ABSTRACT
Scientific conferences, once deemed essential in scholars' lives, are now converting into a high-profit business. These predatory conferences are often organized by some profit-making predatory publishers or manufacturing companies for marketing their product or luring young researchers and scientists to submit their research manuscripts to these so-called predatory journals. Various tactics are used by these conferences to extract money from the researchers and students such as organizing conferences at attractive tourist places with multidisciplinary scope, invitation to submit a research paper to be published at the earliest or to become part of an editorial board/editor-in-chief. It should be realized that these predatory conferences do not provide any benefit to registering individuals for the development of science. The only remedy to expose and stop the business of all such predatory conference organizers is by creating awareness among young scholars and researchers, regarding these predatory conferences and the demerits of attending them, through the established medical and dental institutions, along with specialized associations and societies. A zero-tolerance policy should be created to ban such conferences with a refusal to provide promotion or funding to scholars or researchers attending these conferences. Hence, this narrative review aims to create awareness regarding these predatory conferences, the tactics used by them to trap researchers and ways which young researchers and academic scholars can use to delineate them from legitimate ones.

Key words: Access to information; conference; electronic mail; peer review; predatory behavior; publishing; research

Introduction
It is a matter of immense pleasure for scholars and researchers to conduct research and disseminate its findings in specialized conferences and gain crucial feedback from the expert peers in the respective field. A legitimate conference also helps to gather esteemed and specialized researchers to share their expert views on a theme, in particular, thereby providing learning opportunities for the students.[1] Scientific conferences are essential for scholars and researchers since they act to create communication, provide a platform for sharing ideas, and even help young scholars and independent researchers to understand recent development and trends. Specialty conferences, on the other hand, helps to gather essential academicians and researchers of that field to share expertise, their study results, and experience in the particular field while general conferences provide a multidisciplinary platform for educators and researchers of...
different fields to discuss their research findings and look for fruitful research collaboration opportunities.[5]

When a student or a research participant submit any paper or poster presentation in any of the conferences, they must submit a prescribed word limit abstract. These abstracts should not only provide the gist of the entire study but they should also be simple and easy to understand. In general, an abstract submitted for a legitimate conference is selected by peer reviewers based on specific established criteria. A legitimate conference organized by specialized fields usually publishes the submitted peer-reviewed abstracts in their souvenir or a supplement issue of the peer-reviewed journal.[1]

But today, when everything is compromised and maintaining research integrity, is of prime importance fraudulent predatory journals are finding new ways to trap young scholars and researchers to publish their research paying colossal money in the name of either article processing charges (ACPs) or inviting them for predatory conference registration.[3,4]

Although the rise in awareness regarding “predatory journals” is seen in the past few years, absolutely less awareness has been created regarding more recent developments of “The predatory conferences,” which appears to be based on the same deceiving model of predatory journals. These predatory conferences not only threaten the biomedical science and evidence-based medicine but also threatens early career opportunities of learning and academic upliftment of young scholars and researchers.[5]

However, predatory conference organizers are developing new ways to lure young scholars and researchers, to deceive and take unfair advantages of them. There are always some approaches to avoid these traps and predators. This narrative review therefore aims to raise awareness about these unethical conferences, the techniques they use to lure researchers, and the ways by which young researchers and academic scholars can use to delineate them from legitimate ones.

What are Predatory Conferences?

As described by Merriam Webster’s dictionary, the word “Predatory” refers to “anything that is inclined or intended to injure or exploit others for personal gain or profit.” In a similar way, the so-called predatory conferences and their organizers, organize fake predatory conferences to lure young researches or academicians for personal gain or financial profit by getting them registered in a conference by paying huge registration fees, submission of research manuscripts in so-called predatory journals, or even by luring them to buy products marketed by organizers, without meeting the standards of legitimate conference.[6]

Characteristics of Predatory Conferences

Although predatory conference organizers are developing newer ways every day to trap and lure young scholars and researchers to their money extracting conferences, still there are specific subtle ways and characteristics which delineate them from the legitimate ones.

