

ASSESSING THE LEVEL OF AWARENESS ABOUT PREDATORY JOURNAL AMONG THE STUDENTS OF IAAS, PAKLIHAWA

C. Rana*, C. K. Tiwari, B. Bhattarai, A. Gautam, B. KC, A. Khanal, A. Sharma, B. Tiwari¹, A. Gautam, A. Parajuli and K. Kaphle

Institute of Agriculture and Animal Science, Tribhuvan University, Nepal

*chandrakalarana12@gmail.com

ABSTRACT

The predatory journal has emerged as a threat to credible scientific researches and publication practices because of its ill-money-draining mentality by attracting the authors for publication without providing mandatory peer-review, low publication standard, editorial, and publishing services. This study's main objective is to assess the level of awareness about predatory journals among students of the Institute of Agriculture and Animal Science (IAAS) as a hope to support scholarly communication in battling unprofessional conduct. We conducted an online cross-sectional survey from 26th June to 6th July 2020 at IAAS. A structured questionnaire loaded in Google form was circulated online via E-mails, social media messages, and posted on various IAAS pages. With a total of 110 respondents from the veterinary and agriculture science students, the data concluded that among all respondents only 66.4% were familiar with the idea of predatory journals whereas only 38.2% of respondents were aware of Beall's list and its concept. This fails in a published article to meet the criteria in the scientific community. Hence, proper knowledge regarding the nature of the journal is necessary for publishing the paper so that the scholarly work could reach its milestone.

Keywords: *Beall's list, cross-sectional survey, peer-review, publication standard, scientific*

INTRODUCTION

Scientific writing is an important attribute for any researcher that is a medium of conveying ones' research to others. It should be precise and clear as such the complex on field research work is documented and presented to a variety of readers in the form of a written document. The scientific writings once prepared by the researcher demands publication because only by doing so, it will fulfill its core objective that is not merely the documentation of the research work, but reach and accessible to other people. Different online publication portals are available for the researcher to get their articles published. This has enabled and encouraged the researcher to publish their works online which is easily available to a large mass population over the world. However, this has also opened access for fraudulent publishers and researchers sometimes find themselves stranded in the grasp of those bogus and fraud publishers, often referred to as Predatory publishers. Jeffrey Beall coined the term 'predatory journals' and 'predatory publishers' to refer to such journals and publishers that publish anything for money and "do not follow scholarly publishing industry standards" (Beall, 2016). Journals are said to be "predatory" when they present an illegitimate publication process as a legitimate face and they lack basic industry standards, proper peer-review practices, or a realistic basis in publication ethics (Christopher & Young, 2015). These journals accept bogus articles without any properly conducted peer review. Although the peer-review process does not certify that the results are correct as the reviewers do not replicate the experiments or analyze the data, it confirms about methodology, results, conclusion, relevance (Lock, 2004). Some other characteristic features of predatory journals are an unauthentic publication process, the false authority of the editorial board, fewer members of the editorial board, falsification or lack of institutional affiliations, homepages containing spelling errors, bogus impact factors, e-mail spam, a small number of published

papers and high publication fees (Kokol et al., 2018). Such journals do represent a recent revolution in scientific communication and are now required by an increasing number of major funders and institutions attracting authors who wish to give their work prompt and unfettered access (Bhandari et al., 2020).

The publication is as important as actual research to researcher these days and researchers, especially the rookies, wants their articles and works to gain a certain reach in the scientific community. This will not only convey their findings, ideas, and work to the greater mass of people but also opens the door of opportunities for them. Authentic journals hold a special place in the life of researchers. A vital aspect of publishing a research article is selecting a journal with an appropriate topic and scope, respected among other researchers in the discipline, widely indexed, and feasible to readers (Christopher & Young, 2015). This allows authors to share their original findings, reasoning, and proposed changes to practice standards for effective dissemination of the work (Monteiro et al., 2012). A researcher's performance and productivity are mainly judged on the number of publications and where they appear. Publishing in peer-reviewed scientific journals is the cornerstone of academic assessment and the gold standard for communicating research output (Christopher & Young, 2015). Publications make scientific information obtained from research widely available, and allow the rest of the academic audience to evaluate the quality of the study (Kaur, 2013). Due to this, the importance of journals in academic life goes beyond providing a means of communication and a permanent record.

