

Chinese Ph.D. Students' Perception of Predatory Journals

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Abstract. The aim of this study is to investigate Chinese Ph.D. students' attitudes towards predatory journals. An online questionnaire was distributed and 332 respondents from various disciplines and institutions shared their opinions. The result showed that the majority of respondents (n=271; 81.32%) never heard about predatory journals. Among those who knew what predatory journals are (n=61, 18.68%), thought that predatory journals had bad reputation, low quality and poor peer-review process. They agreed that such journals charge high APC but published quickly. The results also indicated that the awareness of predatory journals was influenced by respondents' gender, research experience and publishing experience. Male respondents knew more about predatory journals than female respondents. Respondents who had rich research and publishing experiences were more likely to identify predatory journals. Regarding further publishing intention, 124 respondents (37.35%) said they might try predatory journals to achieve assessing requirements, and 208(62.65%) respondents refused.

Keywords: Predatory Journals, Chinese Ph.D. Student, Online Questionnaire Survey.

1 Introduction

Predatory journals, which widely recognized as those open access journals using the author-pays model [1] but failing to provide necessary editorial and publishing services [2], are created by publishers whose cardinal purposes are pursuing profits. These journals always promise high editorial and publishing standards using personalized email to call for papers. But actually, these journals are lack of quality control, use fake metrics, location, editorial boards and websites, hijack reputed journals, publish diverse topics and provide fast services [3][4][5]. Studies confirmed that the majority of predatory journals come from developing countries, particularly India, Pakistan, Nigeria and China [6][7].

Previous studies and practices showed that China was at the risk of predatory publishing. Therefore, the Chinese government and institutions manage to protect researchers from being deceived by predatory journals. In 2018, the Chinese govern-

ment announced a proposal that China was about to create a national blacklist of journals [8]. Some Chinese institutions and universities such as the Zhongshan Ophthalmic Center at Sun Yat-sen University, the Obstetrics and Gynecology Hospital of Fudan University, East China University of Political Science and Law and so on had complied and circulated the predatory journals' list to remind researchers to avoid submitting papers to these journals. As the potential power of future scientific research development, it is necessary to investigate the Chinese Ph.D. students' perception of predatory journals. This poster reports an online questionnaire survey on Chinese Ph.D. students' awareness and perceptions of predatory journals.

2 Literature Review

Most studies about the authors of predatory journals focused on the authors' countries, demographic characteristics and the motivations that authors publish in these journals.

Simón found out that the majority of papers in predatory journals came from Third World countries like Turkey, Jordan, Malaysia, Pakistan, and particularly Nigeria [9]. And in 2018, Selcuk examined 24,840 articles published in 832 stand-alone journals listed in Beall's list [10] quantitatively and firmly confirmed that researchers from India, Nigeria, and Turkey had the highest number of publications in predatory journals [11]. Generally, Asia countries were always singled out in similar studies [7,11-14].

Further studies about the demographic characteristic of authors showed that those who published their papers in predatory journals were young and inexperienced authors [7][15]. These authors mostly have little or no experience of academic publishing and most of them endeavor to increase their number of publications [7], and therefore, they choose these "pay big, publish fast" journals [16]. Besides, promotion system, incentive allowance systems, "publish-or-perish" pressure, unawareness, and policymakers' attitudes are potential reasons that drive authors publish in predatory journals [9][17][18][19].

In 2016, China surpassed the United States as the world's largest producer of scientific articles [20]. Ph.D. students made great contributions to that progress. A report from the Ministry of Education of the PRC showed that it was estimated that there were 362,000 Ph.D. students in 2017 [21] and the number should be larger in these two years [22]. Most Ph.D. students are full-time researchers with little scholarship and are required to publish a certain number of papers in a limited period to apply for degrees. Therefore, Chinese Ph.D. students are shouldering heavy pressure to publish papers. Recently, with the massive increase of open access journals in China which increasing from 685 [23] in 2012 to over 1200 by 2017 [24], and as a negative effect of this, the "dishonorable" publications grow [25].

