Investigating academic library responses to predatory publishing in the United States, Canada, and Spanish-speaking Latin America

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Purpose: This is a comparative investigation of how university libraries in the United States, Canada, and Spanish-speaking Latin America are responding to predatory publishing.

Design/methodology/approach: The *Times Higher Education* World University Rankings was used to identify the top 10 universities from each of the US and Canada, as well as the top 20 Spanish-language universities in Latin America. Each university library's website was scrutinized to discover whether the libraries employed scholarly communication librarians, whether they offered scholarly communication workshops, or whether they shared information about scholarly communication on their websites. This information was further examined to determine if it discussed predatory publishing specifically.

Findings: Most libraries in the US/Canada sample employ scholarly communication librarians and nearly half offer workshops on predatory publishing. No library in the Latin America sample employed a scholarly communication specialist and just one offered a workshop addressing predatory publishing. The websites of the libraries in the US and Canada addressed predatory publishing both indirectly and directly, with US libraries favoring the former approach and Canadian libraries tending towards the latter. Predatory publishing was rarely addressed directly by the libraries in the Latin America sample; however, all discussed self-archiving and/or Open Access.

Research limitations/implications: Brazilian universities were excluded owing to the researchers' language limitations. Data were collected between September 15 and 30, 2019, so it represents a snapshot of information available at that time. The study was limited to an analysis of library websites using a fixed set of keywords and it did not investigate whether other campus units were involved or whether other methods of informing researchers about predatory publishing were being used.

Originality/value: The study reveals some best practices leading to recommendations to help academic libraries combat predatory publishing and improve scholarly publishing literacy among researchers.

Introduction

A decade ago, academic librarian Jeffrey Beall (2010) brought the notion predatory publishing to the public's attention and provided a preliminary description of this practice; however, the specifics of what makes a journal predatory remain difficult to pin down. Beall's early explanation described predatory publishers as those which sought to exploit the author-pays model of Open Access publishing by setting up websites that closely resemble those of legitimate publishers in order to publish counterfeit journals of low quality. Between 2010 and 2017, Beall used his blog to maintain an online list of what he considered to be questionable scholarly Open Access publishers. This eventually became known as Beall's List, and it garnered both supporters and detractors. Kimotho (2019) provides a detailed review of issues raised by Beall's critics about the criteria used to identify potential predatory journals and publishers, which include suggestions that Beall's methodology was flawed.

Recently, Grudniewicz et al. (2019) made another attempt to define predatory journals. This description was proposed by a group of 35 leading scholars and publishers from ten countries who spent over 12 hours hammering out the following:

> Predatory journals and publishers are entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices. (Grudniewicz et al., 2019).

Though a useful starting point, this definition lacks concrete detail, illustrating the challenge involved in trying to definitively describe this slippery concept. For the purposes of the present article, our understanding of predatory publishing is that it is an exploitative practice in scholarly communication in which a non-reputable publisher by-passes the peer-review process and agrees to publish an article online in exchange for the author paying a fee.

In traditional publishing, a researcher submits an article to a journal, and the journal editor usually arranges for the article to be peer-reviewed by multiple experts in the field. These experts make a recommendation as to the quality of the work, and on this basis, the editor may reject it, accept it, or suggest revisions to be implemented before the work can be accepted for publication. Once the work is deemed by the journal editor to be ready for publication, it will be published in the journal. In this traditional model, the journals are made available by subscription, meaning that the costs associated with the publication process are borne principally by the readers or their institutions.

However, as subscription prices increased, scholarly journals became expensive for many universities. In developing countries, the situation could be exacerbated by increasing inflation and decreasing currency valuation. At the same time, the Internet became more established and easier to access. Eger and Scheufen (2018) suggest that these two factors paved the way for a new model of publishing known as Open Access, which began to gain momentum around the turn of the millennium. According to Peter Suber (2003), one of the earliest and most influential proponents of Open Access, this model has two main characteristics. First, information must be freely available to users, and second, the copyright owner must authorize unrestricted access to, as well as copying and downloading of the material.

Therefore, under Open Access, the former access toll model where readers had to pay to access the content shifted to model where the costs must be covered by some means other than through subscriptions. For instance, this could mean that authors must pay an article processing fee in order to publish in an Open Access journal. The funds to pay this fee may come from a research grant or from the author's or journal's institution, for example. In fact, there are multiple Open Access models. For instance, Crawford (2011) and Caruso et al. (2013) distinguish between Green Open Access (self-archiving) and Gold Open Access (author-pays), as well as hybrid models where a specific article in a journal can be freely available even if other articles are not. Meanwhile, Platinum or Diamond Open Access journals are emerging in which publication charges are covered by sponsors, such as research institutions. However, Open Access was never intended to circumvent the peer-review process, and reputable Open Access journals still adhere to this practice. In contrast, predatory journals take advantage of the author-pays model to create online journals where, for a fee, authors can get a quick publication that is not subject to peer-review or to any serious editorial oversight.

As previously noted, there is no currently agreed-upon definition of what constitutes a predatory journal, and as pointed out by Cobey et al. (2018, para. 2), "in the absence of a clear definition, it is difficult for stakeholders such as funders and research institutions to establish explicit policies to safeguard work they support from being submitted to and published in predatory journals." In spite of the challenges, it is nonetheless vital for institutions to try to inform their researchers about predatory publishers and about the importance of not publishing in predatory journals.

The aim of this paper is to investigate what steps university libraries are taking in this regard. As cross-cutting units with a mandate to support researchers through both their collections and their services, academic libraries are well-placed to help combat the phenomenon of predatory publishing. In particular, we compare the efforts that are being made by universities in the US and Canada with those in Spanish-speaking Latin America. On the one hand, researchers in developing countries may be more vulnerable to predatory publishing practices (as will be teased out later in the paper), and so their institutions may be more motivated to provide information to these researchers that could help them to avoid such practices. On the other hand, institutions in the US and Canada generally have greater means than those in developing countries, and so North American institutions may have developed or deployed more comprehensive resources in this regard. Therefore, an investigation into and comparison of the approaches taken by academic libraries at these two types of institution could potentially reveal some best practices or strategies that could be adopted more widely.

Sociocultural factors that could contribute to predatory publishing

Both the popular media (e.g., Gillis, 2017; Spears, 2018) and scientific publications (Bohannon, 2015; Grudniewicz et al., 2019) have observed that predatory publishing is a growing problem in the scholarly community. While all scholars could potentially fall victim to predatory publishers, some are more at risk than others. For instance, a study by Xia et al. (2015) collected and analyzed the publication record, citation count, and geographic location of authors from a range of journals, and their findings suggest that authors who publish in predatory journals tend to be early-career researchers from developing countries with relatively little publishing experience. In this section, we explore some of the sociocultural factors that could contribute to scholars falling prey to predatory publishers, including the 'publish or perish' phenomenon, the dominance of English as the language of scholarly publishing, and the financial incentives at some institutions.

