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Attitudes to open peer review among stakeholders of a scholarly-led journal in Brazil

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Attitudes to open peer review among stakeholders of a scholarly-led journal in Brazil

Atitudes perante a revisão por pares aberta entre as partes interessadas em uma revista acadêmica no Brasil

Running title: Attitudes to open peer review

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Abstract

Scholarly journals should consider the attitudes of their communities before adopting any of the seven traits of open peer review. Unfortunately, surveys from the Global North might not generalize to the Global South, where double-blind peer review is commonplace even among journals on natural sciences and medicine. This paper reports the findings of a survey on attitudes to open peer review among four stakeholder groups of a scholarly-led medical journal in Brazil: society members and journal readers, authors, and reviewers. Compared to a previous survey recruiting mostly researchers on natural sciences from Europe, this survey found similar support to open peer review in general and for most of its traits. One important exception was open identities, which were considered detrimental by most participants, even more so in this survey than in the previous one. Interestingly, participants were not so dismissive of open identities when expressing whether they agreed with statements about its specific consequences. Because preprints are increasingly popular but incompatible with double-blind review, future research should examine the effects of transitioning from double-blind to open identities, especially on gender bias. Meanwhile, scholarly journals with double-blind review might prefer to begin by adopting other traits of open review or to make open identities optional at first.

Keywords: scholarly communication; academic communities; peer review; scholarly journals; self publishing; medical science

Resumo

Periódicos científicos deveriam considerar as atitudes de suas comunidades antes de adotar qualquer um dos sete traços da revisão por pares aberta. Infelizmente, inquéritos do Norte Global podem não generalizar para o Sul Global, onde a revisão por pares duplo-cega é comum mesmo entre periódicos das ciências naturais e medicina. Este artigo relata os achados de um inquérito sobre as atitudes perante a revisão por pares aberta em quatro grupos de partes interessadas em um periódico médico no Brasil: membros da associação, e leitores, autores e revisores do periódico. Em comparação a um inquérito prévio recrutando principalmente pesquisadores em ciências naturais da Europa, este inquérito encontrou suporte semelhante à revisão por pares em geral e à maioria de seus traços. Uma importante exceção foram as identidades abertas, um traço que foi considerado prejudicial pela maioria dos participantes, neste inquérito ainda mais do que no prévio. É digno de nota que as identidades abertas não tenham sido tão rejeitadas assim quando os participantes expressaram se concordavam ou não com assertivas sobre as consequências específicas desse traço. Uma vez que os preprints são crescentemente populares, mas incompatíveis com a revisão duplo-cega, pesquisas futuras deveriam examinar os efeitos de uma transição da revisão duplo-cega para identidades abertas, especialmente sobre o viés de gênero. Enquanto isso, periódicos científicos com revisão duplo-cega podem preferir adotar outros traços de revisão aberta, ou tornar as identidades abertas inicialmente opcionais.

Descritores: comunicação científica; comunidades científicas; revisão pelos pares; periódicos científicos; autopublicação; medicina

Introduction

Peer review became a core feature of journal publishing in the second half of the 20th century, amidst other significant transformations of scholarly communication (Baldwin, 2018; Tennant *et al.*, 2017; Zuckerman; Merton, 1971). In this now-called traditional form of peer review, editors elicit reports from reviewers of their choice to improve the authors' manuscripts and inform the editors' decisions; the whole process is concealed from the public. Peer review is usually double-blind, that is, authors' and reviewers' identities are concealed from each other. Single-blind peer review, where reviewers know the authors' identities, is usual for journals from the Global North on natural sciences and medicine (Pontille; Torny, 2014).

While peer review is usually trusted and considered beneficial (Jubb, 2016; Mulligan *et al.*, 2013), direct evidence on its benefits is scarce (Jefferson *et al.*, 2007; Smith, 2006; 2010), and traditional peer review has received strong criticism and calls for reform over the centuries (Csiszar, 2016; Ross-Hellauer, 2017; Tennant *et al.*, 2017). For instance, former medical editor Richard Smith (2006; 2010) denounced traditional peer review as inconsistent, biased, prone to abuse, wasteful, resistant to innovative research, and missing most errors. His former journal was one of the first to reform peer review (Schroter *et al.*, 2020) and, since then, the movement grew into a "peer review revolution" (Tennant *et al.*, 2017).