An unethical practice of predatory journal spreads misleading information to the readers. Bogus publishers with the poor peer review process will not only pollute the genuine research works but can also impact greatly on the scientific community as a whole. The increase in the number of poor articles that haven't gone under an effective peer review process can mislead the reader and mask the genuine publications of non-predatory journals. In this scenario, predatory journals harm the integrity of this circle as principles of 'good scientific practice' are bypassed by omitting a proper peer-review process (Richtig et al., 2019). They reduce the authenticity and validity of the research and scientific works published. Researchers are under constant pressure for publishing their work to increase their rating as well as to receive funding and they easily get attracted by various predatory journals (Richtig et al., 2018). The common practice of predatory journals is to offer an easy publication opportunity that can be achieved faster. However, publishing in predatory journal questions and devalues the research works. Thus, proper education about identifying predatory journals is extremely important. Beall's list is a list of the potential predatory journals that help researchers/writers to identify predatory journals along with the criteria for determining predatory Open-Access Publishers (Olivarez et al., 2018). In this paper, we try to assess the level of knowledge and attitude about predatory journals among the students of IAAS, Paklihawa.

MATERIALS AND METHODS

Institute of Agriculture and Animal Science (IAAS) is an autonomous academic center of Tribhuvan University (TU) for imparting education in disciplines: Agriculture, Animal Science, and Veterinary Science. This study was conducted among the students of the IAAS Paklihawa campus located at Bhairahawa, Rupandehi, Province-5, Nepal. Around 700 students are studying in Paklihawa campus in B.Sc Agriculture and B.V.Sc and A.H. faculties. An online questionnaire was designed using Google form to assess the level of awareness among students of IAAS, Paklihawa. The consent of participants was noted. The

details and objectives of the study were explained. It was emphasized that answers were anonymous and confidential. The demographic component includes age, gender, faculty, and grade. The awareness section had ten questions, which were all closed-ended. Among them five were Yes/No questions; whether participants were aware of the predatory journal and Beall's list, whether participants had published papers and follow up questions on whether they were aware of their publication, also whether a predatory journal gave proper review or not. The online questionnaire was then disseminated from June 26 to all the IAAS students through E-mails, social media (WhatsApp, Viber, Messenger) and personal text messages. Also, posted on various IAAS Facebook pages (IAAS Notice board page). The online survey was closed on July 6. Data were entered in the spreadsheet of Microsoft Excel 2019, and analysis was performed using IBM SPSS statistic version 25. Descriptive analysis (frequency and percentage) was applied to summarize the results.

RESULTS AND DISCUSSION

Students from both the faculties; Veterinary Science and Agriculture Science were equally encouraged to take part in the survey. Out of many invitations sent, 110 responses were received, of which 66 (60%) were from Veterinary Science while 44 (40%) respondents were from Agriculture faculty.

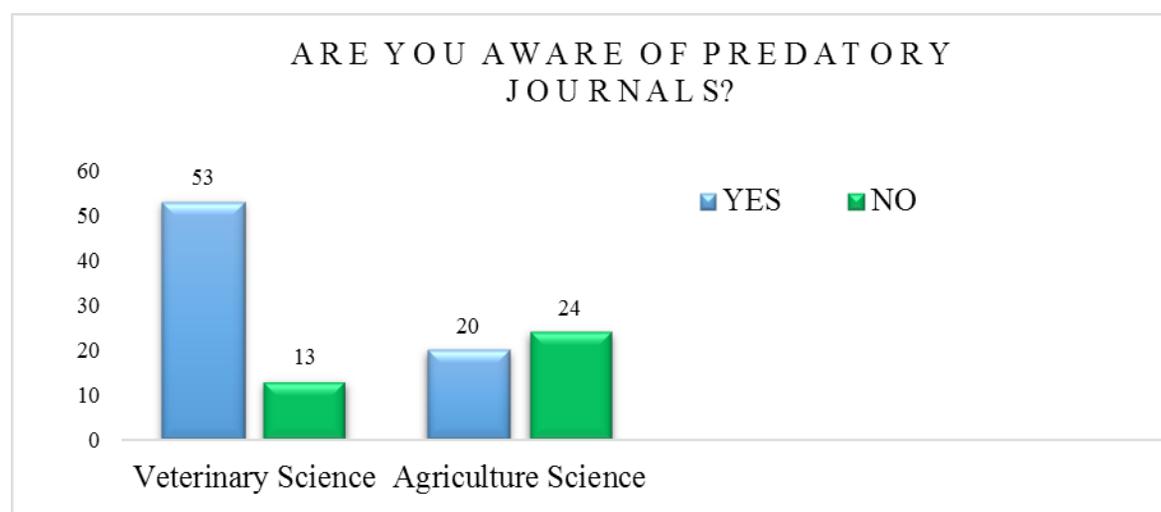


Figure 1. Bar graph showing the level of awareness of predatory journal among two faculties

