuscripts	Bioethics	Any	Prevalence and content of journal PRCOI policies	Survey of policies of 63 bioethics journals and questionnaire of 35 editors
<i>McIntosh (2023)</i>	Journal manuscripts	Fertility and pregnancy	Any	Prevalence of PRCOI	Survey of disclosures of editors, authors, and reviewers for 15 publications from a special research issue from one journal
<i>Mendelson (2012)</i>	Clinical guidelines	Cardiology	Any	Prevalence of PRCOI	Survey of 498 reviewers from 17 American College of Cardiology and American Heart Association guidelines
<i>Müller (2008)</i>	Journal manuscripts	Mixed <sup>†</sup>	Any	Editors' experiences with journal PRCOI policies and practices	Questionnaire of 291 journal editors from 291 open-access journals
<i>Ralph (2020)</i>	Journal manuscripts	Public health and health systems	Financial	Prevalence and content of journal PRCOI policies	Survey of policies of 20 high-impact public health journals
<i>Raniga (2020)</i>	Journal manuscripts	Radiology	Not reported	Prevalence of peer reviewers' reasons to decline to review due to COI	Survey of 9,366 reviewer responses to American Journal of Roentgenology
<i>Resnik (2017)</i>	Journal manuscripts	Public health and health systems	Any	Prevalence and content of journal PRCOI policies	Survey of policies of 227 public health journals
<i>Schneider (2020)</i>	Clinical guidelines	Cardiology	Not reported	Prevalence of PRCOI	Survey of disclosures of 105 reviewers from two European Society of Cardiology guidelines
<i>Schneider (2019)</i>	Funding applications	Mixed	Non-financial	Funders' experiences with PRCOI	Questionnaire of nine funding administrators from nine US institutions
<i>Schneider (2007)</i>	Journal manuscripts	Public health and health systems research	Any	Prevalence of published PRCOI declarations	Survey of declarations in 124 publications from 31 German health service research journals
<i>Schroter (2010)</i>	Funding applications	Mixed	Not reported	Prevalence of funders' PRCOI policies and peer reviewers' and funders' practices and experiences with PRCOI	Questionnaire of 258 reviewers and 29 national and international funding organisations
<i>Stöllberger (2018)</i>	Clinical guidelines	Cardiology	Not reported	Prevalence of PRCOI	Survey of disclosures of 125 reviewers in two European Society of Cardiology guidelines
<i>Talari (2022)</i>	Journal manuscripts	Mixed	Non-financial	Researchers' experiences with PRCOI	Questionnaire of 205 postgraduate medical trainees from India
<i>Teplitskiy (2018)</i>	Journal manuscripts	Neuroscience	Non-financial	Impact of PRCOI on reviewer recommendations	Survey of 24,022 reviewer reports on 7,881 manuscripts from one neuroscience journal
<i>Wang (2018)</i>	Clinical guidelines	Mixed	Any	Prevalence of published PRCOI declarations	Survey of declarations in 176 WHO guidelines
<i>Willis (2016)</i>	Journal manuscripts	Not reported <sup>^</sup>	Not reported	Prevalence of peer reviewers' reasons to decline to review due to PRCOI	Survey of 680 reviewer responses from one journal <sup>^</sup>
<i>Zhu (2019)</i>	Journal manuscripts	Mixed	Any	Prevalence of journal PRCOI policies and published declarations	Survey of declarations in 496 publications from 248 Chinese journals
<b>Mix-methods research</b>					
<i>Hendrick (2017)</i>	Journal manuscripts	Mixed	Any	Prevalence of journal policies and stakeholders' experiences with PRCOI	Survey of 21 journals, and interviews with 23 editors, 9 researchers, and 16 other stakeholders <sup>§</sup>
<i>Silva (2016)</i>	Journal manuscripts	Mixed	Any	Researchers' experiences with PRCOI	Questionnaire of 65 researchers from nine Brazilian universities

PRCOI: Peer reviewer conflicts of interest; WHO: World Health Organisation; ICMJE: International Committee of Medical Journal Editors

\* Any includes both financial and non-financial conflicts of interest.

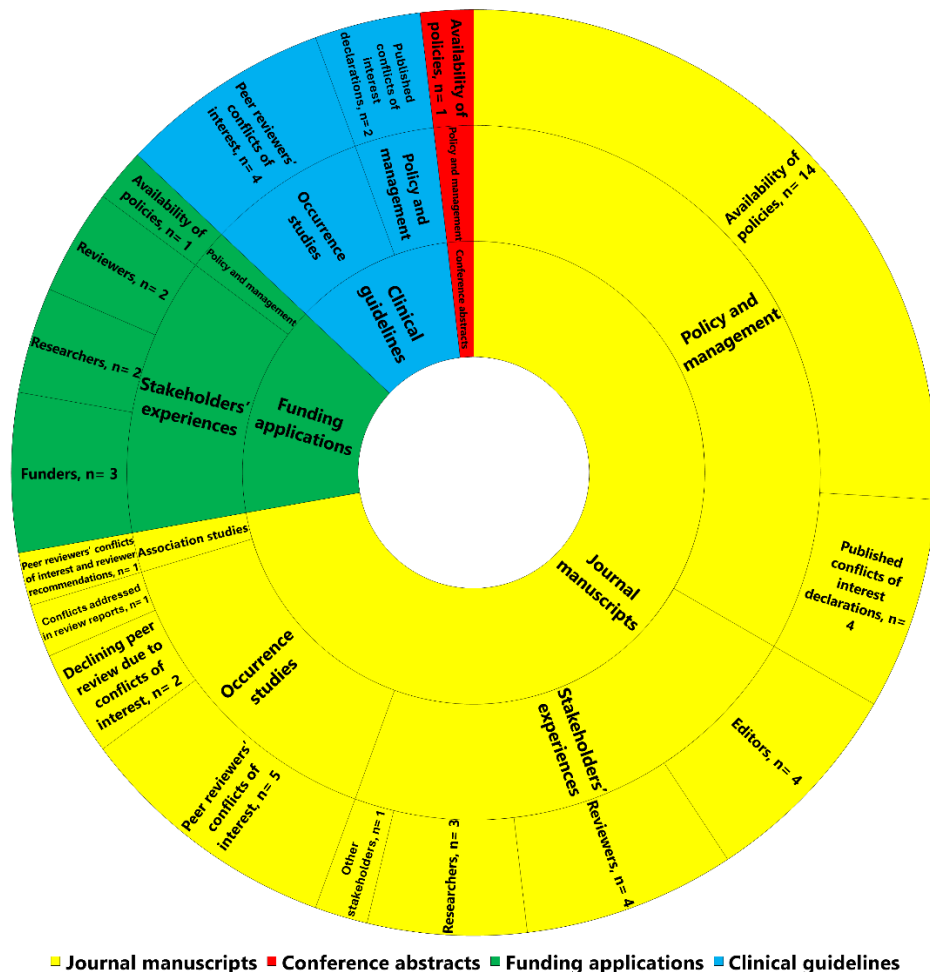
† Sample of journals includes physical sciences, engineering and life sciences.

‡ Sample includes biotechnology and life sciences.

¶ Sample includes health sciences, natural sciences, humanities, social sciences, and applied sciences.

<sup>^</sup> Reviewer sample is from "a journal published by John Wiley & Sons Ltd and owned by a professional medical society based in the United Kingdom, with affiliations to other international societies in the field".

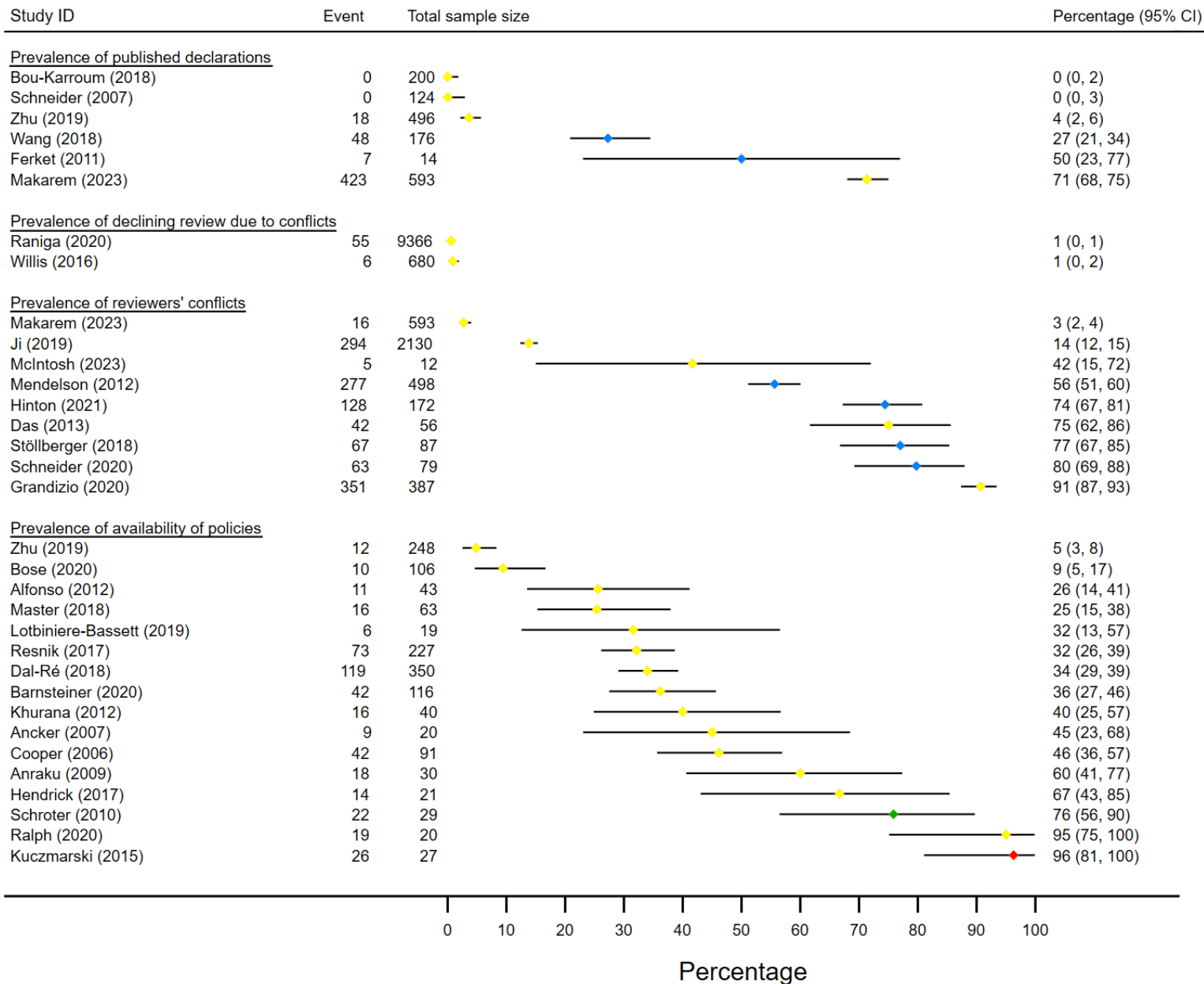
<sup>§</sup> Three publishers, four medical writers, one drug company representative, one tobacco company representative, one industry consultant, and six medical publishing critics.



**Figure 2. Aims of the 41 included studies for each of the four study domains**

The inner circle includes the four study domains, followed by overall aims, and the outer circle includes more specific study aims with the number of studies (n) for each particular aim. As some studies had multiple themes and aims (eg, experiences of both peer reviewers and editors), the sum of studies (ie, n) is more than the total number of included studies (ie, 41).





**Figure 3. Prevalence estimates related to peer reviewers' conflicts of interest**

The colours represent the four study domains: Journal manuscripts (yellow), Conference abstracts (red), Funding applications (green), and Clinical guidelines (blue).

## Supplementary appendix 1. Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
<b>TITLE</b>			
Title	1	Identify the report as a scoping review.	1
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2-3
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	5
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (eg, population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5
<b>METHODS</b>			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (eg, a Web address); and if available, provide registration information, including the registration number.	6
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (eg, years considered, language, and publication status), and provide a rationale.	6-7
Information sources*	7	Describe all information sources in the search (eg, databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	7-8
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	7
Selection of sources of evidence†	9	State the process for selecting sources of evidence (ie, screening and eligibility) included in the scoping review.	8
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (eg, calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	8-9
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	8-9
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	8
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	8-9
<b>RESULTS</b>			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	9-10
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	10
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	NA



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	10-13
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	10-13
<b>DISCUSSION</b>			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	13
Limitations	20	Discuss the limitations of the scoping review process.	14-15
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	15-16
<b>FUNDING</b>			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	17

**Supplementary appendix 2. Search strategy of electronic databases, registers and other sources**

Source	Search strategy	References
<b>Ovid MEDLINE(R) ALL</b> 1946 to January 15, 2024	(("Conflict of Interest"/) or (((vested or competing or conflict*) adj3 interest*).ti,ab.) or (((industry or financial) adj3 (interaction or collaboration or relation* or tie* or pay*)),ti,ab.) or ((institution* or intellectual or scholar* or academic* or personal or professional* or specialist* or financial or nonfinancial) adj3 (commitment* or association* or affiliation* or relation* or interest* or conflict*).ti,ab.) or (((declar* or disclos* or statement*) adj3 interest*).ti,ab.) AND (exp "peer review"/) or ((peer review* or reviewer* or reviewing or referee*).ti,ab.)	2,153
<b>Embase Classic + Embase</b> 1947 to January 15, 2024	(("Conflict of Interest"/) or (((vested or competing or conflict*) adj3 interest*).ti,ab.) or (((industry or financial) adj3 (interaction or collaboration or relation* or tie* or pay*)),ti,ab.) or ((institution* or intellectual or scholar* or academic* or personal or professional* or specialist* or financial or nonfinancial) adj3 (commitment* or association* or affiliation* or relation* or interest* or conflict*).ti,ab.) or (((declar* or disclos* or statement*) adj3 interest*).ti,ab.) AND (exp "peer review"/) or ((peer review* or reviewer* or reviewing or referee*).ti,ab.)	3,695
<b>The Cochrane Methodology Register (CMR)</b> until May 2012	Using the CMR keywords " <i>peer review – conflict of interest</i> " in one search and combining the following terms in the abstract search field in a second search: <i>peer review, conflict of interest</i> .	164
<b>Google® Scholar</b> , January 15, 2024	Search terms: " <i>peer review</i> " and " <i>conflicts of interest</i> ". Automatically sorted by relevance.	505,000 (first 200 screened)
<b>The Open Access Theses &amp; Dissertations</b> , January 15, 2024	Search 1: (conflicts of interest) AND (peer review), Filters: Medical sciences Search 2: (conflicts of interest) AND ("peer review") Search 3: (conflicts of interest) AND (peer review), Filters: Nursing Search 4: (conflicts of interest) AND (peer review), Filters: Health Care Sciences Search 5: (conflicts of interest) AND (peer review), Filters: Psychology Search 6: ("conflicts of interest") AND (peer review) Search 7: "conflicts of interest"	357 1,614 959 652 1,168 89 855
<b>The Proquest Dissertations &amp; Theses Global</b> , January 15, 2024	Search 1: ((abstract(Conflicts of Interest) OR abstract(conflict of interest) OR abstract(competing interests)) AND abstract(peer review) OR abstract(referee) OR abstract(peer-review) OR abstract(peer reviewer)) AND diskw.Exact("Grant peer review process" OR "Online peer review" OR "Peer reviewers" OR "conflicts of interests" OR "Peer review process" OR "Conflicts of Interest" OR "Peer review checklist" OR "Peer reviewing" OR "Conflicts of interest" OR "peer review/ratings" OR "Peer reviews" OR "Potential conflicts of interest" OR "Enhanced Peer Review" OR "E-peer review" OR "Peer Review" OR "Grants peer review process" OR "Conflicts of interest and disclosures" OR "Conflicts of interests" OR "Personal conflicts of interest" OR "Financial conflicts of interest" OR "Editorial peer review" OR "Nursing peer review" OR "Peer-review evaluation" OR "peer review" OR "Digital peer review" OR "Peer review guidelines" OR "Peer review" OR "Peer-review" OR "Organizational conflicts of interest" OR "Nurse peer review" OR "Peer review groups")  Search 2: ((abstract(Conflicts of Interest) OR abstract(conflict of interest) OR abstract(competing interests)) AND abstract(peer review) OR abstract(referee) OR abstract(peer-review) OR abstract(peer reviewer)) Automatically sorted by relevance.  Search 3: ((abstract(Conflicts of Interest) OR abstract(conflict of interest) OR abstract(competing interests)) OR abstract(peer review) OR abstract(referee) OR abstract(peer-review) OR abstract(peer reviewer))  Search 4: ((abstract(Conflicts of Interest) OR abstract(conflict of interest) OR abstract(competing interests)) OR abstract(peer review) OR abstract(referee) OR abstract(peer-review) OR abstract(peer reviewer)) AND subjects:	168  1,955 (first 200 screened)  24,124 (first 200 screened)  1,184 (first 200 screened)

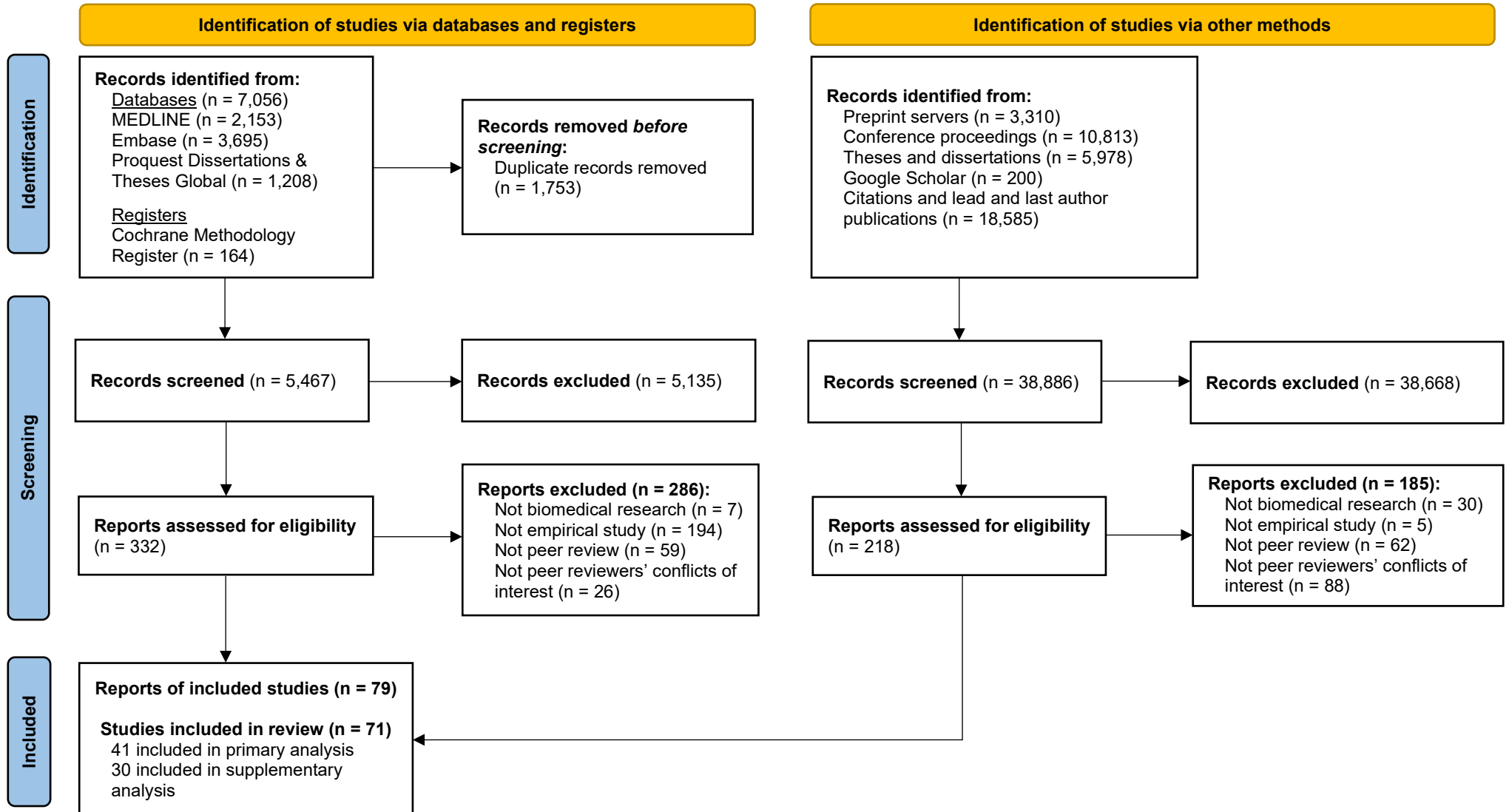
	(clinical psychology OR public health OR nursing OR psychotherapy OR developmental psychology OR psychology OR mental health OR medicine OR behavioral psychology OR health education OR ethics OR research) Automatically sorted by relevance.  Search 5: ((abstract(Conflicts of Interest) OR abstract(conflict of interest) OR abstract(competing interests)) OR abstract(peer review) OR abstract(referee) OR abstract(peer-review) OR abstract(peer reviewer)) AND subjects: (clinical psychology OR public health OR nursing OR psychotherapy OR developmental psychology OR psychology OR mental health OR medicine OR behavioral psychology OR health education OR social research OR social psychology OR sociology OR ethics OR research)	440
<b>The Networked Digital Library of Theses and Dissertations</b> , January 15, 2024	Search 1: Subject: "peer review" AND "conflicts of interest" Search 2: Title: "Peer review"  Search 3: reviewers OR "peer review" or referees AND "conflicts of interest" Search 4: "conflicts of interest" or "conflict of interest" or "conflict of interests" AND peer review Search 5: journal publishing AND peer review AND conflicts of interest	15 166,362 (first 200 screened) 7 35 27
<b>MedRxiv</b> , January 15, 2024	(All collections) Search 1: Title: peer review [phrase] Search 2: Abstract or title: peer review [phrase] Search 3: Abstract or title: conflicts of interest [phrase]	6 323 1,379
<b>Open Science Framework</b> , January 15, 2024	Search 1: "peer review" OR "Peer reviewer" OR referee OR reviewer Search 2: "conflicts of interest" OR "peer review"	191 150
<b>bioRxiv</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "Peer reviewer" OR referee OR reviewer	35 34
<b>PsyArXiv</b> , January 15, 2024	Search 1: "peer review" OR "Peer reviewer" OR referee OR reviewer Search 2: "conflicts of interest" OR "peer review"	109 111
<b>Preprints.org</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "Peer reviewer" OR referee OR reviewer	24 25
<b>PeerJ</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "Peer reviewer" OR referee OR reviewer	31 27
<b>MetaArXiv</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "Peer reviewer" OR referee OR reviewer	42 35
<b>sportRxiv</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "Peer reviewer" OR referee OR reviewer	1 3
<b>NutriXiv</b> , January 15, 2024	conflicts of interest OR peer review or referee	20
<b>SocArXiv</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "peer reviewer" OR referee OR reviewer	73 81
<b>arXiv</b> , January 15, 2024	Search 1: "conflicts of interest" OR "peer review" Search 2: "peer review" OR "peer reviewer" OR referee OR reviewer Automatically sorted by relevance.	410 4,318 (First 200 screened)
<b>Cochrane Colloquia (1994-2023)</b>	Posters ( <a href="https://abstracts.cochrane.org/search/site?f%5B0%5D=field_abstract_type%3A2">https://abstracts.cochrane.org/search/site?f%5B0%5D=field_abstract_type%3A2</a> ) Oral ( <a href="https://abstracts.cochrane.org/search/site?f%5B0%5D=field_abstract_type%3A1">https://abstracts.cochrane.org/search/site?f%5B0%5D=field_abstract_type%3A1</a> )	4,961 3,002

<b>PEERE International Conference on Peer Reviews</b> , January 15, 2024	Publications ( <a href="https://www.peere.org/category/publications/">https://www.peere.org/category/publications/</a> )	40
	Presentations ( <a href="https://www.peere.org/dissemination/presentations/">https://www.peere.org/dissemination/presentations/</a> )	132
<b>Evidence Live</b> , January 15, 2024	2018 ( <a href="https://ebmlive.org/evidence-live-2018/">https://ebmlive.org/evidence-live-2018/</a> ), the link is not working. Some identified elsewhere ( <a href="https://ebm.bmj.com/content/23/Suppl_1">https://ebm.bmj.com/content/23/Suppl_1</a> )	65
	2017 ( <a href="https://ebmlive.org/wp-content/uploads/2017/05/Oral-Abstracts.pdf">https://ebmlive.org/wp-content/uploads/2017/05/Oral-Abstracts.pdf</a> ), the link is not working.	0
	2016 ( <a href="https://ebmlive.org/evidence-live-2016-poster-abstracts/">https://ebmlive.org/evidence-live-2016-poster-abstracts/</a> ), ( <a href="https://ebmlive.org/wednesday-22nd-june/">https://ebmlive.org/wednesday-22nd-june/</a> ), ( <a href="https://ebmlive.org/thursday-23rd-june/">https://ebmlive.org/thursday-23rd-june/</a> ), and ( <a href="https://ebmlive.org/friday-24th-june/">https://ebmlive.org/friday-24th-june/</a> )	100
	2015 ( <a href="https://ebmlive.org/evidence-live-2015-poster/">https://ebmlive.org/evidence-live-2015-poster/</a> )	76
	2013 ( <a href="https://web.archive.org/web/20150508191621/">https://web.archive.org/web/20150508191621/</a> ), ( <a href="http://www.evidence-live.com/2013/posters">http://www.evidence-live.com/2013/posters</a> )	232
	2011 ( <a href="https://web.archive.org/web/20150504113404/">https://web.archive.org/web/20150504113404/</a> ), ( <a href="http://www.evidence-live.com/2011/posters">http://www.evidence-live.com/2011/posters</a> )	88
	2010 ( <a href="https://web.archive.org/web/20150504110336/">https://web.archive.org/web/20150504110336/</a> ) ( <a href="http://www.evidence-live.com/2010/posters">http://www.evidence-live.com/2010/posters</a> )	36
<b>World Conferences on Research Integrity</b> , until January 15, 2024	2007 ( <a href="https://wcrif.org/wcri2007">https://wcrif.org/wcri2007</a> )	65
	2010 ( <a href="https://wcrif.org/wcri2010">https://wcrif.org/wcri2010</a> )	76
	2013 ( <a href="https://wcrif.org/wcri2013">https://wcrif.org/wcri2013</a> )	186
	2015 ( <a href="https://wcrif.org/wcri2015">https://wcrif.org/wcri2015</a> )	175
	2017 ( <a href="https://wcrif.org/documents/41-abstract-book-5th-wcri-2017/file">https://wcrif.org/documents/41-abstract-book-5th-wcri-2017/file</a> )	257
	2019 ( <a href="https://wcrif.org/images/2019/PDF/Abstract_book.pdf">https://wcrif.org/images/2019/PDF/Abstract_book.pdf</a> )	300
2022 ( <a href="https://www.wcri2022.org/wp-content/uploads/2022/05/WCRI-Abstract_Book_V2.pdf">https://www.wcri2022.org/wp-content/uploads/2022/05/WCRI-Abstract_Book_V2.pdf</a> )	260	
<b>Congress on Peer Review and Scientific Publication</b> , until January 15, 2024	2022 ( <a href="https://peerreviewcongress.org/wp-content/uploads/2022/11/Program2022.pdf">https://peerreviewcongress.org/wp-content/uploads/2022/11/Program2022.pdf</a> )	180
	2017 ( <a href="https://peerreviewcongress.org/wp-content/uploads/2020/07/program_2017.pdf">https://peerreviewcongress.org/wp-content/uploads/2020/07/program_2017.pdf</a> )	134
	2013 ( <a href="https://peerreviewcongress.org/peer-review-congress-2013-program/">https://peerreviewcongress.org/peer-review-congress-2013-program/</a> )	110
	2009 ( <a href="https://peerreviewcongress.org/peer-review-congress-2009-program/">https://peerreviewcongress.org/peer-review-congress-2009-program/</a> )	110
	2005 ( <a href="https://peerreviewcongress.org/peer-review-congress-2005-program/">https://peerreviewcongress.org/peer-review-congress-2005-program/</a> )	64
	2001 ( <a href="https://peerreviewcongress.org/peer-review-congress-2001-program/">https://peerreviewcongress.org/peer-review-congress-2001-program/</a> )	106
	1997 ( <a href="https://peerreviewcongress.org/peer-review-congress-1997-program/">https://peerreviewcongress.org/peer-review-congress-1997-program/</a> )	93
	1993 ( <a href="https://peerreviewcongress.org/wp-content/uploads/old_site/pdf/1993/program_1993.pdf">https://peerreviewcongress.org/wp-content/uploads/old_site/pdf/1993/program_1993.pdf</a> ): Link not working	0
1989 ( <a href="https://peerreviewcongress.org/wp-content/uploads/old_site/pdf/1989/program_1989.pdf">https://peerreviewcongress.org/wp-content/uploads/old_site/pdf/1989/program_1989.pdf</a> )	45	