The research questions of this study are: What do Chinese Ph.D. students know about predatory journals? What are their attitudes towards publishing in predatory journals?

3 Method

An online questionnaire was distributed to collect Chinese Ph.D. students' perceptions and personal information. The questionnaire included 9 questions about the investigation of awareness and attitude. It also included a few demographic questions to help determine whether attitudes vary according to discipline, research experience, gender and job status.

The questionnaire was in Chinese language and was hosted on wenjuanxing (wjx.cn), the most widely used online survey platform in China. It went live on 14th July, 2019 and was closed on 24th July, 2019. It was distributed via social media such as WeChat, Weibo and some online forums like Xiaomuchong.com and Scien-
cenet.cn. A total of 347 questionnaires were received, among which, 15 of the feedback were excluded as incomplete or unqualified, so in the end, 332 were reminded for analysis.

At the end of the questionnaire, respondents were required to provide their background information. If they skipped any of those questions, or indicated that they were not Ph.D. students, the questionnaire would be invalid. Based on these filter mechanisms, we believed that all respondents were Chinese Ph.D. students who were pursuing a doctorate degree.

Table 1. Diversify of the respondents

Background	Options	Number	Percentage
Gender	Male	181	54.52%
	Female	151	45.48%
Institution	Top University	238	71.69%
	Ordinary University	65	19.58%
	Scientific Institutions	29	8.73%
Research experience	Less than 2 years	83	25%
	2-5 years	178	53.61%
	More than 5 years	71	21.39%
Discipline	Natural Science	91	27.41%
	Social Science	77	23.19%
	Engineering	75	22.59%
	Humanities	58	17.47%
	Medical Science	22	6.63%
	others	9	2.71%

The result indicated that 4.22% (n=14) of respondents were exchanging or visiting in other countries, including Australia, Japan, UK, Republic of Korea, Canada, the USA and so forth. In terms of their university levels, more than 70% were from top universities, while only 20% of respondents from ordinary universities. Top universities were those which listed in "Project 985" and "Project 211" initiated by the Chinese government in the 1990s. These universities were thought as the first class universities in China. Ordinary universities were the secondary universities but distinguished

themselves from the higher vocational schools and technologies colleges. Sample size difference was because the operators of this research were from top universities, so the questionnaire was spread in their own social groups which mainly in the top university circle as well. To some extent, this research was more suitable to explain the perception of predatory journals among Chinese Ph.D. students in top universities.

4 Results and Conclusions

Questions were set up to cover three matters containing general situation of awareness, cognition about predatory journals and further publishing intention. The following discussions will focus on these matters. The first question divided respondents into two groups, respondents who had heard about predatory journals as Group 1 and those did not as Group 2. And the results discussed separately.

4.1 Chinese Ph.D. Students Know Little about Predatory Journal

The result showed that only 61(18.37%) respondents(Group 1) knew the predatory journals, while the rest 271(81.63%) did not(Group 2). Generally, it reflected how little Chinese Ph.D. students knew about predatory journals whatever their gender, research experience or publishing experience.

Table 2. Significant association elements with the awareness of predatory journals

Awareness of Predatory Journals		Know	Don't know	Total	
Gender	Male	43(23.76%)	138(76.24%)	181	$\chi^2=7.69$; P=0.006
	Female	18(11.92%)	133(88.08%)	151	
Research experience	<2 years	7(8.43%)	76(91.57%)	83	$\chi^2=11.414$; P=0.003
	2-5 years	33(18.54%)	145(81.46%)	178	
	>5 years	21(29.58%)	50(70.42%)	71	
Publishing experience	Have published	57(20.36%)	223(79.64%)	280	$\chi^2=4.69$; P=0.030
	Haven't published	4(7.69%)	48(92.31%)	52	

In terms of diversity, male respondents knew more about predatory journals than females. Respondents with richer research experience might be more likely to recognize exactly what predatory journals were. Respondents who had published their paper in journals had stronger awareness of predatory journals than those never.

