Predatory journals: The underlying strategies

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Abstract:

With the growing use of the Web and IT in education and research, many authors desire to publish their opinions and investigation online to reach a wider audience. This desire of authors has led to the introduction of a number of "predatory" or fake journals. Such journals are being known as "predatory" for their devious intention and abusive activities. In addition, many of these counterfeit journals disguised themselves as the reputed ones, a particular approach known as "hijacking". However, the success of such journals has been credited to the "open access" publication. Although certain standards and methods have been provided by some authors to recognize predatory journals, very few studies have aimed at explaining their underlying success strategies. The objective of this review paper is to identify the underlying strategies of such journals in order to save valuable time and research efforts of the scholars.

Keywords: Predatory journals, Internet, Open access, Online, Research, Researchers.

1. Introduction:

For any paper to be published, an established quality control procedure is termed as "peer review" by independent, anonymous experts not to be revealed or related to the author(s). In very recent years, particularly after, 2010, we can observe an unusual number of papers published online and it is increasing rapidly. The specific reason behind it is not very complicated to guess as we can observe an outrageous number of fresh journals claiming them as "peer-reviewed". In fact, they do not or cannot bear such trouble and time to do that. According to Cabells, a good number of journals are believed to falsely claim themselves as peer-reviewed amounted to around 8,700, in 2018 which is more than double than in 2017 (The Economist, 2018). But it might be more than that as every single day; we can see one or two new ones. Even the figure is much higher on the lists compiled by other experts.

Perhaps, last 10 years or more, many reputed journals are facing the problem of decreased tendencies in their subscriptions, at least in individual level. As an alternate, some journals have started to provide options to the authors to publish open access with paying publication charge or "non-open access" to publish without publication fee. However, many journals of even reputed publishers now take "publication or processing fee" from the authors to publish their papers. Such a practice has given the birth to a new phenomenon in academia called "open access". This new open access practice permits the readers to search and download a paper online free of cost. It might be praised by readers' viewpoints as many people (including scholars and readers). But this practice has been criticized by many as well since they argue that it has a severe drawback. As an example, Elizabeth Wager, a British professional on scholarly publishing and the Editor of "Research Integrity and Peer Review" argues that a journal based on author fee will continuously publish garbage as long as the readers do not have to pay while the authors are willing to pay the publication fee (Wager & Wiffen, 2011). On the other hand, researchers at the Ottawa Hospital Research Institute, after completing an investigation on 3,702 biomedical articles from 185 alleged publishers, concluded that the Web at present overflows with such deceitful papers (The Economist, 2018). Therefore, the authors should be well-knowledgeable when visiting such journals with obvious language errors and over ambitious, unnatural claims, such as rigorous peer reviews within two-three days or publication within one week. The authors publishing their articles in such journals are simply apprehensive about increasing the legitimacy of their resumes.

Such tendencies often eclipse the risk of being caught, without even their knowledge (The Economist, 2018).

It is interesting to observe that a number of educational institutions also reaping the fruit of this opportunity by looking for an easier way to expand their image. Research by Derek Pyne, an economist at Thompson Rivers University Business School in British Columbia, exposed that colleges/universities getting benefitted from such cheap journals helping them in boosting their credentials even if in an immoral style (Reaction Watch, 2017). However, such practice is being more and more evident in developing and poorer countries where the research fund is scarce and inadequate results in ordinary research outcome. Another study conducted at the Hanken School of Economics in Helsinki found that around 613 journals from a list of 11,873 proved to be bogus (The Huffington Global, 2018). Another study revealed the shocking results for the authentic researchers from India and Nigeria that found against each 100 papers published in genuine journals by authors from India and Nigeria, the number of papers published in fake journals accumulated upto 277 and an unbelievable figure of 1,580 respectively (Reaction Watch, 2017).

The researchers are now becoming interested in this issue a few investigations have initiated. But still the number of studies is quite few in this regard. There are still many unanswered questions such as why such publishers emerge and what is the source of their income, anyway? How to identify them to be safe? These answers have been attempted to supply in this review paper.