'Publish or perish'

The *Oxford Advanced Learners Dictionary* defines "publish or perish" as follows:

> a phrase used to express the idea that it is important for teachers in colleges and universities to publish books, etc. about their research, and that if they fail to do so it will have a bad effect on their career. (*OALD*, online)

It is well known that scholars in all disciplines and at all ranks are under pressure to publish their research findings (de Rond & Miller, 2005). After all, the point of doing research is to share the results in order to advance knowledge and solve problems. However, researchers are being pressured to publish for other reasons too, such as helping their employers to increase their institutional impact factor or other type of research metric, helping to secure funding, or helping to obtain a contract renewal, tenure, promotion, or even a graduate degree (e.g. Cobey et al., 2019).

While these challenges are not exclusive to researchers in developing countries, the 'publish or perish' pressure appears to be prevalent there. For instance, Corcoran (2015) explains that at Mexican universities, PhD students may be expected to publish an article in an indexed journal in their field in order to fulfill program requirements for graduation. Similar expectations are in place in India where, as Vaidyanathan (2019) explains, this nation's University Grants Commission currently requires PhD student to publish at least one article in a peer-reviewed journal and present two papers at conferences or seminars before they submit their doctoral thesis. However, this Commission is currently reviewing this situation because it "suspects the publishing requirement has contributed to a flourishing of poor-quality journals that offer to publish papers quickly for a fee, without providing services such as editing and peer-review" (Vaidyanathan, 2019, para. 3). As pointed out by Priyadarshini (2018, 538), a number of predatory journals have made their way onto the Indian government's list of accepted journals. This phenomenon has been observed by others also, such as by Cukier et al. (2019, 5), who comment that "it is becoming increasingly difficult to distinguish articles published in predatory journals from legitimate journals as predatory journals are also finding their way into trusted sources like PubMed". Part of the reason that Indian students could be motivated to publish in a predatory journal is because of the quick turnaround time offered by such publications. Peer review takes time, meaning that publishing in reputable journals can often take more than year. According to Vaidyanathan (2019), these delays mean that many students in India find themselves in a situation where they cannot receive their degrees or get jobs because they have not fulfilled the publishing requirement. Meanwhile, although it is not a national policy in China, a similar situation exists. Wang (2018) explains that almost all Chinese universities demand that doctoral student publish multiple papers in scholarly journals before they can graduate; as a result, a lucrative fake journal industry is proliferating in China.

While students are among the most vulnerable members of the academic community, they are not alone in feeling the pressure to publish. For instance, according to Cantoral (2007), in Latin America, the publication policies for researchers changed significantly in the period between 1970 and 1990. In the 1970s, it was not a requirement to publish in order to obtain a promotion at most Latin American universities; however, between 1980 and 1990, the universities established a career advancement model based on number of scholarly publications, contributing to the 'publish or perish' pressure that still exists, and has even further intensified, today.

'Publish in English *or perish'*

If the 'publish or perish' model were not already enough to contend with, many scholars are further marginalized because English is the dominant language of scholarly publication. Therefore, for non-Anglophones, there is an added burden to publish in this foreign language (Solovova et al., 2017). This means more time and sometimes additional cost (e.g. for translation or editing services). Not all scholars can afford professional language services (e.g. Olsson & Sheridan, 2012), yet when the text is not well-written, the English speaking journal editors, who act as gatekeepers, may reject the manuscript because the language quality is deemed insufficient, rather than because of any problem with the content per se. Mur Dueñas (2012) recounts the struggles that Spanish-speaking Business researchers faced in attempting to publish their research in international journals, noting that out of twenty-four papers drafted and (re-submitted) over a six-year-period, only half were successfully published in the journal to which they were initially submitted. Moreover, in the reviewers' reports that requested major revisions, there were numerous non-specific negative comments related to language or style. If such authors find their work being repeatedly rejected by the main journals in their field for language-related

reasons, they may begin sending their work to lesser-known journals and could end up submitting to a predatory journal whose status is difficult to discern.

Financial incentives for publishing

While pressure to publish can sometimes take a punitive form (e.g., if you *don't* publish, you *won't* get a job or a promotion), there are other cases where publishing is incentivized (e.g. if you *do* publish, you *will* get a bonus). This could be exacerbated in developing countries where faculty or researchers may not receive high salaries to begin with. As described by Neff (2018), the researcher evaluation scheme in Mexico offers substantial financial rewards to scientists with high productivity levels, where productivity is largely equated with the number of articles published. Most Mexican universities have additional reward systems that mirror (to differing degrees) the national scheme, as do many states in Mexico. The net result is that academics can double or triple their salary if they publish enough articles and accumulate adequate citations. Other countries have implemented similar incentive schemes. For example, Grimes (2018) notes that in 2008, Turkey introduced a national agency that collects publication data and, for each article, pays a cash bonus equivalent to approximately 7.5% of the average faculty salary. Similarly, Hedding (2019) reports that South African scholars receive a cash bonus for each paper that they publish.

Bonifaz Chirinos (2018) observes that many incentive schemes are successful in increasing the number of publications; however, they may have unintended side effects, such as negatively impacting the quality of publications, discouraging collaboration, and distracting academics from other duties (e.g. teaching). Moreover, such incentives could result in poorly paid academics falling into the trap of publishing in difficult-to-detect predatory journals, especially in cases where the publication costs may be lower than the bonus received for publishing.

Open Access

Ironically, some of the Open Access models that were intended to make access to scientific research more equitable may even be a contributing factor to predatory publishing in developing countries since funding systems to support Gold Open Access in these regions are not as well established as they are in developed countries (Tennant et al., 2016). As described by Wingfield and Millar (2019), publication costs can eat into whatever research grants academics in poorer countries manage to obtain. They point out that article processing charges for legitimate Open Access journals can be expensive, citing that *PLOS One* charges academics US$1595 per paper, *PLOS Biology* charges US$3000, and *Cell Reports* charges US$5000. This can be a huge burden, particularly for academics in developing countries with weaker currencies, or for newly established researchers who do not have substantial research grants. According to Matheka et al. (2014), in Kenya, Open Access publication fees can often exceed a monthly salary for researchers. In contrast, a study by Xia (2015) found that the fees charged by predatory publishers are significantly lower, with few charging more than US$200.