"Open peer review" is an umbrella term for peer review innovations in the spirit of open science (Ross-Hellauer, 2017; Tennant *et al.*, 2017; Wolfram *et al.*, 2020). Ross-Hellauer (2017) found 122 definitions of open peer review, consisting of various combinations of seven "traits": *open identities* was defined as when "authors and reviewers are aware of each other's identity"; *open reports* was defined as when "review reports are published alongside the relevant article"; *open participation* was defined as when "the wider community are able to contribute to the review process"; *open interaction* was defined as when "direct reciprocal discussion between author(s) and reviewers, and/or between reviewers, is allowed and encouraged"; *open pre-review manuscripts* was defined as when "manuscripts are made immediately available (e.g., via pre-print servers like arXiv) in advance of any formal peer review procedures"; *open final version commenting* was defined as "review or commenting on final 'version of record' publications"; and open platforms ("decoupled review") was defined as when "review is facilitated by a different organizational entity than the venue of publication." Open identities and open reports are included in most definitions of open peer review and are thus considered "core traits" (Ross-Hellauer, 2017). Refer to Ross-Hellauer (2017) for an analysis of which trait

responds to which shortcoming of traditional peer review and fit into which school of open science, and to Ross-Hellauer (2017), Tennant *et al.* (2017), and Bruce *et al.* (2016) for reviews of the evidence base for different traits of open peer review. In the Global North, “born open” journals on natural sciences or medicine account for much of the open peer review adoption (Tennant *et al.*, 2017; Wolfram *et al.*, 2020). In the Global South, the SciELO Network is probably one of the main organizations driving the adoption of open peer review.

Implementing open peer review is not straightforward, though. Different traits of open peer review serve different editorial goals, and their acceptability may vary from one scholarly community to the other (Ross-Hellauer; Görögh, 2019). For example, communities traditionally adopting single-blind peer review (medicine and natural sciences in the Global North) (Pontille; Torny, 2014) are also those adopting open identities (Wolfram *et al.*, 2020), suggesting the benefit might be less obvious for communities adopting double-blind peer review; and open participation seems more popular in the social sciences and humanities than in the natural sciences, technology and medicine (Ross-Hellauer, 2017).

One proposed strategy is for editors to survey their communities’ attitudes to open peer review (Ross-Hellauer; Görögh, 2019). Previous surveys found open identities to be the trait scholars though less likely to improve peer review (Ross-Hellauer *et al.*, 2017) and double-blind peer review to be preferred over single-blind or open identities (Mulligan *et al.*, 2013; Bernal; Román-Molina, 2018). To the best of our knowledge, no survey about open peer review has targeted a scholarly community in the Global South yet.

This study reports an online survey on attitudes to open peer review among stakeholders of a non-profit scholar-led medical journal in Brazil: *Revista Brasileira de Medicina de Família e Comunidade* (RBMFC; ISSN 2179-7994).

Methods

This electronic survey was administered through the Web from April 6 to May 10, 2020, using formr 0.18.3 (Arslan; Tata, 2018), an open-source survey framework (Arslan *et al.*, 2019). The full formr “run” (questionnaires and their interconnections) used in this survey is openly available at the Open Science Framework (Fontenelle; Sarti, 2020a). The participants belonged to four groups of RBMFC stakeholders:

- *SBMFC members* were physicians (that is, not medical students) with a currently non-expired membership in Sociedade Brasileira de Medicina de Família e Comunidade (SBMFC), the learned society sponsoring and publishing the journal;

- *Readers* were anyone having read one or more of articles from RBMFC within the last twelve months;
- *Authors* were anyone having published an article in RBMFC within the last five years;
- *Reviewers* were anyone having peer-reviewed a submission for RBMFC within the last five years.