### Supplementary appendix 3. Data extraction form

Category	Information	Description
General information	Authors	Name of corresponding, first and last author or organisation if no authors are listed.
	Author's affiliations	Verbatim.
	Affiliation	Was the corresponding author affiliated with a university or other investigated organisations (eg, journal, funding organization, government)?
	Country	Country of corresponding and subsequently all authors
	Study reference	DOI or URL.
	Title	Verbatim.
	Year	Year of publication.
	Name of publication platform	Name of journal, conference proceeding, higher education facility, or preprint server.
	Type of document	Journal publication, preprint, conference abstract, thesis, published protocol, registered study title.
	Citations	Number of publication citations, and first and last author publications, and citations
	Authors' conflicts of interest	Declarations from all authors, verbatim.
	Study funding	Verbatim.
	Role of the funder	Verbatim.
	Study methodology	Conflicts of interest definition in study
Peer review definition in study		Verbatim.
Type of conflicts of interest in study		Financial, non-financial, both or not reported.
Study aims and objectives		Verbatim
Peer reviewer's conflicts of interest as aim		Peer reviewers' conflicts of interest investigated as: primary, non-primary or not a part of aim (ie, need to be stated as part of the study aims, study objectives or described in the data extraction or data analysis sections.)
Data collection method(s)		Verbatim methods description from study
Study design		Questionnaire, survey, interviews, focus groups or mixed methods
Study domain		Journal manuscripts, conference abstracts, theses or dissertations, funding organisations, clinical guidelines, or mixed.
Type of peer review		Open, single-blind, double-blind, mixed, or not reported.
Biomedical discipline		Eg, cardiology, nursing, public health, or psychology.
Area of science		ie, biomedical, or multidisciplinary science
Outcome		Eg, policy prevalence, peer reviewer conflicts of interest prevalence, the association between conflicts of interest and editorial outcomes, reasons for retraction, reasons for reviewer decline, reviewer's, editor's, researcher's or funder's experiences, the prevalence of published declarations of peer reviewers' conflicts of interest.
Study results		Sample size
	Unit of analysis	Eg, Reviewers, editors, journals or journal policies
	Study results	Key study results (eg, the prevalence of peer reviewers' conflicts of interest or association between conflicts of interest and reviewer recommendations).

Supplementary appendix 4. PRISMA flow diagram illustrating study inclusion



## Supplementary appendix 5. Reference list of the 30 included studies in supplementary analyses

1. Davis CH, Bass BL, Behrns KE, et al. Reviewing the review: a qualitative assessment of the peer review process in surgical journals. *Res Integr Peer Rev*. 2018;3(101676020):4. doi:10.1186/s41073-018-0048-0
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7. Sanchez E., Rossi F. Concerns on who guidelines of treating and preventing HIV infection. In: *Value in Health*. Vol 18. Elsevier Ltd; 2015:A247.
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13. Yang L., Wang P., Yang R. Conflict of interest reporting in biomedical journals published in China. *Account Res*. 2017;24(8):451-457. doi:10.1080/08989621.2017.1392246
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15. Bonn NA, Pinxten W. Rethinking success, integrity, and culture in research (part 1) — a multi-actor qualitative study on success in science. *Res Integr Peer Rev*. 2021;6(1):1. doi:10.1186/s41073-020-00104-0
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17. Taichman D, Jackson J, Cotton D, et al. Misuse of Received Manuscripts by Peer Reviewers: A Cross-sectional Survey. In: *The 9th International Congress on Peer Review and Scientific Publication*. American Medical Association; 2022. Accessed July 6, 2023. <https://peerreviewcongress.org/abstract/misuse-of-received-manuscripts-by-peer-reviewers-a-cross-sectional-survey/>
18. Emden C, Schubert S. Manuscript reviewing: What reviewers have to say. *Contemp Nurse*. 1998;7(3):117-124. doi:10.5172/conu.1998.7.3.117
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## Supplementary appendix 6. List of 471 excluded studies (by full text) with reasons for exclusion

Author, year	DOI or link	Title	Reason for exclusion
Abdel-Raziq 2022	<a href="https://doi.org/10.1016/j.amims.2021.10.016">https://doi.org/10.1016/j.amims.2021.10.016</a>	Deconstructing Bias in Academia: Retracted Publications on Gender and Medicine	Not empirical study
Abdoul 2012	<a href="https://doi.org/10.1371/journal.pone.0046054">https://doi.org/10.1371/journal.pone.0046054</a>	Peer Review of Grant Applications: Criteria Used and Qualitative Study of Reviewer Practices	Not peer reviewers' conflicts of interest
Ackerman 2005	<a href="https://dx.doi.org/10.1016/j.iaad.2004.10.010">https://dx.doi.org/10.1016/j.iaad.2004.10.010</a>	Reviewer conflicts of interest should be disclosed	Not empirical study
Adler 2017	<a href="https://dx.doi.org/10.1001/jama.2017.9186">https://dx.doi.org/10.1001/jama.2017.9186</a>	Bias among peer reviewers	Not empirical study
Aitken 2003	<a href="https://doi.org/10.1179/107735203800328885">https://doi.org/10.1179/107735203800328885</a>	WHO handling of conflicts of interest.	Not empirical study
Al Aboud 2005	<a href="https://pubmed.ncbi.nlm.nih.gov/16435047/">https://pubmed.ncbi.nlm.nih.gov/16435047/</a>	Editors of dermatological journals	Not empirical study
Alhazzani 2018	<a href="https://dx.doi.org/10.1007/s00134-018-5367-6">https://dx.doi.org/10.1007/s00134-018-5367-6</a>	Conflicts of interest disclosure forms and management in critical care clinical practice guidelines	Not peer review
Allum 2022	<a href="https://osf.io/preprints/metaarxiv/fqy7c/">https://osf.io/preprints/metaarxiv/fqy7c/</a>	Researchers on research integrity: a survey of European and American researchers	Not peer review
Alpert 2007	<a href="https://dx.doi.org/10.1016/j.amimed.2007.02.013">https://dx.doi.org/10.1016/j.amimed.2007.02.013</a>	Peer review: the best of the blemished?	Not empirical study
Altieri 2017	<a href="https://dx.doi.org/10.1016/j.surg.2017.01.010">https://dx.doi.org/10.1016/j.surg.2017.01.010</a>	Surgeons' perceptions on industry relations: A survey of 822 surgeons	Not peer review
Altman 2013	<a href="https://dx.doi.org/10.1136/bmj.f4796">https://dx.doi.org/10.1136/bmj.f4796</a>	Declaration of transparency for each research article	Not empirical study
Anderson 2007	<a href="https://dx.doi.org/10.1021/es072457f">https://dx.doi.org/10.1021/es072457f</a>	Conflict of interest	Not empirical study
Angelski 2012	<a href="https://bmcmedethics.biomedcentral.com/articles/10.1186/1472-6939-13-4">https://bmcmedethics.biomedcentral.com/articles/10.1186/1472-6939-13-4</a>	The publication of ethically uncertain research: attitudes and practices of journal editors	Not peer review
Annane 2019	<a href="https://dx.doi.org/10.1007/s00134-018-5458-4">https://dx.doi.org/10.1007/s00134-018-5458-4</a>	Academic conflict of interest	Not empirical study
Annals of Emergency Medicine 2020	<a href="https://dx.doi.org/10.1016/j.annemergmed.2020.07.033">https://dx.doi.org/10.1016/j.annemergmed.2020.07.033</a>	Journal Performance Report	Not empirical study
Anonymous 1998	<a href="https://www.nature.com/articles/nbt0598-395a.pdf">https://www.nature.com/articles/nbt0598-395a.pdf</a>	NIH peer review: time for some changes	Not empirical study
Armstrong 2016	<a href="https://dx.doi.org/10.1007/s11657-016-0260-9">https://dx.doi.org/10.1007/s11657-016-0260-9</a>	Quality assessment of osteoporosis clinical practice guidelines for physical activity and safe movement: an AGREE II appraisal	Not peer review
Arteaga-Livias 2019	<a href="https://dx.doi.org/10.17843/rpmesp.2019.364.4739">https://dx.doi.org/10.17843/rpmesp.2019.364.4739</a>	[Editorial endogamy in the Revista Peruana de Medicina Experimental y Salud Publica].	Not peer review
Asapbio 2018	<a href="https://asapbio.org/peer-review/survey">https://asapbio.org/peer-review/survey</a>	Peer review survey results	Not empirical study
Aspura 2018	<a href="https://doi.org/10.1007/s11192-018-2720-z">https://doi.org/10.1007/s11192-018-2720-z</a>	An analysis of Malaysian retracted papers: Misconduct or mistakes?	Not peer reviewers' conflicts of interest
Audisio 2022	<a href="https://doi.org/10.1016/j.ijcard.2021.12.021">https://doi.org/10.1016/j.ijcard.2021.12.021</a>	A survey of retractions in the cardiovascular literature	Not peer reviewers' conflicts of interest
Baas 2019	<a href="https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3339568">https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3339568</a>	When Peer Reviewers Go Rogue - Estimated Prevalence of Citation Manipulation by Reviewers Based on the Citation Patterns of 69,000 Reviewers	Not peer reviewers' conflicts of interest
Baggs 2003	<a href="https://doi.org/10.1002/nur.10076">https://doi.org/10.1002/nur.10076</a>	Editors and conflict of interest	Not empirical study
Bakthavachalam 2021	<a href="https://doi.org/10.1007/s11192-021-03895-1">https://doi.org/10.1007/s11192-021-03895-1</a>	Retracted articles in the biomedical literature from Indian authors	Not peer reviewers' conflicts of interest
Banal-Estano 2019	<a href="https://doi.org/10.1016/j.respol.2019.04.008">https://doi.org/10.1016/j.respol.2019.04.008</a>	Evaluation in research funding agencies: Are structurally diverse teams biased against?	Not peer reviewers' conflicts of interest
Barbour 2008	<a href="https://dx.doi.org/10.1371/journal.pmed.0050199">https://dx.doi.org/10.1371/journal.pmed.0050199</a>	Making sense of non-financial competing interests	Not empirical study
Barnes 2018	<a href="https://dx.doi.org/10.1016/j.bja.2018.07.027">https://dx.doi.org/10.1016/j.bja.2018.07.027</a>	Unacceptable conflicts of interest	Not empirical study
Barnett 2017	<a href="https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-017-0040-0">https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-017-0040-0</a>	Using democracy to award research funding: an observational study	Not peer review
Barnett 2014	<a href="https://eprints.qut.edu.au/77513/">https://eprints.qut.edu.au/77513/</a>	Including or excluding conflicts of interest among expert peer reviewers had little impact on funding success, a case study from Australia.	Not peer review
Bartelmann 2020	<a href="https://dx.doi.org/10.1111/jep.13166">https://dx.doi.org/10.1111/jep.13166</a>	Impact of pharmaceutical industry involvement in the external review of clinical practice guidelines-A case study	Not empirical study
Barrios 2018	<a href="https://dx.doi.org/10.1371/journal.pone.0204993">https://dx.doi.org/10.1371/journal.pone.0204993</a>	Analysis of the conflicts of interest disclosed by the program reviewers of the scoliosis research society (SRS) congresses, 2010-2014	Not peer review
Baždarić 2021	<a href="https://doi.org/10.1371/journal.pone.0244529">https://doi.org/10.1371/journal.pone.0244529</a>	Attitudes and practices of open data, preprinting, and peer-review—A cross sectional study on Croatian scientists	Not peer reviewers' conflicts of interest
Beddoes 2022	<a href="https://doi.org/10.1080/02691728.2022.2111669">https://doi.org/10.1080/02691728.2022.2111669</a>	The Influence of Disciplinary Origins on Peer Review Normativities in a New Discipline	Not peer reviewers' conflicts of interest
Bekelman 2003	<a href="https://dx.doi.org/10.1001/jama.289.4.454">https://dx.doi.org/10.1001/jama.289.4.454</a>	Scope and impact of financial conflicts of interest in biomedical research: A systematic review	Not peer review
Bence 2004	<a href="https://doi.org/10.1177/0165551504045854">https://doi.org/10.1177/0165551504045854</a>	The influence of peer review on the research assessment exercise	Not peer reviewers' conflicts of interest
Bennett 2016	<a href="https://dx.doi.org/10.1111/jcpp.12547">https://dx.doi.org/10.1111/jcpp.12547</a>	Practitioner Review: On the trustworthiness of clinical practice guidelines - a systematic review of the quality of methods used to develop guidelines in child and youth mental health	Not peer reviewers' conflicts of interest
Bennett 2011	<a href="https://dx.doi.org/10.1007/s11606-011-1730-9">https://dx.doi.org/10.1007/s11606-011-1730-9</a>	Systematic review of clinical practice guidelines on the pharmacologic treatment of type 2 diabetes mellitus: Are guidelines evidence-based?	Not peer reviewers' conflicts of interest
Benos 2005	<a href="https://dx.doi.org/10.1152/advan.00056.2004">https://dx.doi.org/10.1152/advan.00056.2004</a>	Ethics and scientific publication	Not empirical study

Berdahl 2022	<a href="https://dx.doi.org/10.1002/emp2.12680">https://dx.doi.org/10.1002/emp2.12680</a>	The impact of mandatory conflict of interest disclosures on editors' manuscript acceptance decisions: A cross-sectional observational study.	Not peer review
Berger 2008	<a href="https://doi.org/10.1016/j.annemergmed.2008.03.010">https://doi.org/10.1016/j.annemergmed.2008.03.010</a>	Leak: Avandia and the integrity of the peer review process	Not empirical study
Bero 1992	<a href="https://doi.org/10.1056/NEJM199210153271606">https://doi.org/10.1056/NEJM199210153271606</a>	The Publication of Sponsored Symposia in Medical Journals	Not peer reviewers' conflicts of interest
Bertholf 2021	<a href="https://dx.doi.org/10.1093/LABMED/LMAA093">https://dx.doi.org/10.1093/LABMED/LMAA093</a>	Scientific evidence, medical practice, and the insidious danger of anecdotal reports	Not empirical study
Bhatt 2021	<a href="https://doi.org/10.1007/s11192-021-03895-1">https://doi.org/10.1007/s11192-021-03895-1</a>	A multi-perspective analysis of retractions in life sciences	Not peer review
Billi 2010	<a href="https://dx.doi.org/10.1161/CIRCULATIONAHA.110.970962">https://dx.doi.org/10.1161/CIRCULATIONAHA.110.970962</a>	Part 4: Conflict of interest management before, during, and after the 2010 International Consensus Conference on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations	Not empirical study
Biros 1999	<a href="https://doi.org/10.1111/j.1553-2712.1999.tb01218.x">https://doi.org/10.1111/j.1553-2712.1999.tb01218.x</a>	Research fundamentals VI: misconduct in biomedical research.	Not empirical study
Blackburn 2006	<a href="https://journals.sagepub.com/doi/10.1111/j.1467-9280.2006.01715.x">https://journals.sagepub.com/doi/10.1111/j.1467-9280.2006.01715.x</a>	An Examination of Sources of Peer-Review Bias	Not peer reviewers' conflicts of interest
Blum 2009	<a href="https://doi.org/10.1001/jama.2009.1669">https://doi.org/10.1001/jama.2009.1669</a>	Requirements and Definitions in Conflict of Interest Policies of Medical Journals	Not peer review
Bočina 2022	<a href="https://peerreviewcongress.org/abstract/analysis-of-articles-retracted-because-of-conflicts-of-interest-in-the-retraction-watch-database/">https://peerreviewcongress.org/abstract/analysis-of-articles-retracted-because-of-conflicts-of-interest-in-the-retraction-watch-database/</a>	Analysis of Articles Retracted Because of Conflicts of Interest in the Retraction Watch Database	Not peer review
Bornmann 2006a	<a href="https://doi.org/10.1016/j.joi.2006.09.005">https://doi.org/10.1016/j.joi.2006.09.005</a>	Gatekeepers of science—Effects of external reviewers' attributes on the assessments of fellowship applications	Not peer reviewers' conflicts of interest
Bornmann 2006b	<a href="https://doi.org/10.1016/j.joi.2008.05.003">https://doi.org/10.1016/j.joi.2008.05.003</a>	Latent Markov modelling applied to grant peer review	Not peer reviewers' conflicts of interest
Bornmann 2005a	<a href="https://doi.org/10.3152/147154405781776283">https://doi.org/10.3152/147154405781776283</a>	Committee peer review at an international research foundation: predictive validity and fairness of selection decisions on post-graduate fellowship applications	Not peer reviewers' conflicts of interest
Bornmann 2005b	<a href="https://psycnet.apa.org/doi/10.1111/j.1468-2389.2005.00326.x">https://psycnet.apa.org/doi/10.1111/j.1468-2389.2005.00326.x</a>	Criteria Used by a Peer Review Committee for Selection of Research Fellows: A Boolean Probit Analysis.	Not peer reviewers' conflicts of interest
Bornmann 2005c	<a href="https://doi.org/10.1007/s11192-005-0214-2">https://doi.org/10.1007/s11192-005-0214-2</a>	Selection of research fellowship recipients by committee peer review. Reliability, fairness and predictive validity of Board of Trustees' decisions	Not peer reviewers' conflicts of interest
Bössel-Debbert 2023	<a href="https://osf.io/preprints/psyarxiv/bza29">https://osf.io/preprints/psyarxiv/bza29</a>	An analysis of functional relationships between systemic conditions and unethical behavior in German academia	Not peer reviewers' conflicts of interest
Brandt 2012	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3490543/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3490543/</a>	Inventing conflicts of interest: a history of tobacco industry tactics	Not empirical study
Bravo 2019	<a href="https://doi.org/10.1038/s41467-018-08250-2">https://doi.org/10.1038/s41467-018-08250-2</a>	The effect of publishing peer review reports on referee behavior in five scholarly journals	Not biomedical research
Brems 2021	<a href="https://doi.org/10.1371/journal.pone.0249267">https://doi.org/10.1371/journal.pone.0249267</a>	Analysis of conflict of interest policies among organizations producing clinical practice guidelines	Not peer review
Brezis 2020	<a href="https://doi.org/10.1007/s11192-020-03348-1">https://doi.org/10.1007/s11192-020-03348-1</a>	Arbitrariness in the peer review process	Not biomedical research
Broga 2014	<a href="https://doi.org/10.1007/s11948-013-9431-x">https://doi.org/10.1007/s11948-013-9431-x</a>	Publication Ethics in Biomedical Journals from Countries in Central and Eastern Europe	Not peer reviewers' conflicts of interest
Brown 2022	<a href="https://doi.org/10.5195/jmla.2022.1280">https://doi.org/10.5195/jmla.2022.1280</a>	Retracted publications in pharmacy systematic reviews	Not peer reviewers' conflicts of interest
Bruton 2017	<a href="https://doi.org/10.1177/1747016117739940">https://doi.org/10.1177/1747016117739940</a>	What's it to me? Self-interest and evaluations of financial conflicts of interest	Not peer review
Bunner 2012	<a href="https://dx.doi.org/10.1016/j.ajic.2012.05.012">https://dx.doi.org/10.1016/j.ajic.2012.05.012</a>	Assessing the quality of the peer review process: Author and editorial board member perspectives	Not peer reviewers' conflicts of interest
Buttliere 2016	<a href="https://osf.io/972eu/">https://osf.io/972eu/</a>	Psychological researchers' views on peer review: a forward focused survey.	Not biomedical research
Butzer 2020	<a href="https://doi.org/10.1016/j.explore.2019.12.010">https://doi.org/10.1016/j.explore.2019.12.010</a>	Bias in the Evaluation of Psychology Studies: A Comparison of Parapsychology Versus Neuroscience	Not biomedical research
Callahan 2003	<a href="https://dx.doi.org/10.1067/mem.2003.42">https://dx.doi.org/10.1067/mem.2003.42</a>	Journal policy on ethics in scientific publication	Not empirical study
Campbell 2006	<a href="https://dx.doi.org/10.1056/NEJMsa061457">https://dx.doi.org/10.1056/NEJMsa061457</a>	Financial relationships between institutional review board members and industry	Not peer review
Campos-Varela 2019	<a href="https://doi.org/10.1016/j.gaceta.2018.01.009">https://doi.org/10.1016/j.gaceta.2018.01.009</a>	Misconduct as the main cause for retraction. A descriptive study of retracted publications and their authors	Not peer reviewers' conflicts of interest
Candal-Pedreira 2022	<a href="https://doi.org/10.1080/08989621.2022.2080549">https://doi.org/10.1080/08989621.2022.2080549</a>	Evolution and characterization of health sciences paper retractions in Brazil and Portugal	Not peer review
Cappai 2015	<a href="https://dx.doi.org/10.5214/ans.0972.7531.220202">https://dx.doi.org/10.5214/ans.0972.7531.220202</a>	Peer review of grant funding - The Australian perspective	Not empirical study
Catto 2015	<a href="https://dx.doi.org/10.1016/j.eururo.2014.08.017">https://dx.doi.org/10.1016/j.eururo.2014.08.017</a>	European urology: Serving our readership through systematic peer review, use of reporting standards, and encouragement of postpublication review	Not empirical study
Cengher 2023	<a href="https://dx.doi.org/10.1002/iaba.1033">https://dx.doi.org/10.1002/iaba.1033</a>	Editors' perspectives on the selection of reviewers and the quality of reviews	Not biomedical research
Chamber 2019	<a href="https://doi.org/10.1111/1471-0528.15689">https://doi.org/10.1111/1471-0528.15689</a>	Plagiarism and data falsification are the most common reasons for retracted publications in obstetrics and gynaecology	Not peer reviewers' conflicts of interest
Charlton 2004	<a href="https://dx.doi.org/10.1016/j.mehy.2004.06.001">https://dx.doi.org/10.1016/j.mehy.2004.06.001</a>	Conflicts of interest in medical science: Peer usage, peer review and 'Col consultancy'	Not empirical study
Chauvin 2019	<a href="https://doi.org/10.1097/MEJ.0000000000000491">https://doi.org/10.1097/MEJ.0000000000000491</a>	A systematic review of retracted publications in emergency medicine	Not peer reviewers' conflicts of interest
Chen 2018	<a href="https://doi.org/10.1007/s11192-017-2565-x">https://doi.org/10.1007/s11192-017-2565-x</a>	Retracted publications in the biomedical literature with authors from mainland China	Not peer reviewers' conflicts of interest
Chen 2015	<a href="https://dx.doi.org/10.1136/bmjopen-2015-008099">https://dx.doi.org/10.1136/bmjopen-2015-008099</a>	Clinical practice guidelines for hypertension in China: A systematic review of the methodological quality	Not peer review