2. The success factors and core strategies:

In general, predatory open access journals exploit online facilities for most of their submission processes. Therefore, the most proficient way to begin for those is to throw the "Call for Papers" (CFPs) via group e-mail (Eklund, 2012; Schauss, 2014; Wehrmeijer, 2014). Before that, prospective authors are documented on the basis of their previous publications and conference records (mostly from Google Scholar profiles) as well as their associates are composed from their publications. However, even the people with no publication but possessing a link online receives the mail anyway. It is a frequently established reality among authors that poor ability over the English language is to blame for such invitations (Eklund, 2012; Truth, 2012; Bohannon 2013; Crawford, 2014). It can be argued that good publishers such as Taylor & Francis, Sage, Emerald, Elsevier or Willey do not send such CFP to the ordinary authors for submitting papers. Therefore, the sole intention for those journals is to snatch the paper anyway with the publication fee.

Some characteristics of the CFP those may compromise the ordinary distinctive features of the predatory journals have been listed below (Alexandru-Ionuţ & Petrişor, 2016):

a) Journal names (source of names: Beall's list): Despite of some improvements in this field, the insufficient number of titles in the previous lists can provide an explanation why particular names have not been seen in the primary list. A probable timeline might include:

- **2009 and earlier:** Abundant first titles were evident to be from Africa and Asia, e.g. The African Journal of Business Management, African Journal of Biotechnology or African Journal of Agricultural Research; as well as some 'neutral' names like Bentham Publishing or Academic Journals was filtered out.
- **2010:** Included 'brand' publishers such as Medwell Journals or David Publishing.
- **2011:** Unclear titles were included in this list (Academic Journals or Scientific Journals); as well as titles with designations such as 'International' (International Research Journals) or 'Global' (Global Open Journals) began to emerge.
- **2012-2013:** Journal names started to include actual geographic locations including real journal titles (African Research Review, Indian Journal of Applied-Basic Medical Sciences), false (US, UK, Australia or Canada): Australian Journal of Basic and Applied Sciences, American Scientific Research Journals, American V-King Scientific Publishing, or Canadian Journal of Applied Sciences or comprehensive (Interlink Continental Journal of Social Science and Humanities or Atlantic Journals),

common names (Academy Publish, Greener Journals, Elixir Online Journal, Pelagia Research Library Journals, Pyrex Journals, Apex Journal International, or Prime Journals), journals having included the words 'International', 'Global' etc. (Global Journal of Management Science and Technology, International Journal of Engineering Research and Applications), scholastic words (Scholoxy International Publications, Academia Journal of Scientific Research, or Scholarena Journals) or words containing inspiration (in bold) (Noble Research Publishers, International Invention Journal of Education and General Studies, Merit Research Journals, Savant Journals, Peak Journal of Social Sciences and Humanities, Nextgen Research Publication, Sky Journal of Agricultural Research, or Ambit Journals), words indicating extensive range and vision (Journal of Comprehensive Research), and occasionally fairly straight forward and trustworthy titles (Journal of Applied Pharmacy, Pharmacologia). Additionally, hijacked journals first come into sight at this stage.

A lot of words are commonly observed in CFP's such as: 'advanced', 'scientific', 'scholarly peer-reviewed' and 'leading publisher' (Schauss, 2014; Wehrmeijer, 2014). Similarly, Crawford (2014) exposed that there are 74 journals starting with 'Indian Journal of...', 247 titles starting with 'Global', 300 with 'Open' (176 'Open Journal...' and 228 'The Open...'), 114 'Research Journal of...', 131 'Research Open Journal of...', and 2,208 'International Journal...'. Quite frequently the names override or replicate such as Scientific Research and Essays, Standard Scientific Research and Essays or International Journal of Scientific Research and Essays. The new tendency amid titles are 'Modern', 'Innovative', 'Green', 'Progressive', 'Ingenious' and 'Standard'. Very lately, renowned journals are being snatched by developing predatory and false websites or online platforms for journals that subsist in the printed form as well such as Wulfenia, Archives des Sciences, Jökull, Bothalia, Pensée, Sylwan, Ciencia e tecnica vitivinicola, or CADMO (Beall, 2012a; Butler, 2013; Lukić et al., 2014). Furthermore, such journals have widened their original scope, for example, "Wulfenia" that focuses on plant biology has been interchanged with 'Multidisciplinary Wulfenia" that incorporates all subjects related to science.