Methodology and Corpus

There may be multiple units at a university that have an interest in helping scholars to avoid the pitfalls of predatory publishing, such as an Office for Research, or a Faculty of Graduate Studies; however, these sources are outside the scope of this investigation. This study focuses on academic libraries, which are units that at many universities have taken an active or leading role in helping researchers to avoid

predatory publishers and identify quality venues for scholarly communication (e.g. Berger & Cirasella, 2015). Cobey et al. (2019) have observed that lack of knowledge about predatory publishing and lack of guidance in identifying appropriate places to publish are contributing factors that may lead researchers to publish in predatory journals. Several authors have observed that university libraries are well positioned to help fill this gap and combat predatory publishing (e.g. Zhao 2014; Johnston & Boczar, 2019; Cukier et al., 2019). Firstly, the library is responsible for collection development, which means knowing about predatory journals and excluding them from the collection. Moreover, a library is a cross-cutting unit that serves all disciplines and all levels of scholars. Indeed, it is becoming common to see academic libraries hiring specialists in 'scholarly communication' to support researchers with the creation, evaluation, dissemination and preservation of research (e.g. Miles et al., 2018). Therefore, the aim of this study is to investigate what types of support academic libraries are providing to researchers to help them avoid predatory publishing. In particular, we want to uncover whether academic libraries in developed and developing regions are providing similar types and levels of support, or whether these differ, and if so, how. Based on information presented in the previous sections, there seems to be a greater need in developing countries for their universities to provide support in the drive to eradicate publishing in predatory journals. To conduct this investigation, we will compare approaches used in the United States (US) and Canada on the one hand (representing developed countries), against those used in Spanish-speaking Latin America[1] on the other (representing developing countries).

To select the university libraries for the study, we consulted the *Times Higher Education (THE) World University Rankings* (THE 2019) to identify the top universities in the US, Canada, and Latin America. Our reason for selecting the top universities overall, rather than collecting a random sample, is that these universities are particularly research active, whereas universities further down the list may be less concerned with scholarly publication. On the *THE* site, we focused on the overall institutional ranking, which incorporates the following performance indicators: research, citations, teaching, international outlook, and industry income. The most recent information available for the US and Canadian universities was the 2020 THE ranking. Using the overall ranking, and applying the site's regional filters to focus first on the US and then on Canada, we identified the top 10 universities in each of these countries. Together, these 20 universities comprise our sample representing universities in the US/Canada.

To obtain the list of universities comprising our sample from Latin America, we followed the same process of consulting the *THE World University Rankings* (THE 2019) and referring to the overall ranking, but this time we applied the regional filter for Latin America. The most recent information available for Latin American universities was the 2019 THE ranking. Next, we manually eliminated all Brazilian universities from this list because their websites are in Portuguese and neither researcher speaks this language. The top 20 Spanish-language universities became our sample representing Latin America. These 20 Latin American universities are located in six different countries: Argentina (3), Chile (7), Colombia (4), Costa Rica (1), Mexico (3), and Peru (2).

Table 1 contains the list of the 40 universities included in this study.

[INSERT TABLE 1 NEAR HERE]

[1] Although Brazil is in Latin America, it has been excluded from this study because the authors are not fluent in Portuguese.

For each university, we searched the library's website for three types of information that could be easily gleaned from a website and that could indicate that a library is proactively helping researchers to avoid publishing in predatory journals: 1) whether the library employs a scholarly communication specialist; 2) whether the library offers any workshops/training on predatory publishing; and 3) whether the library has posted any information about predatory publishing on its website. However, we were open to gathering any other information related to predatory publishing that we might encounter on the websites. All websites were consulted between September 15th and 30th, 2019.

There is significant variation in the way that libraries organize information on their websites, so we studied each site thoroughly to be sure that we did not miss information. In particular, we investigated the Research Guides/Subject Guides/Topic Guides/LibGuides for information on publishing, research dissemination, scholarly communication, Open Access or related topics. We also looked under tabs such as "Research Support", "Library Services", "Digital Scholarship" and "Scholarly Communication".

When exploring the websites, we conducted key word searches using the browser's "Find" feature. One challenge that we encountered is that people use different terminology to discuss predatory publishing. During our literature review, we noted the terms used, although we may have overlooked some. Strings that we searched for on the websites included the English-language terms "predator*", "decepti*", "dubious", "suspicious", "questionable", "undesirable", "fraudulent", "fake", "hoax", "scam", and "bogus", and the Spanish-language terms "depredador*", "predador*", "predatori*", "falsa*", "fraudulent*", "ilegítim*", "dudos*", "sospechos*", "cuestionabl*", "estafador*" and "engaños*". In addition, two of the Canadian universities (the Université de Montréal and the Université d'Ottawa) also maintain French-language websites, and so the following French terms were used to search those pages: "prédateur*", "prédatrice*", "canul*", "trompeu*", "factice*", "faux", "fausse*", "suspect*", "douteu*" and "contestable*".

Just as there are many ways to organize a library website, there are many ways to divide up responsibilities among library staff. We took note of which libraries had positions for specialists in scholarly communication or digital scholarship who could be consulted for publishing advice. However, we recognize that not all libraries use specialist titles and other employees, such as subject librarians, may also have expertise in scholarly communication and be useful resources for this type of information. Therefore, this is a limitation of the methodology.

We also investigated the workshops or training offered by the library; however, while some library pages contained archives of past training activities, others listed only upcoming events. It is therefore possible that a library does offer workshops on predatory publishing, but that such workshops were not on the schedule during the period when we conducted the website analysis. This is therefore another limitation of our methodology.

Finally, speaking directly with librarians was beyond the scope of this project; however, in a future expansion, we intend to survey and interview librarians to determine whether libraries are using other methods as a means of combatting predatory publishing.

Findings

The findings from the website analysis of the 40 libraries in this study are summarized in the tables below. Table 2 presents the data from the library websites of the US and Canada sample, while Table 3 synthesizes the data from the Latin America sample.

[INSERT TABLE 2 NEAR HERE]

[INSERT TABLE 3 NEAR HERE]

Discussion

University libraries in the US and Canada sample

Our website examination revealed that, among the 20 US and Canadian universities, 90% (18/20) have a librarian specializing in scholarly or digital communication, as illustrated in Table 2. Most of the websites instruct users with questions about scholarly publishing, research metrics, Open Access, the institutional repository or related issues to contact these specialists for more information. The two libraries without scholarly or digital communication specialists are Harvard University in the US, which has multiple Research Librarians, and the Université de Montreal in Canada, which has numerous Subject Librarians. Researchers at these institutions are encouraged to contact their disciplinary specialist for guidance on publishing in that discipline.