Cheng 2013	<a href="https://tdr.lib.ntu.edu.tw/handle/123456789/6386">https://tdr.lib.ntu.edu.tw/handle/123456789/6386</a>	Conflict of Interest in Biomedical Researches	Not peer review
Chengappa 2017	<a href="https://doi.org/10.1016/j.ekir.2020.12.014">https://doi.org/10.1016/j.ekir.2020.12.014</a>	Self-reported Financial Conflict of Interest in Nephrology Clinical Practice Guidelines	Not peer review
Chikritzhs 2010	<a href="https://dx.doi.org/10.1111/j.1360-0443.2009.02743.x">https://dx.doi.org/10.1111/j.1360-0443.2009.02743.x</a>	Protecting the integrity of shared scientific knowledge: is the conflict of interest statement enough?	Not empirical study
Chirico 2021	<a href="https://dx.doi.org/10.4103/picr.PICR_363_20">https://dx.doi.org/10.4103/picr.PICR_363_20</a>	Declaration of conflict of interest for reviewers in time of COVID-19 should be mandatory	Not empirical study
Chirumbolo 2017	<a href="https://dx.doi.org/10.1016/j.ejim.2017.01.018">https://dx.doi.org/10.1016/j.ejim.2017.01.018</a>	Peer reviewing and Editor's decision should never be a personal conflicting matter	Not empirical study
Cho 2013	<a href="https://annals.edu.sg/proceedings-of-47th-singapore-malaysia-congress-of-medicine-2013/">https://annals.edu.sg/proceedings-of-47th-singapore-malaysia-congress-of-medicine-2013/</a>	Singapore Malaysia Congress of Medicine 2013, Managing Conflicts of Interest in Medicine	Not empirical study
Cho 2000	<a href="https://doi.org/10.1001/jama.284.17.2203">https://doi.org/10.1001/jama.284.17.2203</a>	Policies on Faculty Conflicts of Interest at US Universities	Not peer review
Chu 2019	<a href="https://dx.doi.org/10.12809/hkir.1916453">https://dx.doi.org/10.12809/hkir.1916453</a>	Striving for best practices in journal publishing	Not empirical study
Cicchetti 1976	<a href="https://api.semanticscholar.org/CorpusID:14811330">https://api.semanticscholar.org/CorpusID:14811330</a>	A Statistical Analysis of Reviewer Agreement and Bias in Evaluating Medical Abstracts	Not peer reviewers' conflicts of interest
Clark 2015	<a href="https://dx.doi.org/10.1111/iicp.12569">https://dx.doi.org/10.1111/iicp.12569</a>	Addressing conflict of interest in non-pharmacological research	Not empirical study
Clift 2021	<a href="https://doi.org/10.1177/23982128211006574">https://doi.org/10.1177/23982128211006574</a>	Lifting the lid on impact and peer review	Not peer reviewers' conflicts of interest
Cohen 2013	<a href="https://dx.doi.org/10.1016/j.rbmo.2013.03.010">https://dx.doi.org/10.1016/j.rbmo.2013.03.010</a>	Possible conflicts of interest in medical publishing	Not empirical study
Collins 2018	<a href="https://dx.doi.org/10.1093/tropel/fmy039">https://dx.doi.org/10.1093/tropel/fmy039</a>	The scientific integrity of journal publications in the age of 'Fake News'	Not empirical study
Coveney 2017	<a href="https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-017-0043-x">https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-017-0043-x</a>	'Are you siding with a personality or the grant proposal?': observations on how peer review panels function	Not peer review
Cantekin 1990	<a href="https://doi.org/10.1001/jama.1990.03440100147022">https://doi.org/10.1001/jama.1990.03440100147022</a>	Biomedical Information, Peer Review, and Conflict of Interest as They Influence Public Health	Not empirical study
Daley 2019	<a href="https://dx.doi.org/10.1136/bmjopen-2018-027285">https://dx.doi.org/10.1136/bmjopen-2018-027285</a>	Assessment of the methodological quality of local clinical practice guidelines on the identification and management of gestational diabetes	Not peer review
Dal-Ré 2020	<a href="https://doi.org/10.1016/j.medcli.2019.04.018">https://doi.org/10.1016/j.medcli.2019.04.018</a>	Analysis of biomedical Spanish articles retracted between 1970 and 2018	Not peer reviewers' conflicts of interest
Dal-Ré 2019a	<a href="https://doi.org/10.1136/jmedgenet-2019-106137">https://doi.org/10.1136/jmedgenet-2019-106137</a>	Reasons for and time to retraction of genetics articles published between 1970 and 2018	Not peer reviewers' conflicts of interest
Dal-Ré 2019b	<a href="https://pubmed.ncbi.nlm.nih.gov/30895939/">https://pubmed.ncbi.nlm.nih.gov/30895939/</a>	Potential predatory journals are colonizing the ICMJE recommendations list of followers	Not peer review
Dalton 2001	<a href="https://pubmed.ncbi.nlm.nih.gov/11557944/">https://pubmed.ncbi.nlm.nih.gov/11557944/</a>	Peers under pressure.	Not empirical study
Dambha-Miller 2019	<a href="https://dx.doi.org/10.1136/bmj.l6704">https://dx.doi.org/10.1136/bmj.l6704</a>	Competing interests in peer review	Not empirical study
Damasio 2022	<a href="https://www.reciis.icict.fiocruz.br/index.php/reciis/article/view/3306/2534">https://www.reciis.icict.fiocruz.br/index.php/reciis/article/view/3306/2534</a>	Accountability to scientific misconduct: the SciELO editors' view	Not peer reviewers' conflicts of interest
D'Andrea 2017	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0186111">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0186111</a>	Can editors save peer review from peer reviewers?	Not peer reviewers' conflicts of interest
Davidoff 2001	<a href="https://www.nejm.org/doi/full/10.1056/NEJMed010093">https://www.nejm.org/doi/full/10.1056/NEJMed010093</a>	Sponsorship, authorship and accountability.	Not empirical study
Day 2015	<a href="https://reader.elsevier.com/reader/sd/pii/S0048733315000086?toKen=60D11B1FEDB6D4C558ED0E842051E3BE3C7E2945790A27289565FB896B00E65C9AD11476AB24A6391F59C38729A12C85&amp;originRegion=eu-west-1&amp;originCreation=2022121911147">https://reader.elsevier.com/reader/sd/pii/S0048733315000086?toKen=60D11B1FEDB6D4C558ED0E842051E3BE3C7E2945790A27289565FB896B00E65C9AD11476AB24A6391F59C38729A12C85&amp;originRegion=eu-west-1&amp;originCreation=2022121911147</a>	The big consequences of small biases: A simulation of peer review	Not peer reviewers' conflicts of interest
Delikoura 2021	<a href="https://www.mdpi.com/2304-6775/9/2/14">https://www.mdpi.com/2304-6775/9/2/14</a>	Open Research Data and Open Peer Review: Perceptions of a Medical and Health Sciences Community in Greece	Not peer reviewers' conflicts of interest
Dellavalle 2006	<a href="https://dx.doi.org/10.1016/j.jaad.2006.05.015">https://dx.doi.org/10.1016/j.jaad.2006.05.015</a>	Cultivating peer review	Not empirical study
Deng 2016	<a href="https://dx.doi.org/10.1186/s12871-015-0150-5">https://dx.doi.org/10.1186/s12871-015-0150-5</a>	Clinical practice guidelines for the management of neuropathic pain: A systematic review	Not peer reviewers' conflicts of interest
Diniz 2007	<a href="https://dx.doi.org/10.1590/S1516-44462007000400001">https://dx.doi.org/10.1590/S1516-44462007000400001</a>	Supplements and conflicts of interest	Not empirical study
Dobson 2003	<a href="https://dx.doi.org/10.1136/bmj.326.7390.618">https://dx.doi.org/10.1136/bmj.326.7390.618</a>	Lawyers may seek judicial review of panel reviewing paroxetine	Not empirical study
Doh 2016	<a href="https://journals.sagepub.com/doi/10.1177/0162243916665466">https://journals.sagepub.com/doi/10.1177/0162243916665466</a>	Impact of Alumni Connections on Peer Review Ratings and Selection Success Rate in National Research	Not biomedical research
Donovan 2020	<a href="https://doi.org/10.1080/10410236.2020.1762970">https://doi.org/10.1080/10410236.2020.1762970</a>	What Motivates Health Communication's Peer Reviewers to Review? A Survey of Our Scholarly Community	Not peer reviewers' conflicts of interest
Dove 2006	<a href="https://www.nature.com/articles/nm0106-5a">https://www.nature.com/articles/nm0106-5a</a>	New rules propose greater scrutiny for NIH grant recipients.	Not empirical study
Drummond 2010a	<a href="https://dx.doi.org/10.1177/0310057x1003800203">https://dx.doi.org/10.1177/0310057x1003800203</a>	Conflicts of interest and medical publishing: The private eye test	Not empirical study
Drummand 2010b	<a href="https://dx.doi.org/10.1111/j.1475-6773.2010.01088.x">https://dx.doi.org/10.1111/j.1475-6773.2010.01088.x</a>	Integrity in scientific publishing.	Not empirical study
Drvenica 2018	<a href="http://dx.doi.org/10.3390/publications7010001">http://dx.doi.org/10.3390/publications7010001</a>	Peer Review of Reviewers: The Author's Perspective	Not peer reviewers' conflicts of interest
Durrington 2000	<a href="https://pubmed.ncbi.nlm.nih.gov/11071213/">https://pubmed.ncbi.nlm.nih.gov/11071213/</a>	Academia and industry.	Not empirical study
DuVal 2004	<a href="https://doi.org/10.1111/j.1748-720X.2004.tb01967.x">https://doi.org/10.1111/j.1748-720X.2004.tb01967.x</a>	Institutional Conflicts Of Interest: Protecting Human Subjects, Scientific Integrity, And Institutional Accountability	Not peer review
Dyck 2013	<a href="https://dx.doi.org/10.1136/medethics-2011-100274">https://dx.doi.org/10.1136/medethics-2011-100274</a>	Is mandatory research ethics reviewing ethical?	Not empirical study
Elder 2020	<a href="https://dx.doi.org/10.1503/cmaj.191737">https://dx.doi.org/10.1503/cmaj.191737</a>	Reporting of financial conflicts of interest by Canadian clinical practice guideline producers: A descriptive study	Not peer review

Elia 2014	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0085846">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0085846</a>	Fate of Articles That Warranted Retraction Due to Ethical Concerns: A Descriptive Cross-Sectional Study	Not peer review
Ellis 1995	<a href="https://dx.doi.org/10.1111/j.1365-2796.1995.tb01169.x">https://dx.doi.org/10.1111/j.1365-2796.1995.tb01169.x</a>	Peer review and conflicts of interest	Not empirical study
Elston 2021	<a href="https://dx.doi.org/10.1016/j.jaad.2020.10.027">https://dx.doi.org/10.1016/j.jaad.2020.10.027</a>	Fairness and transparency in medical journals.	Not empirical study
Elston 2019	<a href="https://dx.doi.org/10.1016/j.jaad.2017.11.011">https://dx.doi.org/10.1016/j.jaad.2017.11.011</a>	Ethics and fairness during the review and publication process	Not empirical study
Epperson 2015	<a href="https://scholarworks.uno.edu/td/2069/">https://scholarworks.uno.edu/td/2069/</a>	Truth or Consequences—Academic Physicians' Perspective in the Management of Commercially-influenced Conflicts of Interest	Not peer review
Ernst 1994	<a href="https://archive.org/details/sim_translational-research_1994-08_124_2/page/n3/mode/2up">https://archive.org/details/sim_translational-research_1994-08_124_2/page/n3/mode/2up</a>	Reviewer bias – a blinded experimental study.	Not peer reviewers' conflicts of interest
Etemadi 2004	<a href="https://europepmc.org/article/MED/14968189">https://europepmc.org/article/MED/14968189</a>	Views of Iranian medical journal editors on medical research publication.	Not peer review
Evans 2022	<a href="https://link.springer.com/article/10.1007/s11948-022-00390-5">https://link.springer.com/article/10.1007/s11948-022-00390-5</a>	Stakeholders' Experiences of Research Integrity Support in Universities: A Qualitative Study in Three European Countries	Not peer review
Evans 2005	<a href="https://pubmed.ncbi.nlm.nih.gov/15916025/">https://pubmed.ncbi.nlm.nih.gov/15916025/</a>	Content validation of instruments: Are the perspectives of Anglo reviewers different from those of Hispanic/Latino and American Indian reviewers?	Not peer reviewers' conflicts of interest
Evans 1993	<a href="https://doi.org/10.1007/bf02599618">https://doi.org/10.1007/bf02599618</a>	The characteristics of peer reviewers who produce good-quality reviews	Not peer reviewers' conflicts of interest
Faggion 2021	<a href="https://dx.doi.org/10.1016/j.jclinepi.2020.10.001">https://dx.doi.org/10.1016/j.jclinepi.2020.10.001</a>	Frankenstein's article...how the reviews of peers can create a monster	Not empirical study
Faggion 2020	<a href="https://doi.org/10.1016/j.ident.2020.103452">https://doi.org/10.1016/j.ident.2020.103452</a>	Reporting of conflict of interest and sponsorship in dental journals	Not peer review
Faggion 2018	<a href="https://doi.org/10.1016/j.jdent.2018.09.002">https://doi.org/10.1016/j.jdent.2018.09.002</a>	An analysis of retractions of dental publications	Not peer review
Fausser 2019	<a href="https://dx.doi.org/10.1016/j.rbmo.2019.09.001">https://dx.doi.org/10.1016/j.rbmo.2019.09.001</a>	May the colleague who truly has no conflict of interest now please stand up!	Not empirical study
Felaeffel 2018	<a href="https://doi.org/10.1007/s10805-017-9295-9">https://doi.org/10.1007/s10805-017-9295-9</a>	A Cross-Sectional Survey Study to Assess Prevalence and Attitudes Regarding Research Misconduct among Investigators in the Middle East	Not peer review
Ferrarello 2018	<a href="https://dx.doi.org/10.1186/s40945-018-0049-9">https://dx.doi.org/10.1186/s40945-018-0049-9</a>	Ethics reporting practices in randomized controlled trials of physical therapy interventions after stroke.	Not peer review
Fiialka 2021	<a href="http://dx.doi.org/10.21511/kpm.05(1).2021.04">http://dx.doi.org/10.21511/kpm.05(1).2021.04</a>	Involving Ukrainian early career scientists in publishing practices and their attitudes to scholarly communication	Not biomedical research
Fiialka 2020	<a href="http://dx.doi.org/10.21511/kpm.04(1).2020.03">http://dx.doi.org/10.21511/kpm.04(1).2020.03</a>	Reviewing articles as a way of professional evaluation of scientific texts: organizational and ethical aspects	Not biomedical research
Fiore 2021	<a href="https://doi.org/10.4103%2Fsjia.sja_1110_20">https://doi.org/10.4103%2Fsjia.sja_1110_20</a>	A scoping review of retracted publications in anesthesiology	Not peer review
Flaherty 2013	<a href="https://dx.doi.org/10.1345/aph.1R691">https://dx.doi.org/10.1345/aph.1R691</a>	Ghost- and guest-authored pharmaceutical industry-sponsored studies: abuse of academic integrity, the peer review system, and public trust.	Not empirical study
Fleck 2004	<a href="https://apps.who.int/iris/bitstream/handle/10665/269119/PMC2585965.pdf?sequence=1&amp;isAllowed=y">https://apps.who.int/iris/bitstream/handle/10665/269119/PMC2585965.pdf?sequence=1&amp;isAllowed=y</a>	MMR controversy raises questions about publication ethics	Not empirical study
Fonseca-Mora 2014	<a href="http://dx.doi.org/10.3989/redc.2014.4.1151">http://dx.doi.org/10.3989/redc.2014.4.1151</a>	Ethics and Spanish Scientific Journals of Communication, Education and Psychology: the editorial perception	Not biomedical research
Fontanarosa 2017	<a href="https://dx.doi.org/10.1001/jama.2017.4563">https://dx.doi.org/10.1001/jama.2017.4563</a>	Conflict of Interest and Medical Journals	Not empirical study
Foo 2011	<a href="https://link.springer.com/content/pdf/10.1007/s11948-011-9273-3.pdf?pdf=button">https://link.springer.com/content/pdf/10.1007/s11948-011-9273-3.pdf?pdf=button</a>	An Analysis on the Research Ethics Cases Managed by the Committee on Publication Ethics (COPE) Between 1997 and 2010	Not peer reviewers' conflicts of interest
Forsyth 2014	<a href="https://dx.doi.org/10.1186/2046-4053-3-122">https://dx.doi.org/10.1186/2046-4053-3-122</a>	Conflicts of interest and critiques of the use of systematic reviews in policymaking: an analysis of opinion articles.	Not peer review
Freedman 2008	<a href="https://dx.doi.org/10.1111/j.1527-3466.2008.00045.x">https://dx.doi.org/10.1111/j.1527-3466.2008.00045.x</a>	Promoting ethical conduct in the publication of research.	Not empirical study
Gallo 2016	<a href="https://dx.doi.org/10.1007/s11948-015-9631-7">https://dx.doi.org/10.1007/s11948-015-9631-7</a>	Frequency and Type of Conflicts of Interest in the Peer Review of Basic Biomedical Research Funding Applications: Self-Reporting Versus Manual Detection	Not peer review
Gandy 2007	<a href="https://dx.doi.org/10.1111/j.1365-277X.2007.00759.x">https://dx.doi.org/10.1111/j.1365-277X.2007.00759.x</a>	Editorial: Ethics in research and publishing	Not empirical study
Garattini 2019	<a href="https://dx.doi.org/10.1007/s10198-018-1028-5">https://dx.doi.org/10.1007/s10198-018-1028-5</a>	Conflict of interest disclosure: striking a balance?	Not empirical study
Garcia-Costa 2022	<a href="https://doi.org/10.7717/peerj.13539">https://doi.org/10.7717/peerj.13539</a>	Measuring the developmental function of peer review: a multi-dimensional, cross-disciplinary analysis of peer review reports from 740 academic journals	Not peer reviewers' conflicts of interest
Garfunkel 1994	<a href="https://doi.org/10.1001/jama.1994.03520020063017">https://doi.org/10.1001/jama.1994.03520020063017</a>	Effect of Institutional Prestige on Reviewers' Recommendations and Editorial Decisions	Not peer reviewers' conflicts of interest
Gasparyan 2015	<a href="https://dx.doi.org/10.3346/jkms.2015.30.8.1010">https://dx.doi.org/10.3346/jkms.2015.30.8.1010</a>	Publishing Ethics and Predatory Practices: A Dilemma for All Stakeholders of Science Communication	Not empirical study
Gaudet 2017	<a href="https://osf.io/preprints/osf/3dq5j">https://osf.io/preprints/osf/3dq5j</a>	How pre-publication journal peer review (re)produces ignorance at scientific and medical journals: a case study	Not peer reviewers' conflicts of interest
Gjersvik 2015	<a href="https://dx.doi.org/10.1111/bjd.14157">https://dx.doi.org/10.1111/bjd.14157</a>	Conflicts of interest in medical publishing: It's all about trustworthiness	Not empirical study
Gillespie 1985	<a href="https://dx.doi.org/10.1177/016224398501000306">https://dx.doi.org/10.1177/016224398501000306</a>	Experience with NIH Peer Review: Researchers' Cynicism and Desire for Change	Not peer reviewers' conflicts of interest
Glantz 1994	<a href="https://dx.doi.org/10.1001/jama.272.2.114">https://dx.doi.org/10.1001/jama.272.2.114</a>	Inappropriate and appropriate selection of 'peers' in grant review	Not peer review
Glode 2002	<a href="https://www.istor.org/stable/26660453">https://www.istor.org/stable/26660453</a>	Advising under the influence?: conflicts of interest among FDA advisory committee members.	Not empirical study
Gleicher 2013	<a href="https://dx.doi.org/10.1016/j.rbmo.2013.01.015">https://dx.doi.org/10.1016/j.rbmo.2013.01.015</a>	Avoiding currently unavoidable conflicts of interest in medical publishing by transparent peer review	Not empirical study
Gmel 2010	<a href="https://dx.doi.org/10.1111/j.1360-0443.2009.02764.x">https://dx.doi.org/10.1111/j.1360-0443.2009.02764.x</a>	The good, the bad and the ugly	Not empirical study



Goldsmith 2006	<a href="https://www.iidonline.org/action/showPdf?pii=S0022-202X%2815%2932988-2">https://www.iidonline.org/action/showPdf?pii=S0022-202X%2815%2932988-2</a>	Picking Your Peers	Not peer reviewers' conflicts of interest
Gollogly 2006	<a href="https://pubmed.ncbi.nlm.nih.gov/16924299/">https://pubmed.ncbi.nlm.nih.gov/16924299/</a>	Ethical dilemmas in scientific publication: pitfalls and solutions for editors.	Not empirical study
Gonsalves 2020	<a href="https://dx.doi.org/10.1016/j.jsxm.2020.08.022">https://dx.doi.org/10.1016/j.jsxm.2020.08.022</a>	Results of a World Health Organization Scoping of Sexual Dysfunction-Related Guidelines: What Exists and What Is Needed	Not peer reviewers
Gori 2001	<a href="https://dx.doi.org/10.1038/35098246">https://dx.doi.org/10.1038/35098246</a>	Financial interests are not the only bias factor [3]	Not empirical study
Gorman 2020	<a href="https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-020-00098-9">https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-020-00098-9</a>	High impact nutrition and dietetics journals' use of publication procedures to increase research transparency	Not peer review
Gottlieb 2017	<a href="https://dx.doi.org/10.1001/jama.2017.2207">https://dx.doi.org/10.1001/jama.2017.2207</a>	How should journals handle the conflict of interest of their editors?: Who watches the "watchers"?	Not empirical study
Graf 2007	<a href="https://dx.doi.org/10.1111/j.1742-1241.2006.01230.x">https://dx.doi.org/10.1111/j.1742-1241.2006.01230.x</a>	Best Practice Guidelines on Publication Ethics: A publisher's perspective	Not empirical study
Graves 2011	<a href="https://www.bmj.com/content/343/bmj.d4797">https://www.bmj.com/content/343/bmj.d4797</a>	Funding grant proposals for scientific research: retrospective analysis of scores by members of grant review panel	Not empirical study
Greenberg 2010	<a href="https://dx.doi.org/10.1038/468037d">https://dx.doi.org/10.1038/468037d</a>	Reviewer disclaims competing interest	Not biomedical research
Gregory 2019	<a href="https://dx.doi.org/10.1016/j.hlc.2019.05.171">https://dx.doi.org/10.1016/j.hlc.2019.05.171</a>	Everything You Need to Know About Peer Review - The Good, The Bad and The Ugly	Not empirical study
Grey 2019	<a href="https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-019-0062-x">https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-019-0062-x</a>	Quality of reports of investigations of research integrity by academic institutions	Not peer review
Gupta 2020	<a href="https://doi.org/10.1007/s00296-020-04718-x">https://doi.org/10.1007/s00296-020-04718-x</a>	Scholarly publishing and journal targeting in the time of the Coronavirus Disease 2019 (COVID-19) pandemic: a cross-sectional survey of rheumatologists and other specialists	Not peer reviewers' conflicts of interest
Gutarra-Vilchez 2014	<a href="https://dx.doi.org/10.3109/14647273.2013.872301">https://dx.doi.org/10.3109/14647273.2013.872301</a>	Systematic evaluation of the quality of clinical practice guidelines on the use of assisted reproductive techniques	Not peer reviewers' conflicts of interest
Hackett 2020	<a href="https://dx.doi.org/10.1242/BIO.056556">https://dx.doi.org/10.1242/BIO.056556</a>	Publishing ethics in the era of paper mills	Not empirical study
Hamilton 2020	<a href="https://doi.org/10.7554%2FeLife.62529">https://doi.org/10.7554%2FeLife.62529</a>	Journal policies and editors' opinions on peer review	Not peer reviewers' conflicts of interest
Hampson 2012	<a href="https://dx.doi.org/10.1016/j.iuro.2012.01.067">https://dx.doi.org/10.1016/j.iuro.2012.01.067</a>	Conflict of interest in urology	Not peer review
Hankenson 2009	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2696825/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2696825/</a>	Competing interests policy for AALAS journals.	Not empirical study
Hardy 2021	<a href="https://dx.doi.org/10.1111/imi.15522">https://dx.doi.org/10.1111/imi.15522</a>	Interests and conflicts when writing, reviewing and editing papers on voluntary assisted dying	Not empirical study
Haven 2019	<a href="https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-019-0081-7">https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-019-0081-7</a>	Researchers' perceptions of research misbehaviours: a mixed methods study among academic researchers in Amsterdam	Not peer review
Heneghan 2019	<a href="https://dx.doi.org/10.1136/bmj.l6236">https://dx.doi.org/10.1136/bmj.l6236</a>	Declaring interests and restoring trust in medicine	Not empirical study
Herbert 2015	<a href="https://bmjopen.bmj.com/content/5/7/e008380">https://bmjopen.bmj.com/content/5/7/e008380</a>	Using simplified peer review processes to fund research: a prospective study	Not peer review
Heros 2008	<a href="https://dx.doi.org/10.3171/PED-08/01/110">https://dx.doi.org/10.3171/PED-08/01/110</a>	Policy on conflict of interest: Journal of Neurosurgery Publishing Group	Not empirical study
Herrera-Anazco 2024	<a href="https://dx.doi.org/10.1111/dewb.12439">https://dx.doi.org/10.1111/dewb.12439</a>	Retraction of health science articles by researchers in Latin America and the Caribbean: A scoping review	Not peer reviewers' conflicts of interest
Hodgson 1997	<a href="https://doi.org/10.1016/S0895-4356(97)00167-4">https://doi.org/10.1016/S0895-4356(97)00167-4</a>	How reliable is peer review? An examination of operating grant proposals simultaneously submitted to two similar peer review systems	Not peer review
Hodgson 1995	<a href="https://www.semanticscholar.org/paper/Evaluation-of-cardiovascular-grant-in-aid-by-peer-Hodgson/ea4f952159bb67736fbc3efed9175c6be0cf86d">https://www.semanticscholar.org/paper/Evaluation-of-cardiovascular-grant-in-aid-by-peer-Hodgson/ea4f952159bb67736fbc3efed9175c6be0cf86d</a>	Evaluation of cardiovascular grant-in-aid applications by peer review: influence of internal and external reviewers and committees	Not peer reviewers' conflicts of interest
Holliday 2009	<a href="https://dx.doi.org/10.1111/j.1743-7563.2009.01252.x">https://dx.doi.org/10.1111/j.1743-7563.2009.01252.x</a>	The Delphi process: A solution for reviewing novel grant applications	Not peer review
Homedes 2016	<a href="https://dx.doi.org/10.1080/08989621.2016.1171150">https://dx.doi.org/10.1080/08989621.2016.1171150</a>	Are Private Interests Clouding the Peer-Review Process of the WHO Bulletin? A Case Study	Not peer review
Horner 2011	<a href="https://dx.doi.org/10.1044/1092-4388">https://dx.doi.org/10.1044/1092-4388</a>	Research ethics III: Publication practices and authorship, conflicts of interest, and research misconduct	Not empirical study
Houlihan 1992	<a href="https://psycnet.apa.org/record/1993-19304-001">https://psycnet.apa.org/record/1993-19304-001</a>	Critiquing the peer review process: examining a potential dual role conflict	Not peer review
Howat 2021	<a href="https://www.microbiologyresearch.org/content/journal/acmi/10.1099/acmi.0.000272">https://www.microbiologyresearch.org/content/journal/acmi/10.1099/acmi.0.000272</a>	Converting Access Microbiology to an open research platform: community survey results Open Access	Not peer reviewers' conflicts of interest
Hu 2013	<a href="https://dx.doi.org/10.1111/j.1365-2753.2012.01893.x">https://dx.doi.org/10.1111/j.1365-2753.2012.01893.x</a>	The quality of clinical practice guidelines in China: A systematic assessment	Not peer review
ICMJE 2010	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3142758/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3142758/</a>	Uniform requirements for manuscripts submitted to biomedical journals: Writing and editing for biomedical publication	Not empirical study
Igic 2015	<a href="https://pubmed.ncbi.nlm.nih.gov/26537088/">https://pubmed.ncbi.nlm.nih.gov/26537088/</a>	Conflicting interests involved in the process of publishing in biomedical journals	Not empirical study
Jagsi 2014	<a href="https://doi.org/10.1016/j.ijrobp.2014.04.021">https://doi.org/10.1016/j.ijrobp.2014.04.021</a>	Attitudes Toward Blinding of Peer Review and Perceptions of Efficacy Within a Small Biomedical Specialty	Not peer reviewers' conflicts of interest
Jalalzadeh 2022	<a href="https://ps.tbzmed.ac.ir/Article/ps-34646">https://ps.tbzmed.ac.ir/Article/ps-34646</a>	Analysis of Retracted Articles in Pharmacology and Pharmacy	Not peer reviewers' conflicts of interest
Janke 2017	<a href="https://www.ajpe.org/content/ajpe/81/4/73.full.pdf">https://www.ajpe.org/content/ajpe/81/4/73.full.pdf</a>	"Editors' Perspectives on Enhancing Manuscript Quality and Editorial Decisions Through Peer Review and Reviewer Development"	Not peer reviewers' conflicts of interest
Jelinek 2000	<a href="https://dx.doi.org/10.1046/j.1442-2026.2000.00114.x">https://dx.doi.org/10.1046/j.1442-2026.2000.00114.x</a>	Secrecy serves science poorly: The question of conflict of interest	Not empirical study
Jette 2019	<a href="https://dx.doi.org/10.1093/pti/pzz099">https://dx.doi.org/10.1093/pti/pzz099</a>	Protecting Against "Publication Spin" in Clinical Trials	Not empirical study
Jiang 2014	<a href="https://dx.doi.org/10.1111/resp.12417">https://dx.doi.org/10.1111/resp.12417</a>	Quality assessment of clinical practice guidelines in respiratory diseases in China: A systematic appraisal	Not peer review
John 2019	<a href="https://www.bmj.com/content/367/bmj.l5896">https://www.bmj.com/content/367/bmj.l5896</a>	Effect of revealing authors' conflicts of interests in peer review: randomized controlled trial	Not peer reviewers' conflicts of interest

