Published in final edited form as:

Surgery. 2018 August ; 164(2): 212–218. doi:10.1016/j.surg.2018.01.027.

The Use of Solicited Publishing by Academic Surgeons

Vi Nguyen^a, Rebecca A. Marmor^{a,b}, Sonia L. Ramamoorthy^{a,c}, Todd W. Costantini^{a,d}, Joel M. Baumgartner^{a,e}, Jennifer Berumen^{a,f}, Garth R. Jacobsen^{a,g}, and Jason K. Sicklick^{a,e,*}

^aUniversity of California, San Diego School of Medicine, La Jolla, CA

^bDepartment of Surgery, University of California, San Diego, La Jolla, CA

^cDivision of Colorectal Surgery, Department of Surgery, University of California, San Diego, La Jolla, CA

^dDivision of Trauma, Surgical Critical Care, Burns and Acute Care Surgery, Department of Surgery, University of California, San Diego, La Jolla, CA

^eDivision of Surgical Oncology, Department of Surgery, Moores Cancer Center, University of California, San Diego, La Jolla, CA

^fDivision of Hepatobiliary Surgery and Abdominal Transplantation, Department of Surgery, University of California, San Diego, La Jolla, CA

^gDivision of Minimally Invasive Surgery, Department of Surgery, Center for the Future of Surgery, University of California, San Diego, La Jolla, CA

Abstract

Background: Few details are known about open-access surgery journals that solicit manuscripts via E-mail. The objectives of this cross-sectional study are to compare solicited surgery journals with established journals and to characterize the academic credentials and reasons for publication of their authorship.

Methods: We identified publishers who contacted the senior author and compared their surgery journals with 10 top-tier surgical journals and open-access medical journals. We assessed the senior authorship of articles published January 2017–March 2017 and utilized a blinded survey to determine motivations for publication.

Results: Throughout a 6-week period, 110 E-mails were received from 29 publishers distributing 113 surgery journals. Compared with established journals, these journals offered lesser publication fees, but also had lesser PubMed indexing rates and impact factors (all $P < .002$). Professors, division chiefs, and department chairs were the senior authors of nearly half of US-published papers and spent ≈\$83,000 to publish 117 articles in journals with a median impact factor of 0.12 and a 33% PubMed indexing rate. Survey responses revealed a dichotomy as 43% and 57% of

*Corresponding author: Division of Surgical Oncology, Moores Cancer Center, University of California, San Diego, UC San Diego Health Sciences, 3855 Health Sciences Drive, Room 2313, Mail Code 0987, La Jolla, CA 92093-0987. jsicklick@ucsd.edu, ammones@ucsd.edu (J.K. Sicklick).

Presented at the 2018 Academic Surgical Congress, Jacksonville, FL.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.surg.2018.01.027.

authors published in these journals with and without knowledge of their solicitant nature, respectively. The most commonly reported reasons for submission included waived publication fees (50%), invitation (38%), and difficulty publishing elsewhere (12%)

Conclusion: Despite their sparse PubMed indexing and low impact factors, many senior academic faculty publish in solicitant surgery journals. This study highlights the importance for the academic surgical community to be cognizant of the quality of a journal when reviewing the literature for research and evidence-based practice.

Introduction

The dissemination of scientific knowledge is expanding rapidly. Each year, 2.5 million new manuscripts are published, while the number of scholarly journals increases by 3.5%.¹ At this rate, global scientific output is projected to double every 9 years.^{2,3} As the number of scientific publications continues to increase so dramatically, it becomes progressively more difficult to remain current with the breadth of new knowledge. In turn, physicians and scientists need to become increasingly savvy when reviewing the literature for developing evidence-based practices or guiding new scientific discoveries.

This massive proliferation of scientific output may be fueled, in part, by the emergence of the model of open-access publishing. This new approach aims to distribute information without mandating reader subscription fees.⁴ Although this model offers unrestricted access to new findings, it has become increasingly difficult to differentiate traditional open-access publishers from newfound ones who utilize marketing techniques, such as targeted E-mail solicitations and often with a waiver of marked discount in the publishing fee, to increase their output. These growth strategies have led to the term, “predatory publishing.”^{5–8} Earlier studies have detailed the tactics utilized by these publishers, including claiming of false impact factors, use of high publication fees, vague headquarter locations and contact information, unidentified editorial board members, and title “hijacking” of established journals, ie, choosing of names very close to other established surgery journals.^{5–8} Awareness of these practices may aid in discerning these “predatory publishers” from legitimate open-access publishers.⁹ Furthermore, the appropriate vetting and peer review process of some of these journals has been called into question. In 2017, the flawed peer review process of one of these “predatory” publishers was exposed when investigators used a fabricated physician alias to submit a Seinfeld-themed case report about “uromycitis,” a fictional medical condition created on an episode of a prior television show.¹⁰ The article has since been removed from the webpage of the publisher without a formal retraction statement. We are now at a tipping point and must consider the pros and cons of freely dispersing new medical and scientific knowledge but potentially at the cost of inadequate or insufficient peer review at times.