As summarized in Table 2, with regard to workshops, 45% (9/20) of the US and Canadian universities – three in the US (CalTech, Yale, and Berkeley) and six in Canada (Toronto, McGill, Montreal, Alberta, Waterloo, and Western) – offered a workshop to inform researchers about predatory journals or conferences and how to avoid them. At the University of Waterloo, the workshop was delivered as a webinar. Of the nine workshops, three used the term "predatory" in the workshop's title or description (CalTech, McGill, Alberta), while one (Waterloo) used the term "questionable publisher". The remaining five workshops (Yale, Berkeley, Toronto, Montreal, Western) focused more generally on scholarly publishing (e.g. choosing good places to publish) and one of these (Western) specifically included information on Open Access publishing.

With regard to information on the website, Table 2 indicates that 65% (13/20) of the universities created a LibGuide, Subject Guide, Topic Guide or Research Guide that focused either wholly or partially on predatory publishing. Eight of the 13 guides specifically mentioned predatory publishing as something to be avoided, although the term "predatory" was used in only six instances (CalTech, McGill, Alberta, Ottawa, Calgary, and Waterloo), while the other two used the terms "suspicious journals and publishers" (Yale) and "undesirable journal" (Toronto). Most often the subject of the guide was to do with "publishing"; however, in one case (Waterloo) a detailed description of predatory practices was contained in a Research Guide entitled "Author's Rights", which may not be a place where researchers would automatically look for information on predatory publishing. In two cases where there were no guides discussing predatory publishing (Princeton, Chicago), there were guides on Open Access, so this could represent a missed opportunity to inform researchers about this worrisome phenomenon while also explaining Open Access. Furthermore, at one university (McGill), the information about predatory publishing was included in guides developed for specific disciplines (i.e., Life Sciences, Nursing, Physics) but there was no general guide addressing this topic, meaning that researchers from other disciplines may not find that information.

Only one university (Toronto) included both a guide and additional information elsewhere on the library's website (i.e., under the Research Support tab). In two other cases where there was no guide on predatory publishing or a related topic (Berkeley, Montreal), the main library page linked to a page on Scholarly or Digital Communication, which described a range of library services and activities in these areas (e.g. institutional repositories, support for Open Access publishing) and also included guidelines for avoiding predatory publishers. In contrast, the one Digital Scholarship page (UPenn) did not discuss predatory publishing directly. Meanwhile, in four other cases, there were links from the main library page to other pages, such as Research Support; only one of these (McMaster) explicitly addressed predatory publishing, whereas the others (Stanford, UBC, Western) discussed topics such as Open Access, research metrics, and institutional repositories without specifically mentioning predatory publishing.

Overall, we can observe that in the Canada and US sample, there are two broad strategies in play. Some institutions help researchers to identify quality journals and appropriate places to publish without mentioning predatory practices directly. In contrast, other institutions explicitly warn researchers about predatory publishers and provide information about how to detect and avoid them. Four institutions (CalTech, Calgary, Alberta, Montreal) also include information about avoiding predatory conferences, which Grove (2017) claims now outnumber legitimate events. According to Gillis (2018, np), predatory conferences are an offshoot of predatory publishing: "Many publishers of deceptive or poor-quality academic journals have created a big sideline business organizing equally questionable academic conferences." Gillis (2018) emphasizes that less experienced researchers are typically the victims of these fake conferences.

In general, the US institutions seem to shy away from explicit warnings; only one institution (Caltech) contains a detailed discussion of predatory journals (and conferences). Another US institution (Yale) includes a "List of Suspicious Journals and Publishers" but does not use the term "predatory", nor does it include criteria that researchers could use to identify any potentially predatory journal not already on the list. Meanwhile, a third US institution (Berkeley) notes that researchers who are "concerned about deception" can read up on it in external sources and provides a link to one such article.

In contrast, the websites of the Canadian institutions take a more direct approach by shedding light on the problem. With just one exception (Western), all the Canadian universities explicitly warn researchers about the dangers of predatory publishing. Moreover, eight use the term "predatory", while the other (Toronto) uses the terms "undesirable journal" and "deceptive publisher". In some cases, however, the term "predatory" is used in quotation marks (Alberta) or prefaced with "so-called" (UBC). This terminological issue merits further investigation to uncover why libraries may have elected neither to use the term "predatory" nor to focus directly on predatory practices.

It is well known in applied linguistics that when a new concept is introduced, it is typically accompanied by a term to designate it, although this initial term may be provisional until a definitive name is accepted. Often, our understanding of an emerging concept evolves, which may bring about a change in the term or may result in several terms competing to describe the same concept before one fully takes hold and the others are dropped or used in a more restricted way (Sager, 1997).

As noted in the introduction, Beall (2010) introduced the concept/term "predatory publishing", although no consensus has been reached on its precise definition, and Beall (2017a) himself now acknowledges that the term is problematic. Kimotho (2019, 9) reports that since it was introduced, "most of the critics

[of Beall's List] have decried the use of the term 'predatory' which they say is *a loaded and pejorative term* and a threat to academic freedom." These critics note that calling for a ban on predatory journals could represent a challenge to freedom of speech and to researchers' choice about where to publish their work (Kimotho, 2019). Perhaps those US or Canadian libraries that avoid the term "predatory" or that focus on helping researchers to identify quality journals rather than to avoid predatory ones are choosing to be mindful of these issues of freedom of speech or researchers' right to choose their publication venue.

For other authors, the term "predatory" is problematic in part because it implies that there must be victims who are being preyed upon. While some researchers may indeed be lured into publishing in predatory journals, there are other questionable behaviours springing up around predatory publishing that cannot be subsumed logically under the term "predatory". For instance, Anderson (2015), Ray (2016), Pyne (2017) and Cobey et al. (2019) all point to cases where authors may intentionally submit and pay for their work to be published in questionable journals to get an easy publication, or because of frustrations with traditional journals (e.g. long time to publication period). However, if an author is a willing participant, then can the journal be labelled as "predatory"? Ray (2016) distinguishes between "predatory publishing", where authors are not aware of the nature of the journal, and "fraudulent publishing," where authors knowingly participate. As previously described in the methodology section, we searched for a range of different terms in addition to "predatory", and the results in Table 2 show that different terms are indeed being used to describe this evolving concept (e.g. Toronto uses "undesirable"; Yale uses "suspicious"; Berkeley uses "deceptive"). Therefore, some libraries who avoid using "predatory" may be consciously trying to provide a more accurate description of the broader situation.

Adopting this strategy of avoiding the term "predatory" may also help to avoid lawsuits. There are several examples of librarians or researchers being sued for identifying journals or publishers as potential predators. For instance, New (2013) describes a lawsuit against a librarian and his Canadian university employer after the librarian described a publisher as "dubious" on his personal blog. Todd (2018) reports that a researcher was suspended after identifying some publishing practices at his university as being predatory (Pyne 2017); he was reinstated only after a legal battle. Even Beall ceased maintaining his list in 2017 when faced with legal threats (Beall 2017b). Perhaps, therefore, some libraries are choosing the words on their websites carefully to avoid legal proceedings.