Only 73(66.4%) respondents, 53 from veterinary science, and 20 from agriculture science were aware of the ideas of Predatory Journals (Figure 1). This result appears similar to the research by Ritching et al., (2019) where 69.7% of 131 participants were aware of the predatory journals but contrastingly only 23% among 142 had ideas about such journals in the research by Christopher and Young (2015). In our survey 37(33.6%) were unaware of predatory journals. From this data, we can conclude that two-third of the students of IAAS were aware of the predatory journals.

Only 12.7% of respondents responded that predatory journal provides peer review and is reliable for publication whereas majority of respondents (87.3%) think that predatory journal is not reliable. This data matches the article published by Publonsin coordination

with the Swiss National Science Foundation on a paper that shows about 3.31% of respondents claimed for a predatory journal giving a proper peer review (Solving the Mystery of Peer Review for Predatory Journals, 2020). Peer-review is essential to identify non-scientific work, unsound research methods thereby doing gatekeeping roles to preserve the integrity of the scholarly record (Beall, 2017). Without a credible review process of the predatory journal, it causes a hazard to scientific integrity (Cartwright, 2016). This suggests that even if students of IAAS know about the idea of a predatory journal, they may be unaware of the nature of the predatory journal and may have misbelief about the peer review provided by such journals.

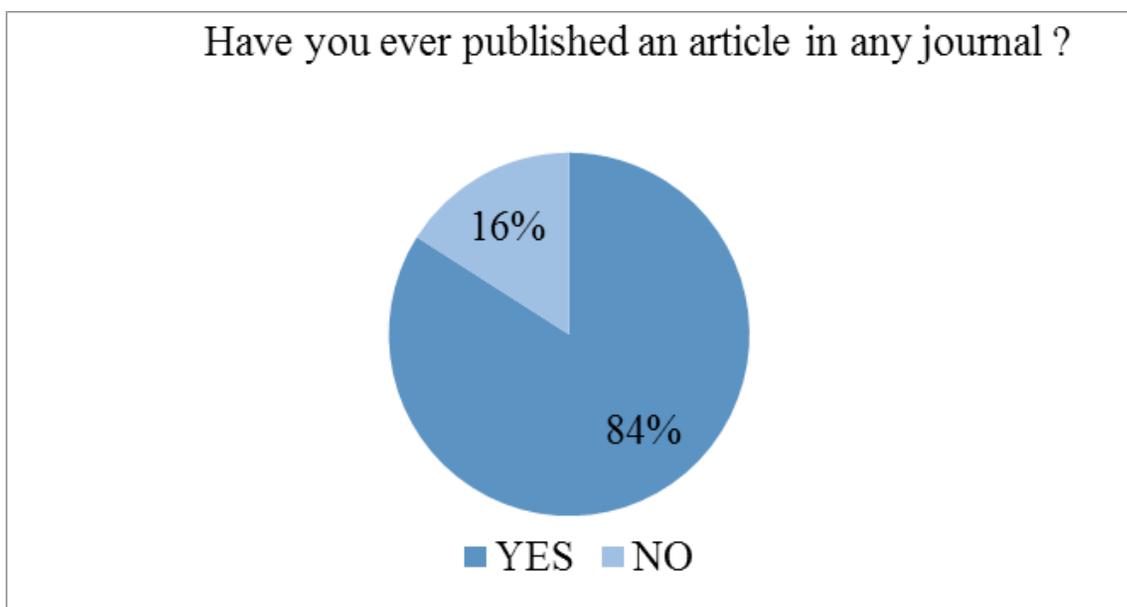


Figure 2. Pie-chart showing if respondents ever published an article or not

Only 18 (16.4%) respondents indicated to have published a scientific article in a journal out of which 15 respondents suggested having been aware and known about the predatory journal (Figure 3) whereas 84% of respondents had never published the article (Figure 2). Only 5 articles publishing respondents out of 18 suggested having known about Beall's list (Figure 3). This data indicates that even students who have already published their scientific writing in a journal are unaware of the concept of predatory and non-predatory journals and may have been victims of predatory journals. A similar study conducted in Croatia among the scientists reveals 50% have published at least one paper in open access but are not aware that all Croatian journals fall under open access whereas 98% of respondents believe that open access ensures better visibility than the toll-access journal (Hebrang Grgić & Guskić, 2019).