In 2017, these solicitant publishers and their marketing strategies are considered a well-known phenomenon in academic surgery circles. We raise the question of whether the approaches of these publishers are effective in recruiting the editorial involvement or manuscript submissions of the surgical faculty of US academic institutions. Herein, we sought to characterize surgery journals distributed by solicitant publishers, to evaluate

whether they meet the standards established by traditional journals, to identify their authorship, and to assess the motivations for reporting their studies in these surgery journals.

Methods

Identification of publishers

We started by identifying scientific publishers who contacted 1 academic surgeon (JKS) via E-mail during a 6-week period (January 1, 2017–February 20, 2017). Inclusion criteria encompassed publishers who requested manuscript submission, membership on the editorial board, and/or attendance at specific conferences. E-mail invitations to conferences unaffiliated with a publisher were excluded. Spam folders were reviewed to ensure comprehensive inclusion of all E-mail solicitations.

Analysis of E-mails

The Flesch Reading Ease and Flesch-Kincaid Grade Level scores were computed using Microsoft Word for each received E-mail. Using similar core measures (ie, word length and sentence length), the former designates how difficult a passage is to understand in English (range: 0–100; ie, lesser scores mean more difficult), while the latter indicates the years of education needed to understand a text.¹¹ For each received E-mail, we then computed the total number of grammatic errors, using the online GrammarCheck program.¹² Next, we analyzed the specificity of received E-mails by determining whether each solicitation targeted the surgeon's field of expertise.

Identification of surgery journals

We then identified the surgery journals distributed by these solicitant publishers. Inclusion criteria encompassed journal titles that contained the terms “Surgery,” “Surgical,” “Transplantation,” and/or “Laparoscopy”; all surgical subspecialties were included. We then procured the following data from the respective website of each journal: the duration of journal existence based on the publication date of the first volume and/or issue; the locations of international and US editorial offices; the editor-in-chief; the International Standard Serial Number (ISSN); the Digital Object Identifier (DOI) number; the status of any PubMed index; the impact factor; and publication fees. We used Google Maps¹³ to categorize all disclosed US addresses as commercial or residential based on satellite images of the property.

Assessment of generalizability to nonsurgery specialties

For each solicitant publisher, we then identified journal titles within their portfolios for other operative subspecialties (ie, obstetrics/gynecology, ophthalmology, urology), as well as nonoperative specialties (ie, emergency medicine, psychiatry).

Assessment of generalizability across surgery subspecialties

To assess the generalizability of the senior author's (JKS's) first cohort of E-mail solicitations, we conducted a validation study by tallying the total number of E-mails received by 5 additional academic surgeons from a wide range of general surgery

subspecialties (ie, surgical oncology, trauma, transplantation, minimally invasive surgery, and colorectal surgery) throughout a 2-week period (March 29, 2017–April 11, 2017).

Verification of contact information

To validate the contact information distributed by a subset of publishers, the senior author (JKS) responded to every E-mail received during the 2-week validation study and tallied any E-mail reply from the journal. From the same E-mails, the investigators called all the telephone numbers disclosed by the editorial office. Finally, we physically visited one local editorial office in San Diego, CA, to validate the address provided in the E-mail solicitation.

Comparison of solicitant versus nonsolicitant journals

Of the solicitant surgery journals, we then selected the ones that reported an impact factor ($n = 9$) and compared them with: (1) 10 established open-access medical journals (impact factor > 5.23; Supplemental Table I); and (2) 10 traditional surgery journals with optional open access (impact factor > 2.40; Supplemental Table II). These journals were identified using Thomson Reuters.¹⁴ Using SPSS (IBM Analytics, Armonk, NY), we performed univariate statistical analyses (2-tailed t test for continuous variables, χ^2 test for categorical variables) to compare the publication fees, durations of existence, PubMed indexing rates, and impact factors of these journals.