Another aspect of the findings that merits discussion is whether the direct approach (i.e., explicit warnings about predatory publishing) or the indirect approach (i.e., focusing on identifying good publication venues) is more effective. Zhao (2014, 9) asserts that librarians should help researchers to gain a deeper understanding of Open Access and of the characteristics of quality journals, but she notes that less experienced researchers may need additional support:

> … some researchers, particularly research students and early career researchers can be unintentionally trapped by this emergent type of publishing scam […] There is an urgent need for the development of knowledge and skills to distinguish the appropriate publishing options from questionable ones ….

Zhao (2014, 12) describes this as *scholarly publishing literacy*, emphasizing that "Academic libraries and librarians are well-positioned to play a key role in supporting researchers on scholarly publishing literacy." Johnson and Boczar (2019, 12) also address scholarly publishing literacy, noting that it is key

for librarians to consider the needs of the researcher that they are trying to assist. Johnson and Boczar (2019, 2) distinguish between "advocacy" (e.g. encouraging researchers to publish in legitimate Open Access journals) and "advising" (e.g. warning researchers against potentially problematic publishers). Some researchers may need information about *both* predatory and reputable publishing to develop the scholarly publishing literacy skill set that will enable them to distinguish between the two.

In closing, a global look at efforts made by the 20 US and Canadian libraries to help researchers deal with predatory publishing reveals that only one (Toronto) employs all the strategies that have been discussed: 1) it employs a specialist with the title "Scholarly Communication and Liaison Librarian"; 2) it offers a workshop entitled "Scholarly Publishing and Current Awareness"; and 3) its website contains a Research Guide on "Scholarly Publishing" that includes information on both selecting appropriate places to publish and avoiding publishing in undesirable journals. In addition, under the library's Research Support tab, there is a page that both describes quality Open Access publishing and outlines a series of guidelines for identifying deceptive publishers. This Canadian university also avoids the term "predatory" and instead uses the terms "undesirable journals" and "deceptive publishers". Thus through a combination of having a specialist librarian, a workshop on scholarly publishing, a Research Guide and additional website information – the latter two of which employ judiciously selected terminology and present details of how to explicitly avoid dubious publishers and how to identify good ones – the University of Toronto appears to be the North American institution that has adopted the most comprehensive approach to helping researchers develop scholarly publishing literacy skills.

University libraries in the Latin America sample

Turning now to the Latin America sample, Table 3 reveals that none of the 20 libraries appears to employ a scholarly communication specialist. However, it is important to note that the idea of having research specialists in libraries is relatively new in many Latin American countries. As outlined by Rodríguez Gallardo (2007), for many years, librarians in Latin America have typically held an undergraduate qualification in Library and Information Science (LIS), rather than the graduate-level qualification that is expected in North America. However, Rodríguez Gallardo (2007, 53) asserts that from "the mid-twentieth century the influence of North American library science was perceived more intensely" in Latin American LIS programs and libraries. By 2007, there were 12 LIS master's programs in Spanish-speaking Latin America, and additional programs have since been established, such as the first LIS master's in Colombia in 2011 (Molina Molina & Gaviria Velásquez, 2010). According to Rodríguez Gallardo (2007, 41), the bachelor's training in Latin America has a technical focus, while master's programs provide an initiation into research, allowing graduates of the latter to better support researchers. As more master's graduates are hired by university libraries in Latin America, perhaps more specialist positions (e.g. scholarly communication librarians) will be established.

Although no Latin American libraries employ librarians with a job title such as "scholarly communications librarian", 30% (6/20) (PUCC, PUCV, PUCP, Monterrey, Javeriana, Antioquia) do specify on their websites that they have one or more librarians who can support researchers, although details about this support are not specified. These six libraries are located in Chile (2), Peru, Mexico, and Colombia (2). According to the list of 12 LIS master's programs compiled by Rodríguez Gallardo (2007, 48), these programs were offered by universities in Argentina (3), Chile (2), Costa Rica (1), Mexico (3), Peru (1), and Puerto Rico (2). Meanwhile, Molina Molina and Gaviria Velásquez (2010) confirm that

Colombia now also offers an LIS master's. Therefore, we can see that the libraries offering specialized research support are all located in countries that offer at least one graduate-level LIS program.

As Table 3 illustrates, only 25% (5/20) of libraries in the Latin America sample offer publishing workshops to their researchers; however, in four of the five cases (UNAM, Córdoba, Los Andes, UNC), the content is not focused on predatory publishing but on how to identify and publish in high impact, prestigious, or quality Open Access journals. According to Zhao (2014, 8), including information about Open Access models is a key component of scholarly publishing literacy since "Some researchers, rather than seeing the publishers with questionable practices as aberrations, make incorrect assumptions that these practices apply to all open access journal publishers." However, as we saw previously, Zhao (2014, 13) suggests that different researchers may benefit from different types of information:

> Many academic libraries have taken a leadership role in supporting open access and scholarly communication. However, instead of supporting researchers to develop scholarly publishing literacy, the priority is often promoting the open access agenda and advocacy for institutional repositories.

Therefore, it could be helpful to provide both types of information (i.e., how to identify quality journals and how to avoid predatory ones). This combined approach is the one taken by the fourth library (PUCP), which tackles both subjects directly in a video tutorial entitled "Advice for Researchers" which is posted on YouTube but can be accessed via a link on the library's website. This approach is laudable because it means that many researchers can potentially be reached by this open access and easily retrievable video. Once again, we can see that the five university libraries that offer workshops on some aspect of scholarly publishing are located in countries that offer graduate-level LIS education (i.e., Argentina, Colombia (2), Mexico, and Peru).

With regard to information on websites in the Latin America sample, none of the 20 contains any direct reference to predatory publishers or conferences, as summarized in Table 3. However, 85% (17/20) of these sites discuss Open Access publishing, while 100% provide details about self-archiving in institutional repositories. Moreover, 55% (11/20) advise researchers about how to identify appropriate publication venues, while 35% (7/20) provide details about various metrics to evaluate journal quality (e.g., impact factor, ranking). It would be relevant and feasible to extend discussions about Open Access and journal quality to include information about predatory publishing practices so as to provide researchers with a well-rounded scholarly publishing literacy skillset, as advocated by Zhao (2014) and Johnston and Boczar (2019).