Johnson 2010a	<a href="https://dx.doi.org/10.1086/656690">https://dx.doi.org/10.1086/656690</a>	Final report of the Lyme disease review panel of the Infectious Diseases Society of America: A pyrrhic victory?	Not empirical study
Johnson 2010b	<a href="https://dx.doi.org/10.1016/j.jimpt.2010.01.004">https://dx.doi.org/10.1016/j.jimpt.2010.01.004</a>	Conflict of Interest in Scientific Publications: A Historical Review and Update	Not empirical study
Jull 2019	<a href="https://dx.doi.org/10.1016/j.msksp.2019.02.001">https://dx.doi.org/10.1016/j.msksp.2019.02.001</a>	The peer review process: Giving and receiving advice	Not empirical study
Jurkat-Rott 2004	<a href="https://www.sciencedirect.com/science/article/pii/S0171933504703453">https://www.sciencedirect.com/science/article/pii/S0171933504703453</a>	Reviewing in science requires quality criteria and professional reviewers.	Not empirical study
Južnič 2010	<a href="https://link.springer.com/article/10.1007/s11192-010-0230-8">https://link.springer.com/article/10.1007/s11192-010-0230-8</a>	Scientometric indicators: peer-review, bibliometric methods and conflict of interests	Not empirical study
Kamali 2020	<a href="https://doi.org/10.1007/s11948-020-00274-6">https://doi.org/10.1007/s11948-020-00274-6</a>	Plagiarism, Fake Peer-Review, and Duplication: Predominant Reasons Underlying Retractions of Iran-Affiliated Scientific Papers	Not peer reviewers' conflicts of interest
Kapoor 2011	<a href="https://iaapl.org/content/39/3/332.long">https://iaapl.org/content/39/3/332.long</a>	Ethics in forensic psychiatry publishing	Not empirical study
Karhulahti 2021	<a href="https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-021-00116-4">https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-021-00116-4</a>	Transparency of peer review: a semi-structured interview study with chief editors from social sciences and humanities	Not biomedical research
Karvonen 2022	<a href="https://doi.org/10.1038/s41372-022-01420-7">https://doi.org/10.1038/s41372-022-01420-7</a>	Addressing bias and knowledge gaps regarding race and ethnicity in neonatology manuscript review	Not peer reviewers' conflicts of interest
Katz 2016	<a href="https://dx.doi.org/10.2214/AJR.16.16008">https://dx.doi.org/10.2214/AJR.16.16008</a>	Ethical issues in radiology journalism, peer review, and research	Not empirical study
Käsmann 2020	<a href="https://doi.org/10.1007/s00066-020-01729-2">https://doi.org/10.1007/s00066-020-01729-2</a>	Peer review analysis in the field of radiation oncology: results from a web-based survey of the Young DEGRO working group	Not peer reviewers' conflicts of interest
Kaur 2015	<a href="https://dx.doi.org/10.1007/s11017-015-9339-3">https://dx.doi.org/10.1007/s11017-015-9339-3</a>	Towards a balanced approach to identifying conflicts of interest faced by institutional review boards	Not peer review
Kempen 2015	<a href="https://dx.doi.org/10.1016/j.jclinane.2015.03.028">https://dx.doi.org/10.1016/j.jclinane.2015.03.028</a>	Insuring clear declaration of corporate conflicts of interest in all medical journals: the highest priority	Not empirical study
Kempers 2002	<a href="https://dx.doi.org/10.1016/S0015-0282">https://dx.doi.org/10.1016/S0015-0282</a>	Ethical issues in biomedical publications	Not empirical study
Kerig 2021	<a href="https://dx.doi.org/10.1002/its.22647">https://dx.doi.org/10.1002/its.22647</a>	Why Participate in Peer Review?	Not empirical study
Khamis 2017	<a href="https://dx.doi.org/10.1186/s12961-017-0244-2">https://dx.doi.org/10.1186/s12961-017-0244-2</a>	Requirements of health policy and services journals for authors to disclose financial and non-financial conflicts of interest: A cross-sectional study	Not peer review
Khan 2022	<a href="https://doi.org/10.3346/jkms.2022.37.e44">https://doi.org/10.3346/jkms.2022.37.e44</a>	Bibliometric and Altmetric Analysis of Retracted Articles on COVID-19	Not peer reviewers' conflicts of interest
Khazzam-Horovitz 2013	<a href="https://digital.lib.washington.edu/researchworks/handle/1773/22490">https://digital.lib.washington.edu/researchworks/handle/1773/22490</a>	Safeguarding the Ethical Conduct of Biomedical Research in Israel against Conflict of Interest	Not peer review
Kiebertz 1998	<a href="https://dx.doi.org/10.1212/WNL.51.6.1527">https://dx.doi.org/10.1212/WNL.51.6.1527</a>	Avoiding conflicts of interest: Responsibilities of authors, reviewers, and editors	Not empirical study
King 1997	<a href="https://sigmapubs.onlinelibrary.wiley.com/doi/abs/10.1111/j.1547-5069.1997.tb01551.x">https://sigmapubs.onlinelibrary.wiley.com/doi/abs/10.1111/j.1547-5069.1997.tb01551.x</a>	Peer review, authorship, ethics, and conflict of interest	Not empirical study
Kirkham 2018	<a href="https://f1000research.com/articles/7-920">https://f1000research.com/articles/7-920</a>	Who and why do researchers opt to publish in post-publication peer review platforms? - findings from a review and survey of F1000 Research	Not peer reviewers' conflicts of interest
Kirman 2019	<a href="https://dx.doi.org/10.1016/j.yrtph.2019.01.003">https://dx.doi.org/10.1016/j.yrtph.2019.01.003</a>	Science peer review for the 21st century: Assessing scientific consensus for decision-making while managing conflict of interests, reviewer and process bias	Not peer reviewers' conflicts of interest
Klitzman 2010	<a href="https://doi.org/10.1136/me.2010.035394">https://doi.org/10.1136/me.2010.035394</a>	Disclosures of funding sources and conflicts of interest in published HIV/AIDS research conducted in developing countries	Not peer review
Klebel 2020	<a href="https://doi.org/10.1371/journal.pone.0239518">https://doi.org/10.1371/journal.pone.0239518</a>	Peer review and preprint policies are unclear at most major journals	Not peer reviewers' conflicts of interest
Kobulashvili 2019	<a href="https://dx.doi.org/10.1111/ene.14017">https://dx.doi.org/10.1111/ene.14017</a>	Quality appraisal of guidelines for diagnosis and treatment of rare and complex epilepsies: Preliminary results of a survey among partners of the EpiCARE - A European Reference Network for rare and complex epilepsies	Not peer review
Kocyyigit 2022	<a href="https://jkms.org/DOIx.php?id=10.3346/jkms.2022.37.e142">https://jkms.org/DOIx.php?id=10.3346/jkms.2022.37.e142</a>	Analysis of Retracted Publications in The Biomedical Literature from Turkey	Not peer reviewers' conflicts of interest
Kojima 2015	<a href="https://dx.doi.org/10.1378/chest.14-2396">https://dx.doi.org/10.1378/chest.14-2396</a>	How Japanese medical journals manage conflicts of interest.	Not peer reviewers' conflicts of interest
Korenman 1998	<a href="https://jamanetwork.com/journals/jama/fullarticle/185891">https://jamanetwork.com/journals/jama/fullarticle/185891</a>	Evaluation of the research norms of scientists and administrators responsible for academic research integrity.	Not peer review
Krapež 2022a	<a href="https://doi.org/10.18690/lexonomica.14.1.127-152.2022">https://doi.org/10.18690/lexonomica.14.1.127-152.2022</a>	Editors' Responsibility for Publishing High-Quality Research Results: A Worldwide Study Into Current Challenges in Quality Assessment Processes	Not peer reviewers' conflicts of interest
Krapež 2022b	<a href="https://doi.org/10.3390/publications10010012">https://doi.org/10.3390/publications10010012</a>	Advancing Self-Evaluative and Self-Regulatory Mechanisms of Scholarly Journals: Editors' Perspectives on What Needs to Be Improved in the Editorial Process	Not biomedical research
Krimsky 2009	<a href="https://doi.org/10.1080/08989620903190273">https://doi.org/10.1080/08989620903190273</a>	An Analysis of Toxicology and Medical Journal Conflict-of-Interest Policies	Not peer review
Krimsky 2001	<a href="https://dx.doi.org/10.1159/000056236">https://dx.doi.org/10.1159/000056236</a>	Journal policies on conflict of interest: If this is the therapy, what's the disease?	Not empirical study
Krimsky 1998	<a href="https://dx.doi.org/10.1001/jama.280.3.225">https://dx.doi.org/10.1001/jama.280.3.225</a>	Financial interest and its disclosure in scientific publications	Not empirical study
Kuehn 2013	<a href="https://dx.doi.org/10.1001/jama.2013.280660">https://dx.doi.org/10.1001/jama.2013.280660</a>	Striving for a more perfect peer review: editors confront strengths, flaws of biomedical literature.	Not empirical study
Kumar 2009	<a href="https://dx.doi.org/10.1080/08989620903328576">https://dx.doi.org/10.1080/08989620903328576</a>	Dealing with misconduct in biomedical research: A review of the problems and the proposed methods for improvement	Not empirical study
Kung 2012	<a href="https://dx.doi.org/10.1001/2013.jamainternmed.56">https://dx.doi.org/10.1001/2013.jamainternmed.56</a>	Failure of clinical practice guidelines to meet Institute of Medicine Standards: Two more decades of little, if any, progress	Not peer review

Kurmis 2006	<a href="https://dx.doi.org/10.1016/j.acra.2005.08.016">https://dx.doi.org/10.1016/j.acra.2005.08.016</a>	Exploring the relationship between impact factor and manuscript rejection rates in radiologic journals	Not peer review
Kwah 2019	<a href="https://dx.doi.org/10.1093/ptj/pzz006">https://dx.doi.org/10.1093/ptj/pzz006</a>	Quality of Clinical Practice Guidelines for Management of Limb Amputations: A Systematic Review	Not peer review
Langer 2012	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3523262/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3523262/</a>	Original article: Conflicts of interest among authors of medical guide lines	Not peer review
Langfeldt 2023	<a href="https://doi.org/10.1093/scipol/scad051">https://doi.org/10.1093/scipol/scad051</a>	Distrust in grant peer review—reasons and remedies	Not biomedical research
Lanier 2021	<a href="https://dx.doi.org/10.1080/08989621.2020.1815010">https://dx.doi.org/10.1080/08989621.2020.1815010</a>	Dealing with inappropriate-, low-quality-, and other forms of challenging peer review, including hostile referees and inflammatory or confusing critiques: Prevention and treatment	Not empirical study
Lanier 2006	<a href="https://www.mayoclinicproceedings.org/article/S0025-6196(11)60403-5/pdf">https://www.mayoclinicproceedings.org/article/S0025-6196(11)60403-5/pdf</a>	Editor's note: Industry support of articles published in Mayo Clinic Proceedings.	Not empirical study
Lee 2020	<a href="https://dx.doi.org/10.1016/j.spinee.2020.05.582">https://dx.doi.org/10.1016/j.spinee.2020.05.582</a>	Does conflict of interest affect the reported fusion rates with bone graft extenders?	Not peer review
Legg 2021	<a href="https://dx.doi.org/10.1136/tobaccocontrol-2020-056003">https://dx.doi.org/10.1136/tobaccocontrol-2020-056003</a>	Paying lip service to publication ethics: scientific publishing practices and the Foundation for a Smoke-Free World	Not biomedical research
Lehman-McKeeman 2003	<a href="https://dx.doi.org/10.1093/toxsci/kfq051">https://dx.doi.org/10.1093/toxsci/kfq051</a>	Guidelines governing conflict of interest	Not empirical study
Le Sueur 2020	<a href="https://doi.org/10.1080/0142159X.2020.1774527">https://doi.org/10.1080/0142159X.2020.1774527</a>	Pride and prejudice – What can we learn from peer review?	Not peer reviewers' conflicts of interest
Lei 2018	<a href="https://doi.org/10.1007/s11948-017-9962-7">https://doi.org/10.1007/s11948-017-9962-7</a>	Lack of Improvement in Scientific Integrity: An Analysis of WoS Retractions by Chinese Researchers (1997–2016)	Not peer reviewers' conflicts of interest
Li 2020	<a href="https://doi.org/10.1080/08989621.2020.1802586">https://doi.org/10.1080/08989621.2020.1802586</a>	Differing perceptions concerning research misconduct between China and Flanders: A qualitative study	Not peer reviewers' conflicts of interest
Li 2019	<a href="https://dx.doi.org/10.1186/s12872-018-0960-8">https://dx.doi.org/10.1186/s12872-018-0960-8</a>	Critical appraisal of international guidelines for the screening and treatment of asymptomatic peripheral artery disease: A systematic review	Not peer review
Li 2015a	<a href="https://www.hbs.edu/ris/Publication%20Files/16-053_d27212a1-d6ca-400d-bb65-b078f104d8ae.pdf">https://www.hbs.edu/ris/Publication%20Files/16-053_d27212a1-d6ca-400d-bb65-b078f104d8ae.pdf</a>	Expertise vs. Bias in Evaluation: Evidence from the NIH	Not peer review
Li 2015b	<a href="https://dx.doi.org/10.1126/science.aaa0185">https://dx.doi.org/10.1126/science.aaa0185</a>	Research funding. Big names or big ideas: do peer-review panels select the best science proposals?	Not peer reviewers' conflicts of interest
Lichter 2017	<a href="https://dx.doi.org/10.1001/jama.2017.3191">https://dx.doi.org/10.1001/jama.2017.3191</a>	Conflict of interest and the integrity of the medical profession	Not empirical study
Liesegang 2014	<a href="https://dx.doi.org/10.1016/j.ophtha.2014.08.039">https://dx.doi.org/10.1016/j.ophtha.2014.08.039</a>	Toward transparency of financial disclosure	Not empirical study
Ling 2018	<a href="https://dx.doi.org/10.7507/1672-2531.201712036">https://dx.doi.org/10.7507/1672-2531.201712036</a>	Reporting quality of clinical practice guidelines of China in 2015	Not peer review
Liu 2021	<a href="https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-021-02693-1#citeas">https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-021-02693-1#citeas</a>	Quality of pediatric clinical practice guidelines	Not peer review
Lo Vecchio 2009	<a href="https://dx.doi.org/10.1016/S1590-8658">https://dx.doi.org/10.1016/S1590-8658</a>	Evaluation of quality of guidelines for acute gastroenteritis in children with the AGREE instrument	Not peer review
Lumb 2011	<a href="https://dx.doi.org/10.1016/j.icrc.2011.06.012">https://dx.doi.org/10.1016/j.icrc.2011.06.012</a>	Conflict of interest; disclosure; peer review	Not empirical study
Machingaidze 2017	<a href="https://dx.doi.org/10.1016/j.ijlinepi.2016.09.015">https://dx.doi.org/10.1016/j.ijlinepi.2016.09.015</a>	Series: Clinical Epidemiology in South Africa. Paper 2: Quality and reporting standards of South African primary care clinical practice guidelines	Not peer review
Mackie 2004	<a href="https://dx.doi.org/10.1016/j.puhe.2004.04.001">https://dx.doi.org/10.1016/j.puhe.2004.04.001</a>	Conflict(s) of interest	Not empirical study
Madhugiri 2021	<a href="https://doi.org/10.1007/s00701-020-04615-z">https://doi.org/10.1007/s00701-020-04615-z</a>	An analysis of retractions in neurosurgery and allied clinical and basic science specialties	Not peer reviewers' conflicts of interest
Magid 2020	<a href="https://dx.doi.org/10.1161/CIR.0000000000000898">https://dx.doi.org/10.1161/CIR.0000000000000898</a>	Part 2: Evidence evaluation and guidelines development 2020 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care	Not empirical study
Mahoney 1978	<a href="https://doi.org/10.1007/BF01172515">https://doi.org/10.1007/BF01172515</a>	Getting Published	Not biomedical research
Mahoney 1977	<a href="https://doi.org/10.1007/BF01173636">https://doi.org/10.1007/BF01173636</a>	Publication prejudices: An experimental study of confirmatory bias in the peer review system	Not biomedical research
Mahawar 2009	<a href="https://doi.org/10.1016/S1015-9584(09)60401-2">https://doi.org/10.1016/S1015-9584(09)60401-2</a>	Peer Review Practices in Biomedical Literature: A Time for Change?	Not peer reviewers' conflicts of interest
Majumder 2021	<a href="https://www.nature.com/articles/s41433-021-01438-9">https://www.nature.com/articles/s41433-021-01438-9</a>	Analysis of retracted articles in the ophthalmic literature	Not peer review
Malay 2009	<a href="https://dx.doi.org/10.1053/j.ifaas.2009.03.001">https://dx.doi.org/10.1053/j.ifaas.2009.03.001</a>	Peer review and scientific misconduct: bad authors and trusting reviewers.	Not empirical study
Malički 2022	<a href="https://assets.researchsquare.com/files/rs-1296644/v1/88b3813c-75c4-4710-a66a-36bd1b9ab0a9.pdf?c=1643232945">https://assets.researchsquare.com/files/rs-1296644/v1/88b3813c-75c4-4710-a66a-36bd1b9ab0a9.pdf?c=1643232945</a>	Transparency in conducting and reporting research: a survey of authors, reviewers, and editors across scholarly disciplines	Not peer reviewers' conflicts of interest
Maloney 2004	<a href="https://pubmed.ncbi.nlm.nih.gov/15810180/">https://pubmed.ncbi.nlm.nih.gov/15810180/</a>	Grant proposal reviewer says he would have scored proposal lower due to conflict of interest	Not empirical study
Manchikanti 2015	<a href="https://pubmed.ncbi.nlm.nih.gov/25675064/">https://pubmed.ncbi.nlm.nih.gov/25675064/</a>	Medical journal peer review: Process and bias	Not empirical study
Manguele 2021	<a href="https://dx.doi.org/10.1002/hpm.3295">https://dx.doi.org/10.1002/hpm.3295</a>	Addressing conflicts of interest of ethical reviewers of health planning, management, policy and systems research proposals	Not peer review
Mann 2003	<a href="https://dx.doi.org/10.1002/pds.847">https://dx.doi.org/10.1002/pds.847</a>	Journal's policy regarding conflict of interest	Not empirical study
Marusic 2014	<a href="https://dx.doi.org/10.11613/BM.2014.023">https://dx.doi.org/10.11613/BM.2014.023</a>	Editorial research and the publication process in biomedicine and health: Report from the Esteve Foundation Discussion Group, December 2012	Not empirical study
Matarese 2008	<a href="https://dx.doi.org/10.1371/journal.pone.0002512">https://dx.doi.org/10.1371/journal.pone.0002512</a>	Relationship between quality and editorial leadership of biomedical research journals: a comparative study of Italian and UK journals.	Not peer review
Matías-Guiu 2012	<a href="https://dx.doi.org/10.1016/j.nrl.2011.10.002">https://dx.doi.org/10.1016/j.nrl.2011.10.002</a>	Conflict of interests and scientific publications	Not empirical study
Mavrogenis 2020	<a href="https://dx.doi.org/10.1007/s00264-020-04504-1">https://dx.doi.org/10.1007/s00264-020-04504-1</a>	The good, the bad and the rude peer-review	Not empirical study
McComas 2011	<a href="https://doi.org/10.1007/s11948-011-9264-4">https://doi.org/10.1007/s11948-011-9264-4</a>	Researcher Views About Funding Sources and Conflicts of Interest in Nanotechnology	Not biomedical research

McCrary 2000	<a href="https://www.neim.org/doi/10.1056/NEJM200011303432207?url_ver=Z39.88-2003&amp;rft_id=ori:rid:crossref.org&amp;rft_dat=cr_pub%20%200www.ncbi.nlm.nih.gov">https://www.neim.org/doi/10.1056/NEJM200011303432207?url_ver=Z39.88-2003&amp;rft_id=ori:rid:crossref.org&amp;rft_dat=cr_pub%20%200www.ncbi.nlm.nih.gov</a>	A National Survey of Policies on Disclosure of Conflicts of Interest in Biomedical Research	Not peer review
McCullough 1989	<a href="https://dx.doi.org/10.1177/016224398901400107">https://dx.doi.org/10.1177/016224398901400107</a>	First Comprehensive Survey of NSF Applicants Focuses on Their Concerns About Proposal Review	Not biomedical research
McDowell 2020	<a href="https://doi.org/10.1091%2Fmbc.E20-10-0642">https://doi.org/10.1091%2Fmbc.E20-10-0642</a>	How to bring peer review ghostwriters out of the dark	Not peer reviewers' conflicts of interest
McKenzie 2022	<a href="https://dx.doi.org/10.1200/OP.22.00275">https://dx.doi.org/10.1200/OP.22.00275</a>	Exploring Bias in Scientific Peer Review: An ASCO Initiative	Not peer reviewers' conflicts of interest
McLaughlin 2007	<a href="https://pubmed.ncbi.nlm.nih.gov/17187382/">https://pubmed.ncbi.nlm.nih.gov/17187382/</a>	A rebuttal: secret ties to industry and conflicting interests in cancer research.	Not empirical study
Meadmore 2020	<a href="https://doi.org/10.1371/journal.pone.0239757">https://doi.org/10.1371/journal.pone.0239757</a>	Decision-making approaches used by UK and international health funding organisations for allocating research funds: A survey of current practice	Not peer reviewers' conflicts of interest
Mecca 2014	<a href="https://doi.org/10.1007/s11948-014-9580-6">https://doi.org/10.1007/s11948-014-9580-6</a>	Researcher Perspectives on Conflicts of Interest: A Qualitative Analysis of Views from Academia	Not peer reviewers' conflicts of interest
Meerpohl 2010	<a href="https://doi.org/10.1001/archpediatrics.2009.287">https://doi.org/10.1001/archpediatrics.2009.287</a>	Editorial Policies of Pediatric Journals	Not peer review
Melo-Martin 2007	<a href="https://www.nature.com/articles/448129a">https://www.nature.com/articles/448129a</a>	Authors' financial interests should be made known to manuscript reviewers.	Not empirical study
Mervis 2007	<a href="https://pubmed.ncbi.nlm.nih.gov/17702914/">https://pubmed.ncbi.nlm.nih.gov/17702914/</a>	Grants management. NSF survey of applicants finds a system teetering on the brink.	Not biomedical research
Mialon 2020	<a href="https://dx.doi.org/10.1136/bmjopen-2019-034082">https://dx.doi.org/10.1136/bmjopen-2019-034082</a>	Mechanisms for addressing and managing the influence of corporations on public health policy, research and practice: A scoping review	Not peer review
Millar 2009	<a href="https://dx.doi.org/10.5694/j.1326-5377.2009.tb02496.x">https://dx.doi.org/10.5694/j.1326-5377.2009.tb02496.x</a>	Genesis of medical thromboprophylaxis guidelines in Australia: A need for transparency and standardisation in guideline development	Not empirical study
Min 2021	<a href="https://dx.doi.org/10.5758/vsi.213711">https://dx.doi.org/10.5758/vsi.213711</a>	Ethics and responsibilities of peer reviewers to the authors, readers, and editors	Not empirical study
Minion 2007	<a href="https://dx.doi.org/10.1016/j.ivs.2007.05.024">https://dx.doi.org/10.1016/j.ivs.2007.05.024</a>	Ethics of guidelines for reviewers of medical manuscripts	Not empirical study
Misra 2020	<a href="https://dx.doi.org/10.1007/s10067-020-04965-0">https://dx.doi.org/10.1007/s10067-020-04965-0</a>	Integrity of clinical research conduct, reporting, publishing, and post-publication promotion in rheumatology	Not empirical study
Misra 2019	<a href="https://dx.doi.org/10.4997/JRCPE.2019.301">https://dx.doi.org/10.4997/JRCPE.2019.301</a>	Conflicts of interest in academic publishing: When in doubt, declare!	Not empirical study
Moberly 2018	<a href="https://dx.doi.org/10.1136/bmj.k3942">https://dx.doi.org/10.1136/bmj.k3942</a>	Public health experts split over deal with industry funded charity	Not empirical study
Moline 1994	<a href="https://pubmed.ncbi.nlm.nih.gov/11653327/">https://pubmed.ncbi.nlm.nih.gov/11653327/</a>	Perspectives of protocol reviewers	Not empirical study
Molino 2019	<a href="https://dx.doi.org/10.1590/1413-812320182410.24352017">https://dx.doi.org/10.1590/1413-812320182410.24352017</a>	Comparison of the methodological quality and transparency of Brazilian practice guidelines	Not peer review
Molino 2016	<a href="https://dx.doi.org/10.1371/journal.pone.0166367">https://dx.doi.org/10.1371/journal.pone.0166367</a>	Non-communicable disease clinical practice guidelines in Brazil: A systematic assessment of methodological quality and transparency	Not peer review
Morawska 2017	<a href="https://peerreviewcongress.org/abstract/types-of-research-integrity-issues-encountered-by-a-specialist-research-integrity-group/">https://peerreviewcongress.org/abstract/types-of-research-integrity-issues-encountered-by-a-specialist-research-integrity-group/</a>	Types of Research Integrity Issues Encountered by a Specialist Research Integrity Group	Not peer review
Morgan 2001	<a href="https://www.iaacap.org/article/S0890-8567(09)60849-2/fulltext">https://www.iaacap.org/article/S0890-8567(09)60849-2/fulltext</a>	Ethical issues related to publishing and reviewing.	Not empirical study
Moylan 2017	<a href="https://peerreviewcongress.org/abstract/an-analysis-of-peer-review-cases-brought-to-the-committee-on-publication-ethics-cope-from-1997-to-2016/">https://peerreviewcongress.org/abstract/an-analysis-of-peer-review-cases-brought-to-the-committee-on-publication-ethics-cope-from-1997-to-2016/</a>	An Analysis of Peer Review Cases Brought to the Committee on Publication Ethics (COPE) From 1997 to 2016	Not biomedical research
Mueller 2020	<a href="https://hdl.handle.net/10388/12877">https://hdl.handle.net/10388/12877</a>	Opinion Leaders as Brand Advocates in the Medical Industry – How Medical Professionals Perceive Source Credibility and Company Affiliations	Not peer review
Murphy 2008	<a href="https://dx.doi.org/10.1007/s11745-008-3156-7">https://dx.doi.org/10.1007/s11745-008-3156-7</a>	The need for the persons involved as reviewers in the peer-review system to disclose potential conflicts of interest regarding the manuscript or the authors.	Not empirical study
Nahai 2010	<a href="https://dx.doi.org/10.1177/1090820X10361885">https://dx.doi.org/10.1177/1090820X10361885</a>	Peer review: does it work?	Not empirical study
Nahai 2009	<a href="https://dx.doi.org/10.1016/j.asi.2009.06.003">https://dx.doi.org/10.1016/j.asi.2009.06.003</a>	Managing conflicts of interest: who is responsible?.	Not empirical study
Napierala 2018	<a href="https://bmcmedethics.biomedcentral.com/articles/10.1186/s12910-018-0309-y">https://bmcmedethics.biomedcentral.com/articles/10.1186/s12910-018-0309-y</a>	Management of financial conflicts of interests in clinical practice guidelines in Germany: results from the public database Guideline Watch	Not peer review
Nature 2018	<a href="https://dx.doi.org/10.1038/d41586-018-01420-8">https://dx.doi.org/10.1038/d41586-018-01420-8</a>	Nature journals tighten rules on non-financial conflicts.	Not empirical study
Nebert 2004	<a href="https://ehp.niehs.nih.gov/doi/full/10.1289/ehp.112-a980">https://ehp.niehs.nih.gov/doi/full/10.1289/ehp.112-a980</a>	Conflicts of interests: declarations for all.	Not empirical study
Neumann 2013	<a href="https://doi.org/10.1378/chest.12-2390">https://doi.org/10.1378/chest.12-2390</a>	Experiences with a novel policy for managing conflicts of interest of guideline developers: a descriptive qualitative study	Not peer review
Nicholls 2019	<a href="https://dx.doi.org/10.1093/eurheartj/ehz814">https://dx.doi.org/10.1093/eurheartj/ehz814</a>	Submitting, publishing and sharing articles	Not empirical study
Nobarany 2017	<a href="https://doi.org/10.1002/asi.23711">https://doi.org/10.1002/asi.23711</a>	Understanding and Supporting Anonymity Policies in Peer Review	Not biomedical research
Norberg 2012	<a href="http://dx.doi.org/10.2196/jmir.2319">http://dx.doi.org/10.2196/jmir.2319</a>	An evaluation of web-based clinical practice guidelines for managing problems associated with cannabis use	Not peer review
Norris 2018	<a href="https://dx.doi.org/10.1371/journal.pone.0198125">https://dx.doi.org/10.1371/journal.pone.0198125</a>	An evaluation of emergency guidelines issued by the World Health Organization in response to four infectious disease outbreaks	Not peer reviewers' conflicts of interest
Norris 2012	<a href="https://doi.org/10.1371%2Fjournal.pone.0037413">https://doi.org/10.1371%2Fjournal.pone.0037413</a>	Conflict of Interest Policies for Organizations Producing a Large Number of Clinical Practice Guidelines	Not peer review
Norris 2011	<a href="https://doi.org/10.1371/journal.pone.0025153">https://doi.org/10.1371/journal.pone.0025153</a>	Conflict of Interest in Clinical Practice Guideline Development: A Systematic Review	Not peer review
Novins 2018	<a href="https://dx.doi.org/10.1016/j.iaac.2017.12.007">https://dx.doi.org/10.1016/j.iaac.2017.12.007</a>	Conflict of Interest and the Journal Revisited	Not empirical study