Identification of article authors

For the original 113 solicitant surgery journals, we next tallied their total number of articles published between January and March 2017. We then determined whether the senior author of each article was affiliated with an international or a US institution. We categorized each US institution as academic or nonacademic. We then utilized departmental websites to determine the rank of each senior academic US author. We also estimated the total publication fees paid by these US academic authors during this 3-month study period, as well as the median impact factors and PubMed indexing rates of the journals in which they published articles.

Survey of article authors

Having identified senior US academic authors who published in these 113 solicitant surgery journals between January and March 2017, we surveyed them via E-mail, using the E-mail address of the senior author from the “author information” sections of the respective articles. In cases where author information was not provided, we obtained the E-mail address of the senior author from their respective institutional department webpages. After approval by the University of California San Diego Institutional Review Board, an E-mail invitation was sent to all identified individuals to assess the authors’ reason(s) for submission to solicitant surgery journals. Informed consent was obtained from each survey respondent through a consent statement that served as the questionnaire cover letter. This consent statement outlined privacy practices and explained the purpose and procedures of our study. Participation in the survey was completely voluntary. To preserve anonymity and confidentiality, survey responses were not linked to individual subjects via their E-mail addresses.

Results

Identification of publishers

We identified 29 publishers who sent 110 E-mails to the senior author (JKS) during an initial 6-week study period (mean: 3.8 emails/publisher; mean: 2.2 emails/day). A total of 24 publishers (83%) E-mailed for manuscript submissions, 3 (11%) E-mailed for both manuscript submission and editorial board membership, 1 (3%) E-mailed for editorial board membership only, and 1 (3%) E-mailed for conference attendance only.

Characteristics of E-mail solicitations

Moving beyond the indication for E-mail solicitation, we studied the characteristics of each invitation to better understand its architecture and specificity toward the recipient. Overall, these E-mails were characterized by difficult readability and were often not related to the specialty of the recipient. More specifically, the mean Flesch Reading Ease and Flesch-Kincaid Grade Level of received E-mails were 36.0 ± 13.7 and 11.3 ± 1.3 , respectively, suggesting the content was difficult to understand. The mean number of grammatic errors per E-mail was 9.6 ± 5.2 (range: 0–39). Only 21 E-mails (19%) were addressed specifically to the recipient; these E-mails included 14 E-mails (13%) that were personalized manuscript invitations targeting the surgeon's field of academic interest and 7 E-mails (6%) that offered guest editorship of issues within the surgeon's area of expertise. The remaining 89 E-mails (81%) included random topics unrelated to the recipient's scope of study or field of practice.

Characteristics of surgery journals

We next examined the 113 surgery journals distributed by the 29 publishers (mean: 3.9 surgery journals/publisher). The mean duration of journal existence was 2.0 ± 1.8 years, with the year of journal inauguration ranging the years 2005–2017 (median year: 2016). Of the 113 journals, 71 journals (63%) were established in the year 2016. The location of their 157 editorial offices varied by countries and sites; 44 journals (39%) had more than one office. A total of 66 offices (42%) were located internationally, and 91 (58%) were located in the United States (Supplemental Fig 1, A). Of the 66 international offices, 43 (65.2%) were located in India. Of the 91 US offices, 27 (30%) were operated from private residences (ie, single-family homes, condominiums, or apartments) (Supplemental Figs 1, B –C).

Bibliometric parameters

Of these 113 identified surgery journals, 42% (47) and 26% (29) possessed an ISSN and DOI number, respectively. Moreover, 12 journals (11%) were indexed in PubMed, and only 9 journals (8%) reported an impact factor. For the few reporting an impact factor, the median impact factor was 0.24 (range: 0.08–0.60). Of note, the impact factor of these journals were self-reported, and none could be validated using Thomson Reuters.¹⁴

Publication fees

Of the 113 journals studied, 88 journals (78%) charged a publication fee. while 4 journals (3%) did not charge a publication fee. The remaining 21 journals (19%) did not disclose

information regarding the presence or absence of publication fees. The median reported publication fee was \$755 USD (range: \$0–\$2,019) (Fig 1).

Characteristics of the editor of these surgery journals

Having evaluated the journal themselves, we proceeded to assess the individuals managing them. A total of 45 journals (40%) listed an editor(s)-in-chief, while 100 journals (89%) listed their editorial board membership on their website. A total of 22 of these editorial boards (22%) did not include any female board members.