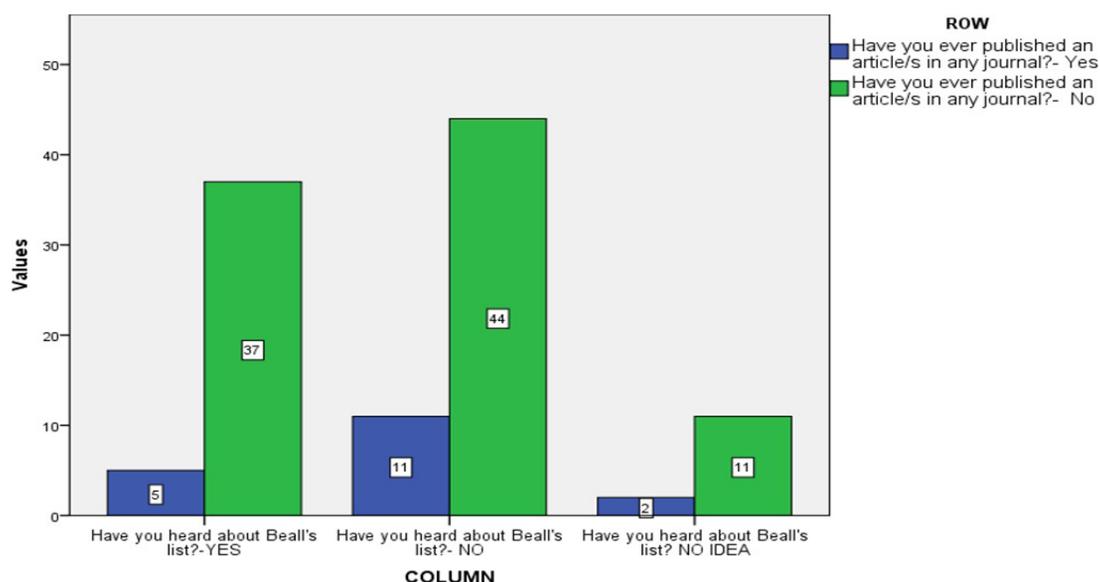


Figure 3. Bar graph showing the level of awareness among published or non-published

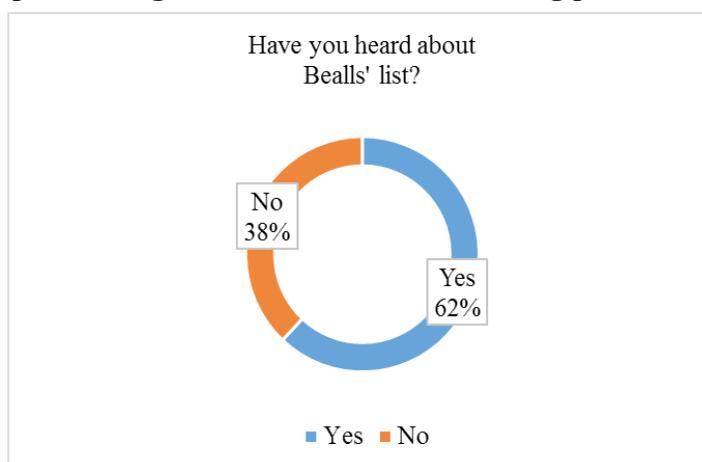


Figure 4. Ring showing percentage of respondent aware of Beall’s list

In our survey, we asked respondents if they had heard about Beall’s list to which 42(38.2%) respondents responded with Yes while 68(61.8%) respondents responded with No (Figure 4). The follow-up inquiry question about Beall’s list suggested only 38(34.5%) respondents knew the correct meaning and significance of Beall’s list while 7(6.4%) of respondents were incorrect about it whereas 65(59.1%) respondents had no idea about the meaning of Beall’s list. This statement has the highest proportion of ‘no idea’ responses (59%) which indicates the low level of awareness about Beall’s list among students of IAAS. Even the respondents who were aware of the predatory journal had little awareness about Beall’s list. Only 27.7% of respondents were aware (Richtig et al., 2019) whereas another survey done at the University of California found only 7% awareness about Beall’s list of potential predatory journals (Christopher & Young, 2015). Beall’s list is a list of the potential predatory journals that help researchers/writers to identify predatory journals along with the criteria for determining predatory Open-Access Publishers (Olivarez et al., 2018). In

the context of Nepal, due to lack of mentorship, training, and support, authors have a lower level of awareness about the predatory journal as well as Beall's list. Therefore, to improve knowledge regarding scientific writing a broader educational approach is a must to recognize potential predatory journals.