b) Operating location: If observed carefully, it can be noticed that various such bogus journals utilize the words such as 'global', 'international', 'universal' or 'world' (Butler, 2013; Dyrud, 2014). This is an effort to hide their genuine locations. In addition to false locations and address, the invitations found in their websites using postal addresses belong to the western countries such as US, UK, Australia or Canada (Beall, 2010b, 2012b; Crawford, 2014; Dyrud, 2014; Schauss, 2014; Wehrmeijer, 2014). Majority of such journals seems to be originated and located in India, Pakistan or Nigeria where fresh predatory publishers or journals are believed to come out every single week or month (Beall, 2012a; Wehrmeijer, 2014). Additionally, address or physical locations are not essentially noted in the CFPs or websites (Wehrmeijer, 2014). A brilliant strategy is to hire an office addresses in the United States or the United Kingdom and contain the words "American" or "British" in the journal names. In fact, the journal administration is operated from another country. A bizarre circumstance is the consequential oxymoronic title like American International Journal of... (Biology, Contemporary Scientific Research, Research in Formal, Applied and Natural Sciences etc.)

c) Journal focus: In a good number of cases, such predatory journals offer a very wide scope of coverage and focus (Eklund, 2012; Haug, 2013; Burns, 2014; Dyrud, 2014; Schauss, 2014; Wehrmeijer, 2014), even combining the fields or majors that are more or less related (Schauss, 2014) or even missing a definite field (Journal of Comprehensive Research, Scientific Research and Essays, Standard Scientific Research and Essays or International Journal of Scientific Research and Essays). As an example, the Journal of Scientific Research and Studies covers, according to the CFP, "Biomedical and Life Sciences, Chemistry and Materials Science, Computer Science and Communications, Earth and Environmental Sciences, Engineering, Medicine and Healthcare, Physics and Mathematics and finally Social Sciences and Humanities" in the format of "Research Papers, Working Papers, Short Communications, Case Studies, Literature Surveys and even Mini Reviews". Moreover, the Global

Advanced Research Journal of Arts and Humanities "is devoted to escalating the depth of the subject scope across disciplines with the ultimate aim of expanding knowledge of the subject", although the subject is not affirmed, similar to the American Research Journal of Chemistry, which "is an online open access journal publishing monthly for Scientists, Professors, and Research Scholars to publish high quality papers with great impact" (please note the English level, contrasting with an 'American' journal). Last but not least, the Indian Journal of Applied Research claims to be a "Journal for All Subjects" (statement listed on al pages of the CFP). In fact, such journals can take any paper in any format provided that article processing charge or publication fee is paid by the authors.

d) Faster publication promise: Most predatory journal offer a surprisingly faster reviewing period (Eklund, 2012; Truth, 2012; Crawford, 2014; Dyrud, 2014; Schauss, 2014) or provide the author an option to shorten it by paying a certain amount (Crawford, 2014). To demonstrate this statement, the International Journal of Emerging Technology and Advanced Engineering mentioned in its CFP for Volume 5, Issue 2 of February 2015 stated that the submission deadline is February 05, 2015 whereas the publication date is February 20, 2015 (the gap is only five days). However, the shortest recorded times was put forward by Ambit Journals (48 hours) and Indian Journal of Research (3 days).

e) Abstracting and indexing: To most of the new authors, abstracting and indexing is a major attraction to publish papers. By being informed regarding this attraction, some of the oldest predatory journals (African Journal of Business Management, African Journal of Biotechnology and African Journal of Agricultural Research) were indexed in Thomson Reuters-Institute of Scientific Information (ISI) database, although they have been discontinued later on (Eklund, 2012; Truth, 2012; Dyrud, 2014) but still using that as an indexing platform. Many false indexes were created from the beginning of 2013 (Jalalian & Mahboob, 2013; Burns, 2014). Although those journals often claim to be listed as 'ISI', in fact they are GISI (Global Institute for Scientific Information) where the Impact Factor (IF) is replaced by Google-based Impact Factor or other invented factors, such as Global Impact Factor (GIF), Universal Impact Factor (UIF), Journal Impact Factor (JIF) or Morocco-based Scientific Journal Impact Factor (SJIF). Fascinatingly, the whole process for 'accrediting' such journals is a business by itself. For example, a journal applying for a JIF from GISI will be charged 'a nominal fee for processing' (http://www.jifactor.com/SubmityourJournal.asp). Formerly, committed websites had the charges displayed but has been removed recently. Recounting one of my personal experiences at the end of 2018, when two articles were submitted in separate journals of the same publisher (Developing Economy Journal; and Management and Human Resource Research Journal, CIRD Publications) reportedly claiming to be indexed in Scopus and SCIE (Web of Science), in fact, proved to be a blatant lie.