Assessment of generalizability to non-surgery specialties

Next, we assessed whether solicitant publishing affected medical specialties other than surgery. The same 29 identified publishers distributed 39 obstetrics/gynecology journals (mean: 1.3 journals/publisher), 38 emergency medicine journals (mean: 1.3 journals/publisher), 33 psychiatry journals (mean: 1.1 journals/publisher), 27 ophthalmology journals (mean: 0.9 journals/publisher), and 18 urology journals (mean: 0.6 journals/publisher), respectively (Table 1). Taken together, our results suggest that the field of surgery ($n = 113$ journals; mean: 3.9 journals/publisher) is affected disproportionately by solicitant publishing.

Assessment of generalizability across surgery subspecialties

Given the prevalence of solicitant publishing within surgery, we then evaluated how solicitant publishing affects colleagues with other surgery subspecialties. Throughout a 2-week study period, the 6 surgeons we evaluated each received a mean total of 42.4 ± 19.7 E-mails (3.0 ± 1.4 E-mails/day), suggesting that the originally studied experience was generalizable across surgery specialties.

Verification of contact information

To validate the contact information distributed by a subset of publishers in real time, the senior author (JKS) responded to every E-mail ($n = 65$) received during the 2-week study validation period. A total of 43 (66%) of the journals replied. From the same solicitant E-mails, we also called all editorial offices that disclosed a telephone number ($n = 39$); only 8 (21%) had working telephone numbers that were answered. When we visited a local editorial office in San Diego, CA, we discovered that the provided address was invalid. In this case, the suite number did not exist in the directory of the commercial building nor on the designated floor.

Comparison of solicitant versus nonsolicitant journals

To assess whether these solicitant journals met the standards established by traditional, nonsolicitant journals, we performed comparative statistical analyses. First, from the original 113 journals, we compared the 9 solicitant journals reporting impact factors with 10 established open-access medical journals (Table 2). The solicitant journals had lesser publication fees ($\$1,302 \pm \433 vs $\$3,555 \pm \$1,228$; $P < .001$), lesser durations of existence (4.6 ± 1.5 years vs 7.4 ± 3.5 years; $P < .039$), lesser impact factors (0.3 ± 0.2 vs 9.1 ± 3.2 ; $P < .001$), and lesser PubMed indexing rates (0% vs 100%; $P < .001$).

Next, we compared these same 9 solicitant journals with 10 traditional surgery journals with optional open access. The mean publication fees, durations of existence, impact factors, and PubMed indexing rates of the traditional surgery journals were $\$2,750 \pm 1,012$, 72.2 ± 41.7 years, 4.3 ± 1.8 , and 100%, respectively (Table 2). Again, the solicitant journals had lesser publication fees ($P < .002$), shorter durations of existence ($P < .001$), lesser impact factors ($P < .001$), and lesser rates of PubMed indexing ($P < .001$). In contrast to the fees of these solicitant journals, however, the open-access publication fees charged by these surgery journals were optional.

Characteristics of article authors

We then sought to characterize the authorship of 113 solicitant surgery journals. From January to March 2017, these 113 surgical journals published 649 articles. Of these 499 (77%) were submitted by an international senior author, and 150 (23%) were submitted by a US senior author. Of the 150 US articles, 117 (78%) were affiliated with academic institutions. The locations of these academic institutions spanned the entire United States (Fig 2). The rankings of the academic senior authors were as follows: professor ($n = 55$, 47%), associate professor ($n = 29$, 25%), assistant professor ($n = 23$, 20%), instructor ($n = 2$, 2%), fellow ($n = 4$, 3%), resident ($n = 3$, 2%), and medical student ($n = 1$, 1%). Moreover, 24% of professors ($n = 13$) served as chairs of departments of surgery, and 25% of professors ($n = 14$) served as surgical division chiefs (Fig 3). In sum, academics spent an estimated \$82,560 (mean: \$705/manuscript) based on the reported publication fees of the solicitant journal to publish their work in journals with a median self-reported impact factor of 0.12 and 33% PubMed indexing rate.