Our findings that the majority of libraries in the Latin America sample discuss Open Access and digital repositories is in line with Alperin (2015), who indicates that while no other region in the world has more than 20% of its academic output available through Open Access, Latin America has more than 70%. According to Alperin et al. (2008), the emphasis placed on Open Access in Latin America did not derive from any specific institutional or national policies; rather, it resulted from the combined grassroots efforts of individual researchers, public and private universities, ministries or councils of science and technology, university presses, libraries, and others, often beginning as a regional effort and gradually expanding in coverage. Alperin et al. (2008) also suggest that, on a cultural level, many Latin American researchers hold a particularly resolute social commitment to Open Access, with a strong desire to reduce barriers between publicly funded research and the benefits to society, while at the same time, these researchers hope that disseminating their work via Open Access will improve its global

visibility and impact. Developing a strong practice of self-archiving and Open Access publishing is in line with the approach advocated by international leaders in the field of Open Access, such as Harnad (2010) and Suber (2012).

This finding might appear to contradict the earlier observation that Gold Open Access, with its potentially expensive article processing fees, can be a barrier to scholars with limited research funding (e.g., Wingfield & Millar, 2019). Remember, however, that Open Access offers multiple models, including Green Open Access or self-archiving (see Crawford, 2011; Caruso et al., 2013). As emphasized by Alperin (2015), Latin American countries have a strong tradition of developing regional research portals and self-archiving their work within these. Since there is already a high degree of success in getting researchers to self-archive their work, this may partly explain why no libraries in the Latin American sample have hired scholarly communication specialists.

Finally, it is worth noting that next most-often discussed aspects of scholarly publishing on library websites for the Latin America sample are metrics, impact and research visibility, which are explored on 35% (7/20) of the sites (PUCC, PUCV, Monterrey, Santiago, Austral, Javeriana, Valparaiso). As noted previously, these measures have taken on a new importance in developing countries, where researchers may be expected to publish (often in English) in order to graduate, secure a position or obtain a promotion, or where they may receive financial incentives for publishing.

Conclusion

Predatory publishing and conferences are unlikely to disappear any time soon. While university libraries cannot be solely responsible for combatting these practices, they are nonetheless well positioned to help researchers develop scholarly publishing literacy skills. Our examination of the library websites of 20 top-level universities in each of the US/Canada and Latin American regions revealed different approaches in these two regions with regard to helping researchers deal with predatory practices.

In the US and Canada, the vast majority (90%) of universities hired specialized scholarly communication librarians, and nearly half (45%) offered workshops about predatory publishing. The majority of library websites addressed this issue, though 90% of the universities in Canada addressed it directly by providing explicit instructions on avoiding predators, while 70% of the US universities dealt with it more indirectly by helping researchers to identify good publication venues. Canadian and US libraries also differed in their terminological choices: 80% of the Canadian library websites used the term “predatory”, whereas only one US library used this term.

In contrast, no universities in the Latin America sample hired scholarly communication specialists and just one addressed predatory publishing directly in a workshop (YouTube video). None of them specifically addressed predatory practices on their websites; however, 100% of these libraries emphasized the benefits of Open Access publishing and/or self-archiving in digital repositories. In addition, 55% provided guidance on evaluating journal quality, and 35% discussed research impact.

Although any researcher could fall victim to predatory behaviour, some are more vulnerable than others, including less experienced researchers, non-Anglophones, researchers with small/no grants, and researchers whose institutions or governments offer financial incentives for publishing. It would therefore appear to be in the best interest of all university libraries to help equip researchers with scholarly publishing literacy skills. To offer some potential support to those libraries that currently

appear to be doing less to inform researchers about predatory publishing and conferences (at least via their websites), we have compiled seven recommendations to help guide libraries' future efforts to educate researchers about predatory practices. We hope that academic libraries around the globe will consider and take on board any of these recommendations that may prove useful to some of their patrons.

Recommendations

1) **Use both indirect *and* direct approaches to combat predatory practices**. Proponents of scholarly publishing literacy (e.g. Zhao, 2014) emphasize that researchers need to develop skills that will enable them to distinguish between quality publications and questionable ones, meaning that they need to understand the characteristics of both. In addition, they suggest that different strategies may reach different researchers. While the indirect approach of understanding Open Access more fully and identifying quality publication venues does provide excellent advice for researchers, those who are most vulnerable may benefit from also receiving direct advice about avoiding predatory practices.
2) **Extend information to include all predatory practices.** While predatory publishing has thus far received the greatest amount of attention, predatory conferences are also on the rise (e.g. Gillis, 2018). Several universities have already begun drawing researchers' attention to both types of predatory behaviour.
3) **Make information about predatory practices available in a general guide.** Although some disciplines, such as the health sciences, seem to be more prone to deceptive scholarly communication practices (e.g. Laccourreye et al., 2018), researchers from any discipline could potentially fall victim to predators, and so it is important to make this information easily accessible to all researchers. Certainly, the issue can be re-emphasized in specific disciplinary guides where librarians feel it is warranted owing to widespread predatory activity in these disciplines.
4) **Make the link with Open Access**. Although Open Access publishing is not in and of itself predatory publishing, and although Open Access publishing alone is not the direct cause of predatory publishing, the two concepts are nonetheless linked. Since the majority of library websites for institutions in both the US/Canada and the Latin American samples present researchers with information about Open Access, it could make sense to take advantage of the existing discussion spaces that promote Open Access to also provide researchers with more direct information about predatory practices and to clearly distinguish between them.
5) **Consider workshops and similar activities.** Since almost half (45%) of the libraries in the North American sample offered workshops on predatory practices, it seems to be considered useful, and so it may be worth adopting more widely. As an alternative, an online video tutorial could be created, as was done at one Latin American library. Indeed, an easily accessible video may be preferable since it could reach an even wider audience.
6) **Provide a broad range of librarians with basic training about predatory practices.** While our study indicates that many libraries in the US and Canada have engaged scholarly communication specialists, this approach may not be economically feasible nor a strategic priority for some libraries. However, given that predatory practices have become pervasive, it could help to

provide training in the essentials of recognizing and avoiding predatory practices to all librarians who work with researchers and who may be asked for advice about scholarly communication.

7) **Carefully consider the language used to describe questionable publishers and conferences.** The concepts related to predatory practices, and the terms used to describe them, are still evolving. Some authors feel that the term "predatory" is sometimes applied incorrectly (e.g. Ray, 2016), and several lawsuits have been launched by publishers who object to being labelled "predatory". Some libraries are using terms such as "deceptive publishing" and "questionable journals" to describe practices that were previously labelled as "predatory", and librarians should monitor this evolving terminology to see what emerges as the preferred term.

To sum up, this paper investigated what steps university libraries are taking to help researchers deal with predatory scholarly communication practices. Specifically, we explored and compared the efforts made by university libraries in the US and Canada with those in Spanish-speaking Latin America. The results indicate that libraries in the US and Canada currently employ more scholarly communication specialists and make a more explicit effort to inform researchers about predatory practices (i.e., a direct approach), or how to identify appropriate publication venues (i.e., an indirect approach). In contrast, the libraries in the Latin American sample are strong when it comes to informing researchers about Open Access publishing and self-archiving options, but they do not link this discussion directly to one about predatory practices. It is hoped that the discussion and recommendations provided in this paper will serve to advance the conversation about university library responses – both actual and potential – to the phenomenon of predatory practices in scholarly communication.