The survey was approved by the Research Ethics Committee of Universidade Vila Velha (CAAE nº 28912719.0.0000.5064, report nº 3.846.811). Participants had to provide informed consent before proceeding to the questionnaire items. The information provided to prospective participants included the study objectives in neutral terms (“We would like to hear the opinion of readers, authors and reviewers of RBMFC and members of SBMFC about some ways RBMFC might conduct peer review differently”) to avoid biasing the sample to a more positive or negative attitude to the current system or open peer review. Participants were also informed about the survey’s anonymity, expected duration (“only 15 minutes”, which also doubled as informing about harms or risks), benefits (“Results will inform the editorial policies of RBMFC and other scholarly journals in general”), authorship, ethical approval, and means of contact. Participating in the survey was completely voluntary, that is, it was not a requirement for people to continue interacting with RBMFC or SBMFC in any way, and no direct incentives were offered to prospective study participants. Because of the strict anonymity of the survey, there was no way to prevent people from participating multiple times.

Participants were invited through four different advertisements. SBMFC mailed an invitation to its eligible members on April 7 and again on May 8, 2020; RBMFC mailed an announcement about the survey to its registered users (readers, authors, reviewers and others) on April 12 and again on May 5, 2020; one of the survey authors forwarded the mailed announcement to SBMFC’s email discussion list on May 6, 2020; and RBMFC displayed throughout the survey period an announcement in its rightmost lateral column, above the fold (that is, visible without scrolling down, at least with screen sizes larger than those of smartphones). As in the informed consent page, the advertisements expressed the survey objectives neutrally and listed who was eligible to participate. Because we anticipated there would be some overlap between the stakeholder groups, all advertisements linked to the same landing page. This landing page did not require a username and/or password, but was accessible only for those who knew its URL (uniform resource locator, the network “address”).

The questionnaire was adapted from Ross-Hellauer *et al.* (2017) to the study context and translated to Portuguese and Spanish by the authors of this survey. Because the questionnaire defines its key terms (traditional peer review and each trait of open peer review) and had already been pilot tested and administered by Ross-Hellauer *et al.* (2017), we opted for pilot testing only the questionnaire translation and functionality, by reading and filling it in ourselves as well as asking a few colleagues to do so.

In total, the questionnaire had five pages. After a landing page for language selection (Portuguese, Spanish, English) and another page for informed consent, two main pages comprised 45 items, and a fifth and last page thanked participants and provided the URL where the results would eventually be made available at <https://osf.io/u9p4n/>. The first main page comprised 18 items: seven items about participant characteristics (age, gender, schooling, geographic region, stakeholder groups, satisfaction with peer review in RBMFC, personal experience with peer review), seven items about the opinion on whether each trait would improve peer review, and four items about agreement on scholarly communication currently working well and the desirability of three open science aspects (open access, open data, and open peer review) being common practice. The second main page comprised 27 items: three items about the experience as author and/or reviewer with open identities, open reports, and open participation; and 24 items about the agreement with statements about the seven traits of open peer review. Items about satisfaction, desirability (“...should be common practice”) and agreement had an ordinal scale with five levels, plus a sixth “don’t know”. All items (except stakeholder group) had to be filled before proceeding to the next page, and participants were not allowed to revise their answers before submitting them. The questionnaire items were not randomized in any way, and the only adaptive aspect of the survey was the language selection.

The survey results were described for each stakeholder group using absolute and relative frequencies. Attitudes to open peer review, as well as satisfaction with the current system and attitudes to open access and open data, were described by the combined frequency of answers “agree” and “strongly agree” (or “satisfied” and “very satisfied”, “better” and “much better”). To contrast stakeholder groups despite their overlap, attitudes were also estimated through proportional odds logistic regression with multi-membership (Bürkner, 2018), using packages *brms* (Bürkner, 2017), version 2.13.5, and *rstan*, version 2.21.2, for the R environment for statistical computing, version 4.0.2. The model allowed for the possibility that the attitudes of authors and/or reviewers varied differently than attitudes of other participants. The estimates and their 95% uncertainty intervals (UI) were calculated with only weakly informative prior distributions, which are

fully described in the analytic code (Fontenelle, 2020a) and were preregistered (Fontenelle; Sarti, 2020b). Answers “don’t know” were considered missing data and excluded from the estimation for the corresponding items. Participants not completing the second main page of the questionnaire were not excluded from the analysis of the items in the first main page. Furthermore, their answers on the second page were not imputed, because such missingness did not correlate with attitudes in the first main page (Kendall’s tau ranging from -0.08, for open peer-review manuscripts, to +0.01, for open participation). Survey participants were not weighted, except for the exclusion of participants not belonging to any stakeholder group. There was no need to handle atypical timestamps. The analysis plan included in the preregistration (Fontenelle; Sarti, 2020b) and the final analytical code (Fontenelle, 2020a) are available alongside the open data (Fontenelle; Sarti, 2020c). There was no substantial deviation from the analysis plan, other than correcting a misnamed variable.