Survey of senior authors

Having described the characteristics of solicitant publishers and their respective surgery journals with short durations of existence, low or nonexistent impact factors, low rates of PubMed indexing, and sometimes very expensive publication fees, we were quite surprised by the number of US academic surgeons publishing in these journals. To gain an understanding of the motivations for publishing in these journals, we surveyed the 117 aforementioned senior US academic authors (Fig 4); only 14 responded (15%). All 14 reported receiving E-mail requests for article submissions (1–5 E-mails/day: 50%; 5–10 emails/day: 43%; > 10 emails/day: 7%). Of the 14 respondents, 8 (57%) denied publishing articles in a solicitant surgery journal, while 6 respondents knowingly published a manuscript in a solicitant journal. Of these latter 6 individuals, 5 served on the respective editorial boards. In addition, 2 of these 6 senior academic authors published work that was NIH-funded. The most commonly reported reasons for submission to these solicitant surgery journals included: waived publication fees (50%); invitation (38%); and difficulty publishing elsewhere (12%). Attesting to the latter, 2 authors attempted to submit their work to other journals before ultimately publishing in one of these 113 solicitant surgery journals.

Discussion

The nature of scientific publishing and the dissemination of new information is evolving rapidly with the emergence of the model of open-access publishing. This approach aims to

distribute information freely without mandating subscriptions, but it has become increasingly difficult to distinguish traditional open-access publishers from newfound ones that solicit for manuscript submissions, editorial board memberships, and conference attendance via E-mail. Herein, we analyzed the field of surgery as an exemplary case study of how this phenomenon of solicitant publishing has permeated academia. To our knowledge, this is the first study to not only characterize the surgery journals affiliated with solicitant publishers but also to compare them with established nonsolicitant journals, to describe who comprises their authorship, and finally to begin to understand the motivations for publishing in these journals. The current study is important, because it highlights the briskly evolving features, practices, benefits, and drawbacks associated with solicitant publishers and demonstrates that, contrary to common belief, US academics, including senior faculty, are publishing in journals that solicit their contributions. Thus, this study highlights the importance for scientists, physicians, and academics from all disciplines who contribute to and/or review the literature to be cognizant of the quantity and quality of these journals, as well as their respective publishers.

Publisher solicitation is a relatively contemporary phenomenon. Nearly two-thirds of the journals studied herein were launched in 2016. Our data demonstrate that manuscript submission was the predominant reason for contact (83%), although 81% of requests included subjects unrelated to the recipient's field of study. These E-mails exhibited difficult readability according to two different scoring systems; this difficulty in readability was partly attributable to excessive grammatic errors, as indicated by a mean of nearly 10 mistakes per E-mail. These grammatic errors may be attributed to translation from other foreign languages, because more than half of the journals operate from international offices. Surprisingly, or perhaps in alignment with the portability of the internet, 30% of US offices had addresses assigned to residential addresses. The validity of contact information was highly suspect, because editorial offices had E-mail and telephone response rates of only 66% and 21%, respectively. Additionally, we confirmed that a false address for the editorial office was reported for a publisher who claimed to operate locally from San Diego. Overall, our findings raise concerns about the longevity and transparency of these journals.

Although the approach of E-mail solicitation appears to be an effective recruiting tool, very few of these journals are disseminating their content in an impactful way, because the median unconfirmable impact factor (claimed by the journal) of 0.24 indicates less than one citation per article published during the two preceding years. A late-2016 report noted that 5,634 journals were indexed in Index Medicus and MEDLINE on PubMed¹⁵; however, only 11% of the solicitant surgery journals we identified in the current study possessed PubMed indexing. This finding suggests that most studies published by these journals may be falling outside of the normal corpus of medical literature review. In contrast, increasing numbers of clinicians and scientists search for publications via internet search engines (eg, Google and Bing) rather than PubMed, which may not filter out these journals. Thus, articles reported online by these publishers may still end up being read, cited, and even followed for clinical decision-making.

Despite these limitations, our study demonstrates that, contrary to common perception, many US academic surgeons do submit their work to these solicitant journals. In fact,