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20 universities from the US and Canada	Country	20 universities from Spanish-speaking Latin America	Country
California Institute of Technology (CalTech) https://www.library.caltech.edu/	USA	Pontificia Universidad Católica de Chile (PUCC) http://bibliotecas.uc.cl/	Chile
Stanford https://library.stanford.edu/	USA	Tecnológico de Monterrey https://biblioteca.tec.mx/inicio	Mexico
Massachusetts Institute of Technology (MIT) https://libraries.mit.edu/	USA	Universidad de Chile https://www.uchile.cl/bibliotecas	Chile
Princeton University http://library.princeton.edu/	USA	Universidad de Los Andes https://biblioteca.uniandes.edu.co/index.php?lang=es	Colombia
Harvard University https://library.harvard.edu/	USA	Universidad Nacional Autónoma de México (UNAM) http://bibliotecas.unam.mx/	Mexico
Yale University https://web.library.yale.edu/	USA	Universidad Autónoma Metropolitana http://www.uam.mx/_serv_comunidad/bibliotecas.html	Mexico
University of Chicago https://www.lib.uchicago.edu/	USA	Pontificia Universidad Católica del Perú (PUCP) http://biblioteca.pucp.edu.pe/	Peru
University of Pennsylvania (UPenn) https://www.library.upenn.edu/	USA	Universidad Nacional de Colombia (UNC) https://bibliotecas.unal.edu.co/	Colombia
Johns Hopkins University https://www.library.jhu.edu/	USA	Pontificia Universidad Católica de Valparaíso (PUCV) http://biblioteca.ucv.cl/	Chile
University of California (UC), Berkeley http://www.lib.berkeley.edu/	USA	Universidad de Santiago de Chile http://biblioteca.usach.cl/	Chile
University of Toronto https://onesearch.library.utoronto.ca/	Canada	Universidad Peruana Cayetano Heredia (UPCH)	Peru

		https://dugic.cayetano.edu.pe/	
University of British Colombia (UBC) https://www.library.ubc.ca/	Canada	Universidad Austral https://www.austral.edu.ar/biblioteca/	Argentina
McGill University https://www.mcgill.ca/library/	Canada	Pontificia Universidad Javeriana https://www.javeriana.edu.co/biblos/bibliotecas	Colombia
McMaster University https://library.mcmaster.ca/	Canada	Universidad Nacional de Córdoba http://redbiblio.unc.edu.ar/	Argentina
Université de Montréal https://bib.umontreal.ca/	Canada	Universidad de Antioquia http://www.udea.edu.co/wps/portal/udea/web/inicio/sistema-bibliotecas	Colombia
University of Alberta https://www.library.ualberta.ca/	Canada	Universidad de Costa Rica http://sibdi.ucr.ac.cr/	Costa Rica
University of Ottawa https://biblio.uottawa.ca/en	Canada	Universidad Nacional de San Martín http://www.unsam.edu.ar/biblioteca_central/	Argentina
University of Calgary https://library.ucalgary.ca/	Canada	Universidad de La Frontera http://www.bib.ufro.cl/	Chile
University of Waterloo http://www.lib.uwaterloo.ca/	Canada	Universidad de Valparaíso https://bibliotecas.uv.cl/	Chile
University of Western Ontario https://www.lib.uwo.ca/	Canada	Universidad de Concepción http://www.bibliotecas.udec.cl/	Chile

Table 1. List of the universities included in the study as obtained from the *Times Higher Education World University Rankings* (THE 2019).

University in US/Canada	Specialist in scholarly communication	Workshop on predatory publishing	LibGuide/Subject Guide/Topic Guide/Research Guide on predatory publishing	LibGuide/Subject Guide/Topic Guide/Research Guide on good publishing practices	Other information on website about predatory publishing	Information about predatory conferences	Specific use of the word "predatory"
CalTech	Author Services and Digital Repository Librarian	Open Access Publishing: Possibilities, Peculiarities, and Predators.	LibGuide called "Open Access / Predatory Publishing / Questionable Conferences".	--		Yes	Yes
Stanford	Digital Information Services Librarian	No	No	No	Under "Research support… for faculty" there is a link to the institutional repository but nothing specifically about predatory publishing.	No	No
MIT	Scholarly Communication Librarian x 3	No	No	Research Guide on "Getting Published" with a section advising how to select a journal which describes what a good journal looks like.		No	No
Princeton	Scholarly Communication Librarian	No	No	Research Guide on "Scholarly Communication" that contains a lot of information about Open Access.		No	No
Harvard	multiple Research Librarians	No	No	Research Guide on "Publishing your Scholarship" that advises how		No	No

				to select the best journal.			
Yale	Director of Digital Scholarship	Choosing a Journal for Publication of an Article.	Includes a "List of Suspicious Journals and Publishers" (but no information on how to identify one that is not on the list already).	Research Guide called "Choosing a Journal for Publication of an Article".		No	No ("suspicious"
Chicago	Scholarly Communication Librarian	No	No	Subject Guide on "Open Access".		No	No
UPenn	Scholarly Communication and Digital Repository Librarian	No	No	No	From the main Library page there is a link to a page called Digital Scholarship where there is information on Open Access and the institutional repository but no specific mention of predatory publishing.	No	No
Johns Hopkins	Scholarly Communication Librarian	No	No	Subject Guide on "Scholarly Metrics" and Subject Guide on "Evaluating Information" (including information on peer-review).		No	No
UC, Berkeley	Associate University Librarian for Scholarly Resources (in	Managing and Maximizing Your Scholarly	No	No	From the main Library page there is a link to the Scholarly	No	No ("deception")

	charge of the Office of Scholarly Communication Services)	Impact (information on evaluating journals and publishing options).			Communication Services where there is a section on "Publishing your scholarship" which includes a subsection entitled "Evaluating Publishers" that details how to identify trusted journals and also gives tips about what to do if you are "concerned about deception". Does not use the term predatory publishing but links to an academic article about how to identify potential predatory journals.		
Toronto	Scholarly Communication and Liaison Librarian	Scholarly Publishing and Current Awareness.	Research Guide on "Scholarly Publishing" includes information on journal selection including a subsection entitled "How not to publish in an	--	Under the Research Support tab there is a page on Open Access that includes "Guidelines for Identifying Deceptive Publishers".	No	No ("undesirable", "deceptive")

			undesirable journal".				
UBC	Scholarly Communication and Copyright Services Librarian	No	No	No	From the main Library page is a page called "Build your Academic Profile" and this page contains a checklist to help with journal selection called "Learn to avoid so-called predatory publishers".	No	Yes
McGill	Scholarly Communication Librarian	Predatory Publishing: What it is and how to avoid it	Research Guides for publishing in several different disciplines (Life Sciences, Nursing, Physics) which specifically discuss predatory publishing.	--		No	Yes
McMaster	Digital Scholarship Librarian	No	No	No	Under the Research Help tab there is a page on Open Access publishing that includes a section called "Avoid Predatory Publishers" that links to a checklist for identifying deceptive publishers.	No	Yes

