**Plagiarism: An Ethical Breach**

*What is Plagiarism?*

The word plagiarism has been derived from the Latin word “plagiarius” meaning “kidnapper” or “abductor” [1]. Plagiarism may be defined as “the use of other’s published or unpublished ideas or words or other intellectual property without attribution or permission, and presenting them as new and original rather than derived from an existing source” according to World Association of Medical Editors (WAME) [2]. Plagiarism may be either intentional or unintentional. Intentional plagiarism occurs when there are changes of author being benefitted from conducted such a breach [3]. Intentional plagiarism is further categorized as into several types viz. plagiarism of ideas, plagiarism of text, mosaic plagiarism, and self plagiarism [4]. When an author simply uses the idea of another researcher without copying any words or phrases, it is referred to as plagiarism of ideas. Copying a portion of the text without acknowledging the source is referred to as plagiarism of text. Mosaic plagiarism includes copying of both ideas as well as portions of text and presenting as them as author’s original work. Stealing one’s own work is referred to as self-plagiarism [4].

Unintentional plagiarism usually occurs due to several reasons such as: the author has like ideas without having the thought of cheating or plagiarizing; lack of writing or understanding skills; and sometimes due to inappropriate citation of the source [5]. Although unintentional plagiarism must not be punishable, most cases face the consequences as those of intentional plagiarism. In
some cases, lack of awareness regarding plagiarism and its consequences may lead inexperienced writers to plagiarize their writings to a varying degree. Although such instances are considered as unintentional, providing awareness is extremely important to avoid plagiarism [6].

**Knowing about Plagiarism: How Often does it Occur?**

Maintenance of ethical code in scientific research is extremely important. This can only be achieved by avoiding plagiarism to the maximum extent possible. Paraphrasing the text or summarizing the ideas are primary steps that can be adopted to avoid plagiarism. However; acknowledging the source from which the ideas/facts have been obtained is a mandate to avoid plagiarism [1]. Authors are responsible to inform the readers of the sources of ideas presented in their paper [7]. Appropriate citation is the key factor in avoiding plagiarism. According to a recently conducted study, 9.2% of the researchers have conducted either one form of plagiarism during their research [8].

A meta-analysis conducted to identify the proportion of researchers who were involved in plagiarism revealed that upto 4.9% of the scientists had plagiarized their research to some extent. In addition, this meta-analysis also revealed that upto 33.3% of the scientists were aware that their associates have involved in this scientific breach however; when questioned on the reporting of plagiarism, upto 29% of the cases were not reported or were not noticed [9]. Although the proportion of researchers involved in plagiarizing their research was not very high, considering the different types of scientific misconduct, plagiarism is quite prevalent. Detecting plagiarism and reporting plagiarism may further help in reducing its incidence.

**Detecting Plagiarism: The Important Know Hows**
Google is one of the ruling search engines available to us these days. We all resort to Google and find the answers to most questions. However; part from Google, there are several specialized software which have been developed for the identification/detection of plagiarism. These software help detect and prevent plagiarism. Using such software not only assists the editors of most journals identify and notify of plagiarism to authors but also help authors identify cases of unintentional plagiarism. The use of plagiarism detection software enables the editors of the journals to identify plagiarism and improve the quality of work being published. These software automatically scan the manuscripts to identify plagiarized portions within the document [10]. Most journals use several specialized software to identify instances of plagiarism to regulate the quality of scientific publishing. In addition to maintaining quality of scientific publishing, journals have the responsibility to maintain the ethical code. The editors of journals use either of the below techniques to detect plagiarism:

- Manual check
- Use of plagiarism detection software such as
  - iThenticate
  - eTBLAST
  - CrossCheck
  - Turnitin
  - Safe Assign

Most organizations use the iThenticate software for the detection of plagiarism. This software compares the document in question with published research articles, abstracts, and uploaded files (if any) available online to detect plagiarized portions in the document [11, 12]. Most journals do
not consider more than 10% of plagiarism detected by these software as acceptable for publication and notify the authors and co-authors in such instances [13].

**Plagiarized? Know the Consequences**

A study revealed that more than 2000 articles have been retracted as a result of plagiarism from PubMed [14]. The Committee on Publication Ethics (COPE) encourages the editors and reviewers to report cases of plagiarism to regulate such instances to the maximum possible extent. The COPE has categorized action to be taken in different types of plagiarism. Table 1 demonstrates the action to be taken in different cases of plagiarism [15].

**Table 1: Consequences of Plagiarism as per COPE Guidelines**

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Action: Submitted Paper</th>
<th>Action: Published paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual theft</td>
<td>Deliberate copying of large blocks of text without attribution</td>
<td>Reject paper Inform author’s institution Impose sanctions (ban author)</td>
<td>Inform author’s institution Retract paper Impose sanctions (ban author)</td>
</tr>
<tr>
<td>Intellectual sloth</td>
<td>Copying of ‘generic’ text, eg a description of a standard technique, without clear attribution</td>
<td>Either reject paper or Instruct authors to rewrite plagiarized text</td>
<td>Retract paper</td>
</tr>
<tr>
<td>Plagiarism for scientific English</td>
<td>Copying of verbatim text often from multiple sources</td>
<td>Instruct authors to rewrite plagiarized text</td>
<td>Retract paper</td>
</tr>
<tr>
<td>Technical plagiarism</td>
<td>Use of verbatim text without identifying it as a direct quotation but citing the source</td>
<td>Instruct authors to credit verbatim text / identify direct quotations properly</td>
<td>Retract paper</td>
</tr>
</tbody>
</table>

Please note that the content in the above table has been taken from the COPE discussion paper [15].
According to the COPE guidelines, a submitted manuscript with substantial plagiarism will be rejected by the journal if the authors fail to revise the manuscript as per the expectations of the editor of the journal or if the authors do not respond to the editor’s request for revision of the manuscript [16]. In addition, when clear plagiarism has been detected in a published manuscript, the editors hold the right to retract the manuscript after communicating with the authors in this regard [17]. In an article published on plagiarism by the Indian Journal of Psychiatry, the authors mention that substantial amount of plagiarism in an article is usually addressed by a committee conceived by the Editor. The members of the committee hold the rights to inform the heads of the departments the authors and co-authors belong to regarding the plagiarism. In addition, the authors and the co-authors may be blacklisted from future submissions to the same journal and the journal may consider publishing an apology, statement, explanation, or retraction based on the type and extent of plagiarism identified in the article [18].

**Conclusion**

Plagiarism is not just a case of stealing or fabricating ideas already reported by another researcher, it contributes to a significant amount of breach in scientific ethics. Plagiarism has a greater impact on quality of research being published. Avoiding plagiarism also adds value to the quality of publications available to the researchers. Although the concept of maintaining optimal ethical code is not new in the scientific community, more stringent rules are extremely important to reduce the prevalence of plagiarism cases.
References

17. COPE, *What to do if you suspect plagiarism (b) Suspected plagiarism in a published manuscript*.