

## THE ATTITUDES AND EXPERIENCES OF SURGICAL SCIENCE ACADEMICIANS REGARDING THE OPEN PEER REVIEW PROCESS OF ARTICLES

### CERRAHİ BİLİM AKADEMİSYENLERİNİN HAKEMLİK YAPARKEN MAKALELERİN AÇIK DEĞERLENDİRME SÜRECİNE İLİŞKİN TUTUMLARI VE DENEYİMLERİ

Orhan ÜREYEN<sup>1</sup> Hatice ŞİMŞEK<sup>2</sup> Abdullah ŞENLİKÇİ<sup>3</sup>  
Mehmet YILDIRIM<sup>1</sup> Enver İLHAN<sup>1</sup>

<sup>1</sup> University of Health Sciences Turkey, İzmir Bozyaka Health Practise and reasearch Center, Department of Genaral Surgery, izmir Turkey

<sup>2</sup> Dokuz Eylul University Faculty of Medicine, Public Health, İzmir, Turkey

<sup>3</sup> Ankara Training and Research Hospital, Department of Gastroenterology Surgery, Ankara, Turkey

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## SUMMARY

**Introduction:** Open peer-review is a method that has been used in the evaluation of articles in journals in recent years. The aim of this study was to evaluate the attitudes and experiences of surgical science academicians regarding the open peer-review process while refereeing.

**Material and Methods:** This descriptive study included academicians of surgical science in Turkey. The questionnaire consisted of 25 items. Three e-mails were sent to a total of 4000 academicians at different times.

**Results:** Evaluation was made of the responses of 362 academicians. After the article is published, 39% of the referees want their names to be included in the article as reviewers. While 31.5% of the referees wanted their opinions to be included in the article after publication, 56.6% did not.

**Conclusion:** It was observed that approximately one third of the academicians participating in this study in Turkey thought that it would be appropriate to include the referee reports in the article. It can be recommended that the open peer review system be used with the approval of the author and the referee.

## ÖZ

**Giriş:** Açık hakem değerlendirme, son yıllarda dergilerde makale değerlendirilmesinde kullanılmaya başlanmış bir yöntemdir. Bu çalışmanın amacı; cerrahi bilim akademisyenlerinin hakemlik yaparken, açık değerlendirme sürecine ilişkin tutum ve deneyimlerini değerlendirmektir.

**Gereç ve Yöntem:** Tanımlayıcı tipteki çalışma Türkiye'deki cerrahi bilim akademisyenlerini içermektedir. Anket 25 sorudan oluşmaktadır. Toplam 4000 akademisyene farklı zamanlarda 3 defa mail gönderildi.

**Bulgular:** Çalışmaya 362 akademisyen dahil oldu. Makale basıldıktan sonra hakemlerin %39'u isimlerinin makalede değerlendirmeci olarak yer almasını istemektedirler. Hakemlerin %31,5'i makale basıldıktan sonra hakem görüşlerinin makalede yer almasını istemekte iken %56,6'sı istememektedir.

**Sonuç:** Ülkemizdeki çalışmaya katılan akademisyenlerin yaklaşık üçte birinin hakem raporlarının makalede yer alması fikrinin uygun olduğunu düşündüğü görüldü. Yazar ve hakemin onayı doğrultusunda, açık hakem değerlendirmesi sisteminin kullanılmaya başlanılmasını önermekteyiz.

## INTRODUCTION

Peer review is at the heart of journal publishing to provide ideas to help editors improve the quality of the article after submission to journals (1). This system has some benefits and drawbacks. Prejudice is one of the most criticized aspects in the evaluation of articles. This bias may arise from many factors such as author, region, country, gender, and institution (2). Authors and referees generally do not know each other when the article is evaluated, although sometimes one of the parties does not know the other or both sides know each other (3). The referees knowing the author may cause a bias. The review system goes through many frequent changes to reduce bias (1). Open peer review (OPR) has been trending in recent years. OPR does not mean the same for scientific and academic communities, but is interpreted differently. It has therefore been defined as an umbrella term for a number of overlapping ways in which peer review models can be adapted for the purposes of science (4). Its two main features are "open identities", where both authors and referees are aware of each other's identities (ie not blind) and "open reports" where review reports are published alongside the relevant article. These features can be combined, but do not have to be, and can be complemented by other innovations such as "open participation", where the wider community can contribute to the review process, or "open interaction", in which there is direct mutual discussion between the authors and reviewer. In this system, referee or referees are utilised but before the official referee opinion, everyone can express their opinions clearly and discuss the article with the authors (5). However, the applicability of this system continues to be debated (6). OPR is accepted as the quality assurance of published scientific research. This approach has been found to be based on the concept of mutual respect for each other and readiness to accept criticism for the work done (5). OPR tries to refresh standardized review procedures and offers a better peer review feature such as reviewer accountability, reducing bias and inconsistency in review quality,