Montreal	Numerous subject specialists	*Recherche d'articles scientifiques et classement des revues* (Searching for scholarly publications and journal rankings, including a section on how to identify prestigious journals in a field).	No	No	From the main Library page there is a page on Scholarly Communication which discusses Open Access and also has a section with tips on avoiding predatory journals and conferences (« Éditeurs prédateurs et conférences factices »).	Yes	Yes
Alberta	Digital Scholarship Librarian	Buyer Beware: Predatory Publishing	Subject Guide on "Resources for Writing and Publishing" with a section called "Avoiding Undesirable/'Predatory' Publications and Fake Conferences".	--		Yes	Yes
Ottawa	Scholarly Communication Librarian	No	Research Guide on "Publication" with a section entitled "Predatory Publishers".	--		No	Yes
Calgary	Digital Initiatives and Scholarship Librarian	No	Research Guide on "Scholarly Communication" with a section on "Predatory Publishers and Predatory Conferences".	--		Yes	Yes
Waterloo	Associate University Librarian,	Author's Rights (with a section on	Research Guide on "Author's Rights" with a section on	--		No	Yes

	Collections, Technology and Scholarly Communication	'Questionable publisher practices and how to avoid them') (delivered as a webinar).	publishing considerations that contains a detailed discussion of predatory publishing.				
Western	Research & Scholarly Communication Librarian x2	1) Preparing to Publish 2) Who pays for Open Access?	No	No	Under the Research Support tab there is a page on Open Access and one on Research Metrics, but neither specifically mention predatory publishing.	No	No

Table 2. Summary of library website information from universities in the US and Canada sample.

University in Latin America	Specialist in scholarly communication	Specific mention of librarian to support research	Workshop on predatory publishing	Other information on website about predatory publishing	Information about predatory conferences	Specific use of the terms "depredador" or "predador"
Pontificia Universidad Católica de Chile (PUCC)	No	Yes	No	Advice on finding places to publish, including information about evaluating journal quality, but no specific mention of predatory publishing. Information about Open Access publishing and self-archiving in a digital repository. Information about good research practices, bibliometrics, and impact factors.	No	No
Tecnológico de Monterrey	No	Yes	No	Detailed information on different models of Open Access and publication strategies, including self-archiving, but no specific mention of predatory publishing. Information	No	No

				about various metrics (journal impact factors, institutional rankings, H-index).		
Universidad de Chile	No	No	No	Information about Open Access publishing and self-archiving in a digital repository. Advice on finding places to publish, including information about evaluating journal quality, but no specific mention of predatory publishing.	No	No
Universidad de Los Andes	No	No	No specific workshop on predatory publishing but there are workshops on evaluating journals and identifying prestigious places to publish.	Information about Open Access publishing and self-archiving in a digital repository. Advice on finding places to publish, including information about evaluating journal quality, but no specific mention of predatory publishing.	No	No

Universidad Nacional Autónoma de México (UNAM)	No	No	No specific workshop on predatory publishing but there are workshops on evaluating journals.	Information about how to publish in Open Access and institutional repositories, but no specific mention of predatory publishing.	No	No
Universidad Autónoma Metropolitana	No	No	No	Information about institutional repositories.	No	No
Pontificia Universidad Católica del Perú (PUCP)	No	Yes	A video tutorial called "Advice for PUCP researchers" discusses predatory publications and how to identify them.	Information about Open Access publishing and self-archiving in a digital repository. Advice on finding places to publish, including information about evaluating journal quality, but no specific mention of predatory publishing.	No	No
Universidad Nacional de Colombia	No	No	No specific workshop on predatory publishing but there are workshops on Open Access.	Information about Open Access publishing and self-archiving in a digital repository, as well as identifying appropriate places to publish, but no specific	No	No

				mention of predatory publishing.		
Pontificia Universidad Católica de Valparaíso (PUCV)	No	Yes	No	Information about Open Access publishing and self-archiving in a digital repository. Information about identifying appropriate places to publish, and about various metrics (journal impact factors, institutional rankings, H-index), but no specific mention of predatory publishing.	No	No
Universidad de Santiago de Chile	No	No	No	Detailed information on different models of Open Access, self-archiving and publication strategies, but no specific mention of predatory publishing. Information about evaluating journal quality and using various metrics (journal impact factors, institutional	No	No

				rankings, H-index).		
Universidad Peruana Cayetano Heredia	No	No	No	Information about Open Access publishing and self-archiving in a digital repository. Advice on finding places to publish, including information about evaluating journal quality, but no specific mention of predatory publishing.	No	No
Universidad Austral	No	No	No	Information about Open Access publishing and self-archiving in a digital repository. Information about various metrics (journal impact factors, institutional rankings, H-index), but no specific mention of predatory publishing.	No	No
Pontificia Universidad Javeriana	No	Yes	No	Information about Open Access publishing and self-archiving in a digital repository. Advice on	No	No

				finding places to publish, including information about evaluating journal quality, but no specific mention of predatory publishing. Information about impact factor, visibility.		
Universidad Nacional de Córdoba	No	No	No specific workshop on predatory publishing but there are workshops on Open Access.	Information about Open Access and institutional repositories, but no specific mention of predatory publishing.	No	No
Universidad de Antioquia	No	Yes	No	Information about Open Access publishing and self-archiving in a digital repository. No specific mention of predatory publishing practices.	No	No
Universidad de Costa Rica	No	No	No	Information about institutional repositories, but no specific mention of predatory publishing.	No	No

Universidad Nacional de San Martin	No	No	No	Information about Open Access publishing and self-archiving in a digital repository. No specific mention of predatory publishing practices.	No	No
Universidad de La Frontera	No	No	No	No specific mention of predatory publishing practices.	No	No
Universidad de Valparaíso	No	No	No	Information about various metrics (journal impact factors, institutional rankings, H-index). Advice on finding places to publish, including information about publishing in Open Access, self-archiving, and evaluating journal quality, but no specific mention of predatory publishing.	No	No
Universidad de Concepción	No	No	No	Information about Open Access publishing and self-archiving in a digital repository. No specific	No	No

				mention of predatory publishing practices.		

Table 3. Summary of library website information from universities in the Latin America sample.