f) Impact factor: In order to present a sense of trustworthiness they use such indices not drawing any specific notice regarding impact factors (generally, between 1 and 2), even though they such Ifs are doubtfully defined. As an example, the Global Impact Factor takes in "factors like peer review originality, scientific quality, technical editing quality, editorial quality and regularity" (http://globalimpactfactor.com/). Similarly, the International Journal of Computers and Technology advertises in the CFP an Impact Factor of 1.532. By clicking on the supposed links the recipients are redirected to the Council for Innovative Research (CIR) (http://cirworld.org/), that lists impact factors of the journals, 'calculated with process of IF calculation procedure of CIR' and describes the payment options to receive the CIR Impact Factor. Other options of reputation are presented less often; the International Journal of Engineering Science and Innovative Technology (with an address in the US, having a Branch in India and anonymous Chief Editor) and International Journal of Emerging Technology and Advanced Engineering are included in the CFP line "ISO 9001:2008 Certified (International) Journal".

g) Language used: Another characteristic of such journals is the wrong, poor or imperfect language of the CFP and papers published in those journals (Eklund, 2012; Truth, 2012; Bohannon, 2013; Crawford 2014) encourages authors not having English as their native language to publish papers without much anxiety regarding the quality of the language to be used. A perfect picture of the poor language quality can be seen in the few samples from the CFP sent by the Integrated Journal of Engineering Research and Technology: "It is our pleasure to inform you that Integrated Journal of Engineering Research and Technology Successfully Launched Nov-Dec, 2014, Issue-6. We are thankful to All Authors/Researchers, Editors and Advisory Board members and all team members of Society of Scientific Research (SSR) to make it successful. We Promise our Worldwide Researchers to provide High Security to Article and quality to their Research Article. If you wish to publish your Valuable Research/Review Article/Case Study in Volume 2, 2015, Issue 1, Jan-Feb, Submit it for publication in Integrated Journal on editorijertco@gmail.com. Integrated Journal indexed various reputed indexing agencies like International Impact Factor Services, SOCOLAR China, Research Bible Fuchu Tokyo JAPAN, Indian Science Publication, Scientific Indexing Services, Directory of Research Journal Indexing, Cite factor, Research Gate, Google Scholar etc.", or Global Journal of Advanced Research: "We are send the procedure for Submit Paper or Article and publishing this. All information given below. [...] If you want submit the Article without registration using this link Click... [...] After submit paper using following procedure by us: [...] Third Stage - Editor Board gives this conformation to author by mail. If paper is accepted then editor will also give account detail for Copyright Form. [...] Fourth Stage -Author will be submit scan copy of copyright form which is download form." Another substitute strategy adopted by predatory journals is to charge for their language editing services. This is a uniformly expensive option for the authors. For example, "Congratulations! Your article has been accepted by the Editorial Board of the Journal. Only it needs to be edited in language. You can take the help of our experts regarding this. For more information. Click below….

h) Publication pressure: The 'publish or perish' theory takes priority when predatory journals push authors to become a craft for disseminating their outcome (Truth, 2012). For example, the language of CFP in this case is "We know how valuable your research outcome is for the readers and we are here to disseminate your valuable opinion, and findings though our worldwide audience community". In fact, like any other aggressive advertisement, such CFPs put a kind of psychological force on the new authors who want to publish their papers online for various reasons.

i) Openness: Metrics-dominated methods for figure wise expansion in research have compelled the authors to a kind of hurry for having more citations (Lawrence, 2007). By putting forward open access and relaxing back on the reading costs, predatory journals ensures authors a hope for more citations (Truth, 2012). In fact, most CFPs suggests openness as a "paramount request" (International Research Journal of Public and Environmental Health) or "key request" (Merit Research Journals) of worldwide researchers. Similarly, the Pacesetter Journal of Agricultural Science Research quotes: "One key request of researchers across the world is unrestricted access to research publications. Open access gives a worldwide audience larger than that of any subscription-based journal and thus increases the visibility and impact of published works. It also enhances indexing, retrieval power and eliminates the need for permissions to reproduce and distribute content".