significantly reducing the time spent on publication, and the reviewer will be honest as the opinion appears in the published article. It can be considered to be more reputable as it reviews good articles that generate and increase interest in presenting opinions (6). The aim of this study was to evaluate the perspectives of academicians working in surgical sciences regarding sharing their names as evaluators while working as referees and sharing the evaluation notes at the end of the article.

## MATERIAL AND METHODS

This descriptive study included academicians in surgical branches (General surgery, Urology, Obstetrics, Otorhinolaryngology, Cardiovascular Surgery, Chest Surgery, Anesthesia, Medical Pathology, Pediatric Surgery, Plastic Surgery) in Turkey. The study was approved by the Local Ethics Committee (decision no:12, date: 11/11/2020). Three e-mails were sent to the corporate mail addresses of a total of 4000 academicians at different times. If they had previously participated in the study, they were asked not to participate again.

The questionnaire consisted of 25 items compiled from sociodemographic characteristics and literature on the subject. While creating the questionnaire, it was sent to 5 specialists working as referees in journals and working outside of surgical sciences, feedback was received, and a final form was established. The data were collected with a previously tested questionnaire via "google forms". The first section of the questionnaire provided information about the purpose and quality of the research, and after obtaining informed consent for participation, the respondents were asked to complete the questionnaire anonymously and not disclosing the name of the institution. It was stated to all participants that the questionnaire would be evaluated in an anonymous and voluntary manner and that all data would be kept confidential, and it was guaranteed that their IP addresses would not be collected. Descriptive data were presented as percentage distributions

and mean  $\pm$  standard deviation values. The relationships of some sociodemographic variables with the attitudes and experiences of the respondents regarding the open review process of articles were determined using the t-test and Chi-square analysis.

## RESULTS

Evaluation was made of the data of 362 academicians, comprising 80% males, 39% were professors and 30% were associate professors. The place of work was a university in 62% of the academicians and 31% were at a training and research hospital. The sociodemographic data of the participants are given in Table 1.

The attitudes and experiences of the study participants regarding the open peer review process are presented in Tables 2 and 3. Only 27% of the respondents were satisfied with the current referee appointment and decision-making system, 81.4% of the referees did not want to know the names of the authors, and 35.4% thought that familiarity with the authors would affect their decisions. It was stated by 47.8% that the article could be sent to the referenced

referees sometimes, and 35.6% stated that it should not be sent at all. After the article is published, 39% of the referees wanted their names to be included in the article as reviewers, 31.5% wanted their opinions to be included in the article, and 56.6% of them did not.

The relationships of sociodemographic characteristics of the study participants with their attitudes and experiences regarding the open peer-review process are presented in Tables 4 and 5. An academic title of specialist 23.8% of those with, 19.9% of professors, 9.9% of assistant professors, and 6.5% of associate professors wanted to know the names of the authors, and this difference was significant ( $n = 0.004$ ). In comparison to other institutions, a significantly higher rate of those employed in Training and Research Hospitals wanted to have their names published as post-publication reviewers ( $p = 0.004$ ). The mean age of the group who wanted to know the names of the authors was significantly higher than the group who did not ( $p = 0.026$ ). The mean age of those who wanted post-publication review notes to be published was significantly lower than those who did not ( $p = 0.005$ ).