Results

The survey’s landing page was reached by 402 people, of which 191 (48%) consented to participate, 151 (38%) completed the first of two main pages, and 134 (33%) completed the whole questionnaire. The survey starting times were evenly distributed through the study period (median 2020-04-17, interquartile range [IQR] 2020-04-12 to 2020-05-03) and the survey had a median duration time of 9.4 minutes (IQR, 6.8 to 14.9). The 151 participants completing the first main page comprised 86 (5%) of 1774 eligible SBMFC members, 82 readers (out of approximately 200 thousand annual visits), 42 authors (out of 290 articles with 992 unique authors), and 50 (22%) of 226 eligible reviewers.

Table 1 describes the 151 survey participants completing the first main page of the questionnaire. Most of them were 35–44 years old (38%) and male (55%); most participants were from Brazil (97%) and, in general, their most advanced degree was undergraduate or medical school (40%). All of them belonged to at least one stakeholder group: 57% were SBMFC members, 54% were readers, 28% were authors, and 33% were reviewers. Most participants did not have any experience with open identity (83%), open reports (81%), or open participation (90%) as authors or reviewers, even though 60 (39%) reported having experience both as authors and reviewers with open peer review in general. Two-thirds of the survey participants were satisfied with peer review in RBMFC.

— Table 1 around here —

Half the study participants agreed the current system of scholarly communications worked well (Table 2). Most of them agreed it should be common scholarly practice to make research publications and data available under open access, but only little more than half agreed open peer review should be a common scholarly routine.

— Table 2 around here —

One core trait, open identities, received the least support among all traits, with few participants believing it would improve peer review (Table 3), even if almost half the participants agreed open identities would improve the quality of reviewer report, and reviewers and authors should have the option of revealing their own identities (Table 4). While many participants worried open identities would inhibit reviewers from agreeing to review, fewer thought it would inhibit authors from submitting. Furthermore, few participants agreed open identities were fairer than traditional peer review.

— Table 3 around here —

The other core trait, open reports, was the one with support more closely matching agreement with open peer review in general, both in terms of stakeholders believing it would improve peer review (Table 3) and in terms of them agreeing it would provide useful information to readers and improve the quality of the reviewer reports (Table 4). On the other hand, a similar proportion of participants worried open reports would inhibit reviewers from making strong criticism, or from agreeing to review.

— Table 4 around here —

Open interaction was the trait receiving more support, with most participants believing it would improve peer review (Table 3) and agreeing it would result in better publications (Table 4). While almost as many participants believed open final-version commenting would also improve peer review (Table 3), few agreed with post-publication peer review in blog articles, online journal clubs, and social media (Table 4). Support for open participation, open pre-review manuscripts, and open platforms was also somewhat lesser than for open peer review in general, but not as small as support for open identities (Table 3, Table 4).

Support for open peer review varied with the stakeholder group participants belonged to. Readers and SBMFC members seem to be more supportive (than authors and reviewers) of open peer review in general (Table 2) and trait by trait (Table 3), as well as when considering more specific statements (Table 4).

Discussion

We reported an online survey with each of four stakeholder groups of RBMFC, a scholar-led journal from Brazil, on their attitudes towards open peer review. While few eligible stakeholders participated in the survey, the neutral language of the advertisements means participants should have similar attitudes to non-participants. One way in which participants might differ from non-participants is the extent to which they concern themselves with peer review in RBMFC, as indicated by a larger proportion of reviewers participating (in comparison to the proportion of SBMFC members participating) and by participants (even among readers and SBMFC members) being more likely to hold a master's or PhD degree than family and community physicians in general (Fontenelle *et al.*, 2020). Furthermore, while the small sample size precludes precise estimates (as disclosed through the uncertainty intervals), the survey closely reproduced the methods of Ross-Hellauer *et al.* (2017), so that confidence in this survey's findings increases to the extent that they are similar to theirs, and differences between the surveys hint at the possibility of contextual effects.