j) Paper acceptance rate: The most glaring sign of Predatory journals is that they exhibit consistently high acceptance rates where almost all papers are accepted with very little to no peer review (Bohannon, 2013; Bartholomew, 2014; Dyrud, 2014; Wehrmeijer, 2014) and most often the copy-editing stage is bypassed altogether (Wehrmeijer, 2014). These tendencies were exposed by Bohannon's 'sting operation' where he stated "acceptance was the norm, not the exception" (Bohannon, 2013). For instance, the International Journal of Emerging Technology and Advanced Engineering (with an Editorial Board including "200+" members) endorses in its CFP an acceptance rate of 10: 1.5. Nevertheless, the real criteria of peer review too are often fuzzy. They are often masked

by expressions like "robust and neutral" (Journal of Global Economics, Management and Business Research), "rigid" (International Journal of Advanced Computer Technology), "transparent and high standard [...] respected and toughest Advanced OPEN peer-review system" (British Journal of Applied Science & Technology), based on the "prevalent criteria of significance, relevance and scientific excellence" (Journal of Biodiversity Management & Forestry) or "general criteria of significance, relevance and scientific excellence" (Sky Journal of Agricultural Research). In some cases, journals explain an iterative process concerning with a step by step development of the paper (Sky Journals of Biochemistry Research) which focuses on "improving papers instead of only publishing them" (WatchPlus) or encourages "post-publication peer review" (British Journal of Applied Science & Technology). Only a handful of journals unveil the criteria. For example, the CFP from Pak Publishing Group begins with a strong statement: "The bogus peer review is becoming a real concern among academics with numerous journals accepting papers without adequate levels of peer review, only for financial motives. You understandably want to be assured that your paper is published by a reputable and ethical journal, with high-quality peer review", but afterwards the true nature of their peer-review is given as: "We don't reject articles purely on the grounds of supposed importance." In a similar manner, often the language for accepting paper is chosen as "submissions are evaluated for methodological soundness and scientific relevance, rather than perceived level of future importance" according to the Asian Journal of Economics and Empirical Research, and "according to the content and methods employed" as stated by the Elective Medicine Journal.

k) Multiple publications: Surprisingly, a single author can submit and publish multiple papers in the same issue of the same journal (Crawford, 2014). As a matter of fact, the authors are encouraged through offering discounts for offering more than one paper. Such practices have been accounted for by several the examples addressed above.

l) Publication of other items (than articles): The authors are also invited and encouraged to submit other items. This includes the audio and video versions of the articles (Enliven: Bio Analytical Techniques), or "research images, video articles" (Journal of Astrobiology & Outreach), Mini-Review, Technical Notes and so on.

m) Advertising for published materials: Many predatory and fake journals advertises the following: "Article-Level Metrics (ALM), DOI-Cross ref, CrossCheck, Cross Mark Policy, MathJax, Epub, News Letters, Cited-by Linking, Reprints, Article Metrics (provide clear insights about Article views, PDF downloads, citation of articles (Crossref Citation Tool), Social promotions (Facebook, Google+, Twitter), Comments on article, related articles in Google Scholar, Indexed sources like PubMed, Europe PubMed". Likewise, the Journal of Biosensors & Bioelectronics ensures sharing of articles "in social networking like Facebook, twitter, LinkedIn, RSS feeds, etc."

n) Certificates: For each published article, most journals offer printed or online certificates. For example, the Association for Development in Engineering Research (ADER) promises to provide an "individual e-certificate to each author".

o) Promise for services: The services offered to the authors is an understandable signal that predatory publishers hold themselves as (publication) services providers rather than value content providers. For example, the services offered include: "friendly responsive staff" (Merit Research Journal of Education and Review), "24/7 E-mail support / Immediate Response" (Research Journal of Engineering and Technology).