**Table 1.** Distribution of the participants according to sociodemographic characteristics

Feature		N	%
Gender	Male	291	80.4
	Female	71	19.6
Academic title	Professor	141	39.0
	Associate professor	108	29.8
	Assistant professor	71	19.6
	Specialist	42	11.6
Institution	University Hospital	226	62.4
	Training and Research Hospital	111	30.7
	State hospital / Private secondary hospital	25	6.9
Departments	General Surgery	116	32.0
	Anesthesia	33	9.1
	Otorhinolaryngology	33	9.1
	Urology	26	7.1
	Ophthalmology	23	6.3
	Gynecology	22	6.1
	Medical Pathology	22	6.1
	Cardiovascular Surgery	19	5.2
	Pediatric Surgery	18	4.9
	Neurosurgery	17	4.6
	Orthopedics	16	4.4
	Thoracic Surgery	9	2.4
Plastic surgery	8	2.2	

**Table 2.** Participants' attitudes and experiences of the open peer-review process - 1

Feature		n	%
Have you been or have been an editor or assistant editor in the past academically?	Yes	158	43.6
	No	204	56.4
Are you satisfied with the current referee assignment and decision-making system?	Yes	98	27.1
	No	125	34.5
	Undecided	139	38.4
Would you like to know the names of the authors in the evaluation of the article?	Yes	52	14.4
	No	296	81.4
	Undecided	14	3.9
In the evaluation of the article, will the authors being familiar to you or not affect your decision?	Yes	128	35.4
	No	187	51.7
	Undecided	47	13.0
(If yes to the previous question) What effect does it have on your decision? (n = 128)	I feel forced to accept the article	53	41.4
	I feel an obligation to assess better	40	31.3
	I think I should not reject the article	35	27.3
Would you like to know the institutions that the authors work for in the evaluation of the article?	Yes	88	24.3
	No	260	71.8
	Undecided	14	3.9
Would you like to know the countries of the authors in the evaluation of the article?	Yes	121	33.9
	No	232	64.1
	Undecided	9	2.5
Do you consider the journal's index in the evaluation of the article?	Yes	285	78.7
	No	71	19.6
	Undecided	6	1.7
How do you look at the submission of their articles to the referenced referees by the authors?	Can be sent sometimes	173	47.8
	Should never be sent	129	35.6
	Must always be sent	23	6.4
	Undecided	37	10.2
In the evaluation of the article, would you like your name to be included in the article as a reviewer after the article is published?	Yes	141	39.0
	No	184	50.8
	Undecided	37	10.2
After the article you are evaluating is published, would your name being included in the article as a reviewer affect your decision?	Yes	100	27.6
	No	230	63.5
	Undecided	32	8.8
(If yes to the previous question) What effect does it have on your decision?	My review would not change	22	22.0
	I would take less care	5	5.0
	I would examine it in more detail	73	73.0
What do you think about the reviewers' notes appearing in a separate section of the article after the article is published?	Yes, it would be the right application	114	31.5
	No, it would not be a right application	194	53.6
	Undecided	54	14.9

**Table 3.** Participants' attitudes and experiences of the open peer-review process - 2

Feature		n	%
How much time do you spend on average for the review of the article?	1-3 days	168	46.4
	4-7 days	131	36.2
	More than 7 days	63	17.4
Does the time you spend on the article affect the acceptance of the article?	Yes	99	27.3
	No	229	63.9
	Undecided	34	9.4
(If yes to the previous question) What effect does it have on your decision?	I spend more time on an article I will accept	83	83.8
	I spend less time on an article I will accept	14	14.2
	I have no idea	2	2.0
Do you look at the details of the sources used by the article in the evaluation of the article?	Usually	237	65.5
	Sometimes	118	32.6
	Never	7	1.9
Do you get opinions from other referees in the evaluation of the article?	Usually	8	2.2
	Sometimes	199	55.0
	Never	155	42.8
Do you check the decision made by the editor of the journal after your decision?	Usually	194	53.6
	Sometimes	120	33.1
	Never	48	13.3

**Table 4.** The relationship of sociodemographic characteristics with attitudes and experiences regarding the open peer-review process

Feature		Request to know the names of the authors		Asking for name to be published as a post-publication reviewer		Request publication of post-publication review notes	
		Yes n (%)	p	Yes n (%)	p	Yes n (%)	p
Gender	Female (n=71)	71 (7.0)	0.050	26 (36.6)	0.653	21 (29.6)	0.699
	Male (n=291)	47 (16.2)		115 (39.5)		93 (32.0)	
Academic title	Specialist (n=42)	10 (23.8)	0.004	23 (54.8)	0.073	19 (45.2)	0.064
	Assistant professor (n=71)	7 (9.9)		31 (43.7)		22 (31.0)	
	Associate professor (n=108)	7 (6.5)		36 (33.3)		38 (35.2)	
	Professor(n=141)	28 (19.9)		51 (36.2)		35 (24.8)	
Institution	University Hospital (n=226)	34 (15.0)	0.881	76 (33.6)	0.004	67 (29.6)	0.380
	Training and Research Hospital (n=111)	15 (13.5)		58 (52.3)		41 (36.9)	
	State hospital / Private secondary hospital (n=11)	2 (18.2)		4 (36.4)		3 (27.3)	
To be an editor	Yes (n=158)	25 (15.8)	0.486	65 (41.1)	0.452	45 (28.5)	0.278
	No (n=204)	27 (13.2)		76 (37.3)		69 (33.8)	

