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IP Annals of Prosthodontics and Restorative Dentistry

Journal homepage: <https://www.aprd.in/>

## Editorial

# Points to ponder in the field of research & publication

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## ARTICLE INFO

### Article history:

Received 20-09-2022

Accepted 28-09-2022

Available online 30-09-2022

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It gives me great pleasure to write a foreword for this esteemed journal performing remarkable in the field of Prosthodontics. Having spent over a decade in the specialty urges me to pen down a few observations.

Over a last few years, there has been a tsunami of publications in terms of original research, clinical reports or the review papers. This can partially be attributed to the fact that many government and private dental institutions have made the scientific publications, a mandatory prerequisite for promotions and are also considered a measure of one's successful academic profile. This is leading to undue pressure on academicians as well as students thereby resulting in substandard and plagiarized content. This is also causing a paradigm shift in the process of dealing with a clinical scenario. Contrary to the treatment option that can be most beneficial for the patient, it is governed by the paper that can be produced out of the whole exercise. The clinical decision making process based on differential diagnosis, exploring multiple treatment options and finally choosing the optimum modality is slowly fading out.

Witnessing the current research conduct and writings, compelled me to take a step back and analyse the research trends in vogue, in the field of dentistry. Several papers have been written in many indexed and non indexed journals scrutinizing the same by filtering the existing database. The papers have analyzed the scientific activity of dental sciences over the last few decades.<sup>1</sup> It is documented that

number of publications have doubled in fixed time periods, based on Solla-Price's seminal work on the exponential growth of science.<sup>2</sup> But the giant question is, has the dentistry research evolved during recent decades and if so, how? Has the quantity or the quality of dental articles changed, and, if so, how?

Various areas in the field of biomedical science and research that need pondering and deliberation upon are-

### Selection of Original and Relevant Research Topic

The selection is generally based on the ease of conducting trial rather than an attempt to know the lesser known. The topics are chosen as a subsidiary of something already researched upon, by merely modifying a parameter or so. An attempt should be made to establish something not worked upon earlier by identifying the problem area in the designated field which is of clinical relevance

### Nature of the Research work Being Undertaken

The most rampant recent trend in practice is the survey based cross sectional studies evaluating the efficacy or perception of a particular population towards a particular modality. This can be a great tool if the sample size is large, population selected represents different categories and the questions measure the specifics intended; quantitatively not merely qualitatively.

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### Small Sample Size

Clinical trials being done on very small sample size which reduces the power of the study. This generally happens due to shortage of time, thereby selecting fewer subjects which doesn't really yield any statistically significant positive or negative results. The sample size should be derived by statistical calculations and if it is small, should be reported as a pilot study.

### CBCT Based Studies

To re-establish what is already known and to derive correlations between various Prosthodontic landmarks and features, CBCT based studies are done.

### Unreported Negative or Statistically non Significant Findings

Pressure on the operator to achieve significantly positive results is so much that he does not really pay attention to the process; sample size calculation, selection, randomization, elimination of bias, designing a strict protocol, considering the attrition of sample size, a robust evaluation system and reporting. Negative results are of as much importance as the positive ones.

### Publications in Predatory and non Specialty Journals

With the publication surge, authorship and collaborative efforts with other disciplines,<sup>3</sup> part of the production is published in non-specialty journals. On the other hand, the loss of unitariness in dental knowledge,<sup>4</sup> could be leading to a potentially irreversible differentiation process, splintering knowledge into numerous isolated sub-disciplines and specialties. Thus, attempts at a comprehensive portrayal of ongoing scientific research and innovation in the dental sciences have become enormously complex, thus requiring new methodologies.

It is reported that the scientific output in dental sciences is growing in number of yearly articles published, in specialty and non specialty journals; especially the latter which could either be due to journal saturation in specialty submissions, forcing authors to publish in other categories, or to greater multidisciplinary and collaboration with other branches of science. The number of authors has changed markedly from the modal value of 1 to 4. The co-authorship increase could be related to funding, to author productivity,<sup>5</sup> to university publication requirements for promotion, and to increased

competition for scientific-research grants.<sup>3</sup> Furthermore, collaboration can improve clinical and administrative relationships with other specialties and is needed for long term follow-up studies.<sup>6</sup>

### Conflict of Interest

Another major concern is the research being guided by the sponsors leading to manipulated and biased data.

In this Evidence based era, the medical and dental fields are governed by the research and clinical trials being done in particular aspects. Hence it should be a conscious decision to conduct the research with utmost sincerity and to report the facts, as produced without extrapolation and plagiarism. This will result in an original research pool which will be beneficial to the human kind in the years to come. It is also the responsibility of the academicians to inspire and guide the young researchers to conduct original and genuine research with clinical relevance.

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**Cite this article:** Prakash P. Points to ponder in the field of research & publication. *IP Ann Prosthodont Restor Dent* 2022;8(3):130-131.