professors, including division chiefs and department chairs, were the senior authors on nearly half of papers published by US academics in the first quarter of 2017. These academics spent an estimated \$83,000 to publish 117 articles. Thus, it may be extrapolated from our data that US academic surgeons will spend approximately \$330,000 in 2017 to publish their work in just these solicitant journals alone. Clearly, our study evaluated only the tip of the iceberg, because many more publishers also solicit submissions actively. Surprised by this finding, we surveyed the aforementioned senior authors to evaluate the motivations for publication in these solicitant surgery journals. Blinded survey responses revealed that, although all respondents were aware of the general existence of these solicitant surgery journals, 57% still allegedly “unknowingly” published their research in a solicitant journal. This observation provides the first evidence that the discussion needs to be advanced by analyzing the characteristics of these solicitant journals in order to educate surgeons. We also provide novel insights in the misconception that only junior researchers publish in these journals, because nearly half of the 117 senior surgery authors were full professors, and all of respondents ($n = 17$, only 14%) who knowingly published in solicitant surgery journals took credit as being the senior author of the submitted manuscripts. For these individuals, publishing in these journals also appears to be linked with membership on the editorial board of the solicitant surgery journal and because of waived fees for publication. For the half that did not allegedly knowingly submit to these journals, it is possible that another author may have been responsible for determining to which journal their article was submitted. Overall, our data suggest that targeted E-mail invitations for manuscript submission and editorial board membership from solicitant surgery journals are indeed successful. It is our hope that our study has advanced the discussion about the pros and cons of this practice.

Determining the “predatory” nature of a journal can be difficult, because many nascent, open-access publishers that lack financial resources may be mislabeled because of their high publication fees. Given the growing prevalence of solicitant publishing via E-mail requests, we have attempted to analyze these journals scientifically and therefore, take a balanced stance. Our data suggest that it is critical for the academic surgical community to contemplate how to become more vigilant when considering the options for submission of manuscripts in surgery journals, as well as developing evidence-based practice. Many of the studies published in these journals may be excellent but should not be taken at face value.

We propose several strategies to increase awareness of this phenomenon at both the individual and systemic levels. First, utilization of validated, health-related databases (ie, PubMed, SCOPUS, Web of Science, EMBASE, The Cochrane Library) as well as avoidance of more generalized search engines (ie, Google, Bing) can be implemented when conducting reviews of the medical literature, because solicitant surgery journals are often not included by these indexing services.⁸ Additionally, when considering manuscript submission, specific journal titles can be searched using the National Library of Medicine’s NCBI Databases¹⁶ to determine whether the journal is indexed in MEDLINE, PubMed, or PubMed Central. This practice may also help discern established journals from those with similar names who utilize the aforementioned tactic of “title hijacking.”^{5–8} Additionally, surgeons may reference the Directory of Open Access Journals (DOAJ),¹⁷ which lists validated, open-access journals and online published lists of “predatory publishers”¹⁸ if they remain

uncertain regarding a journal's validity. Furthermore, surgeons and other investigators can reference the Thomson Reuters Journal Citations Reports database¹⁴ to verify the alleged impact factor of a journal. At the systemic level, formal education and discussion regarding publishing strategies should be implemented into medical school education, residency training, and research fellowship programs. As an academic surgical population, we also propose the establishment of a working group to provide a consensus statement on how we in the house of surgery and as a community should "police" solicitant publishing. Finally, committees that determine institutional promotions and inductions into surgery societies should also consider utilizing the h-index \ or other measures as a bibliometric parameter of an individual's academic productivity in order to encourage quality rather than quantity of scientific output, which may play a role in publishing in solicitant surgery journals.¹⁹ This approach may motivate surgeons to focus on publishing high-impact work rather than increasing their total publication count. In summary, we offer various strategies that both individual surgeons and the academic surgical community can employ to increase cognizance of solicitant publishing and prioritize quality rather than quantity of research productivity.

Although this is the first report detailing several parameters of solicitant publishers with surgery journals, the data were only collected for two brief periods from six surgeons at a single institution, rendering it difficult to discern how many other similar publishers exist. We purposely chose brief study periods to provide a snapshot of today's current landscape of solicitant surgery journals, because they can often become defunct and disappear without any traceable record.¹⁷

Taken together, our study underscores how important it is for both faculty and trainees to consider important characteristics, such as impact factor and PubMed indexing, as they select journals for article submission and when utilizing publications to guide their evidence-based practices.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements

Supported by NIH T15LM011271 (R.A.M.) and K08 CA168999, R21 CA192072, P30 CA023100 (J.K.S.) The authors have no conflicts to disclose.