**Table 5.** The relationship between the age of the participants and their attitudes and experiences regarding the open peer-review process

		Mean age ± SD	p
Request to know the names of the authors	Yes (n=52)	48.9±9.7	0.026
	No/ Undecided(n=310)	45.7±7.9	
Request for name to be published as a post-publication reviewer	Yes (n=141)	45.3±8.4	0.107
	No/ Undecided (n=221)	46.7±8.1	
Request publication of post-publication review notes	Yes (n=114)	44.5±7.7	0.005
	No/ Undecided (n=248)	47.0±8.4	

## DISCUSSION

The classic single / double blind review is highly respected in the scientific community and is generally considered the gold standard for assessing the validity of research communications (7). In the studies of Kowalczyk et al. investigating OPR and the decisions of the authors of two similar journals in terms of quality, it was concluded that the quality of OPR was better. However, acceptance rates were found to be higher in the OPR group and the revision rates were higher in the blind group. It was also reported in that study that both blind and OPR evaluations may differ from journal to journal (8).

Schmidt et al. discussed OPR in 10 different aspects and published sample referee reports. For authors, OPR is an innovation in scientific communication that deserves more attention, and these published reports give authors, readers, and others a better chance to understand the process from the submission of the first article to

the final published version. Therefore, it was argued that it would provide excellent learning opportunities and the potential to enhance scientific communication and research towards a more transparent, collaborative and participatory initiative (5). Similarly, in the article by Ross-Hellauer, it was emphasized that OPR may have very different definitions and should be standardized. That study also included the opinions of the referees (4). In the study by Kowalczyk et al., the quality of the reviews in open evaluation and single-blind evaluation was compared and they were observed to be of similar quality (8). A study by Vinther et al. concluded that the evaluation quality was similar in QPR and blind peer review, but finding a referee would be difficult if QPR was performed (9). Peebles et al. showed that the request of referees for self citation is common in the peer-review system, but QPR will prevent this due to the openness of the evaluation (10). In the current study, only 39% of the respondents were

positive about the publication of their names, while only 31.5% of the group wanted the referee opinions to be published.

Some journals ask or allow authors to suggest or list reviewers as a possible source of credible opinion when their own known or preferred referees are not available or are not interested in reviewing the article (2). Hausmann et al. recently reported a bias towards lower rejection rates when reviewers suggested by the author evaluated articles submitted to the Journal of Neurochemistry (11). The result of this work led to the journal's decision to abandon the option of suggesting reviewers. Charlier et al. believed that there is a very high risk of evaluation bias when reviewers are proposed, as authors are likely to recommend friends and colleagues as referees (12). In addition, as discussed above, there is concern about the area of abuse and the potential for deliberate manipulation of the peer review process (2). When all these studies are considered, bias is one of the most complained about aspects of the current reviewing system. Of the current study respondents, one-third were not satisfied with the current refereeing system.

One of the important topics questioned in this study was the recommendation of a referee by the authors. The diversity of referee suggestions by the authors can cause bias, resulting in the publication of poorer quality articles. Hausmann et al. found that when the referee was recommended by the authors, there was more acceptance, less rejection, and less major revision (13). In another study, although there was no difference in review quality between sending to a selected referee and sending to an unelected referee, it was concluded that selected referees decided to accept more (8). The study of Wager et al. reached similar results (13). In the current study, 48% of the respondents marked the option that they can be sent sometimes, while 36% marked the option not to send at all.

It is not easy to participate in studies that collect data with questionnaires. In a study about open referee reports similar to this study, only 3062

(7.4%) of the 41,000 people targeted to be reached were able to respond. In that study, 60.3% of the respondents believed that OPR can be used as a general concept in scientific practice. It is thought that this situation will be more beneficial for young people. In addition, 76% of those who agreed with this opinion were referees, editors and writers. However, despite such a high rate of support, 1461 participants stated that open identification could lead to worse results (3). Similarly, in the current study, a response was obtained from only 9% of the population targeted. Unlike the previous study, 39% of the respondents requested OPR in this study. In the sub-analysis of the group that requested OPR, it was seen that those who wanted the publication of referee opinions after publication and those who did not want to know the names of the authors were at a younger age.