Fake DOI: Often, predatory journals provide the authors a Digital Object Identification (DOI) number after accepting a paper (often before publication). However, the number is not searchable nor does it actually exist even after publication. A DOI is the number by which anyone can find that article link to which the stated number is attached. In the case of predatory journals, the DOI is either wrong or does not exist at all.

Other advantages promised: Free assistance for language improvement and a simple and standard paper template are other services provided by such journals. The International Journal of Advanced Research in Chemical Science, offers "Zero Waiting Time" for the publication of accepted manuscripts (Journal of Emerging Trends in Computing and Information Sciences), no length constraints for submissions (Biochemistry & Molecular Biology Letters), and publication of manuscripts in a "secured format" (Journal of Current Computer Science and Technology).

With the course of time, some 'improvements' have been done to the CFP with regards to personalization. Even though the basic nature of invitations are still frequently observed (Eklund, 2012), a few journals have adopted direct approaches. For example, while addressing the authors, some journals transitioned from impersonal format (Dear Researcher, Dear Professor, Dear Colleague or flattering ones, such as Dear Eminent Research Scholar) to semi-personal ones ('Dear' followed by all authors of a published paper, although the e-mail is sent to each of them separately) and even personal ones (including the name of the author). Personalized emails often include gratifying languages to the authors, classically mentioning a different contribution and request for republishing it (Dyrud, 2014) or asking for an identical contribution from the same author(s). For example, a characteristic CFP from a predatory publishing that pretends to be located in the US, although a few clicks will send the recipient to China is like: "Dear [Name], This is ..., a professional journal published across the United States by David Publishing Company, New York, NY, USA. We have learnt your paper "..." in ... We are very fascinated in your research profile and would like to publish your other unpublished papers in ... If you have the plan of making our journal a vehicle for your research interests, please feel free to send electronic version of your papers or books to us through email attachment in MS word format. At present, we are trying to encourage some scholars who are ready to join our editorial board or be our reviewers. If you are interested in our journal, please send your CV to us. Hope to keep in touch by email and can publish some papers or books from you and your friends. As an American academic publishing group, we wish to become your friends if we may." Some other journals refurbish a personalized call and in some cases will even quote the prior message.

Other techniques found in the CFPs are similar to the quotes mentioned below:

• "First of all, we would like to congratulate you for your consistent and incessant efforts till now in the field of ... Being aware of your eminence in the related field, we cordially invite you for your valuable contribution towards our journal"

• "It is truly our honor to reach you for our upcoming Special Issue on..."

• "You are somehow an Academic"

• "I came across to your research paper titled ... and feel that your research is having a very good impact. With a view to begin a long-term fruitful association with you, I invite you to submit your upcoming research articles / papers for publication"

• "Acquiring that you have once published a paper titled ... on the theme of ... (list of the key words of the article, separated by semicolons) in ..., we believe you must have great achievements in your research field and sincerely invites you to propose a Special Issue and be its Lead Guest Editor"

• "The time and attention you devoted for presenting a neoteric article is really palpable"

• Open Access ends the CFPs by wishing recipients to "Have a Great & Healthy day ahead!"

• Some publishers, regardless of the journal, start their CFPs with: "Hope this mail finds you in good spirit."

3. The target group:

Most Often, the targets of such predatory journals are fresh researchers from least developed or developing countries. They surf the internet (particularly Google Scholar) and searches for the email id of authors, inviting them for submitting manuscripts with some attractive offers like a minimal article process charge (APC) or 70% discount for prompt submission. However, the authors are forced to submit their manuscripts within two or three days to be eligible for that reduced APC. The new authors

having limited budget on research and burdened with teaching and non-teaching workloads (Hosain, 2016) cannot often make sure about the quality of the research outcomes. But they might have urgencies or obligations to publish papers anyway for promotions or salary increase pushed by their respective organizations. In such cases, they can be easily exploited by such predatory publishers as they offer quick publication without almost any review process.

4. Open access: Is it always negative?

It should be noted that not all open access journals are predatory journals. There are a number of publishers often liked to different schools of universities that do not charge any publication fee or APC. Moreover, they have very rigorous peer-review policies. Such journals cover their expenses through grants from the university budget or some external funding. In addition, many reputed publishers offer the options to publish articles on an open access basis on the condition of paying APC. It should be noted that such offer is not compulsory for the authors to take. They can go for "non-open access" as well where they do not have the obligation to pay APC.