This survey's participants were markedly less experienced with open peer review than those in Ross-Hellauer *et al.* (2017), besides being somewhat younger. Furthermore, this survey's participants were from a small medical specialty in a middle-income country in Latin America, and are arguably used to open access journals and double-blind peer review, where participants in Ross-Hellauer *et al.* (2017) were generally from the natural sciences in Europe, and many of them are arguably more used to single-blind peer review. This survey had probably fewer to no participants from the publishing industry, but we did not capture this information to avoid breaking anonymity.

With these differences in mind, it is encouraging that both groups had similarly positive attitudes to the current system of scholarly communication, open access, open data, and open peer review in general. While attitudes to most individual traits of open peer review were also similar, open identities deserve further scrutiny.

RBMFC stakeholders were even less supportive of open identities than participants in Ross-Hellauer *et al.* (2017), and this was the least supported trait in that survey, even though it is considered one of the core traits of open peer review (Ross-Hellauer, 2017). In fact, most RBMFC stakeholders believed opening identities would make peer review worse or much worse; see Supplemental Table 2 in (Fontenelle, 2020b). Interestingly, when confronted with statements about the consequences of open identities, participants in both surveys were much less dismissive. RBMFC stakeholders (including reviewers!) agreed less than participants in Ross-Hellauer *et al.* (2017) that opening reviewers'

identities would inhibit them from accepting an invitation, and only a third of RBMFC stakeholders agreed opening *authors'* identities would inhibit them from submitting. The last statement was not part of the other survey's questionnaire, possibly because authors' identities are already open in single-blind peer review.

RBMFC authors and reviewers were much more likely to disagree than to agree with open identities being fairer to authors (see Supplemental Table 2 in Fontenelle (2020b)), whereas participants of Ross-Hellauer (2017) were as likely to agree as to disagree. The difference is probably due to RBMFC adopting double-blind review, which has been consistently reported as the preferred form of peer review in researcher surveys (Mulligan *et al.*, 2013; Pontille; Torny, 2014; Tennant *et al.*, 2017; Bernal; Román-Molina, 2018;). Switching a natural science journal from single-blind to double-blind was found to attenuate bias in peer review against female authors and might benefit other author demographics as well (Pontille; Torny, 2014; Tennant *et al.*, 2017). On the other hand, blinding reviewers to authors' identities cannot avoid bias when the blinding fails, nor can it avoid bias against the manuscripts' contents, such as the conclusions or the theoretical approach (Pontille; Torny, 2014; Tennant *et al.*, 2017). Perhaps more importantly, there is no evidence on the effect of open identities on bias in peer review.

In line with Ross-Hellauer *et al.* (2017), most RBMFC readers, authors, and reviewers did not agree manuscripts should be made freely available before peer review, and most authors and reviewers did not believe preprints would improve peer review. Such lack of enthusiasm contrasts with the proliferation of preprint servers in the last year, such as bioRxiv, medRxiv, OSF Preprints, SciELO Preprints and EmeRI (Emerging Research Information), and because RBMFC did not receive a single protest when the journal started to explicitly accept manuscripts already available as preprints, in December 2018. One explanation might be that authors have no intention of depositing their own manuscripts in preprint servers, but do not object to other authors doing so.

Unfortunately, double-blind review is essentially incompatible with preprints, especially journal-led preprints, when scholarly journals routinely deposit their pre-review manuscripts in preprint servers such as SciELO Preprints or EmeRI. The incompatibility is even more pronounced with EmeRI, as it encourages preprint readers to volunteer to review the manuscripts for corresponding journals (open participation). Other traits of open peer review are not so incompatible with double-blind review: open reports need not be signed, open interaction can be anonymized by editorial platforms such as OJS 3, nothing stops decoupled peer review from being double-blind, and open commenting on the final version complements rather than substitutes traditional peer review.

Conclusion

Stakeholders of RBMFC, a medical specialty journal in Brazil, were generally as supportive to open peer review as participants of a large-scale survey with an over-representation of researchers from the Global North and the natural sciences. This suggests the results of the previous survey are generalizable to other settings and encourages replication in the arts, humanities, and social sciences, which were underrepresented in the previous survey and not included in the present one.