Ollé 2023	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0288313">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0288313</a>	Habits and perceptions regarding open science by researchers from Spanish institutions	Not biomedical research
Ong 2023	<a href="https://link.springer.com/article/10.1186/s41073-023-00129-1">https://link.springer.com/article/10.1186/s41073-023-00129-1</a>	Responsible research practices could be more strongly endorsed by Australian university codes of research conduct	Not peer reviewers' conflicts of interest
O'kane 2019	<a href="https://dx.doi.org/10.1016/j.cca.2019.03.1427">https://dx.doi.org/10.1016/j.cca.2019.03.1427</a>	Ethical issues in biomedical publication	Not empirical study
Oleinik 2014	<a href="https://dx.doi.org/10.1007/s11948-012-9426-z">https://dx.doi.org/10.1007/s11948-012-9426-z</a>	Conflict(s) of interest in peer review: its origins and possible solutions	Not empirical study
Ortea 2020	<a href="https://doi.org/10.1002/leap.1339">https://doi.org/10.1002/leap.1339</a>	The relationship and incidence of three editorial notices in PubPeer: Errata, expressions of concern, and retractions	Not peer review
Pacheco 2022	<a href="https://dx.doi.org/10.1002/irms.1507">https://dx.doi.org/10.1002/irms.1507</a>	Adherence to conflicts of interest policy in Cochrane reviews where authors are also editorial board members: A cross-sectional analysis	Not peer review
Parameswaran 2003	<a href="https://doi.org/10.1164/airccm.168.8.950">https://doi.org/10.1164/airccm.168.8.950</a>	Financial Disclosure of Reviewers	Not empirical study
Parker 2021	<a href="https://doi.org/10.1136/bmj-2021-100188">https://doi.org/10.1136/bmj-2021-100188</a>	Misinformation: an empirical study with scientists and communicators during the COVID-19 pandemic	Not peer reviewers' conflicts of interest
Parker 2013	<a href="https://escholarship.org/uc/item/0237z5hh">https://escholarship.org/uc/item/0237z5hh</a>	Conflict of Interest and Incentives in Health Care	Not peer review
Patel 2011	<a href="https://dx.doi.org/10.3171/2010.8.JNS091834">https://dx.doi.org/10.3171/2010.8.JNS091834</a>	Pitfalls in the publication of scientific literature: A road map to manage conflict of interest and other ethical challenges: Clinical article	Not empirical study
Patton 2006	<a href="https://doi.org/10.1111/j.1539-6924.2006.00727.x">https://doi.org/10.1111/j.1539-6924.2006.00727.x</a>	Scientific peer review to inform regulatory decision making: leadership responsibilities and cautions.	Not empirical study
Paul 2007	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1805716/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1805716/</a>	Conflicts of interest and the credibility of psychiatric research	Not empirical study
Pavan 2008	<a href="https://lume.ufrgs.br/handle/10183/13798">https://lume.ufrgs.br/handle/10183/13798</a>	Práticas sociais na comunicação científica: a avaliação pelos pares nas revistas brasileiras de ciência da informação. [Social practices in scientific communication: peer review in Brazilian journals of information science]	Not biomedical research
Peterson 2022	<a href="https://doi.org/10.1080/08998280.2022.2035189">https://doi.org/10.1080/08998280.2022.2035189</a>	The challenge of recruiting peer reviewers from one medical journal's perspective	Not peer reviewers' conflicts of interest
Phillips 2011	<a href="https://dx.doi.org/10.1185/03007995.2011.624090">https://dx.doi.org/10.1185/03007995.2011.624090</a>	Expert bias in peer review	Not empirical study
Pisetsky 2003	<a href="https://onlinelibrary.wiley.com/doi/epdf/10.1002/art.10946">https://onlinelibrary.wiley.com/doi/epdf/10.1002/art.10946</a>	New policy on disclosure of interest for American College of Rheumatology Journals	Not empirical study
Pitkin 1998	<a href="https://pubmed.ncbi.nlm.nih.gov/9575262/">https://pubmed.ncbi.nlm.nih.gov/9575262/</a>	Ethical and quasi-ethical issues in medical editing and publishing	Not empirical study
Pivovarova 2019	<a href="https://dx.doi.org/10.1097/ACM.0000000000002762">https://dx.doi.org/10.1097/ACM.0000000000002762</a>	How Single Institutional Review Boards Manage Their Own Conflicts of Interest: Findings From a National Interview Study	Not peer review
Pogačnik 2019	<a href="https://hal.science/hal-02141850">https://hal.science/hal-02141850</a>	Science should be open, right?	Not peer reviewers' conflicts of interest
Pollock 2010	<a href="https://dx.doi.org/10.1002/cncr.25268">https://dx.doi.org/10.1002/cncr.25268</a>	The integrity of authorship: doing the right thing.	Not empirical study
Pranic 2020	<a href="https://doi.org/10.1002/leap.1344">https://doi.org/10.1002/leap.1344</a>	Is the quality of reviews reflected in editors' and authors' satisfaction with peer review? A cross-sectional study in 12 journals across four research fields	Not peer reviewers' conflicts of interest
Publons 2019	<a href="https://publons.com/static/Grant-Review-in-Focus-web.pdf">https://publons.com/static/Grant-Review-in-Focus-web.pdf</a>	Grant review in focus	Not peer reviewers' conflicts of interest
Quilligan 2004	<a href="https://dx.doi.org/10.1016/j.ajog.2004.07.025">https://dx.doi.org/10.1016/j.ajog.2004.07.025</a>	Conflict of interest	Not empirical study
Radun 2021	<a href="https://dx.doi.org/10.1080/08989621.2021.1989677">https://dx.doi.org/10.1080/08989621.2021.1989677</a>	Nonfinancial conflict of interest in peer-review: some notes for discussion	Not empirical study
Rakestraw 2009	<a href="https://dx.doi.org/10.1080/01947640903356357">https://dx.doi.org/10.1080/01947640903356357</a>	A conflict of interest: Why peer review committees need heightened scrutiny under federal antitrust law	Not empirical study
Ramasamy 2021	<a href="https://dx.doi.org/10.1016/j.joms.2020.11.033">https://dx.doi.org/10.1016/j.joms.2020.11.033</a>	Is Peer Review a Hindrance to Good Science or a Gatekeeper Against Bad Science?	Not empirical study
Reader 2000	<a href="https://dx.doi.org/10.1783/147118900101194364">https://dx.doi.org/10.1783/147118900101194364</a>	Competing interest	Not empirical study
Reed 2021	<a href="https://dx.doi.org/10.1057/s41271-021-00318-6">https://dx.doi.org/10.1057/s41271-021-00318-6</a>	The disinformation playbook: how industry manipulates the science-policy process-and how to restore scientific integrity	Not empirical study
Regehr 2006	<a href="https://dx.doi.org/10.1111/j.1365-2929.2006.02539.x">https://dx.doi.org/10.1111/j.1365-2929.2006.02539.x</a>	To blind or not to blind? What authors and reviewers prefer	Not peer reviewers' conflicts of interest
Renik 2018	<a href="https://dx.doi.org/10.1177/0192623318754792">https://dx.doi.org/10.1177/0192623318754792</a>	Conflict of Interest in Journal Peer Review	Not empirical study
Resnik 2015	<a href="https://dx.doi.org/10.1080/08989621.2014.958218">https://dx.doi.org/10.1080/08989621.2014.958218</a>	An international study of research misconduct policies	Not peer review
Resnik 2008	<a href="https://dx.doi.org/10.1007/s11948-008-9059-4">https://dx.doi.org/10.1007/s11948-008-9059-4</a>	Perceptions of Ethical Problems with Scientific Journal Peer Review: An Exploratory Study	Not peer reviewers' conflicts of interest
Reyes 2007	<a href="http://www.scielo.cl/scielo.php?script=sci_arttext&amp;pid=S0034-98872018000300373">http://www.scielo.cl/scielo.php?script=sci_arttext&amp;pid=S0034-98872018000300373</a>	Ethics in articles published in medical journals	Not empirical study
Rifai 2019	<a href="https://dx.doi.org/10.1373/clinchem.2018.298901">https://dx.doi.org/10.1373/clinchem.2018.298901</a>	Maintaining research and publication integrity	Not empirical study
Riss 2012a	<a href="https://dx.doi.org/10.1007/s00192-011-1560-7">https://dx.doi.org/10.1007/s00192-011-1560-7</a>	The peer review process II: To review and be reviewed	Not empirical study
Riss 2012b	<a href="https://dx.doi.org/10.1007/s00192-011-1559-0">https://dx.doi.org/10.1007/s00192-011-1559-0</a>	The peer review process I: Submitting a manuscript	Not empirical study
Ritlewski 2007	<a href="https://content.iospress.com/articles/international-journal-of-risk-and-safety-in-medicine/jrs393">https://content.iospress.com/articles/international-journal-of-risk-and-safety-in-medicine/jrs393</a>	Conflicts of interest in medical research in Germany and USA: A scrutiny of legal and ethical guidelines for reviewers and investigators	Not empirical study
Rivara 2007	<a href="http://dx.doi.org/10.1016/j.jpeds.2007.02.008">http://dx.doi.org/10.1016/j.jpeds.2007.02.008</a>	A comparison of reviewers selected by editors and reviewers suggested by authors.	Not peer reviewers' conflicts of interest
Rivkees 2008	<a href="https://pubmed.ncbi.nlm.nih.gov/18780592/">https://pubmed.ncbi.nlm.nih.gov/18780592/</a>	The long arm of financial conflicts of interest: Extensions into lined pockets, research and review, and the United States Senate	Not empirical study

Rock 1999	<a href="https://dx.doi.org/10.1016/S0002-8223(99)00010-3">https://dx.doi.org/10.1016/S0002-8223(99)00010-3</a>	Conflict of interest: an important issue in nutrition research and communications	Not empirical study
Rodriguez 2007	<a href="https://doi.org/10.1016/j.joi.2006.09.006">https://doi.org/10.1016/j.joi.2006.09.006</a>	Mapping the bid behavior of conference referees	Not peer reviewers' conflicts of interest
Rosenfeldt 2002	<a href="https://dx.doi.org/10.1046/j.1444-2892.2002.00154.x">https://dx.doi.org/10.1046/j.1444-2892.2002.00154.x</a>	Conflict of interest	Not empirical study
Ross-Hellauer 2017	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0189311">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0189311</a>	Survey on open peer review: Attitudes and experience amongst editors, authors and reviewers	Not biomedical research
Rohrich 2014	<a href="https://dx.doi.org/10.1097/PRS.0000000000000036">https://dx.doi.org/10.1097/PRS.0000000000000036</a>	The process of publishing industry-affiliated articles in Plastic and Reconstructive Surgery	Not empirical study
Rohwer 2017	<a href="https://doi.org/10.1136/bmjopen-2017-018467">https://doi.org/10.1136/bmjopen-2017-018467</a>	Authorship, plagiarism and conflict of interest: views and practices from low/ middle-income country health researchers	Not peer reviewers' conflicts of interest
Rong 2022	<a href="https://doi.org/10.1053/j.jvca.2021.09.005">https://doi.org/10.1053/j.jvca.2021.09.005</a>	A Systematic Review of Retractions in the Field of Cardiothoracic and Vascular Anesthesia	Not peer reviewers' conflicts of interest
Rons 2006	<a href="https://arxiv.org/abs/1307.7031">https://arxiv.org/abs/1307.7031</a>	Reliability and Comparability of Peer Review Results	Not peer review
ROSS-HELLAUER2023a	<a href="https://osf.io/preprints/socarxiv/e5uyv">https://osf.io/preprints/socarxiv/e5uyv</a>	Understanding the social and political dimensions of research(er) assessment: Interpretative flexibility and hidden criteria	Not biomedical research
ROSS-HELLAUER2023b	<a href="https://osf.io/preprints/socarxiv/dcr8v">https://osf.io/preprints/socarxiv/dcr8v</a>	Value dissonance in research(er) assessment: Individual and institutional priorities in review, promotion and tenure criteria	Not biomedical research
Rossouw 2020	<a href="https://doi.org/10.1177/1556264620955110">https://doi.org/10.1177/1556264620955110</a>	An Analysis of Retracted Articles with Authors or Co-authors from the African Region: Possible Implications for Training and Awareness Raising	Not peer review
Rowan-Legg 2009	<a href="https://dx.doi.org/10.1136/jme.2008.024299">https://dx.doi.org/10.1136/jme.2008.024299</a>	A comparison of journal instructions regarding institutional review board approval and conflict-of-interest disclosure between 1995 and 2005	Not peer review
Rowley 2018	<a href="https://doi.org/10.1177/0165551517740821">https://doi.org/10.1177/0165551517740821</a>	Academics' attitudes towards peer review in scholarly journals and the effect of role and discipline	Not biomedical research
Roy 2001	<a href="https://www.nature.com/articles/35106722">https://www.nature.com/articles/35106722</a>	The perils of peer review.	Not empirical study
Ruff 2015	<a href="https://dx.doi.org/10.1186/s12940-015-0035-6">https://dx.doi.org/10.1186/s12940-015-0035-6</a>	Scientific journals and conflict of interest disclosure: what progress has been made?.	Not empirical study
Ruhli 2009	<a href="https://dx.doi.org/10.1002/huon.200900004">https://dx.doi.org/10.1002/huon.200900004</a>	Peer-review for the peer-review system	Not empirical study
Sachan 2022	<a href="https://dx.doi.org/10.4103/0973-3698.364678">https://dx.doi.org/10.4103/0973-3698.364678</a>	Publication ethics and misconducts	Not empirical study
Sacks 2020	<a href="https://dx.doi.org/10.1371/journal.pone.0243144">https://dx.doi.org/10.1371/journal.pone.0243144</a>	The characteristics and extent of food industry involvement in peer-reviewed research articles from 10 leading nutritionrelated journals in 2018	Not peer review
Sagam 2023	<a href="https://dx.doi.org/10.1136/bmjopen-2023-074510">https://dx.doi.org/10.1136/bmjopen-2023-074510</a>	Quality assessment of clinical practice guidelines in Kenya using the AGREE II tool: a methodological review	Not peer review
Saidman 1994	<a href="https://dx.doi.org/10.1097/0000542-199403000-00003">https://dx.doi.org/10.1097/0000542-199403000-00003</a>	Unresolved issues relating to peer review, industry support of research, and conflict of interest	Not empirical study
Salvi 2003	<a href="https://link.springer.com/article/10.1007/s11948-003-0023-z">https://link.springer.com/article/10.1007/s11948-003-0023-z</a>	Conflict of interest in biomedical research: a view from Europe	Not empirical study
Sandström 2008	<a href="https://doi.org/10.1007/s11192-008-0211-3">https://doi.org/10.1007/s11192-008-0211-3</a>	Persistent nepotism in peer-review	Not peer review
Satyanarayana 2010	<a href="https://journals.lww.com/ijmr/Citation/2010/32020/Biomedical_Journals_in_India_Some_critical.1.aspx">https://journals.lww.com/ijmr/Citation/2010/32020/Biomedical_Journals_in_India_Some_critical.1.aspx</a>	Biomedical journals in India: Some critical concerns	Not empirical study
Savulescu 2004	<a href="https://doi.org/10.1136/jme.2004.010827">https://doi.org/10.1136/jme.2004.010827</a>	What makes the best medical ethics journal? A North American perspective	Not peer reviewers' conflicts of interest
Sawka 2008	<a href="https://dx.doi.org/10.2147/JMDH.S3553">https://dx.doi.org/10.2147/JMDH.S3553</a>	Competing interests in development of clinical practice guidelines for diabetes management: Report from a multidisciplinary workshop	Not peer review
Shafer 2008	<a href="https://dx.doi.org/10.1213/01.ane.0000311326.92888.92">https://dx.doi.org/10.1213/01.ane.0000311326.92888.92</a>	Full disclosure matters!.	Not empirical study
Shah 2023	<a href="https://dx.doi.org/10.1371/journal.pone.0286206">https://dx.doi.org/10.1371/journal.pone.0286206</a>	The role of author identities in peer review	Not biomedical research
Sharma 2017	<a href="https://dx.doi.org/10.1177/0004867417726176">https://dx.doi.org/10.1177/0004867417726176</a>	An appraisal of practice guidelines for smoking cessation in people with severe mental illness	Not peer review
Scharschmidt 1994	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC294293/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC294293/</a>	Chance, Concurrence, and Clustering	Not peer reviewers' conflicts of interest
Schultz 2007	<a href="https://www.sciencedirect.com/science/article/pii/S0022202X15333170?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0022202X15333170?via%3Dihub</a>	Transparency is the key to the relationship between biomedical journals and medical writers.	Not empirical study
Shaw 2015	<a href="https://dx.doi.org/10.15252/embr.201540943">https://dx.doi.org/10.15252/embr.201540943</a>	Blinded by the light: Anonymization should be used in peer review to prevent bias, not protect referees	Not empirical study
Schoenmaker 2013	<a href="https://dx.doi.org/10.1093/ndt/gft303">https://dx.doi.org/10.1093/ndt/gft303</a>	Quality and consistency of clinical practice guidelines for the management of children on chronic dialysis	Not peer review
Schonhaut 2019	<a href="https://dx.doi.org/10.3264/rchped.v90i2.1034">https://dx.doi.org/10.3264/rchped.v90i2.1034</a>	Integrity and misconduct in biomedical research	Not peer review
Schully 2015	<a href="https://dx.doi.org/10.1038/qim.2014.69">https://dx.doi.org/10.1038/qim.2014.69</a>	Evidence synthesis and guideline development in genomic medicine: Current status and future prospects	Not peer reviewers' conflicts of interest
Schulman 1994	<a href="https://dx.doi.org/10.1001/jama.272.2.154">https://dx.doi.org/10.1001/jama.272.2.154</a>	Ethics, economics, and the publication policies of major medical journals	Not peer reviewers' conflicts of interest
Sheng 2022	<a href="https://dx.doi.org/10.7507/1672-2531.202110101">https://dx.doi.org/10.7507/1672-2531.202110101</a>	Quality appraisal of clinical practice guidelines and consensus for the management of fragility fractures in China by AGREE II and AGREE-China	Not peer reviewers' conflicts of interest
Schott 2015	<a href="https://www.aerzteblatt.de/int/archive/article/171081">https://www.aerzteblatt.de/int/archive/article/171081</a>	Declaration and Handling of Conflicts of Interest in Guidelines A Study of S1 Guidelines From German Specialist Societies From 2010–2013	Not peer review
Soreide 2010	<a href="http://www.sjtem.com/content/18/1/56">http://www.sjtem.com/content/18/1/56</a>	Submission policy, peer-review and editorial board members: interesting conflicts and conflicts of interest	Not empirical study