Invitations from personal or free email accounts

It is a common practice of predatory conference organizers to send spam emails from personal or free email accounts e.g., Gmail. These emails are not linked to any organization or specialized association in the biomedical field. Recently, it was observed that these emails are also sent from mail ids linked to organizers, but there is no website linked to it thus making everyone devoid of details of the conference.[7]

Several grammatical mistakes can be observed in these fake and bogus emails ranging from single space error, missing words to complete sentence error. Hence research scholars and academicians should look for all these possibilities to distinguish real from the fake deal.[8]

While predatory publishers and conference organizers target inexperienced scholars and researchers through bulk spam mailings, they can still be differentiated from legitimate conferences as these conferences consist of only a few dozen attendees from a variety of fields, who were scammed and tempted by a publishing bait and a bogus award at these conferences.

Multidisciplinary Conferences

It is known that conferences organized by specialized association or field has a theme for every year and are interdisciplinary, while most fraudulent predatory conferences are multidisciplinary to cover a wide range of topics and different fields to attract and earn money in the name of registration from scholars and researchers of many fields. Such predatory conferences assign different committees for different topics and areas and display the name or photographs of leading and established researchers on their advertising mails or portfolios while these members may be completely unaware of the ascertained topic.[2,9]
Attractive tourist places as a conference venue
Most of the predatory conference organizers try to attract researchers by assigning a famous tourist place as the venue to show the quality of the conference and earn money in the name of site seeing and even in hotel booking prices. While legitimate journals try to set the venue in the cities which may cause less financial burden to participants by lower transportation and hotel booking charges.\[7\]

A fake review process of the submitted abstracts
A fake review process is organized wherein legal specialty and general conferences pay immense efforts to peer review the submitted abstracts, and peer reviewers judge the study based on limited word abstract. Predatory conferences offer a short review process of abstracts between submission and acceptance for the conference, thus providing a substandard review process or bypassing the entire review process. Hence, a short interval between submission of the manuscript and its acceptance for publication can therefore be a robust evidence of low standard predatory journals affiliated with such predatory conferences.\[7\]

Payment Methods
A conference organized by the specialty association or a well-known organization has a specific payment method for registration. These payment methods can be either online payment methods through a specific gateway using dedicated websites utilizing NEFT transfer, debit/credit cards, or demand drafts in favor of specific associations or organizations. On the other hand, most of the predatory conference false claim limited number of seats available to register and ask participants to pay the registration fee as soon as possible by cash payment method or by transferring to personal bank accounts.\[7,10\]

Invitation to speak as speaker
These predatory conferences trap young researchers by exploiting their emotions and luring them to participate and submit their research paper stating that it is their immense pleasure to invite them as a guest speaker or are invited to submit their research paper which will be published in their journal at the earliest if participated in the conference. The use of the term “Global conference” or “International conference” are some common terms used by predatory conference organizers to deceive the researchers and students. However, instead of offering their invitation as an honorarium, they ask to register for a conference paying a huge sum of money.\[7,10-12\]

Unusual award or certificate ceremony
Predatory conference organizers extract money from researchers and students by assuring them awards, which are generally of unusual type by paying a fixed sum of money apart from the registration charges. Examples of some of these awards are the best clinician of the year/state/country, clinic or hospital of the year, best clinic interior of the year, best clinic or hospital website award, heroic award, the superstar of the year award, best speaker of the year award and even best practice of the year awards. These awards are distributed to everyone who registers without revealing who were the participants enrolling for the award, who were the person’s involved in the judgment of the award receivers, and what were the judgment criteria. Enrollment to each awards category is assigned a fixed fee, which increases on the addition of applying to any new category.\[13\]