To the best of our knowledge, this is the first survey to actively recruit and separately describe the attitudes of a journal's readers or members of a journal's learned society. Both stakeholder groups were found to be even more supportive of open peer review than the journal's authors and reviewers, providing some assurance for editors from society journals to experiment with open peer review. Stakeholders of scholarly journals published by university departments might be more uniform in their attitudes.

Always a paragon of open science, SciELO Brazil requires its journals to implement some form of "open peer review": consisting of open identities, open reports, or crediting associate editors. Based on this survey and the discussed literature, journal editors should be extremely cautious of open identities, as most researchers believe it would make more harm than good. If open identities are to be adopted, scholarly journals should consider making them optional at first, and monitor the adherence.

The increasing popularity of preprints might render double-blind review unfeasible, and open identities unavoidable. Unfortunately, no experimental study to this date has examined the effects of transitioning from double-blind to open identities. Scholarly journals currently using double-blind peer review should ideally participate in randomized trials to examine the effects of such a transition on the quality and bias of peer review.

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See title page.

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Tables

Table 1 – Characteristics of the RBMFC stakeholders participating in the survey. Brazil, 2020

Characteristic	SBMFC members	Readers	Authors	Reviewers	Total
Age					
Under 24	1 (1%)	4 (5%)	-	-	5 (3%)
25-34	24 (28%)	25 (30%)	6 (14%)	7 (14%)	43 (28%)
35-44	36 (42%)	31 (38%)	20 (48%)	21 (42%)	58 (38%)
45-54	12 (14%)	8 (10%)	8 (19%)	10 (20%)	21 (14%)
55-64	11 (13%)	11 (13%)	8 (19%)	11 (22%)	20 (13%)
Over 65	2 (2%)	3 (4%)	-	1 (2%)	4 (3%)
Gender					
Female	36 (42%)	32 (39%)	19 (45%)	23 (46%)	68 (45%)
Male	50 (58%)	50 (61%)	23 (55%)	27 (54%)	83 (55%)
Non-binary	-	-	-	-	-
Geographic region					
North	2 (2%)	4 (5%)	2 (5%)	1 (2%)	8 (5%)
Northeast	8 (9%)	10 (12%)	3 (7%)	6 (12%)	17 (11%)
Southeast	40 (47%)	36 (44%)	17 (40%)	23 (46%)	67 (44%)
South	25 (29%)	25 (30%)	19 (45%)	15 (30%)	42 (28%)
Central-West	9 (10%)	5 (6%)	-	2 (4%)	12 (8%)
Outside Brazil	2 (2%)	2 (2%)	1 (2%)	3 (6%)	5 (3%)
Schooling					
High school	-	3 (4%)	-	-	3 (2%)
Undergraduate or medical school	40 (47%)	33 (40%)	5 (12%)	5 (10%)	60 (40%)
Master's	33 (38%)	24 (29%)	17 (40%)	20 (40%)	48 (32%)
PhD	13 (15%)	22 (27%)	20 (48%)	25 (50%)	40 (26%)
Involvement with RBMFC					
SBMFC members	86 (100%)	47 (57%)	22 (52%)	26 (52%)	86 (57%)
Readers	47 (55%)	82 (100%)	26 (62%)	29 (58%)	82 (54%)
Authors	22 (26%)	26 (32%)	42 (100%)	21 (42%)	42 (28%)
Reviewers	26 (30%)	29 (35%)	21 (50%)	50 (100%)	50 (33%)
Overall satisfaction with peer review in RBMFC					
Very dissatisfied	5 (7%)	4 (7%)	4 (10%)	3 (6%)	11 (9%)
Dissatisfied	3 (4%)	3 (5%)	-	-	3 (2%)
Neither satisfied nor dissatisfied	16 (23%)	15 (25%)	8 (21%)	7 (15%)	28 (23%)
Satisfied	35 (50%)	29 (48%)	19 (49%)	24 (51%)	59 (49%)
Very satisfied	11 (16%)	10 (16%)	8 (21%)	13 (28%)	19 (16%)