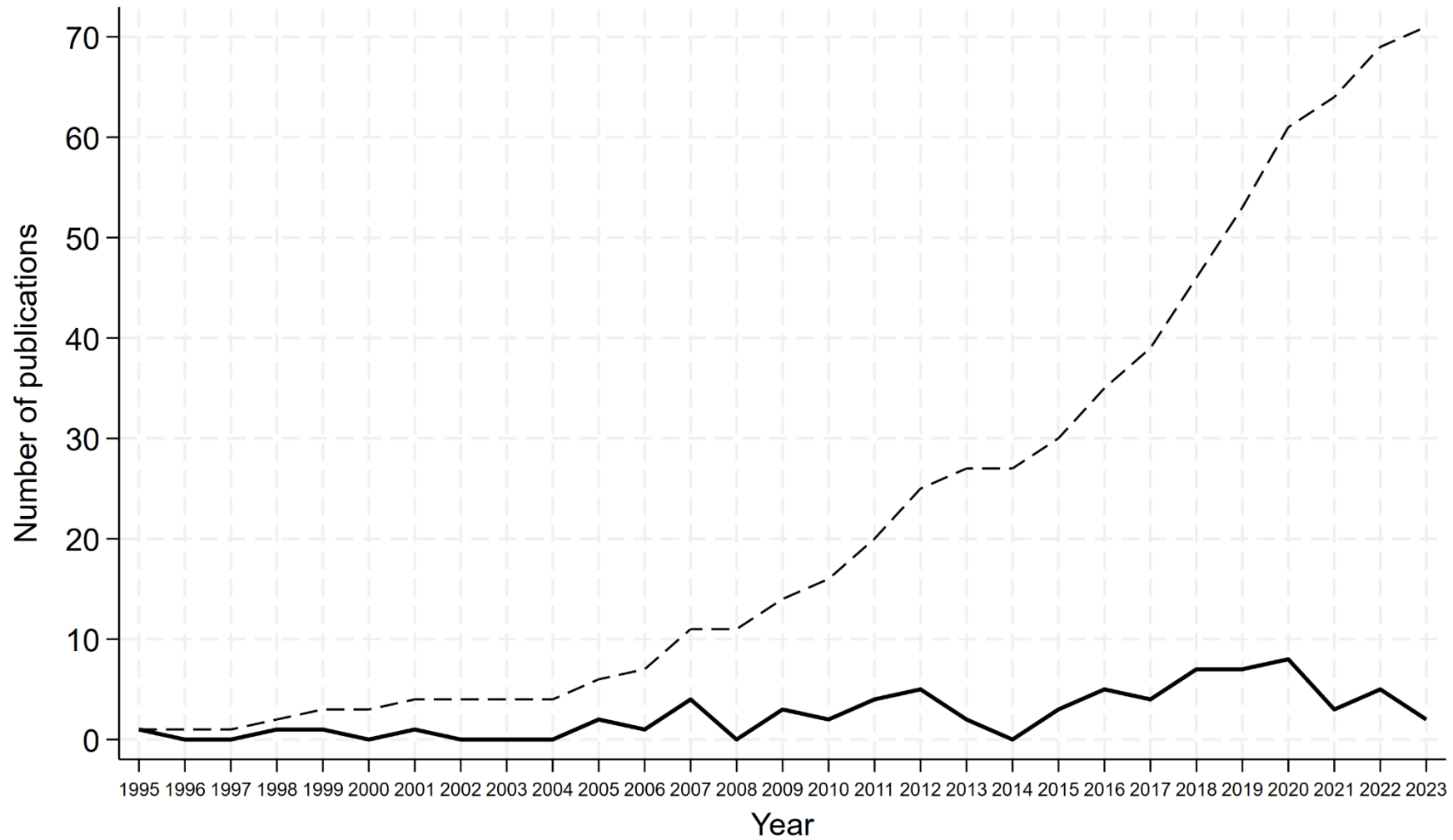
Schuklenk 2015	<a href="https://dx.doi.org/10.1111/bioe.12158">https://dx.doi.org/10.1111/bioe.12158</a>	On peer review	Not empirical study
Selker 2009	<a href="https://dx.doi.org/10.1056/NEJMp0910747">https://dx.doi.org/10.1056/NEJMp0910747</a>	Industry influence on comparative-effectiveness research funded through health care reform.	Not empirical study
Sergey 2022	<a href="https://www.wcri2022.org/wp-content/uploads/2022/05/WCRI-Abstract_Book_V2.pdf">https://www.wcri2022.org/wp-content/uploads/2022/05/WCRI-Abstract_Book_V2.pdf</a> (page 13-14)	AI-inspired integrity implications in grants review: Russian Science Foundation experience	Not biomedical research
Severin 2020	<a href="https://doi.org/10.1002/leap.1336">https://doi.org/10.1002/leap.1336</a>	Purposes of peer review: A qualitative study of stakeholder expectations and perceptions	Not peer reviewers' conflicts of interest
Shamsi-Gooshki 2020	<a href="https://doi.org/10.34172/aim.2020.88">https://doi.org/10.34172/aim.2020.88</a>	Evaluation of Iranian Medical Journals from the Perspective of Publication Ethics	Not peer review
Sidaway 2018	<a href="https://dx.doi.org/10.1038/s41571-018-0106-z">https://dx.doi.org/10.1038/s41571-018-0106-z</a>	The murky world of disclosures	Not empirical study
Siegelman 1991	<a href="https://pubs.rsna.org/doi/epdf/10.1148/radiology.178.3.1994394">https://pubs.rsna.org/doi/epdf/10.1148/radiology.178.3.1994394</a>	Assassins and Zealots: Variations in Peer Review Special Report'	Not peer reviewers' conflicts of interest
Silbiger 2019	<a href="https://peerj.com/articles/8247/">https://peerj.com/articles/8247/</a>	Unprofessional peer reviews disproportionately harm underrepresented groups in STEM	Not biomedical research
Sismondo 2007	<a href="https://doi.org/10.1371/journal.pmed.0040286">https://doi.org/10.1371/journal.pmed.0040286</a>	Ghost management: how much of the medical literature is shaped behind the scenes by the pharmaceutical industry?.	Not empirical study
Shattell 2010	<a href="https://doi.org/10.1111/j.1547-5069.2009.01331.x">https://doi.org/10.1111/j.1547-5069.2009.01331.x</a>	Authors' and Editors' Perspectives on Peer Review Quality in Three Scholarly Nursing Journals	Not peer reviewers' conflicts of interest
Shimray 2021	<a href="https://doi.org/10.1080/08989621.2021.2014327">https://doi.org/10.1080/08989621.2021.2014327</a>	Research done wrong: A comprehensive investigation of retracted publications in COVID-19	Not peer reviewers' conflicts of interest
Shlobin 2022	<a href="https://doi.org/10.1016/j.wneu.2021.10.143">https://doi.org/10.1016/j.wneu.2021.10.143</a>	Reporting Policies in Neurosurgical Journals: A Meta-Science Study of the Current State and Case for Standardization	Not peer review
Smith 2022	<a href="https://doi.org/10.1016/j.jclinepi.2022.09.006">https://doi.org/10.1016/j.jclinepi.2022.09.006</a>	Development processes for e-cigarette public health recommendations lacked transparency in managing conflicts of interest	Not peer review
Smith 2006	<a href="https://dx.doi.org/10.1258/jrsm.99.3.115">https://dx.doi.org/10.1258/jrsm.99.3.115</a>	The trouble with medical journals	Not empirical study
Smith 2005	<a href="https://blogs.bmj.com/bmj/2012/07/03/richard-smith-medical-journals-a-qaqaqle-of-golden-geese/">https://blogs.bmj.com/bmj/2012/07/03/richard-smith-medical-journals-a-qaqaqle-of-golden-geese/</a>	Medical journals are an extension of the marketing arm of pharmaceutical companies	Not empirical study
Solans-Domènech 2017	<a href="https://doi.org/10.1093/reseval/rvx021">https://doi.org/10.1093/reseval/rvx021</a>	Blinding applicants in a first-stage peer-review process of biomedical research grants: An observational study	Not peer reviewers' conflicts of interest
Sorriha 2021	<a href="https://dx.doi.org/10.1007/s00192-021-04729-7">https://dx.doi.org/10.1007/s00192-021-04729-7</a>	Treatment of urinary incontinence: a critical appraisal of clinical practice guidelines with the AGREE II instrument	Not peer reviewers' conflicts of interest
Southgate 1987	<a href="https://jamanetwork.com/journals/jama/fullarticle/368090">https://jamanetwork.com/journals/jama/fullarticle/368090</a>	Conflict of interest and the peer review process	Not empirical study
Spithoff 2020	<a href="https://dx.doi.org/10.1371/journal.pone.0227045">https://dx.doi.org/10.1371/journal.pone.0227045</a>	Drivers of the opioid crisis: An appraisal of financial conflicts of interest in clinical practice guideline panels at the peak of opioid prescribing	Not peer review
Sposato 2014	<a href="https://doi.org/10.1002/ana.24218">https://doi.org/10.1002/ana.24218</a>	A peek behind the curtain: Peer review and editorial decision making at Stroke	Not peer reviewers' conflicts of interest
Stavale 2019	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0214272">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0214272</a>	Research misconduct in health and life sciences research: A systematic review of retracted literature from Brazilian institutions	Not peer review
Steele 2019	<a href="https://dx.doi.org/10.1057/s41271-019-00170-9">https://dx.doi.org/10.1057/s41271-019-00170-9</a>	"Always read the small print": a case study of commercial research funding, disclosure and agreements with Coca-Cola	Not empirical study
Steinbrook 2012	<a href="https://dx.doi.org/10.1111/j.1748-720X.2012.00681.x">https://dx.doi.org/10.1111/j.1748-720X.2012.00681.x</a>	Medical Journals and Conflicts of Interest	Not empirical study
Steinhauser 2012	<a href="https://doi.org/10.1007/s11017-012-9233-1">https://doi.org/10.1007/s11017-012-9233-1</a>	Peer review versus editorial review and their role in innovative science	Not empirical study
Stelmakh 2023	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0283980">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0283980</a>		
Tallapragada 2017	<a href="https://doi.org/10.1007/s11948-016-9764-3">https://doi.org/10.1007/s11948-016-9764-3</a>	Aware, Yet Ignorant: Exploring the Views of Early Career Researchers About Funding and Conflicts of Interests in Science	Not peer review
Tamblyn 2018	<a href="https://doi.org/10.1503/cmaj.170901">https://doi.org/10.1503/cmaj.170901</a>	Assessment of potential bias in research grant peer review in Canada	Not peer review
Tang 2022	<a href="https://doi.org/12/2/e058834.full.pdf">https://doi.org/12/2/e058834.full.pdf</a>	Characteristics and quality of clinical practice guidelines addressing acupuncture interventions: a systematic survey of 133 guidelines and 433 acupuncture recommendations	Not peer review
Teixeira da Silva 2019	<a href="https://dx.doi.org/10.1007/s11673-019-09908-2">https://dx.doi.org/10.1007/s11673-019-09908-2</a>	Editors Should Declare Conflicts of Interest	Not empirical study
Thaler 2015	<a href="https://dx.doi.org/10.1016/j.jclinepi.2015.01.008">https://dx.doi.org/10.1016/j.jclinepi.2015.01.008</a>	Inadequate use and regulation of interventions against publication bias decreases their effectiveness: A systematic review	Not empirical study
Tharyan 2008	<a href="https://pubmed.ncbi.nlm.nih.gov/18807310/">https://pubmed.ncbi.nlm.nih.gov/18807310/</a>	Editorial policy and the reporting of randomized controlled trials: a survey of instructions for authors and assessment of trial reports in Indian medical journals (2004-05).	Not peer review
Thombs 2012	<a href="https://dx.doi.org/10.1503/cmaj.120597">https://dx.doi.org/10.1503/cmaj.120597</a>	A solution to inappropriate self-citation via peer review	Not empirical study
Thordarson 2011	<a href="https://dx.doi.org/10.3113/FAI.2011.0455">https://dx.doi.org/10.3113/FAI.2011.0455</a>	Editorial: Conflict of interest and FAI	Not empirical study
Tierney 2005	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1490141/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1490141/</a>	Scientific discourse, corporate ghostwriting, journal policy, and public trust.	Not empirical study
Toth 2020	<a href="http://dx.doi.org/10.17646/KOME.75672.47">http://dx.doi.org/10.17646/KOME.75672.47</a>	Reasons to decline an invitation to peer review during the Coronavirus (COVID-19) outbreak - Are there implications for journal policy?	Not biomedical research
Travis 1991	<a href="https://www.jstor.org/stable/689918">https://www.jstor.org/stable/689918</a>	New Light on Old Boys: Cognitive and Institutional Particularism in the Peer Review System	Not biomedical research
Triggle 2007	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1994041/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1994041/</a>	What is the future of peer review? Why is there fraud in science? Is plagiarism out of control? Why do scientists do bad things? Is it all a case of: " All that is necessary for the triumph of evil is that good men do nothing?"	Not empirical study

Trueblood 2007	<a href="https://jaapl.org/content/35/1/125">https://jaapl.org/content/35/1/125</a>	Implications for the peer review process: Appellate court requires disclosure of peer review records to office of protection and advocacy	Not empirical study
Tulandi 2020	<a href="https://dx.doi.org/10.1016/j.jogc.2020.01.008">https://dx.doi.org/10.1016/j.jogc.2020.01.008</a>	The Responsibilities of Peer Review	Not empirical study
Tullu 2018	<a href="https://dx.doi.org/10.4103/jpgm.JPGM_618_17">https://dx.doi.org/10.4103/jpgm.JPGM_618_17</a>	Success in Publishing: Selecting an Appropriate Journal and Braving the Peer-review Process	Not empirical study
Tuncay 2003	<a href="https://www.researchgate.net/publication/10706499_Conflict_of_interest">https://www.researchgate.net/publication/10706499_Conflict_of_interest</a>	Conflict of interest	Not empirical study
Turner 2015	<a href="https://bmjopen.bmj.com/content/8/12/e022548#ref-3">https://bmjopen.bmj.com/content/8/12/e022548#ref-3</a>	Evaluation of stakeholder views on peer review of NIHR applications for funding: a qualitative study	Not peer reviewers' conflicts of interest
Utrobičić 2014	<a href="https://europeanscienceediting.org.uk/articles/composition-of-editorial-boards-and-peer-review-policies-of-croatian-journals-indexed-in-web-of-science-and-scopus/">https://europeanscienceediting.org.uk/articles/composition-of-editorial-boards-and-peer-review-policies-of-croatian-journals-indexed-in-web-of-science-and-scopus/</a>	Composition of editorial boards and peer review policies of Croatian journals indexed in Web of Science and Scopus	Not peer review
Vallée-Tourangeau 2022	<a href="https://doi.org/10.1057/s41599-022-01050-6">https://doi.org/10.1057/s41599-022-01050-6</a>	Peer reviewer's dilemmas: a qualitative exploration of decisional conflict in the evaluation of grant applications in the medical humanities and social sciences	Not biomedical research
Van den Eynden 2016	<a href="https://dx.doi.org/10.6084/m9.figshare.4055448">https://dx.doi.org/10.6084/m9.figshare.4055448</a>	Towards Open Research: practices, experiences, barriers and opportunities	Not peer reviewers' conflicts of interest
Veldkamp 2017	<a href="https://osf.io/preprints/psyarxiv/g8cjq">https://osf.io/preprints/psyarxiv/g8cjq</a>	Doctoral thesis: The human fallibility of scientists - dealing with error and bias in academic research	Not peer reviewers' conflicts of interest
Vercellini 2016	<a href="https://dx.doi.org/10.1016/j.ejim.2016.04.014">https://dx.doi.org/10.1016/j.ejim.2016.04.014</a>	Peer review in medical journals: Beyond quality of reports towards transparency and public scrutiny of the process	Not empirical study
Vervaart 2014	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4975197/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4975197/</a>	Ethics in Online Publications.	Not biomedical research
Vuong 2019	<a href="https://doi.org/10.1002/leap.1282">https://doi.org/10.1002/leap.1282</a>	The limitations of retraction notices and the heroic acts of authors who correct the scholarly record: An analysis of retractions of papers published from 1975 to 2019	Not peer reviewers' conflicts of interest
Wager 2009	<a href="http://dx.doi.org/10.1136/jme.2008.028324">http://dx.doi.org/10.1136/jme.2008.028324</a>	Science journal editors' views on publication ethics: results of an international survey	Not biomedical research
Wagner 2009	<a href="https://dx.doi.org/10.1136/jech.2008.085001">https://dx.doi.org/10.1136/jech.2008.085001</a>	Regulatory reinforcement of journal conflict of interest disclosures: How could disclosure of interests work better in medicine, epidemiology and public health?.	Not empirical study
Wagner 2003	<a href="https://dx.doi.org/10.1097/O1.PHM.0000087607.28091.B7">https://dx.doi.org/10.1097/O1.PHM.0000087607.28091.B7</a>	Peer review: Issues in physical medicine and rehabilitation	Not empirical study
Wang 2022	<a href="https://doi.org/10.1002/leap.1465">https://doi.org/10.1002/leap.1465</a>	Comparison of early career researchers and senior career researchers as peer reviewers: A questionnaire survey in China	Not peer reviewers' conflicts of interest
Wang 2019	<a href="https://doi.org/10.1007/s11948-018-0040-6">https://doi.org/10.1007/s11948-018-0040-6</a>	Retracted Publications in the Biomedical Literature from Open Access Journals	Not peer reviewers' conflicts of interest
Wang 2017	<a href="https://doi.org/10.1016/j.wneu.2017.04.014">https://doi.org/10.1016/j.wneu.2017.04.014</a>	Retraction of Neurosurgical Publications: A Systematic Review	Not peer reviewers' conflicts of interest
Wang 2014	<a href="https://dx.doi.org/10.1161/CIRCRESAHA.113.302765">https://dx.doi.org/10.1161/CIRCRESAHA.113.302765</a>	Blind dates in sciences: Dealing with rejection in peer review	Not empirical study
Walker 2022a	<a href="https://doi.org/10.12688/f1000research.6012.2">https://doi.org/10.12688/f1000research.6012.2</a>	Personal attributes of authors and reviewers, social bias and the outcomes of peer review: a case study	Not peer reviewers' conflicts of interest
Walker 2022b	<a href="https://doi.org/10.1017/S1049096521001888">https://doi.org/10.1017/S1049096521001888</a>	Choosing Reviewers: Predictors of Undergraduate Manuscript Evaluations	Not biomedical research
Walter 2001	<a href="https://dx.doi.org/10.1046/j.1440-1614.2001.00838.x">https://dx.doi.org/10.1046/j.1440-1614.2001.00838.x</a>	Publishing ethics in psychiatry	Not empirical study
Wayant 2021	<a href="https://shareok.org/handle/11244/330894">https://shareok.org/handle/11244/330894</a>	Rigor and reproducibility of cancer medicine evidence	Not peer review
Webster 2015	<a href="https://dx.doi.org/10.1503/cmaj.109-4999">https://dx.doi.org/10.1503/cmaj.109-4999</a>	Peer review conflicts of interest surface at CIHR	Not empirical study
Weinstein 2002	<a href="https://pubmed.ncbi.nlm.nih.gov/11805626/">https://pubmed.ncbi.nlm.nih.gov/11805626/</a>	Editorial conflict of interest: art or science? The hippocratic solution.	Not empirical study
Weiss 2019	<a href="https://dx.doi.org/10.7717/peerj.6423">https://dx.doi.org/10.7717/peerj.6423</a>	Discordant financial conflicts of interest disclosures between clinical trial conference abstract and subsequent publication.	Not peer review
Wennerås 1997	<a href="https://www.nature.com/articles/387341a0">https://www.nature.com/articles/387341a0</a>	Nepotism and sexism in peer-review	Not peer review
Wernham 2019	<a href="https://dx.doi.org/10.1111/bjd.17752">https://dx.doi.org/10.1111/bjd.17752</a>	A 5-year review of the quality of reporting and methodology of research using clinician surveys published in the highest-ranked dermatology journals	Not peer review
Wiedermann 2016	<a href="https://dx.doi.org/10.5492/wiccm.v5.i3.171">https://dx.doi.org/10.5492/wiccm.v5.i3.171</a>	Ethical publishing in intensive care medicine: A narrative review.	Not empirical study
Wiersma 2020	<a href="https://doi.org/10.1007/s11673-020-09970-1">https://doi.org/10.1007/s11673-020-09970-1</a>	Status, Respect, and Stigma: A Qualitative Study of Non-financial Interests in Medicine	Not peer review
Winnik 2012	<a href="https://dx.doi.org/10.1093/eurheartj/ehs113">https://dx.doi.org/10.1093/eurheartj/ehs113</a>	From abstract to impact in cardiovascular research: Factors predicting publication and citation	Not peer reviewers' conflicts of interest
Wu 2015	<a href="https://dx.doi.org/10.1155/2015/710324">https://dx.doi.org/10.1155/2015/710324</a>	Critical Appraisal of Clinical Practice Guidelines for Age-Related Macular Degeneration.	Not peer reviewers' conflicts of interest
Xiao 2019	<a href="https://doi.org/10.1016/j.ejogrb.2019.07.039">https://doi.org/10.1016/j.ejogrb.2019.07.039</a>	Evaluation of the quality of guidelines for assisted reproductive technology using the RIGHT checklist: A cross-sectional study	Not peer review
Xu 2022	<a href="https://doi.org/10.1002/leap.1445">https://doi.org/10.1002/leap.1445</a>	Non-author entities accountable for retractions: A diachronic and cross-disciplinary exploration of reasons for retraction	Not peer review
Zaharie 2016	<a href="https://doi.org/10.1016/j.emj.2015.12.004">https://doi.org/10.1016/j.emj.2015.12.004</a>	Peer review motivation frames: A qualitative approach	Not peer reviewers' conflicts of interest
Zhang 2020	<a href="https://doi.org/10.1007/s11192-020-03636-w">https://doi.org/10.1007/s11192-020-03636-w</a>	Collaboration and its influence on retraction based on retracted publications during 1978–2017	Not peer review
Zhao 2020	<a href="https://atm.amegroups.com/article/view/40369/html">https://atm.amegroups.com/article/view/40369/html</a>	A quality evaluation of guidelines on five different viruses causing public health emergencies of international concern	Not peer review
Zhao 2015	<a href="https://doi.org/10.1002/asi.23317">https://doi.org/10.1002/asi.23317</a>	Imperfect Referees: Reducing the Impact of Multiple Biases in Peer Review	Not biomedical research

Zheng 2022	<a href="https://dx.doi.org/10.1111/jan.15067">https://dx.doi.org/10.1111/jan.15067</a>	Clinical practice guidelines for the prevention and management of frailty: A systematic review	Not peer review
Ziegler 2014	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5983090/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5983090/</a>	Freedom of science - can industry influence what scientists publish?	Not empirical study
Zliobaite 2016	<a href="https://dx.doi.org/10.1038/539168a">https://dx.doi.org/10.1038/539168a</a>	Peer review: Revise rules on conflicts of interest	Not empirical study
Zuckerman 1971	<a href="https://www.jstor.org/stable/41827004">https://www.jstor.org/stable/41827004</a>	Patterns of Evaluation in Science: Institutionalisation, Structure and Functions of the Referee System	Not peer reviewers' conflicts of interest
Yang 2022	<a href="https://dx.doi.org/10.1007/s12519-021-00493-2">https://dx.doi.org/10.1007/s12519-021-00493-2</a>	Journal's responsibility in maintaining scientific integrity	Not empirical study
Yao 2016	<a href="https://doi.org/10.1007/s11655-016-2739-z">https://doi.org/10.1007/s11655-016-2739-z</a>	Quality Assessment of Clinical Practice Guidelines for Integrative Medicine in China: A Systematic Review	Not peer review
Yates 2017	<a href="https://dx.doi.org/10.1152/jn.00058.2017">https://dx.doi.org/10.1152/jn.00058.2017</a>	The "new realities" of peer review	Not empirical study
Yoshida 2006	<a href="https://doi.org/10.1532/JH97.06031">https://doi.org/10.1532/JH97.06031</a>	Peer review system: any other choice?	Not empirical study
Young 2009	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2783432/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2783432/</a>	Bias in the research literature and conflict of interest: An issue for publishers, editors, reviewers and authors, and it is not just about the money	Not empirical study
Young 2004	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/15486604/">https://www.ncbi.nlm.nih.gov/pmc/articles/pmid/15486604/</a>	Ethical conduct of journal editors.	Not empirical study

### Supplementary appendix 7. Annual number of publications on peer reviewers' conflicts of interest

The solid line represents the annual number of publications on peer reviewers' conflicts of interest, and the dotted line the sum of annual publications. This also includes theses and dissertations, preprints and conference abstracts.





**Supplementary appendix 8. Study domain, types of biomedical disciplines, aim, definitions and types of conflicts of interest, study design and analysis methods, and sample characteristics of the 71 included studies**

Study	Study domain	Types of biomedical disciplines	Aim	PRCOI investigated as	Study aim related to PRCOI*	Definition or characterisation of conflicts of interest	Type of COI	Study design	Analysis method(s)	Sample characteristics
<b>Qualitative research methods</b>										
<i>Abdoul (2012)</i>	Funding applications	Mixed	"(...) to describe the perceptions and experience of stakeholders regarding non-financial Cols potentially affecting the grant-application review process, to describe the management of these non-financial Cols, and to suggest possible solutions."	Primary aim	Funders', researchers' and reviewers' experiences with PRCOI	"A Col has been defined as "a set of circumstances that create a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest" [16]. Cols may be individual, institutional, financial, academic, or personal."	Non-financial	Semi-structured interviews	Thematic analysis	Stratified random sample of 38 internal and 27 external reviewers, and 33 grant applicants in France
<i>Bonn (2021)</i>	Funding applications	Mixed	"(...) to extend our understanding of success and integrity by also capturing the views of policy makers, funders, institution leaders, research integrity office members, research integrity network members, laboratory technicians, and former researchers who changed career. We present our results in two publications. In the present paper, we discuss how different actors perceive success in	Not aim	Editors', funders', researchers' and other stakeholders' experiences with PRCOI	Not reported	Not reported	Semi-structured interviews and focus groups	Thematic analysis	Convenience sample of 56 stakeholders*

			science, and in an associated publication we present their view on integrity and problems in science.”							
<i>Emden (1998)</i>	Journal manuscripts	Nursing	“Our interest in mounting the study reported here, therefore, was to learn from reviewers themselves - their experiences and views about the process, as well as areas they considered should be further researched.”	Not aim	Reviewers' experiences with PRCOI	Not reported	Not reported	Semi-structured interviews	Thematic analyses	Purposive sample of 15 reviewers from one journal
<i>Freda (2005)</i>	Journal manuscripts	Nursing	“(…) to describe the kinds of ethically difficult situations nursing editors faced in their work.”	Not aim	Editors' experiences with PRCOI	Not reported	Not reported	Questionnaire	Content analysis	Convenience sampling of 88 editors
<i>Glonti (2019)</i>	Journal manuscripts	Mixed	“(…) to examine the experience of general and specialty biomedical journal editors and to characterise their perspectives, expectations and understanding of the roles and tasks of peer reviewers.”	Non-primary aim	Editors' experiences with PRCOI	Not reported	Not reported	Semi-structured interviews	Thematic analysis	Purposive maximum variation sample of 56 journal editors
<i>Grundy (2020b)</i>	Journal manuscripts and clinical guidelines	Mixed	“(…) the purpose of this policy analysis was to document and critically compare the range of policy approaches for managing financial and non-financial interests across health-related research organizations.”	Not aim	PRCOI policy prevalence and content	“The 2009 Institute of Medicine (IOM) report Conflict of Interest in Medical Research, Education, and Practice outlined a normative and conceptual framework for identifying and assessing	Financial and non-financial	Survey	Content analysis	Purposive sample of 22 health-related research organisations



						conflicts of interest, which we used to construct an instrument for data extraction (IOM 2009)."				
<i>Lipworth (2011)</i>	Journal manuscripts	Mixed	"(...) to use qualitative methods to generate a detailed understanding of the most salient social and subjective dimensions of the biomedical manuscript review process from the perspective of working editors and peer reviewers, and to examine biomedical editors' and peer reviewers' everyday experiences of, and attitudes towards, these dimensions"	Not aim	Editors' experiences with PRCOI	Not reported	Not reported	Unstructured interviews	Grounded theory conceptual analysis	Purposive sample of 35 editors from Australia, the UK and the USA
<i>Parker (2022)</i>	Journal manuscripts	Mixed	"(...) to explore indicators of research fraud that could be included in a screening tool to identify potentially problematic studies warranting a closer scrutiny"	Not aim	Researchers' and other stakeholders' experiences with PRCOI	Not reported	Not reported	Interviews	Grounded theory conceptual analysis	Purposive sample of 30 stakeholders
<i>Tercier (2007)</i>	Journal manuscripts	Emergency medicine	"This paper describes a normative model of peer review based on a qualitative profile of the values, beliefs and attitudes of peer reviewers. That is, it describes a model of peer review as it is conceived of by peer reviewers in an	Not aim	Reviewers' experiences with PRCOI	"Personal bias (disciplinary politics, conflicts of interest, petty jealousies)"	Not reported	Semi-structured interviews	Descriptive and thematic analysis	Stratified purposive sample of 72 reviewers from Annals of Emergency Medicine

attempt to discern where the effects and effectiveness of the process are thought to reside.”