Predatory journals frequently ask for the submission of articles through spam emails, creating a fake website of the journal that resembles the authentic and popular journals (Kolkata, 2013), registered at false locations of contact (Elliot, 2012), and fabricate the information of journal with highly decorated impact factors, editorial board and also poor peer review system. To evaluate the awareness about the scholars on what they think is the measure for differentiating predatory and non-predatory journals, the respondents were asked a close-ended question with an option to choose more than one statement that they find appropriate. The data suggested that 55(50%) respondents indicated checking the peer review process is the appropriate factor for differentiating the predatory and non-predatory journals while 46(41.8%) respondent proceeded with Bealls' list as a measure to differentiate, 38(34.5%) respondents answered with Publication charges as measure and 37(33.6%) respondents had absolute no idea about it (Figure 5). Only 20 respondents indicated all three measures appropriate for differentiating the predatory and non-predatory journals. The majority of respondents believed that the peer review process is the major aspect of differentiation between predatory and non-predatory journals. However, the fact that predatory journals are masters of faking and luring the scholars, it makes authors very difficult to contrast these journals with genuine ones. Predatory journals neglect the good peer-review procedure but show that they have a very reliable editorial team, fabricating the database list and affiliation status under any renowned institution (Shrestha et al., 2018). Nevertheless, validating and being aware of the peer review system by thoroughly investigating the journal can prevent scholars from being a victim of the possible predatory journals. Predatory journals and publishers publish anything for money and they do not follow scholarly publishing industry standards (Beall, 2016). Less than half of respondents (41.8%) indicated checking the journal in Bealls' list can be one way for differentiating the possible predatory journals, which shows Bealls' list as the popular aspect for differentiating the journals among students of IAAS, Paklihawa Campus.

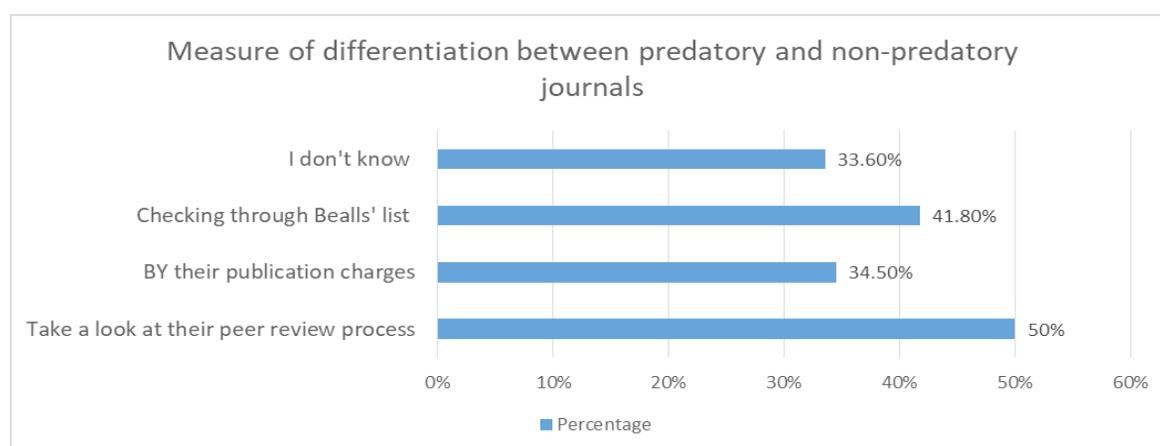


Figure 5. Bar graph showing the different measures students choose to differentiate the predatory and non-predatory journal

The highest-level (67.3%) of respondents agree they would judge based on journal editorial board before manuscript submission, whereas 64.5% agree they would submit based on publication charge. In response to the question “Submitting a manuscript to an unfamiliar journal via good opportunity for publication”, 68.2% of respondents disagreed with the statement while 21.8% of respondents have no idea regarding the statement and only 10% agreed to the statement. Similar findings of high disagreement i.e. 82.7% were found on a survey conducted by Christopher and Young (Christopher & Young, 2015). In a three-rounded modified Delphi survey among leading scholars and publishers from 10 different countries, discussion regarding the scholars who were fully aware of the low grade of the predatory journals but paid money to publish their manuscript just to add a line to their CV was also done and termed their activity completely nuances in publisher’s quality and motivation (Grudniewicz et al., 2019). Hence, to prevent false or misleading information and avoid deviation from best editorial and publication practices, it is necessary to find out whether the offer from an attractive email is an opportunity or scam, only then proceed forward to submit the manuscript.