Characteristic	SBMFC members	Readers	Authors	Reviewers	Total
Experience with open peer review					
Neither	43 (50%)	32 (39%)	8 (19%)	6 (12%)	60 (40%)
Author	13 (15%)	12 (15%)	5 (12%)	-	22 (15%)
Reviewer	3 (3%)	4 (5%)	2 (5%)	8 (16%)	10 (7%)
Both	27 (31%)	34 (41%)	27 (64%)	36 (72%)	59 (39%)
Experience with open identities					
Neither	67 (88%)	62 (85%)	31 (82%)	34 (76%)	111 (83%)
Author	6 (8%)	5 (7%)	5 (13%)	3 (7%)	9 (7%)
Reviewer	-	1 (1%)	-	4 (9%)	5 (4%)
Both	3 (4%)	5 (7%)	2 (5%)	4 (9%)	9 (7%)
Experience with open reports					
Neither	66 (87%)	61 (84%)	29 (76%)	36 (80%)	108 (81%)
Author	8 (11%)	9 (12%)	8 (21%)	1 (2%)	14 (10%)
Reviewer	-	-	-	5 (11%)	5 (4%)
Both	2 (3%)	3 (4%)	1 (3%)	3 (7%)	7 (5%)
Experience with open participation					
Neither	69 (91%)	67 (92%)	35 (92%)	41 (91%)	121 (90%)
Author	5 (7%)	4 (5%)	2 (5%)	-	6 (4%)
Reviewer	1 (1%)	-	-	2 (4%)	3 (2%)
Both	1 (1%)	2 (3%)	1 (3%)	2 (4%)	4 (3%)

RBMFC, Revista Brasileira de Medicina de Família e Comunidade. SBMFC, Sociedade Brasileira de Medicina de Família e Comunidade.

Table 2 – Agreement with statements about aspects of open science among RBMFC stakeholders. Brazil, 2020

Statement	SBMFC members			Readers			Authors			Reviewers		
	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)
The overall current system of scholarly communications works well	43	52%	51% (39–63)	37	48%	45% (28–57)	23	56%	54% (40–73)	30	60%	54% (40–71)
Making research publications open access should be common scholarly practice	74	86%	85% (73–92)	75	91%	92% (84–97)	36	86%	79% (63–90)	42	84%	84% (71–93)
Making research data open access should be common scholarly practice	70	81%	82% (71–89)	71	87%	86% (77–93)	35	85%	75% (58–86)	40	82%	79% (67–91)
Open peer review should be common scholarly practice	52	64%	62% (50–74)	51	66%	63% (51–76)	21	55%	50% (25–63)	26	55%	55% (39–69)

RBMFC, Revista Brasileira de Medicina de Família e Comunidade. SBMFC, Sociedade Brasileira de Medicina de Família e Comunidade. UI, uncertainty interval.

Table 3 – RBMFC stakeholders believing open peer review traits would improve peer review in the journal. Brazil, 2020

Open peer review trait	SBMFC members			Readers			Authors			Reviewers		
	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)
Open identity	14	18%	23% (13–35)	10	13%	10% (5–19)	3	8%	7% (2–18)	4	9%	9% (3–20)
Open reports	36	50%	58% (44–73)	30	42%	46% (32–61)	8	24%	29% (11–50)	15	35%	40% (23–58)
Open participation	45	59%	61% (46–75)	36	49%	44% (29–57)	16	43%	30% (12–52)	21	48%	46% (29–63)
Open Interaction	56	69%	70% (57–82)	52	68%	70% (57–83)	22	56%	45% (21–66)	28	61%	62% (45–78)
Open pre-review manuscripts	35	46%	43% (30–58)	32	44%	39% (26–54)	10	27%	28% (12–45)	14	32%	30% (14–46)
Open final-version commenting	53	67%	64% (53–76)	47	63%	61% (47–72)	25	68%	58% (42–70)	23	51%	58% (43–69)
Open platforms	31	48%	57% (42–71)	29	45%	45% (31–61)	7	26%	17% (5–42)	10	30%	34% (16–53)

The model-based estimates refer to each group if their participants did not also participate in other groups. RBMFC, Revista Brasileira de Medicina de Família e Comunidade. SBMFC, Sociedade Brasileira de Medicina de Família e Comunidade. UI, uncertainty interval.