**Quantitative research methods**

<i>Alfonso (2012)</i>	Journal manuscripts	Cardiology	“This report examines the issue of COI from a global and didactic perspective and provides new insights into current policies and practices among European Society of Cardiology National Societies Cardiovascular Journals.”	Primary aim	PRCOI policy prevalence	“According to the International Committee of Medical Journal Editors (ICMJE) COI exist when an author (or the author’s institution), reviewer or editor have financial or personal relationships that inappropriately influence (bias) his or her actions. The potential for COI exists regardless of whether the individual believes that the relationships affect his or her scientific judgement. Aside from financial relationships, COI may emerge from personal relationships, academic competition and intellectual passion.”	Financial and non-financial	Questionnaire	Descriptive	Purposive sample of 46 journal editors-in-chief from the European Society of Cardiology’s national cardiovascular journals
<i>Ancker (2007)</i>	Journal manuscripts	Mixed†	“To explore differences between scientific fields, we conducted a study of the prevalence and types of conflict of interest policies at peer-reviewed	Primary aim	PRCOI policy prevalence	“In scientific publication, a conflict of interest exists when an author has a financial, professional, or personal	Financial and non-financial	Survey and questionnaire	Descriptive	Purposive sample of 84 high-impact journals from 12 scientific disciplines and questionnaire of 49 journal representatives

			journals in 12 different scientific disciplines as defined by the Institute for Scientific Information (...)"			relationship that could influence or bias that author's decisions, interpretations, conclusions, or publications."				
<i>Anraku (2009)</i>	Journal manuscripts	Ophthalmology	"(...) to survey English-language ophthalmology journals for their conflict-of-interest disclosure policies for authors, peer reviewers, and editors."	Primary aim	PRCOI policy prevalence	"A commonly used definition describes conflict of interest as a set of conditions in which professional judgment involving a primary interest (eg, patient welfare or the validity of research) is unduly influenced by a secondary interest (eg, financial gain)."	Not reported	Survey	Descriptive and comparative statistics	Purposive sample of policies of 42 English-language ophthalmology journals from the 2007 Journal citation database
<i>Barnsteiner (2020)</i>	Journal manuscripts	Nursing	"(...) to examine the extent to which nursing journals have COI policies and require disclosures by authors, peer reviewers, editorial board members, and editors who have a role in journal content decisions"	Primary aim	PRCOI policy prevalence	"A conflict of interest (COI) occurs when an author, reviewer, or editor allows a self-interest to influence judgment (International Committee of Medical Journal Editors [ICMJE], 2019). These interests can be financial, professional, academic, ethical, political, or personal."	Financial and non-financial	Survey and questionnaire	Descriptive and comparative statistics	Purposive sample of 116 nursing journals listed in the Web of Science SCIE database in 2019 and questionnaire of 82 editors
<i>Bose (2022)</i>	Journal manuscripts	Mixed	"(...) to assess COI policies among Indian biomedical journals."	Primary aim	PRCOI policy prevalence	"COI is said to exist when the primary interest of the publication is influenced by a	Financial and non-financial	Survey	Descriptive and inferential statistics	Purposive sample of 106 Indian medical journals

						secondary interest.[1] Secondary interests may include personal financial profit or non-financial advantages.”				
<i>Bou-Karroum (2018)</i>	Journal manuscripts	Public health & Health systems research	“(…) to assess the frequency and different types of COI that authors of systematic reviews on health policy and systems research (HSPR) report.”	Non-primary aim	Prevalence of published PRCOI declarations	“Conflict of interest (COI) is defined as “a financial or intellectual relationship that may impact an individual’s ability to approach a scientific question with an open mind.””	Financial and non-financial	Survey	Descriptive	Random sample of systematic reviews on health policy and systems research from 152 journals from the Health Systems Evidence database published in 2015.
<i>Broome (2010)</i>	Journal manuscripts	Nursing	“(…) to describe the ethical concerns and experiences of reviewers of nursing journals.”	Non-primary aim	Reviewers’ experiences with PRCOI	“Conflict of interest was defined in this survey instrument to include the reviewer having a personal, professional, or financial relationship with the author(s), or a strong negative or positive attitude or bias toward the topic or author(s)”	Financial and non-financial	Questionnaire	Descriptive and content analyses	Purposive sample of 1675 peer reviewers from 52 nursing journals (48% response rate)
<i>Cooper (2006)</i>	Journal manuscripts	Mixed	“(…) to characterize the policies of a broad variety of general and specialty medical journals with regard to COIs of not only manuscript authors but also peer-reviewers and editors”	Primary aim	PRCOI policy prevalence	Not reported	Financial and non-financial	Questionnaire	Descriptive	Convenience sample of 91 editors from general and specialty clinical medical journals
<i>Dal-Ré (2018)</i>	Journal manuscripts	Mixed	“(…) to assess whether journals listed as	Non-primary aim	PRCOI policy prevalence	Not reported	Financial and non-financial	Survey	Descriptive and	Random sample of 350 journals following the International

			International Committee of Medical Journal Editors Recommendations (ICMJE-R) followers state that comply with ICMJE-R COI policies.”					comparative statistics	Committee of Medical Journal Editors Recommendations	
<i>Das (2013)</i>	Journal manuscripts	Mixed	“(…) to assess on awareness of ‘conflict of interest’ issue in medical research and publication among the editorial staff, peer reviewers and authors of Indian medical journals.”	Primary aim	Reviewers’ and editors’ experiences with PRCOI	“A conflict of interest exists when an individual’s professional or ethical obligations might be compromised by self-interest.”	Not reported	Questionnaire	Descriptive	Convenience sample of 56 peer reviewers and 35 editors from 15 Indian medical journals (response rate not reported)
<i>Davis (2018)</i>	Journal manuscripts	General surgery	“To determine the degree of variability and any associations between grading components and journal impact factor, this project was designed to assess the current metrics used in the surgical literature to evaluate submitted original manuscripts”	Not aim	PRCOI policy prevalence	Not reported	Not reported	Survey of reviewer manuscript grading forms	Descriptive and comparative statistics	Purposive sample of 14 general surgery journals
<i>Domínguez-Berjón (2018)</i>	Journal manuscripts	Public health & Health systems research	“(…) to assess the reasons given by potential reviewers for declining a request to review a manuscript and the influence of different factors on acceptance.”	Not aim	Occurrence of declining peer review due to COI	Not reported	Financial and non-financial	Survey of administrative journal data	Descriptive	Sample of all review requests in 2014–2015 from the Gaceta Sanitaria journal
<i>Ferket (2011)</i>	Clinical Guidelines	Radiology	“(…) to critically appraise guidelines on imaging of asymptomatic coronary artery disease (CAD).”	Non-primary aim	Prevalence of published PRCOI declarations	Not reported	Financial	Survey	Descriptive and inferential statistics	Purposive sample of declarations in 14 national and international radiology guidelines

<i>Galandiuk (2022)</i>	Journal manuscripts	Gastroenterology & hepatology	Not reported	Not aim	Occurrence of declining peer review due to COI	Not reported	Not reported	Survey of administrative journal data	Descriptive	Purposive sample of 474 reviewer responses from the Diseases of the Colon & Rectum journal
<i>Gasparyan (2013)</i>	Clinical Guidelines	Rheumatology	Not reported	Not aim	PRCOI policy prevalence	“Although no unified definition of COI exists for the medical community, it is widely described as a set of circumstances in which a primary professional interest is excessively influenced by an individual’s secondary interest(s), which come into conflict with ethical duties toward patients, health professionals, and society-at-large.”	Not reported	Survey	Descriptive	Purposive sample of 43 rheumatology journals
<i>Glasspool-Malone (2005)</i>	Journal manuscripts	Mixed‡	“(…) to assess the perceptions of academic scientists on the granting and peer review processes at the National Institutes of Health (NIH) and to determine whether scientists believe those processes to be impartial and honest.”	Non-primary aim	Researchers’ experiences with PRCOI	Not reported	Non-financial	Questionnaire	Descriptive and comparative statistics	Purposive sample of 206 National Institute of Health applicants from US universities more than 7,000 students and doctoral degree-granting programs (27% response rate)
<i>Good (1999)</i>	Journal manuscripts	Mixed	“To identify editors interested in participating in a global organisation and communication network of medical editors; to assess current use of the peer-review	Not aim	Editors’ experiences with PRCOI	Not reported	Financial and non-financial	Questionnaire	Descriptive	Purposive sample of 245 editors

			process; and to determine current computer capabilities, needs, and interests of medical journal editors around the world.”							
<i>Grandizio (2020)</i>	Journal manuscripts	Surgery	“To determine whether demographic differences exist among editors, reviewers, and authors in The Journal of Hand Surgery (JHS).”	Non-primary aim	Occurrence of PRCOI	Not reported	Financial	Survey	Descriptive and comparative statistics	Purposive sample of payments from industry to 462 peer reviewers from the Journal of Hand Surgery during 2018
<i>Hinton (2021)</i>	Clinical Guidelines	Cardiology	“(…) to assess the frequency and nature of financial conflicts of interest among both the guideline committee authors and the authors of research studies used to support the European Society of Cardiology (ESC) guidelines.”	Non-primary aim	Occurrence of PRCOI	“A conflict of interest (Col) is ‘a set of circumstances that creates a risk that professional judgement or actions regarding a primary interest will be unduly influenced by a secondary interest’. <sup>2</sup> While financial COIs are the focus of much research and commentary, there are also important non-financial COIs, such as ‘intellectual’ COIs. <sup>1</sup> Intellectual COIs are ‘academic activities that create the potential for an attachment to a specific point of view that could unduly affect an	Financial	Survey	Descriptive	Purposive sample of disclosures of 142 peer reviewers in five European Society of Cardiology guidelines

						individual's judgment about a specific recommendation'.				
<i>Ji (2019)</i>	Journal manuscripts	Mixed	"To demonstrate the endorsement of financial conflict of interest (COI) disclosure by peer-reviewers from high-impact medical journals in China."	Primary aim	Reviewers' experiences with PRCOI, Occurrence of PRCOI	Not reported	Financial	Questionnaire	Descriptive and comparative statistics	Purposive sample of 2,130 peer reviewers from the Chinese Medical Association Publishing House (12% response rate)
<i>Khurana (2012)</i>	Journal manuscripts	Mixed	"The authors reviewed and characterized conflict of interest (COI) and disclosure policies published in peer-reviewed psychiatric and nonpsychiatric journals."	Primary aim	PRCOI policy prevalence	"COI is defined as a set of conditions in which professional judgment concerning a primary interest such as a patient's welfare or the accuracy of research findings may be unduly influenced by a secondary interest (7, 13). The International Committee of Medical Journal Editors (ICMJE) specifies that "COI exists when an author (or the author's institution), reviewer, or editor has financial or personal relationships that inappropriately influence (bias) his or her actions (such relationships are also known as dual commitments,	Financial and non-financial	Survey	Descriptive and comparative statistics and content analysis	Purposive sample of 40 high-impact psychiatric and general medical journals



						competing interests, or competing loyalties).”				
<i>Krimsky (2001)</i>	Journal manuscripts	Mixed	“This paper reports on an analysis of COI policies and disclosure frequencies of author personal financial interests in biomedical and science journals for 1997, and on a survey taken of 181 editors of peer-reviewed journals on the implementation of their publications’ COI policies.”	Not aim	Editors’ experiences with PRCOI and PRCOI policy prevalence	“Conflict of interest has been defined as a set of conditions in which professional judgment concerning a primary interest (such as patients’ welfare or the validity of research) tends to be unduly influenced by a secondary interest (such as financial gain).”	Financial and non-financial	Questionnaire and survey	Descriptive	Purposive sample of 123 editors and 157 medical journals
<i>Kuczmarzki (2015)</i>	Conference abstracts	Mixed	“This paper analyzes approaches to scoring abstracts for large medical conferences”	Non-primary aim	PRCOI policy prevalence	Not reported	Not reported	Survey	Descriptive	Convenience sample of policies of 27 large medical society conferences
<i>Lippert (2011)</i>	Journal manuscripts	Emergency medicine	“We investigate reviewers’ perceptions of potential bias introduced by particular author disclosures, and whether reviewer characteristics are associated with a greater likelihood of perceiving bias”	Primary aim	Reviewers’ experiences with PRCOI	“The initial questions were designed to assess baseline reviewer knowledge and perceptions of the activities and benefits of two specific potential conflicts commonly disclosed: serving on a speakers bureau and acting as a consultant. In the second portion of the survey, we elicited reactions to hypothetical	Financial	Questionnaire	Descriptive and comparative statistics	Random sample of 218 peer reviewers from 911 Annals of Emergency Medicine journal (54% response rate)

						manuscripts, which included either one of these two COI disclosures or disclosures such as stock ownership, direct financial payments and research sponsorship. Finally, we gathered information regarding participants' personal ties to industry, experience in peer-review, and teaching roles"				
<i>Looi (2015)</i>	Journal manuscripts	Mixed	"In line with the objectives of Asia Pacific Association of Medical Journal Editors (APAME), an online survey into common publication misconduct encountered by APAME editors was conducted in 2015 to gain insight and encourage collaboration to address these challenges."	Not aim	Editors' experiences with PRCOI	Not reported	Not reported	Questionnaire	Descriptive	Purposive sample of 54 Asia Pacific Association of Medical Journal Editors editors.
<i>Lotbiniere-Bassett (2019)</i>	Journal manuscripts	Neurology	"(...) we sought to evaluate the prevalence and comprehensiveness of COI policies among leading neurosurgical journals."	Non-primary aim	PRCOI policy prevalence	"The International Committee of Medical Journal Editors (ICMJE) defines a COI as "exist[ing] when professional judgment concerning a primary interest (such as patients'	Financial and non-financial	Survey	Descriptive, comparative and inferential statistics	Purposive sample of policies of 19 high-impact neurosurgical journals

						welfare or the validity of research) may be influenced by a secondary interest (such as financial gain).”				
<i>Makarem (2023)</i>	Journal manuscripts	Mixed	“(…) to assess the extent to which peer reviewers and journal editors address authors’ conflicts of interests and study funding. Also, we aimed to assess the extent to which peer reviewers and journals editors reported and commented on their own or each other’s COI.”	Non-primary aim	Occurrence of PRCOI	“A conflict of interest exists when a past, current, or expected interest creates a significant risk of inappropriately influencing an individual’s judgment, decision, or action when carrying out a specific duty”	Financial and non-financial	Survey	Descriptive and thematic analysis	Purposive sample of peer review reports by 593 reviewers for 259 publications from 115 open-access medical journals
<i>Master (2018)</i>	Journal manuscripts	Bioethics	“(…) to examine the availability and comprehensiveness of COI policies for authors, peer reviewers, and editors of 63 bioethics journals in order to understand how journal editors perceive and handle COIs during the process of peer review and publication.”	Primary aim	PRCOI policy prevalence	“In research or clinical practice, conflicts of interest (COIs) exists for an individual when that person has secondary interests that may compromise judgment or decision making related to his or her ethical, legal, or professional obligations”	Financial and non-financial	Survey and questionnaire	Descriptive and comparative statistics	Purposive sample of 63 bioethics journals and 35 editors
<i>McCloskey (2022)</i>	Journal manuscripts	Mixed	“To develop a typology of poor peer review practices (PPRP) and assess researchers’ experiences with PPRP”	Not aim	Researchers’ experiences with PRCOI	“Criticisms based on undisclosed underlying doctrinal or intellectual school-of-thought differences (maybe also suggesting the use of references	Non-financial	Questionnaire	Descriptive	Purposive sample of 112 National Institute of Health grant recipients and bioethicists

						that are inappropriate or tangential to the paper (but not related to peer reviewer's own work))"				
<i>McIntosh (2023)</i>	Journal manuscripts	Fertility and pregnancy	"This case study analyzes the expertise, potential conflicts of interest, and objectivity of editors, authors, and peer reviewers involved in a 2022 special journal issue on fertility, pregnancy, and mental health"	Primary	Occurrence of PRCOI	"All participants in the peer-review and publication process – not only authors but also peer reviewers, editors, and editorial board members of journals – must consider and disclose their relationships and activities when fulfilling their roles in the process of article review and publication"	Financial and non-financial	Survey	Bipartite network analysis	Complete sample of editors, authors, and peer reviewers from 15 publications from a special research issue from one journal.
<i>Mendelson (2012)</i>	Clinical guidelines	Cardiology	"The extent of conflicts of interest (COIs) in cardiology guideline production has not been well studied. Herein, we describe the scope of COIs in clinical practice guidelines."	Non-primary aim	Occurrence of PRCOI	"We use the term "COI" to mean 1 reported affiliation causing a COI by 1 individual participating in 1 guideline."	Financial and non-financial	Survey	Descriptive and inferential statistics	Purposive sample of 498 peer reviewers from 17 American College of Cardiology and American Heart Association guidelines through 2008
<i>Morciano (2016)</i>	Clinical guidelines	Mixed	"(...) to assess whether and how organisations address COI issues related to guideline development, and to identify and quantify problematic areas of underreporting. We set out to capture a cross-sectional sample of worldwide guideline development organisations and to	Not aim	PRCOI policy content and prevalence	"(...) Information required for disclosure of financial and nonfinancial relationships"	Financial and non-financial	Survey	Descriptive and content analysis	Purposive sample of 29 guideline organisations

			examine the content of their policies on COI available in English, French, Spanish and Italian through a predefined data abstraction instrument."							
<i>Moylan (2016)</i>	Journal manuscripts	Mixed	"(...) to determine how transparent notices were in terms of reason for retraction and information provided, and if they complied with the COPE guidelines. We also wanted to determine if retractions were on the increase."	Not aim	Occurrence of retractions due to PRCOI	Not reported	Not reported	Survey	Descriptive	Purposive sample of 134 retracted publications between 2000 and 2015 from BioMed Central journals
<i>Müller (2008)</i>	Journal manuscripts	Mixed ¶¶	"Against this background the present work presents a comprehensive survey which aims at analyzing peer review processes of scholarly open access journals."	Non-primary aim	Editors' experiences with PRCOI	"(...) conflicts, ie behavioral incentives on the part of individual scientists who comply with the ethical principles in the contrary to science."	Financial and non-financial	Questionnaire	Descriptive	Random sample of 291 journal editors from the Directory of Open Access Journals (39% response rate)
<i>Ong (2022)</i>	Journal manuscripts	Emergency medicine	"The authors interrogated a database of de-identified original articles submitted to EMJ during the study period to investigate if there were significant associations between 1) the number of unsuccessful external peer review invitations, 2) the number of total invitations needed, and the acceptance	Not aim	Occurrence of declining peer review due to COI	Not reported	Not reported	Survey	Descriptive, comparative and inferential statistics	Purposive sample of 4,560 reviewer responses between 2016 and 2020 to the Emergency Medicine Journal

			or rejection of a research article.”							
<i>Philips (2021)</i>	Journal manuscripts	Public health & Health systems research	“(…) to explore the true implications of a paper having “peer reviewed journal article” status in this field, and to begin to document the extent to which the journal review process fulfills even its limited potential in public health publishing”	Not aim	Occurrence of PRCOI	Not reported	Financial and non-financial	Survey	Descriptive	Purposive sample of 12 publications from BioMed Central Public Health between 2012 and 2015.
<i>Ralph (2020)</i>	Journal manuscripts	Public health & Health systems research	“This article presents an analysis of financial conflicts of interest policies for editors, reviewers and authors in 20 prominent public health journals.”	Primary aim	PRCOI policy prevalence	Not reported	Financial	Survey	Descriptive	Purposive sample of 20 high-impact public health journals
<i>Raniga (2020)</i>	Journal manuscripts	Radiology	“(…) to evaluate and categorize the decline-to-re-view response to a manuscript review invitation that would allow American Journal of Roentgenology (AJR) editorial staff to improve the peer review process and to reduce manuscript turnaround time.”	Non-primary aim	Occurrence of declining peer review due to COI	Not reported	Not reported	Survey	Descriptive	Purposive sample of 9,366 peer reviewer responses to American Journal of Roentgenology within a 3-year period
<i>Resnik (2017)</i>	Journal manuscripts	Public health & health systems research	“To analyze conflict of interest and funding disclosure policies of 224 journals listed in Journal Citation Reports as focusing on environmental, occupational, or	Non-primary aim	PRCOI policy prevalence	Not reported	Financial and non-financial	Survey	Descriptive and comparative statistics and content analysis	Purposive sample of 227 public health journals from 2014

			public health research.”							
<i>Sanchez (2015)</i>	Clinical guidelines	Infectious disease	“To conduct an assessment of the quality of “Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Recommendations for a public health approach June 2013” by World Health Organization.”	Not aim	Occurrence of PRCOI	Not reported	Financial	Survey	Descriptive	26 peer reviewers from one World Health Organization guideline
<i>Schneider (2020)</i>	Clinical guidelines	Cardiology	“(…) to assess if the European Society of Cardiology guidelines for the management of atrial fibrillation are in accordance with the standards proposed by the Institute of Medicine”	Non-primary aim	Occurrence of PRCOI	Not reported	Not reported	Survey	Descriptive	Purposive sample of disclosures of 105 peer reviewers from the 2010 and 2016 European Society of Cardiology guidelines
<i>Schneider (2019)</i>	Funding applications	Mixed	“In the fall of 2016, a group of nine Clinical and Translational Science Award hubs formed a consortium to address the need for locating expert reviewers who were not in conflict with applications submitted for pilot study awards.”	Primary aim	Funders’ experiences with PRCOI	Not reported	Non-financial	Questionnaire	Descriptive	Purposive sample of nine funding administrators from nine US institutions (response rate not reported)
<i>Schneider (2007)</i>	Journal manuscripts	Public health & health systems research	“(…) to examine the disclosure practice of financial and non-financial conflicts of interest in German language publications concerning health	Non-primary aim	Prevalence of published PRCOI declarations	“Apart from financial interest, problems that may result from non-financial conflicts of interest are explicitly mentioned [10]: ”	Financial and non-financial	Survey	Descriptive statistics and content analysis	Purposive sample of 124 publications from 31 German health service research journals

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services research  
for the first time.)

[...] Conflict of interest exists when an author (or the author's institution), reviewer, or editor has financial or personal relationships that inappropriately influence (bias) his or her actions (such relationships are also known as dual commitments, competing interests, or competing loyalties). These relationships vary from those with negligible potential to those with great potential to influence judgment, and not all relationships represent true conflict of interest. The potential for conflict of interest can exist whether or not an individual believes that the relationship affects his or her scientific judgment. Financial relationships, (such as employment, consultancies, stock ownership, honoraria, paid

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expert testimony) are the most easily identifiable conflicts of interest and the most likely to undermine the credibility of the journal, the authors, and of science itself. However, conflicts can occur for other reasons, such as personal relationships, academic competition, and intellectual passion”

<i>Schroter (2010)</i>	Funding applications	Mixed	“(…) to describe the current status of peer review among biomedical funding organisations and the problems they face when evaluating proposals for biomedical project and programme grants. The second is a survey to determine the workload of external grant reviewers, the level of institutional support for this activity, reviewers’ motivations and perceived barriers to taking on grant review, and their views on possible solutions.”	Non-primary aim	Reviewers’ and funders’ experiences & PRCOI policy prevalence	Not reported	Not reported	Questionnaire	Descriptive	Convenience sample of 258 peer reviewers and 29 national and international funding organisations (49% response rate for organisations and 62% for reviewers)
<i>Shah (2019)</i>	Journal manuscripts	Mixed	“To analyze the contents and format of peer review	Not aim	PRCOI policy prevalence	Not reported	Not reported	Survey	Descriptive	Purposive sample of 41 journals from Pakistan

			proforma of Medical journals of Pakistan”							
<i>Stöllberger (2018)</i>	Clinical guidelines	Cardiology	“(…) to assess if the standards of the Institute of Medicine have influenced the development of the heart failure guidelines of the European Society of Cardiology.”	Primary aim	Occurrence of PRCOI	Not reported	Not reported	Survey	Descriptive	Purposive sample of 125 peer reviewers in two European Society of Cardiology guidelines from 2012 and 2016
<i>Taichman (2017)</i>	Journal manuscripts	Mixed	“(…) to assess peer reviewers’ views and practices including their self-reported use of any information in manuscripts they reviewed.”	Not aim	Reviewers’ experiences with PRCOI and Occurrence of PRCOI	Not reported	Non-financial	Questionnaire	Descriptive	Purposive sample of 1,417 reviewers from Annals of Internal Medicine from 2015 to 2016.
<i>Tavares-Neto (2009)</i>	Journal manuscripts	Mixed	“To evaluate the Brazilian journals cited by the four CAPES medical areas, qualified as “A” national or “I” international, regarding the relevance given to ethics in the instructions for authors.”	Not aim	PRCOI policy prevalence and content of instructions to authors	Not reported	Not reported	Survey	Descriptive	Purposive sample of 20 Brazilian biomedical journals
<i>Talari (2022)</i>	Journal manuscripts	Mixed	“(…) the primary objective of the present web-based survey among medical postgraduate trainees in India was to assess their awareness regarding publication ethics.”	Non-primary aim	Researchers’ experiences with PRCOI	Not reported	Non-financial	Questionnaire	Descriptive	Purposive sample of 205 postgraduate medical trainees from India
<i>Teplitzkiy (2018)</i>	Journal manuscripts	Neurology	“This study presents evidence that connections between authors and reviewers of neuroscience manuscripts are	Primary aim	Association between PRCOI and reviewer recommendations	“By nepotism we denote considerations and cognitive processes, such as heuristics, aimed at	Non-financial	Survey	Descriptive, comparative and inferential statistics	Purposive sample of editors, authors and peer reviewers of 7,881 manuscripts and 24,022 reviewer reports from PLOS

associated with biased judgments and explores the mechanisms driving that effect.”

strategic, non-scientific objectives. An example of nepotism would be a reviewer who reviews a submission from a former student favorably in order to improve that individual's career prospects. By subjective review criteria we denote considerations and cognitive processes aimed at establishing whether a work is significant, original, interesting, or other abstract and ambiguous qualities. By schools of thought we denote considerations and cognitive processes aimed at establishing whether a work is scientifically valid.”

ONE between 2011 and 2012

<i>Van Bueren (2012)</i>	Journal manuscripts	Mixed	“(…) to collect opinions regarding the current peer-review systems and assess whether there is a need to change the process.”	Not aim	Editors', researchers', reviewers' and other stakeholders' experiences with PROCI	Not reported	Not reported	Questionnaire	Descriptive	Convenient sample of 119 medical communications professionals, pharmaceutical company publication professionals, publishers, journal editors, authors, and reviewers
<i>Wang (2018)</i>	Clinical guidelines	Mixed	“(…) to examine DOI, COI, and funders reported in World Health	Non-primary aim	Prevalence of published PROCI declarations	“Conflicts of interest (COI) personal, organizational,	Financial and non-financial	Survey	Descriptive, comparative and	Purposive sample of declarations in 176 World Health Organization

			Organization guidelines, and the potential association between the reporting of DOI and whether World Health Organization was the sole developer of a guideline.”			and financial factors, which may affect the objectivity and independence of guideline contributors are a potential source of bias in the development of clinical practice guidelines”			inferential statistics	guidelines from 2007 to 2016
<i>Wilkes (1995)</i>	Journal manuscripts	Mixed	“To describe U.S. and Canadian medical journals, their editors, and policies that affect the dissemination of medical information”	Not aim	Editors', experiences with PRCOI	Not reported	Financial and non-financial	Questionnaire	Descriptive and comparative statistics	Purposive sample of 221 editors from different journals
<i>Willis (2016)</i>	Journal manuscripts	Not reported	“The present study demonstrates how a single journal generated and analysed data for its own pool of reviewers in order to identify obstacles preventing reviewers from agreeing to review.”	Non-primary aim	Occurrence of declining peer review due to COI	Not reported	Not reported	Survey	Descriptive	Purposive sample of 680 peer reviewer responses to one journal owned by a professional medical society based in the United Kingdom over a 5-month period in 2015
<i>Wong (2012)</i>	Journal manuscripts	Mixed	“To characterize medical editors by determining their demographics, training, potential sources of conflict of interest (COI), and familiarity with ethical standards.”	Not aim	Editors', experiences with PRCOI	Not reported	Not reported	Questionnaire	Descriptive	Purposive sample of 95 editors from different high-impact journals
<i>Yang (2017)</i>	Journal manuscripts	Mixed	“(…) to investigate the current status and policy of Conflict of interest (COI) reporting in biomedical journals in China”	Not aim	PRCOI policy prevalence	“In medical research, education, and clinical practice, conflict of interest (COI) is often defined as financial interests involving industry that may influence	Financial and non-financial	Survey	Descriptive and comparative statistics	Purposive sample of 67 Chinese and English language journals

						the researchers to make impartial decisions and judgments (Siwek 2014)."				
Zhang (2019)	Clinical guidelines	Cardiology	"In our current study, we aimed at systematically reviewing DAPT-relevant clinical practice guidelines, and highlighting their commonalities and differences for better informed decision-making"	Not aim	Prevalence of published PRCOI declarations	Not reported	Financial and non-financial	Survey	Descriptive and inferential statistics	Purposive sample of 18 cardiology guidelines published between 1999 and 2019
Zhu (2019)	Journal manuscripts	Mixed	"(...) to determine the current status of COI disclosure policy enforcement in Chinese medical journals and to promote comprehensive COI policies."	Non-primary aim	PRCOI policy prevalence	"The Institution of Medicine defines COIs as "circumstances that create a risk that professional judgments or actions regarding a primary interest will be unduly influenced by a secondary interest". Financial COIs: Any financial interests and relationships involved in the research and the article to be published. Financial COI types should include specific items such as grants, personal fees, indirect financial support, stock shares, employment and others. The source and amount of	Financial and non-financial	Survey	Descriptive and comparative statistics	Purposive sample of declarations in 496 publications from 248 Chinese journals

financial support should also be specified.  
 Nonfinancial COIs: Any other COIs apart from financial ones. Nonfinancial COI types should include, but not be limited to, items such as intellectual COIs, relationships, academic competition, beliefs. Research COIs: Any secondary interests that would influence the integrity of research. Editorial and the peer-review COIs: Those COIs that would compromise any opinion of participants involved in these key roles of the publication process”

**Mix-method research**

<i>Grundy (2020a)</i>	Funding applications and Clinical guidelines	Mixed	“(…) to articulate the range of issues that are currently labeled as “non-financial conflicts of interest” by biomedical researchers and policymakers and to catalogue “non-financial” interests currently addressed in policy.”	Not aim	Researchers’ experiences	“Despite a lack of consensus on what constitutes a “non-financial” interest, scientific organizations, including journals, guideline developers, and professional associations, are adopting policies that require biomedical	Non-financial	Interviews and surveys	Thematic analysis	Maximum variation purposive sample of 16 authors of COI-related studies
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researchers to formally and publicly disclose their “nonfinancial” conflicts of interest [9e11]. For example, over half of core clinical journals have a policy that requires authors to disclose some form of “non-financial” interest, but the interests covered vary considerably [12]. These interests include authorship of studies on the same subject, membership of a particular school of thought, political affiliations, and “anything that affects objectivity” .”