More than half of respondents 71(64.5%) agreed that decision to accept the manuscript should not be influenced by the publication charge while 29(26.4%) respondents were neutral about it and 10(9.1%) respondents disagreed with it. A survey conducted by Christopher and young find that 82.7% of respondents agreed that the decision to accept a manuscript should not be influenced by the publication charge which is higher than the 64.5% of respondents in our survey (Christopher & Young, 2015). Article processing charges (APCs) in a predatory journal is low as compared to a legitimate journal, however; the information on APCs is hidden or not provided (Cobey et al., 2018). Predatory journals take money from the authors but do not provide substantial peer-review or indexing. Thus, such unethical publication practices lacking transparency and quality standard should be spotted and reported to the concerned authority.

Out of 110 respondents, 74(67.3%) respondents agreed with the statement that they would send their manuscript based on journal/ editorial board while 29(26.4%) respondents were neutral about it and 7(6.4%) respondents disagreed with it (Table 1). A survey conducted showed that 17.6% of respondents agreed that they consider the editorial board for their manuscript submission (Richtig et al., 2019). The quality of a journal is judged by the members and academic credentials of its editorial board, which perform vital tasks such as, peer-review, monitoring journal performance and, publishing ethics guidelines. The predatory journal can list fake scholars as members of editorial boards so authors can ascertain for the non-predatory journal before submitting the manuscript if the journal is a member of the committee on Publication Ethics (COPE) and if recognized as a member of the Open Access Scholarly Publishers Association (OASPA) (Butler, 2013).

The comparative data study suggested 55 respondents agreed on both that publication charges should not be an influencing factor for article acceptance, and they would submit their manuscript based on the journal editor/ editorial board.

Table 1. Table showing comparative data study of respondents on factors of article publication

Question and Answer (Q/A)	I would submit my manuscript based on the journal editor / editorial board:		
	Agree	Neutral	Disagree
	Count	Count	Count
The decision to accept manuscript should not be influenced by publication charge	Agree 55	Neutral 12	Disagree 4
	Neutral 13	14	2
	Disagree 6	3	1

Our survey has certain limitations as only students of IAAS, Paklihawa have participated and the survey did not mention the level of awareness about the impact factors, which help in differentiating the predatory and non-predatory journal. However, the present results report the first survey on manuscript submission habit and the level of awareness about predatory journals among the students of IAAS, Paklihawa campus.

CONCLUSION

Scientific writing and publication have become both a necessity and hobby for aspiring students and young scholars of the scientific community. It is very important that those scientific writing and research articles are published in authentic journals as the number of predatory journals has risen exponentially over time. With a lack of awareness about such predatory journals, the scholar is victimized and their work can go in vain. Thus, it is of extreme importance that young novice scholars are well aware of the predatory journals and be able to differentiate the predatory and non-predatory journals. In the present survey conducted among the students of IAAS, Paklihawa, the majority of respondents were aware of the idea about the predatory journal. However, the level of awareness about Beall's list was low among the students. Even those who had previous experience publishing articles in journals were also unaware of the predatory journals and Beall's list. It indicates students could not distinguish between predatory and non-predatory journals and were the victims of the process. We suggest further study to develop targeted educational interventions among students of IAAS, Paklihawa, in regards to scientific writing.

ACKNOWLEDGMENT

The authors acknowledge Dr. Tulsi Ram Gompo, Mr. Jiban Shrestha, Mr. Saurav Pantha, and Mr. Swochhal Prakash Shrestha for their unreserved support and guidance.