61 respondents in Group 1 also answered the question about their information source channels about predatory journal. Nearly 50% of respondents who know what predatory journals are received the invitation e-mails from predatory journals. Figure 1 showed that around 40% respondents found the information of predatory journals

from social media like WeChat official accounts and blogs, it revealed that predatory journals spread widely in scholars' social applications and online communities. Mentors and peers as well as offline advertisements were also important sources to spread predatory journals. Additionally, a respondent chose "others" and said that he saw the predatory journals at the search engine website like Baidu.

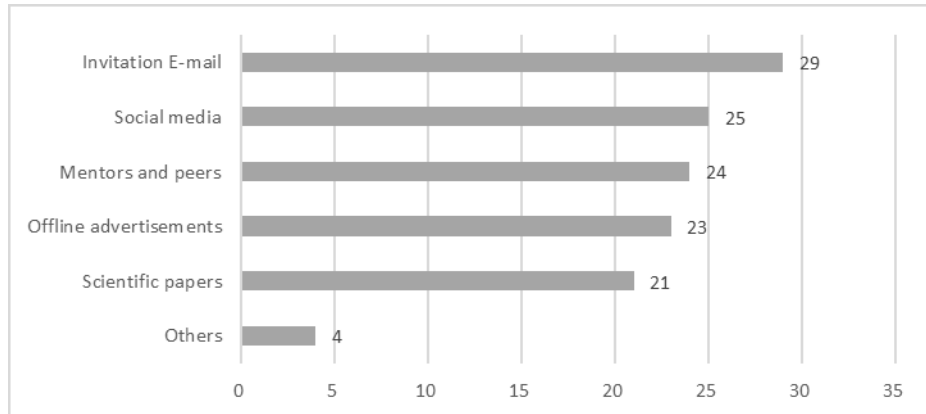


Fig. 1. Channels to get the knowledge of predatory journals

4.2 Chinese Ph.D. Students' Perceptions of Predatory Journals

We set up two multiple-choice questions that described the characteristics of predatory journals from both positive and negative aspects. Respondents in Group 1 were required to answer the questions. The results showed in Table 3. The negative options were set in the gray line while the positive option were in the white line.

For negative aspect, there were no huge gaps among every option which meant respondents who knew predatory journals were, reach consistencies in negative views such as low quality, bad reputation of publishers, high APC, poor peer review, not recognized by peers and colleagues, broad topic range and so on. However, around 80% of respondents thought that predatory journals published and submitted easily and quickly. A quarter of respondents thought that publishing on predatory journals may increase their research paper records. Individual respondents were attracted by open access models, free reading and using, increasing visibility and so on. Additionally, around 20% chose the option of "affordable price and cost-effectively". Because some predatory journals in China offered affordable APC, which may lower than reputable journals, but published a lot to get profit. For example, a Chinese economic journal named *Market Modernization* offered APC for 600 RMB (about 75 dollars) per page that was affordable for even students. This journal published 3 issues a month, and every issue had over 400 pages, about 200 papers. News said from 2004 to 2008, *Market Modernization* had gotten tens of millions of RMB (more than 2.5 million dollars) for profit [26].

Table 3. Positive and negative description of predatory journals

Options	N	Percentage
Quick publishing ↑	49	80.33%
High acceptance ↑	47	77.05%
Low quality ↓	42	68.85%
Publisher with bad reputation ↓	37	60.66%
High APC ↓	36	59.02%
Poor peer reviews ↓	31	50.82%
Not recognized by peers and colleagues ↓	31	50.82%
Broad topic range ↓	30	49.18%
Fake impact factor ↓	19	31.15%
Not indexed by database ↓	19	31.15%
No official website ↓	17	27.87%
Forged editorial board ↓	16	26.23%
Imitate reputable journal title ↓	16	26.23%
Increase personal output records ↑	13	21.31%
Fake ISSN ↓	13	21.31%
Affordable price and cost-effectively ↑	12	19.67%
Increasing visibility ↑	9	14.75%
Free access to full-text content	9	14.75%
Inviting advertisement(emails, online advertisements) ↑	7	11.48%
Indexed by well-known databases and repositories ↑	4	6.56%
Promote scholarly communication, scientific dissemination ↑	4	6.56%

The results indicated that most of Chinese Ph.D. students were confused about the distinction between open access journals and predatory journals. Most positive aspects they thought belonged to open access journals rather than predatory journals.