5. How to identify?

Most predatory journals are open access in nature and they charge a publication fee from the authors (usually, the range is USD 50 to 300). The second point of concern is that such journals have a website but generally the authors are asked to send the manuscript to the email of the editor (that is, most cases, such journals do not have an electronic submission system). These fake journals inform the authors that their manuscripts are "peer reviewed" but when an author sends his/her manuscript to the editors, he/she (the author) gets the mail normally in 3 working days. An average person can realize that within this time, it is literally impossible to review a paper. The most loathsome thing they can do is to cheat an author who is not very enquiring but believes only in the journal's website information. Predatory journals claim that they are included in prestigious indexing services like Scopus, Clarivate, Web of Science etc. The truth is that they have no ties with those indexing services at all. Likewise, they showcase false addresses on their website (normally most of the addresses are in US or Europe) while keeping their actual location a secret.

At present, there are numerous online journals and it is reasonably difficult for an amateur author to discriminate a proper journal from the predatory ones. This can be true even for the professionals. One of the primary reasons for this complication rests on an advance made on scientific publishing that took place in the last decade: the start of open access publishing. This heralded the undesirable climb of online journals falling under the category of 'predatory' journals. These journals are characterized by the following:

i) actively plead for manuscripts
ii) charge publications fees; and
iii) lack of rigorous peer review and editorial services.

However, predatory journals are disguised as the mainstream and legitimate journals. So, how can one discern articles from a predatory journal from a decent one? A group of researchers lately tried to seek the answers. They selected around 100 from each of three different categories and carried out a cross-sectional judgment of uniqueness. The categories were; probably predatory, justifiable open access, and rightful subscription-based biomedical journals. The group considered many diverse factors that set apart the journal's uniqueness such as website reliability, look & feel, editors & staff, editorial/peer review method, instructions to authors, publication model, copyright & licensing, journal location, and contact. Subsequently, the after data collecting data, based on statistical calculated 13 peculiarities were recognized that distance predatory journals from supposed genuine journals. Before listing out those characteristics, some interesting distinctions are to be made (ACSH, 2017). Here are a few:

- A lot of predatory journals' homepage contain spelling errors (66%) and hazy or potentially unconstitutional images (63%) comparing to open access journals (6% and 5%, respectively) and subscription-based journals (3% and 1%, respectively).
- Scientists use an "impact factor" metric to distinguish the extensively readability of a journal. However, 33% of predatory journals (and zero subscription-based journals) cite a fictitious metric - the Index Copernicus Value as their Impact factor.
- There was a high pervasiveness of predatory journals from low or low to middle-income countries (LMICs) (75%) compared to open access journals (19.56%). None of the subscription-based journals listed LMIC addresses.
- Readers were the main target of language used on subscription-based journal web pages (58%) but less so in open access (14.14%) and predatory (3.23%) journals, where authors (predatory journals) or both authors and readers (open access journals) were the primary target.
- Predatory journals ask for a significantly smaller publication fee (median $100 USD) than open access journals ($1865 USD) and subscription-based hybrid journals ($3000 USD)
- Most predatory journals show an interest in publishing non-biomedical topics (e.g., agriculture, geography, astronomy, nuclear physics) along with biomedical topics in the declared scope of the journal seemingly publish on a superior number of topics than non-predatory journals

From such data and a lot additional metrics that were analyzed, the authors identified a list of 13 characteristics that may be utilized to recognize predatory journals (Shamseer, 2017):

1. The scope of interest includes non-biomedical subjects along with biomedical topics
2. Websites and CFPs having of spelling and grammar mistakes
3. Images are imprecise/blurry and are planned to look like something they are not or are illegal
4. The homepage language targeting new authors
5. Promotes the Index Copernicus Value on the website
6. Does not clearly describe how the manuscript will be handled
7. Manuscripts are requested to be submitted via email in many cases rather than using online journal submission platform
8. Rapid publication is promised
9. No retraction policy
10. Information on whether and how journal content will be digitally preserved is absent
11. The article processing/publication charge is very low (e.g., < $300 USD)
12. Journals claiming to be open access either retain copyright by author(s) or fail to mention copyright agreement
13. The contact email address is non-professional and non-journal affiliated (e.g., @gmail.com or @yahoo.com)

This study is quite important when taking the situation into hand. There is an estimated 28,000 scientific journals are in existence today. As the fresh researchers are anxious to publish their toil cannot distinguish the good from the bad. Graduate training does not consist of publication skills and ethics and a single mistake early on in a research career can lead to eternal ramifications. As publishing options persist to develop, this list of 13 will act as an important guideline for distinguishing the proper journals from the fake ones.