REFERENCES

- Beall, J. (2017). *Writer's Forum — Predatory journals, peer review, and education research*.
 Beall, J. (2016). Pharmacy research and predatory journals: Authors beware. *American Journal of Health-System Pharmacy*, 73(19), 1548-1550. doi:10.2146/ajhp160150
 Bhandari, S., Shaktawat, A. S., Tak, A., Patel, B., & Shukla, J. (2020). *Logistic Regression Analysis to Predict Mortality Risk in COVID - 19 Patients from Routine Hematologic Parameters*. August, 123–129. <https://doi.org/10.4103/ijmbs.ijmbs>
 Butler, D. (2013). The dark side of publishing. *Nature*, 495, 433–435. https://doi.org/10.1007/978-1-4419-5707-8_18

- Cartwright, V. A. (2016). Authors beware! The rise of the predatory publisher. *Clinical and Experimental Ophthalmology*, 44(8), 666–668. <https://doi.org/10.1111/ceo.12836>
- Christopher, M. M., & Young, K. M. (2015). Awareness of “predatory” open-access journals among prospective veterinary and medical authors attending scientific writing workshops. *Frontiers in Veterinary Science*, 2(AUG), 1–11. <https://doi.org/10.3389/fvets.2015.00022>
- Cobey, K. D., Lalu, M. M., Skidmore, B., Ahmadzai, N., Grudniewicz, A., & Moher, D. (2018). What is a predatory journal? A scoping review. *F1000Research*, 7(3), 1–29. <https://doi.org/10.12688/f1000research.15256.1>
- Elliott, C. (2012, June 5). *On predatory publishers: A Q and A with Jeffrey Beall*. Available: <https://www.chronicle.com/blogs/brainstorm/on-predatory-publishers-a-qa-withjeffrey-beall/47667> [Retrieved 5 August 2020].
- Grudniewicz, A., Moher, D., & Cobey, K. D. (2019). Predatory Journals (Nature). *Nature*, 576, 210–212. <https://doi.org/10.1038/d41586-019-03759-y>
- Hebrang Grgić, I., & Guskić, M. (2019). Croatian scientists’ awareness of predatory journals. *International Journal for Educational Integrity*, 15(1). <https://doi.org/10.1007/s40979-019-0041-5>
- Kaur, C. D. (2013). *Research publications: Need for Academicians*. 3(4), 220–228.
- Kolata, G. (2013, April 7). *For scientists, an exploding world of pseudo-academia*. Available: <https://www.nytimes.com/2013/04/08/health/for-scientists-anexploding-world-of-pseudo-academia.html> [Retrieved 9 July 2020].
- Kokol, P., Završnik, J., Lahtič, B., & Voner, H. B. (2018). Bibliometric characteristics of predatory journals in pediatrics. *Pediatric Research*, 83(6), 1093–1094.
- Lock, C. (2004). of Scientific Publishing. *Science Editor*, 27(4), 122–123.
- Monteiro, F. N. P., Devan, P. P., Soans, S. T., & Jeppu, A. K. (2012). Importance of publishing research. *International Journal of A J Institute of Medical Sciences 1*, 1(1), 1–2.
- Olivarez, J. D., Bales, S., Sare, L., & van Duinkerken, W. (2018). Format aside: Applying Beall’s criteria to assess the predatory nature of both OA and non-OA library and information science journals. *College and Research Libraries*, 79(1), 52–67. <https://doi.org/10.5860/crl.79.1.52>
- Richtig, G., Berger, M., Lange-Asschenfeldt, B., Aberer, W., & Richtig, E. (2018). Problems and challenges of predatory journals. *Journal of the European Academy of Dermatology and Venereology: JEADV*, 32(9), 1441–1449. <https://doi.org/10.1111/jdv.15039>
- Richtig, G., Richtig, E., Böhm, A., Oing, C., Bozorgmehr, F., Kruger, S., Kiesewetter, B., Zielinski, C., & Berghoff, A. S. (2019). Awareness of predatory journals and open access among medical oncologists: Results of an online survey. *ESMO Open*, 4(6), 1–8. <https://doi.org/10.1136/esmoopen-2019-000580>
- Shrestha, J., Subedi, S., Shokati, B., & Chaudhary, A. (2018). Predatory journals: A Threat to Scholarly publishing. *Journal of Education and Research*, 8(1), 4–10. <https://doi.org/10.3126/jer.v8i1.25482>
- Preston, A. (2020, March 12). Solving the mystery of peer review for predatory journals. *Web of Science*. Retrieved from <https://clarivate.com/webofsciencegroup/article/solving-the-mystery-of-peer-review-for-predatory-journals/> [Retrieved 14 August 2020].