<i>Hendrick (2017)</i>	Journal manuscripts	Mixed	“To what extent does the institutional environment of medical journal publishing inform actors’ conceptualisation and management of conflicts of interest and their consideration of alternative approaches?”	Non-primary aim	Editors’, researchers’ and other stakeholders’ experiences with PROCI; PROCI policy prevalence	Not reported	Financial and non-financial	Survey and semi-structured, interviews	Descriptive analysis of policy data. Abductive thematic analysis of interviews. Triangulation	Stratified purposive sampling of 21 journals, and convenience sample 23 editors, 9 researchers, 3 publishers, 4 medical writers, 1 pharmaceutical company representative, 1 tobacco company representative, 1 industry consultant, and 6 medical publishing critics
<i>Silva (2016)</i>	Journal manuscripts	Mixed	“(…) to analyze and understand the perception of the	Non-primary aim	Researchers’ experiences with PROCI	“Conflict of interests: the same individuals	Financial and non-financial	Questionnaire	Descriptive statistics and	Stratified purposive sample of 65 researchers from nine

			scientific community about the peer review system of scientific journals.”			may be involved in a search funding, article publications and peer-reviewing process;”			content analysis	Brazilian universities (18% response rate)
<i>Tite (2007)</i>	Journal manuscripts	Mixed	“We conducted a survey of reviewers for five biomedical journals to determine the reasons why they decline to review, and their opinions on reviewer incentives.”	Not aim	Occurrence of declining peer review due to COI	Not reported	Not reported	Questionnaire and semi-structured interviews	Descriptive analysis, content analysis and triangulation	Purposive sample of 28 reviewers from the BMJ Publishing Group and a random sample of 200 reviewers from five journals

COI: Conflicts of interest; PRCOI: Peer reviewers' conflicts of interest.

\* If PRCOI was not a stated aim in the study we categorised the study aim according to the data related to PRCOI that was reported in the study

\*\* Current and past researchers, lab technicians, research institution leaders, research integrity office members, editors and publishers, funding agencies, policy makers or influencers, research integrity network members.

† Sample includes physical sciences, engineering and life sciences.

‡ Sample includes biotechnology and life sciences.

¶ Sample includes natural sciences, humanities, social sciences, and applied sciences.



## Supplementary appendix 9. Evidence map of the aims and study design of the 41 included studies with individual studies presented

The map summarises the evidence ordered by study domain, aim, design and methods.

The colours represent the four study domains: Journal manuscripts (yellow), Conference abstracts (red), Funding applications (green), and Clinical guidelines (blue).

The size of the bubbles represents study sample size: 0-10, 10-50, 50-100, 100-500, 500-1000, 1000+.

Studies with multiple aims or multiple types of study design or methods (eg, mixed-methods studies) appear multiple times on the map.

Type of method	Study design	Study aims related to peer reviewers' conflicts of interest										
		Impact of peer reviewers' conflicts on recommendations	Occurrence			Stakeholders' experiences					Policy and management	
			Reviewers' conflicts	Declining review due to conflicts	Conflicts addressed in review reports	Reviewers	Editors	Researchers	Funders	Other stakeholders	Availability of policies	Published declarations
Qualitative	Interview				Abdoul (2012)	Hendrick (2017), Glonti (2019)	Abdoul (2012), Hendrick (2017)	Abdoul (2012)	Hendrick (2017)			
	Questionnaire				Broome (2010)		Silva (2016)					
	Survey of documents									Khurana (2012), Hendrick (2017)		
Quantitative	Survey of administrative journal data	Teplitzkiy (2018)	Grandizio (2020)	Willis (2016), Raniga (2020)								
	Survey of documents		Makarem (2023), McIntosh (2023)		Makarem (2023)					Bose (2020), Lotbiniere-Bassett (2019), Makarem (2023), Bou-Karroum (2018)		

		<p>Stoellberger (2018)</p> <p>Hinton (2021)</p> <p>Schneider (2020)</p> <p>Mendelson (2012)</p>								<p>Khurana (2012)</p> <p>Ralph (2020)</p> <p>Resnik (2017)</p> <p>Zhu (2019)</p> <p>Hendrick (2017)</p> <p>Dal-Ré (2018)</p> <p>Anraku (2009)</p>	<p>Ferket (2011)</p> <p>Schneider (2007)</p> <p>Wang (2018)</p> <p>Zhu (2019)</p>
Questionnaire		<p>Ji (2019)</p> <p>Das (2013)</p>			<p>Das (2013)</p> <p>Lippert (2011)</p> <p>Schroter (2010)</p> <p>Ji (2019)</p> <p>Broome (2010)</p>	<p>Das (2013)</p> <p>Müller (2008)</p>	<p>Silva (2016)</p> <p>Talari (2022)</p> <p>Glasspool-Malone (2005)</p>	<p>Schneider (2019)</p> <p>Schroter (2010)</p>		<p>Cooper (2006)</p> <p>Alfonso (2012)</p> <p>Kuczarski (2015)</p> <p>Schroter (2010)</p>	
Survey of documents and questionnaire										<p>Ancker (2007)</p> <p>Barnsteiner (2020)</p> <p>Master (2018)</p>	

## Supplementary appendix 10. Summary of results on peer reviewers' conflicts of interest from the ten questionnaire studies

Study	Aim of study	Examples of reported questions or results	Responses (%)
Broome (2010)	“(…) to describe the ethical concerns and experiences of reviewers of nursing journals.”	[Reviewers]	
		<i>Have been concerned about conflict of interest</i>	23%
		<i>Have notified the editor when experiencing conflicts of interest</i>	92%
		<i>Were satisfied with the results of notifying the editor about conflicts of interest</i>	94%
		<i>Believe biases and conflicts of interest are more readily apparent in an open peer review model</i>	38%
Das (2013)	“(…) to assess on awareness of ‘conflict of interest’ issue in medical research and publication among the editorial staff, peer reviewers and authors of Indian medical journals.”	[Reviewers]	
		<i>Have heard of conflicts of interest</i>	57%
		<i>Know the meaning of conflicts of interest</i>	30%
		<i>Have returned/rejected a manuscript based on potential financial conflicts of interest</i>	0%
		<i>Have reviewed a manuscript with the author’s identity disclosed and found that it happens to be their friends or students</i>	75%
		<i>Have experienced the editorial office ever inquiring about conflicts of interest issues on article which peer reviewers were asked to review</i>	9%
Glasspool-Malone (2005)	“(…) to assess the perceptions of academic scientists on the granting and peer review processes at the National Institutes of Health (NIH) and to determine whether scientists believe those processes to be impartial and honest.”	[Researchers]	
		<i>Believe there are occasionally or never adequate protections against cronyism in the scientific peer review process at NIH all of the time or most of the time</i>	31%
Ji (2019)	“To demonstrate the endorsement of financial conflict of interest disclosure by peer-reviewers from high-impact medical journals in China.”	[Reviewers]	
		<i>Have experienced that financial conflicts of interest exists when they play a role as peer reviewers</i>	14%
		<i>Knew about the requirements for financial COI disclosure</i>	69%
		<i>Have disclosed financial conflicts of interest when conducting peer-review work.</i>	62%
Lippert (2011)	“(…) reviewers' perceptions of potential bias introduced by particular author disclosures, and whether reviewer characteristics are associated with a greater likelihood of perceiving bias”	[Reviewers]	
		<i>Believe that consultants are likely or very likely to act as a liaison between community physicians and the pharmaceutical company to promote the company's products</i>	68% (reviewer with COI) 84% (reviewer without COI)
		<i>Believe the consultant is reluctant to jeopardize the continuation of a working relationship with the company</i>	74% (reviewer with COI) 87% (reviewer without COI)
Müller (2008)	“(…) analyzing peer review processes of scholarly open access journals.”	[Editors]	
		<i>Reviewers are asked to inform the editors about possible conflicts of interest</i>	54%
		<i>Reviewers can refuse review a manuscript due to existing conflicts of interest</i>	60%
		<i>Reviewers have to refuse review a manuscript due to existing conflicts of interest</i>	21%
		<i>Reviewers with obvious conflicts of interest will be excluded in advance</i>	71%
		<i>Reviewers are asked to disclose any potential conflicts of interest</i>	54%
		<i>Reviewers may refuse to review manuscripts if there is a conflict of interest</i>	67%
		<i>Reviewers must refuse to review manuscripts if there is a conflict of interest</i>	23%
		[Funding organisations]	

<i>Schroter (2010)</i>	“(...) to describe the current status of peer review among biomedical funding organisations and the problems they face when evaluating proposals for biomedical project and programme grants. The second is a survey to determine the workload of external grant reviewers, the level of institutional support for this activity, reviewers’ motivations and perceived barriers to taking on grant review, and their views on possible solutions.”	<i>Experience ‘reviewers not declaring their conflicts of interest’ as a very frequent or frequent problem</i>	0%
		<i>Ask their reviewers to declare their conflicts of interest for each proposal reviewed</i>	81%
		<i>Occasionally or never experience reviewers not declaring their conflicts of interest</i>	86%
		<i>Frequently or occasionally experience applicants questioning the conflicts of interest of the reviewer</i>	48%
<i>Schneider (2019)</i>	“In the fall of 2016, a group of nine CTSA hubs formed a consortium to address the need for locating expert reviewers who were not in conflict with applications submitted for pilot study awards.”	Perceived change for the better over the last 5 years of: <i>Reviewers not declaring their conflicts of interest</i>	24%
		<i>Applicants questioning the conflicts of interest of reviewers</i>	7%
		[Reviewers] <i>Experience conflicts of interest always or often act as barriers to undertaking grant review</i>	15%
		[Funding administrators] <i>Had access to reviewers without a conflict of interest in 2017 and 2018</i>	100%
<i>Silva (2016)</i>	“(...) to analyze and understand the perception of the scientific community about the peer review system of scientific journals.”	[Researchers] <i>Believe economic interests lead to biased and impartial reviews, compromising the credibility and transparency of the peer review system</i>	69%
		<i>Agree that 100% of reviewers maintain complete impartiality when performing peer review</i>	9%
		<i>Agree that scientific ambition and competitiveness create distortions and inhibit transparency in the peer review system</i>	68%
<i>Talari (2022)</i>	“(...) the primary objective of the present web-based survey among medical postgraduate trainees in India was to assess their awareness regarding publication ethics.”	[Researchers] <i>The article you submitted to a journal, was reviewed by reviewer A, who recommended its rejection. You find out that reviewer A is your former colleague with whom you had issues and conflicts. What would you do in such a situation?</i>	
		<i>I will call reviewer A and tell them to not repeat this the next time</i>	1%
		<i>I would apprise the journal’s editor of this conflict and request for a re-review by a different reviewer</i>	40%
		<i>I will initiate legal action against reviewer A</i>	29%
		<i>I would report this as misconduct to the journal’s editor and mention in any future submissions that my manuscripts may not be reviewed by reviewer A</i>	29%

## Supplementary appendix 11. Examples of themes and quotes in three interview studies of funding applicants, reviewers and editors

Study	Aim of study	Examples of interview themes	Examples of quotes from study participants
Abdoul (2012)	“(…) to describe the perceptions and experience of stakeholders regarding non-financial conflicts of interest potentially affecting the grant-application review process, to describe the management of these non-financial conflicts of interest, and to suggest possible solutions.”	Cronyism	External reviewer: <i>“I don’t know whether everyone admits this to you in the same way, but we are all the same, we are much more lenient, well, we are lenient with the people we know.”</i>
		Rivalry	Applicant: <i>“That can happen, and according to me… I made a proposal about a gene and… I saw a database [about that gene] two years later! It could be a coincidence but it is weird! […] They looked for the gene I had proposed in a cohort of patients. […] Now I don’t know for sure, but I have my suspicions.”</i>
		Speciality interest	Internal reviewer: <i>“Conflicts of interest are often disciplinary conflicts. […] That is, each speciality defends itself against other specialities.”</i>
		Competition between universities or regions	Applicant: <i>“It’s a tremendous problem […] I would say the Paris teaching hospitals are hugely overrepresented [in the national Programme Hospitalier de Recherche Clinique]. They handle all the funds, for patient care, for research, for teaching, and they have far more professors than the rest of France, which gives them greater operational capacity with respect to their proposals.”</i>
		Non-financial conflicts of interest are unavoidable and unmanageable	Internal reviewer: <i>“It is absolutely unfeasible, because there are fifty different levels of conflicting interests, disciplinary, geographic, personal, you see what I mean… All kind of networks, in every way, so we can’t manage that… and it goes in all directions, you see what I mean… there are positive conflicts of interests, negative ones […]. For example, something that happens all the time is that people trash others’ proposals in order to open the way for theirs, you see?”</i>
		Non-financial conflicts of interest are unacceptable	There were no supporting quotes reported
Glonti (2019)	“(…) to examine the experience of general and specialty biomedical journal editors and to characterise their perspectives, expectations and understanding of the roles and tasks of peer reviewers.”	Reviewers are expected to ‘declare’ or avoid conflicts of interest	There were no quotes directly related to the themes reported in the study
		Conflict of interest may increase review quality	
		Transparency is important	
		Editors should manage conflicts of interest	
Hendrick (2017)	“To what extent does the institutional environment of medical journal publishing inform actors’ conceptualisation and management of conflicts of interest and their consideration of alternative approaches?”	Unclear guidance on disclosure and management in lower-impact journals	Managing Editor: <i>“We’ve never asked that formally from reviewers. We expect them to be honest.”</i>
		Some editors believe judging your own conflicts of interest is not feasible	Senior editor: <i>“We can see and observe and judge other people’s conflicts, but we can’t judge our own.”</i>

## Supplementary appendix 12. Characteristics of the included studies directly and not directly investigating peer reviewers' conflicts of interest

Study characteristics	Not directly investigating peer reviewers' conflicts of interest* (supplementary analysis)	Directly investigating peer reviewers' conflicts of interest** (primary analysis)	All
	(N = 30)	(N = 41)	(N = 71)
	Number (percentages)		
Peer review domain			
Journal manuscripts	27 (90%)*	30 (73%)	57 (79%)†
Conference abstracts	0	1 (2%)	1 (1%)
Funding applications	2 (7%)	4 (10%)	6 (8%)
Clinical guidelines	6 (20%)	6 (15%)	12 (17%)
Type of report			
Journal publication	22 (73%)	34 (83%)	56 (79%)
Conference abstract	5 (17%)	3 (7%)	8 (11%)
Dissertation	0	4 (10%)	4 (6%)
Preprint	3 (10%)	0	3 (4%)
Location of corresponding author			
North America	13 (43%)	16 (39%)	29 (41%)
Europe	7 (23%)	15 (37%)	22 (31%)
Asia	5 (17%)	9 (22%)	14 (20%)
Oceania	3 (10%)	0	3 (4%)
South America	2 (7%)	1 (2%)	3 (4%)
Primary institution of corresponding author			
University	18 (60%)	24 (59%)	42 (59%)
Hospital	2 (7%)	9 (22%)	11 (15%)
Publisher or journal	4 (13%)	5 (12%)	9 (13%)
Private organisation	2 (7%)	2 (5%)	4 (6%)
Governmental	2 (7%)	1 (2%)	3 (4%)
Pharmaceutical industry	1 (3%)	0	1 (1%)
Tobacco industry	1 (3%)	0	1 (1%)
Biomedical disciplines‡			
Mixed	19 (63%)	19 (46%)	35 (51%)
Cardiology	1 (3%)	5 (12%)	6 (8%)
Public health & Health systems research	2 (7%)	4 (10%)	6 (8%)
Nursing	2 (7%)	2 (5%)	4 (6%)
Emergency medicine	2 (7%)	1 (2%)	3 (4%)
Neuroscience	0	2 (5%)	2 (3%)
Radiology	0	2 (5%)	2 (3%)
Bioethics	0	1 (2%)	1 (1%)
Fertility and pregnancy	0	1 (2%)	1 (1%)
Ophthalmology	0	1 (2%)	1 (1%)
Orthopaedic surgery	0	1 (2%)	1 (1%)
General surgery	1 (3%)	0	1 (1%)
Infectious disease	1 (3%)	0	1 (1%)

Gastroenterology & hepatology	1 (3%)	0	1 (1%)
Rheumatology	1 (3%)	0	1 (1%)
Not reported	0	2 (5%)	2 (3%)
Type of research method			
Quantitative	21 (70%)	37 (90%)	58 (82%)
Qualitative	7 (23%)	2 (5%)	9 (13%)
Mix-methods	2 (7%)	2 (5%)	4 (6%)
Types of conflicts of interest addressed			
Financial and non-financial	9 (30%)	21 (51%)	30 (42%)
Non-financial	3 (10%)	5 (12%)	8 (11%)
Financial	1 (3%)	6 (15%)	7 (10%)
Not reported	17 (57%)	9 (22%)	26 (37%)

\* Studies not directly investigate peer reviewers' conflicts of interest, but where relevant data were reported (eg, a survey of editors' familiarity with ethical standards).

\*\* Studies directly investigating peer reviewers' conflicts of interest (ie, stated as part of the study aims, study objectives or described in the data extraction or data analysis sections).

† Percentage equals more than 100% because three studies (where peer reviewers' conflicts of interest were not the aim) investigated multiple peer review domains

‡ One of the 30 studies without peer reviewers' conflicts of interest as aim also sampled non-biomedical disciplines, and four of the 41 studies with peer reviewers' conflicts of interest as aim also sampled non-biomedical disciplines.

### Supplementary appendix 13. Evidence map of the aims and methods of all 71 included studies

The map summarises the evidence ordered by study domain, aim, design and methods.

The colours represent the four study domains: Journal manuscripts (yellow), Conference abstracts (red), Funding applications (green), and Clinical guidelines (blue).

Size of bubbles represents number of studies for each category: 1 study (smallest), 2-3, 4-5, 6-7, 8-9, and 10+ studies (largest).

Studies with multiple aims or multiple types of study design or methods (eg, mixed-methods studies) appear multiple times on the map.

Type of method		Study aims related to peer reviewers' conflicts of interest														
		Study design	Impact of peer reviewers' conflicts on recommendations	Reviewers' conflicts	Occurrence	Declining review due to conflicts of interest	Conflicts addressed in review reports	Stakeholders' experiences	Reviewers	Editors	Researchers	Funders	Other stakeholders	Policy and management	Availability of policies	Published declarations
Qualitative	Interview				●			●●	●●	●●	●	●●				
	Focus group							●	●	●	●	●				
	Questionnaire							●	●	●						
	Survey of documents												●			
Quantitative	Survey of administrative journal data	●	●	●												
	Survey of documents		●●			●							●	●●	●	
	Questionnaire		●				●	●	●●	●	●	●	●●	●●	●	
	Survey of documents and questionnaire												●			



### Supplementary appendix 14. Evidence map of the aims and methods of all 71 included studies, with individual studies presented

The map summarises the evidence ordered by study domain, aim, design and methods.

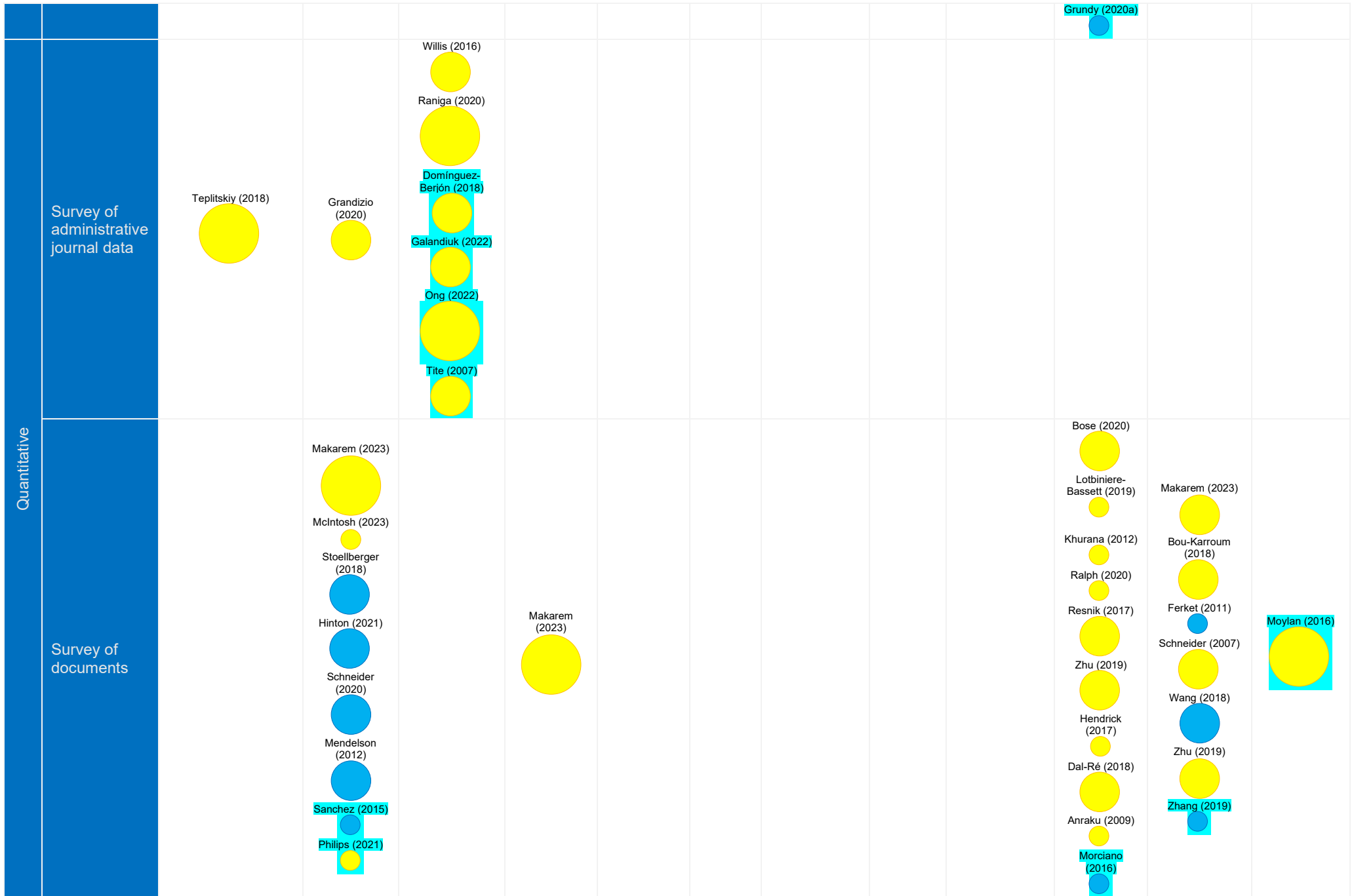
The colours represent the four study domains: Journal manuscripts (yellow), Conference abstracts (red), Funding applications (green), and Clinical guidelines (blue).

The size of the bubbles represents study sample size: 0-10, 10-50, 50-100, 100-500, 500-1000, 1000+.

Studies with multiple aims or multiple types of study design or methods (eg, mixed-methods studies) appear multiple times on the map.

Studies in **turquoise** are not included in the primary analysis.

Type of method	Study design	Study aims related to peer reviewers' conflicts of interest											
		Impact of peer reviewers' conflicts on recommendations	Reviewers' conflicts	Occurrence		Stakeholders' experiences					Policy and management		
				Declining review due to conflicts of interest	Conflicts addressed in review reports	Reviewers	Editors	Researchers	Funders	Other stakeholders	Availability of policies	Published declarations	Retractions
Qualitative	Interview			Tite (2007)		Abdoul (2012) Tercier (2007) Emden (1998)	Hendrick (2017) Glonti (2019) Bonn (2021) Lipworth (2011)	Abdoul (2012) Hendrick (2017) Bonn (2021) Grundy (2020a) Parker (2022)	Abdoul (2012) Bonn (2021)	Parker (2022) Hendrick (2017) Bonn (2021)			
	Focus group						Bonn (2021)	Bonn (2021)	Bonn (2021)	Bonn (2021)			
	Questionnaire					Broome (2010)	Freda (2005)	Silva (2016)					
	Survey of documents										Khurana (2012) Hendrick (2017) Grundy (2020b) Grundy (2020b) Grundy (2020a) Grundy (2020a)		



										<p>Gasparyan (2013)</p> <p>Davis (2018)</p> <p>Shah (2019)</p> <p>Tavares-Neto (2009)</p> <p>Yang (2017)</p>	
Questionnaire		<p>Ji (2019)</p> <p>Das (2013)</p> <p>Taichman (2017)</p>		<p>Das (2013)</p> <p>Lippert (2011)</p> <p>Schroter (2010)</p> <p>Ji (2019)</p> <p>Broome (2010)</p> <p>Taichman (2017)</p> <p>VanBueren (2012)</p>	<p>Das (2013)</p> <p>Wilkes (1995)</p> <p>Müller (2008)</p> <p>Good (1999)</p> <p>Krimsky (2001)</p> <p>Looi (2015)</p> <p>VanBueren (2012)</p> <p>Wong (2012)</p>		<p>Glasspool-Malone (2005)</p> <p>Silva (2016)</p> <p>Talari (2022)</p> <p>McCloskey (2022)</p> <p>VanBueren (2012)</p>	<p>Schneider (2019)</p> <p>Schroter (2010)</p>	<p>VanBueren (2012)</p>	<p>Cooper (2006)</p> <p>Alfonso (2012)</p> <p>Kuczmariski (2015)</p> <p>Schroter (2010)</p>	
Survey of documents and questionnaire										<p>Ancker (2007)</p> <p>Barnsteiner (2020)</p> <p>Master (2018)</p>	