Prearranged conferences for advertising and marketing of new products or technologies
Most of the legitimate conferences are conducted to share their new experiences, ideas, and technologies. While students participate in conferences to share interesting clinical cases, their newly conducted research findings and to gain knowledge about the recent development in their field. However, on the other hand, it is challenging to determine What are these predatory conferences for? Who are the persons in charge of setting the agenda for these conferences? Are they trying to contribute to evidence-based practice or trying to contribute to better health of the community? Most of these conferences are prearranged by manufacturing companies to advertise and market their product as best, recovering money spent from the participants. The results of these research papers and presentation presented in these conferences are fake and bogus and deceive clinicians and researchers into purchasing and using products which claims to provide excellence in clinical or research practice by manipulating evidence.\[14\]

Virtual Conferences
There is comparatively a new occurrence. These types of conferences are held online e.g., webinar. In these conferences, the participants participate using internet-based applications like whatsapp, skype, or any other video calling applications and do not need any other necessities. Now even such tactics are applied for conducting conferences. Here some predatory conference organizers send emails to researchers and students and ask them to participate in their virtual conferences, which will ultimately lead to the award of certification of attendance and best research paper presentation award.\[15\]

Current Scenario of Predatory Conferences
Although awareness regarding fraudulent predatory journals has raised due to continuous efforts, still there is a lack of
Awareness regarding predatory conferences. Very few studies are seen assessing the impact of these predatory conference organizers and tactics used by these organizers to lure young researchers.

Moher and Srivastava conducted a study in 2015 to show the ugly side of the predatory conference. They analyzed 502 electronic invitations, which were received for 12 months and were analyzed. Out of these 502 invitations, 47.2% were invited to submit a manuscript for publication, 41.8% were invitation as guest speaker or a person to organize a conference, 6.0% to become a member of an editorial board of the corresponding journal, while 0.2% was the frank invitation to become editor-in-chief of a journal, and last but not the least 1.2% were invitations to become guest editor of special issue of the journal. It was immensely important to report that, out of these 502 invitations, 210 were invitations related to potentially fraudulent conferences or meetings according to criteria used to create Beall’s lists of predatory journals and publishers and were invitations with proposed role for invitation to be speaker for 80% of the emails, track mentor for 1.4% emails, 0.5% were the invitation for chair a session for conference while 18.2% were invitation to become delegate.[16]

In 2017, brief communication from Clemons et al. put forward the invitations received for four months by a renowned and well-established medical oncologist. According to the brief communication, 578 emails were received and were felt to be spam. Out of these 578 emails, 33% were to submit manuscripts to potentially predatory journals, 18.9% were an invitation for participating in predatory conferences, and 16.9% were for the advertisement of marketed products. Apart from this 7.8% were also the emails related to journal newsletters for which recipients had never subscribed.[17]

Another beautifully conducted prospective cohort study shows the much uglier side of predatory publishers and conference organizers. The researcher states that during a period of 3 months, 936 spam invitations were received, thus making it to 312/month. Most email invites have been sent to submit a chapter for a book, submit manuscripts for publication in a journal, and even invite as a guest speaker. The common tactics employed by these spam mailers were the use of flattery and inventive terminologies, while some of them claiming to provide the best channel for collaborative research and investors.[18]

Conclusion

Often young inexperienced researchers and students fall prey to these predatory conferences with the inherent desire to achieve outstanding results with minimal effort and time blindfolds. Scientific conferences, which were considered as the most critical events in the lives of young research scholars and students, is now being a nightmare for many. These predatory conference organizers not only breach the trust of young scholars but also have transformed these scholarly achievement events into mushrooming of moneymaking business, which is diluting the biomedical knowledge by fake and bogus awards, researches, and even fake evidence-based practice policies. Hence, it is the need of the hour that awareness should be created for predatory conferences along with predatory journals to curb such deceiving practices. In addition, laws should be created to take strict actions regarding these predatory conference organizers with strict refusal for promotion and funds to those who attend all these conferences.

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Conflicts of interest

There are no conflicts of interest.

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