6. The lost research:

The articles, cases or reviews published in predatory journals, although discoverable through the internet, are not indexed by any well reputed services or databases. One cannot discover such publications via the standard searching procedures. The experienced writers, reviewers and academicians will be hesitant or reluctant to read or cite from such articles. At the end, such articles will be lost in the shuffle of time. It is accepted globally that discoverability is a very important issue in

order to increase the visibility of any publications and to receive acknowledge for such work. This is especially true for the researchers from developing or least developed countries who are the prime target of predatory journals. Furthermore, it is also the expectation of the financiers to get back their return on such funding investment.

Therefore, predatory publishers are neglecting the core objective to generate evidence for the overall health of research. These journals are not only cheating the new researchers of developing and underdeveloped countries but also poisoning the global research environment. As Beall (2018) points out, the weak or absence of review procedure indicates that predatory journals can be "reservoirs of author misconduct," including plagiarism, falsified data, and image manipulation (Clark & Smith, 2015).

7. Suggestions for new authors:

It would be appropriate to provide some constructive comments for those who are starting their research or planning to do it. The suggestions are summarized below:

- Have a good look at the websites, verify the copyright, and try to enter all the links like guideline for authors, indexing, archive, submission procedure etc.
- If the journal website claims to have indexing with well reputed indexing services like Scopus, SCI, SSCI, SCIE; search the list of those services online. It should be noted that such indexing are subject to change every year and they publish the list online.
- Remember that all the open access journals are not predatory as most of the open access journals are actually not predatory or fake. Such journals will take a review time of 1 to 2 months on average while predatory journals normally take 2 to 7 days to reply.
- Have a close look at the archive. A minimum satisfactory, open access journal should have one volume a year but may have several issues.
- Have a look at the publisher of the journal too. Do not trust publishers who have uncommon names.
- Have a look at the previously published articles and search for them in research disseminating platforms such Google Scholar, SSRN, Researchgate. Look at their citations as well. Articles published in average journals should preferably have some citations.
- Finally, it is advisable to discuss with senior and experienced researchers, who already have well experience before submission

8. Illegal or unethical?

It is not easy to defeat or stop the spread of predatory journals. As long as they get the APC, they will continue the business at the cost of the authors and research quality. As long as new and inexperienced authors yearn to publish their works, they can continue their scam easily. They may not be conducting anything unlawful and even a legal response seems dubious to succeed.

However, what they are doing is highly unethical. In one way they are cheating the authors using and promising falsified information in their websites and in another way, they are damaging the valuable works of the research community by depriving such works from where they deserve to be.

9. Conclusion:

Fortunately, in order to be being safeguarded, the academia has reacted to such predatory journals. The social media, including social academic media is playing a significant role in this regard. Nonetheless, predatory publishers and journals have also responded with new safeguarding strategies. For example, hijacking seemed to have deceived the authors who were already immune to calls from the 'Global Journal of...'. Unfortunately, the ever continuous stress to publish and get cited is creating some kind of competitive advantages for those journals, particularly when the new, non-prominent authors have to pay out of their own pockets.

Possibly the new idea of creating science, turning it into an industry, is one of the major causes that has helped to create so many predatory journals. A further notable reason might be a re-interpretation of the traditional 'publish or perish' imprecise by science metrics; numerous consequences are the requirement to publish overseas and, possibly, in a country with higher-rated journals, the need to have visibility to be cited (in the context of an evolving electronic 'publishing ecosystem'), and the urgency to publish swiftly. In such a case, a revisit to the science for the sake of science or the advantage of greater society is a probable solution. Only creating awareness against predatory journals can be the most effective defense against such unethical behavior. It can be concluded with the statement that the more conscious the authors will be, the less successful will the publishers of predatory journals.

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