Table 4 – Agreement with statements about open peer review among RBMFC stakeholders. Brazil, 2020

Statement	SBMFC members			Readers			Authors			Reviewers		
	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)
Making reviewer identities open will make reviewers less likely to make strong criticisms	38	53%	52% (41–63)	37	52%	52% (41–65)	21	57%	52% (38–67)	22	52%	50% (34–61)
Making reviewer identities open will increase the quality of reviews	30	42%	45% (32–60)	24	34%	34% (20–48)	10	28%	23% (8–42)	14	33%	40% (25–61)
Reviewers should be allowed to choose whether or not to make their identities open	41	59%	56% (40–71)	40	58%	65% (50–80)	21	58%	53% (30–70)	31	72%	71% (54–87)
Authors should be allowed to choose whether or not to make their identities open	31	44%	39% (25–54)	33	48%	49% (34–66)	17	47%	46% (27–63)	26	59%	60% (44–80)
Making reviewer identities open is fairer to authors	22	31%	35% (22–51)	18	26%	24% (13–39)	6	17%	11% (3–31)	6	15%	20% (9–36)
Potential reviewers are less likely to agree to review for journals that make reviewer identities open	28	43%	43% (28–57)	29	48%	47% (30–64)	21	62%	60% (42–84)	14	38%	47% (29–64)
Potential authors are less likely to submit to journals that make reviewer identities open	11	16%	18% (9–31)	13	20%	20% (11–34)	15	42%	59% (31–82)	9	22%	30% (15–49)
Potential authors are less likely to submit to journals that make author identities open	14	21%	29% (18–41)	18	29%	31% (19–44)	12	34%	36% (24–54)	12	31%	36% (24–52)
Published review reports provide useful information for the reader	44	63%	66% (53–79)	40	59%	62% (47–75)	16	46%	49% (22–64)	20	50%	56% (39–70)
Publishing review reports will make reviewers less likely to make strong criticisms	25	36%	38% (26–49)	27	40%	39% (27–52)	14	40%	41% (27–53)	18	44%	42% (31–55)
Publishing review reports will increase the quality of reviews	43	61%	62% (48–76)	34	49%	50% (33–64)	15	43%	46% (23–60)	23	53%	53% (39–69)
Potential reviewers are less likely to agree to review for journals that publish review reports	25	38%	42% (30–53)	26	42%	42% (30–55)	17	50%	44% (32–59)	14	36%	43% (29–56)
Potential authors are less likely to submit to journals that publish review reports	17	25%	31% (20–43)	21	33%	33% (21–47)	15	47%	45% (29–75)	12	32%	36% (21–52)

Statement	SBMFC members			Readers			Authors			Reviewers		
	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)	n	%	Estimate (95% UI)
Everybody with sufficient knowledge should be able to participate in the review process, regardless of their formal qualifications or area of work	29	41%	38% (26–53)	30	43%	44% (29–61)	9	25%	22% (8–43)	14	33%	37% (23–54)
Close circles of reviewers and editors hold back innovative research	41	57%	53% (40–67)	44	62%	57% (43–73)	16	44%	46% (23–58)	20	44%	47% (29–59)
Reviewers are more likely to review if they are invited	53	80%	77% (64–87)	52	76%	77% (63–87)	31	84%	79% (64–91)	37	84%	83% (71–94)
Increased interaction between authors & reviewers will result in better publications	54	74%	69% (56–79)	54	75%	74% (63–86)	28	78%	67% (42–80)	33	77%	73% (60–86)
Manuscripts should be made openly accessible before peer review begins	30	43%	45% (30–61)	24	35%	29% (17–44)	8	24%	20% (7–40)	13	33%	29% (14–47)
Blog articles, online journal clubs and social media commentary on final-version publications are part of peer review	26	39%	34% (21–51)	24	35%	27% (16–42)	11	30%	24% (9–41)	10	24%	26% (12–41)

The model-based estimates refer to each group if their participants did not also participate in other groups. RBMFC, Revista Brasileira de Medicina de Família e Comunidade. SBMFC, Sociedade Brasileira de Medicina de Família e Comunidade. UI, uncertainty interval.