Among all the respondents(332), 297 of them (89.46%) thought that predatory journals are ubiquitous in China. In this survey, we invited respondents to list predatory journals they know both from and out of China. 19 journals were nominated (See table 4). The most frequently mentioned journal was *PLOS ONE* for four times. Besides, *Scientific Reports* occurred three times. Some famous publishers for open access publishing like MDPI, Frontiers were suffered as well. Chinese predatory journals listed were all in the field of social science and humanities.

Table 4. Journals which respondents listed as predatory

English Journals		Chinese Journals
<i>Plos One</i> (4 times)	<i>IEEE Access</i>	<i>China Collective Economy</i> 《中国集体经济》
<i>Scientific Reports</i> (3times)	<i>Frontiers</i>	<i>China National Exhibitions</i> 《中国民族博览》
MDPI's journals	<i>Materials</i>	<i>Publishing and Copyrights</i> 《出版与版权》
<i>Biomed Research International</i>	<i>Oncotarget</i>	<i>Examination Weekly</i> 《考试周刊》
<i>Applied Science</i>	<i>Tumor Biology</i>	<i>Participation Flowers</i> 《参花》
<i>Medical Science Minitor</i>	<i>Medicine</i>	<i>Journal of News Research</i> 《新闻研究导刊》
<i>Advance in Mechanical Engineering</i>		

4.3 Attitudes and Reasons to Submit to Predatory Journals

Respondents were required to answer the question “Are you willing to submit your paper to predatory journals?” The result showed that 62.65% of respondents said no, it mainly because they were worried about the quality of the journals. Besides, some of them thought that publishing in predatory journals was useless and meaningless and may hurt their reputation and future promotion. Furthermore, some respondents referred to the risk of publishing in predatory journals like copyright offense, academic misconduct and they deemed that scholars should be responsible for their researches. Individual respondents mentioned that the predatory journals were not recorded in reputable indexes and repositories, which might not in compliance with their graduate conditions, mentors’ requirements or assessment systems.

For the rest of 124(37.35%) of respondents, the majority of them said that they would probably submit their paper to predatory journals since they were under high pressure to reach their tasks like the records of their research paper, graduation and promotion qualifications. Some of them explained that if there were no specific requirements for publication in their institutions or their work were not good enough to publish in reputable journals, they would like to try easy-published journals. Unexpectedly, around 10% respondents thought that they were not confident enough to submit their paper to reputable journals because of the low-identify of their research fields and their bad English writing abilities. They were afraid of being discriminated by reputable journals. 12 respondents were recommended by mentors and peers to submit their paper to predatory journals.

5 Discussion

The results suggested that most of Chinese Ph.D. students had limited knowledge about predatory journals, as they mixed up predatory journals with open access journals. They knew predatory journals mainly from e-mail, social media and even unofficial and unauthorized search engines. Chinese Ph.D. students might simply regard the journals with low quality, published quickly and author-paid publishing as predatory journals. Even some of them thought that the mega journals or journals published by open access publishers were predatory journals. Besides, some leaders or mentors were confused by predatory journals, which had similar titles with reputable ones, and they recommended these journals to Ph.D. students. For further publishing intention, due to the assessment systems in China or qualifications for graduation and promotion, some Ph.D. students had published or might be likely to submit their paper to predatory journals.

In conclusion, this research was a pilot studies to investigate the awareness of Chinese Ph.D. students on predatory journals. In the future, we are about to explore the relevant factors which affect the cognition and submission behaviors of Chinese Ph.D. students on predatory journals. In the end, we would like to make more people distinguish what predatory journals are and for them to not be deceived anymore.

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