This is one of the very few studies in literature on this subject. This study has some limitations. While interpreting the study data, it should be kept in mind that it was conducted only in a certain geographical region, in Turkey. In addition, it should be known that the study participants consisted of only surgical branches, and there were no opinions of academicians from other medical fields and social and natural sciences. Finally, these findings cover a small portion of the academicians of surgical branches in Turkey.

## CONCLUSION

It has been understood that the current referee assignment system has some negative effects on the referees. It can be considered that a system that can be used by the referees should be developed in order to have more transparent and more careful referee reports. It has been observed that one third of the academicians in Turkey favored the idea of including the referee reports in the article. It can therefore be recommended that the OPR system be used with the approval of the author and the referee.

## REFERENCES

1. Angadi HS. Is Open Peer Review the Future of Refereeing? A Narrative Review. *A Narrative Review* 2020.
2. Gregory AT, Denniss AR. Everything you need to know about peer review—the good, the bad and the ugly. *Heart, Lung and Circulation* 2019; 28(8):1148-53.
3. Ross-Hellauer T, Deppe A, Schmidt B. Survey on open peer review: Attitudes and experience amongst editors, authors and reviewers. *PloSone* 2017; 12(12): e0189311.
4. Ross-Hellauer T. What is open peer review? A systematic review [version 2; referees: 4 approved]. *F1000Research* 2017(6): 588.
5. Schmidt B, Ross-Hellauer T, van Edig X, Moylan EC. Ten considerations for open peer review. *F1000 Res* 2018; 7: 969. doi: 10.12688/f1000research.15334.1. eCollection 2018.
6. Ross-Hellauer T, Görögh E. Guidelines for open peer review implementation. *Research Integrity and Peer Review* 2019; 4(1):1-12.
7. Besançon L, Rönnerberg N, Löwgren J, Tennant JP, Cooper M. Open up: a survey on open and non-anonymized peer reviewing. *Research integrity and peer review* 2020; 5(1):1-11.
8. Kowalczyk MK, Dudbridge F, Nanda <https://bmjopen.bmj.com/content/5/9/e008707.short> - aff-3 S, Harriman SL, Patel J, Moylan EC. Retrospective analysis of the quality of reports by author-suggested and non-author-suggested reviewers in journals operating on open or single-blind peer review models. *BMJ open* 2015; 5(9): e008707
9. Vinther S, Haagen Nielsen O, Rosenberg J, Keiding N, Shroeder TV. Same review quality in open versus blinded peer review in *Ugeskrift for Læger*. *Dan Med J* 2012; 59(8):A4479.
10. Peebles E, Scandlyn M, Blair RH. A retrospective study investigating requests for self-citation during open peer review in a general medicine journal. *Plos one* 2020; 15(8):e0237804.
11. Hausmann L, Schweitzer B, Middleton FA, Schulz JB. Reviewer selection biases editorial decisions on manuscripts. *Journal of Neurochemistry* 2017; 146(1):21-46.
12. Charlier P, Al-Chaer ED, Abdallah B, Massaad C, Herve´ C. Peer (and brothers) review? Ethical challenges in author-proposed peer reviews [Letter]. *Eur J Intern Med* 2018; 47:e24–5.
13. Elizabeth W, Parkin EC, Tamber PS. Are reviewers suggested by authors as good as those chosen by editors? Results of a rater-blinded, retrospective study. *BMC medicine* 2006; 4(1):1-5.

## Corresponding Author

Orhan UREYEN (Assoc. Prof.)  
Tel: 5056487748  
E-mail: drureyen@yahoo.com  
ORCID:0000-0002-7820-9088

Hatice SIMSEK (Assoc. Prof.) ORCID:0000 0001 7209485X  
Abdullah SENLİKÇİ (G. Surgery Specialist) ORCID:0000000243214004  
Mehmet YILDIRIM (Prof. Dr.) ORCID:0000-0001-9948-9106  
Enver İLHAN (Prof. Dr.) ORCID: 000-0003-3212-9709