References

1. Ware M , Mabe M . The STM Report: An overview of scientific and scholarly journal publishing 2015; Fourth: http://www.stm-assoc.org/2015_02_20_STM_Report_2015.pdf Accessed February 27, 2017.
2. Bornmann L , Mutz R . Growth rates of modern science: A bibliometric analysis based on the number of publications and cited references. JASIST. 2015;66:2215–2222.
3. Van Noorden R Global scientific output doubles every nine years 2014; <http://blogs.nature.com/news/2014/05/global-scientific-output-doubles-every-nine-years.html> Accessed February 26, 2017.
4. Swartz MK . Open access publishing: Scholarly or predatory? J Pediatr Health Care. 2015;29:121–122.25697766

5. Beall J . Dangerous predatory publishers threaten medical research. J Korean Med Sci. 2016;31:1511–1513.27550476
6. Beall J . Predatory journals: Ban predators from the scientific record. Nature. 2016;534:326.
7. Beall J . Best practices for scholarly authors in the age of predatory journals. Ann R Coll Surg Engl. 2016;98:77–79.26829665
8. Hansoti B , Langdorf MI , Murphy LS . Discriminating between legitimate and predatory open access journals: Report from the international federation for emergency medicine research committee. West J Emerg Med. 2016;17:497–507.27625710
9. Butler D . Investigating journals: The dark side of publishing. Nature. 2013;495:433–435.23538810
10. Hello...Newman. Yet another sting pranks a predatory journal. Seinfeld-style. 2017 <https://www.sott.net/article/347706-Hello-Newman-Yet-another-sting-pranks-a-predatory-journal-Seinfeld-style>. Accessed April 10, 2017.
11. Test your document's readability 2017; <https://support.office.com/en-us/article/Test-your-document-s-readability-85b4969e-e80a-4777-8dd3-f7fc3c8b3fd2> Accessed March 6, 2017.
12. GrammarCheck 2017; <http://www.grammarcheck.net/editor/> Accessed April 15, 2017.
13. Google Maps. 2017; <https://www.google.com/maps> Accessed January 3, 2017.
14. Journal Citation Reports 2017; <https://jcr.incites.thomsonreuters.com/> Accessed February 28, 2017.
15. Number of titles currently indexed for Index Medicus® and MEDLINE® on Pub-Med® 2017; https://www.nlm.nih.gov/bsd/num_titles.html Accessed March 7, 2017.
16. NLM Catalog: Journals referenced in the NCBI databases 2018; <https://www.ncbi.nlm.nih.gov/nlmcatalog/journals>. Accessed January 5, 2018.
17. Directory of Open Access Journals 2017; <https://doaj.org/>. Accessed April 19, 2017.
18. List of Predatory Journals 2018; <https://predatoryjournals.com/journals/>. Accessed January 5, 2018.
19. Nguyen V , Marmor RA , Sicklick JK . Paper presented at: Society of Surgical Oncology Annual Cancer Symposium. February 1, 2018.

Fig. 1.
Histogram of publication fees for 92 surgery journals associated with publishers that actively solicit manuscript submissions via E-mail.

Fig. 3. CONSORT flow diagram characterizing authors who submitted their work to 113 solicitant surgery journals from January to March 2017 (% indicated of prior group).

Fig. 4. CONSORT flow diagram characterizing survey respondents. *Note that 8 senior authors published more than 1 article between January 2017 and March 2017.

Table 1

Surgical versus nonsurgical journals distributed by 29 identified solicitant publishers

Specialty	Number of journals	Mean number of journals/publisher
Surgery	113	3.9 ± 4.7
Obstetrics/gynecology	39	1.3 ± 1.1
Emergency medicine	38	1.3 ± 1.6
Psychiatry	33	1.1 ± 1.5
Ophthalmology	27	0.9 ± 0.8
Urology	18	0.6 ± 0.6

Table 2

Comparison of attributes of solicitant surgery journals versus established open access journals and surgery journals.

Variable	Solicitant surgery journals (<i>n</i> = 9)	Open-access medical journals (<i>n</i> = 10)	<i>P</i> value (solicitant versus top-tier open access)	Surgery journals (<i>n</i> = 10)	<i>P</i> value (solicitant versus top-tier surgical)
Mean publication fee (\$USD)	1,302 ± 433	3,555 ± 1,228	<.001	2,750 ± 1,012	<.002
Mean duration of existence (years)	4.6 ± 1.5	7.4 ± 3.5	<.039	72.2 ± 41.7	<.001
Mean impact factor	0.3 ± 0.2	9.1 ± 3.2	<.001	4.3 ± 1.8	<.001
Rate of PubMed indexing	0	100.0%	<.001	100.0%	<.001