

Letter to Editor**Statistics for dental researchers; part 1: Introduction***Arash Shahravan DDS, MS<sup>1</sup>, Mohammad Reza Baneshi PhD<sup>2</sup>***Abstract**

Learning statistics is a necessity for dental researchers. Due to daily dental science expansion, dental researchers have to study new papers in recent dental journals to remain up to date. On the other hand, knowing principles of statistics helps better understanding of the articles. Some authors revealed that knowledge of dentists about basic topics of statistics was poor. Therefore, in this series of articles, we will discuss some statistical topics as self-learning tool.

**KEY WORDS:** Dental researcher, statistics, epidemiology.

J Oral Health Oral Epidemiol 2012; 1 (1): 1-2

“**K**nowing statistics is essential for dentist”. This is a typical and common sentence in some articles in dental journals which discussed the necessity of learning statistics for dental students and dentists.

We also believe in this topic because of the following reasons:

1. Due to the science explosion, recently the necessity of remaining up to date in dental literature is widely accepted. Dentists must review new articles in scientific dental journals to be informed about new progresses in this field. It has been accepted as a general rule that knowing the basic principles of statistics such as descriptive statistics, simple analytical tests, and the concept of p-value can help readers to better understand the whole concept of an article.
2. According to scientific committees such as American Dental Association, to improve the concept of “Evidence-based Dentistry” (EBD) and to make it accepted as a new method in patient management, the ability of finding the “Best Evidences” and “critical appraisal” of scientific

articles are essential adjunctive topics in dental education. Obviously, statistics helps in this regard.

Furthermore, there are some researches which showed the lack of knowledge of principles of statistics in dentists. For instance, Scheutz et al. evaluated the knowledge of a group of Danish dentist about some elementary concepts of statistics by a multiple choice questionnaire. They found that dentists’ information was so low that they could not have a good conclusion when they were facing a statistical analysis.<sup>1</sup> Haron et al. evaluated the knowledge of some dentists in Kuwait and showed that their knowledge about some EBD concepts such as P-value, confidence interval or odds ratio was poor.<sup>2</sup>

As there is a few numbers of self-learning packages in statistics for dental researchers which consist of oral health-related examples, we decided to publish some statistical reviews in current journal.

This series consists of following statistical topics:

1. Descriptive statistics
2. Parametric statistical analysis
3. Non-parametric statistical analysis

<sup>1</sup> Associate Professor, Kerman Oral and Dental Diseases Research Center, Department of Endodontics School of Dentistry Kerman University of Medical Sciences, Kerman, Iran.

<sup>2</sup> Research Center for Modeling in Health, Department of Epidemiology and Biostatistics, School of Public Health, Kerman University of Medical Sciences, Kerman, Iran.

Correspondence to: Mohammad Reza Baneshi PhD.

Email: m\_baneshi@kmu.ac.ir

4. Diagnostic tests
5. Systematic reviews and meta-analysis
6. Univariate and multivariable regression models
7. Validity and reliability of questionnaires

There will be also other subjects which will be added to fill the gaps between subjects as it is required. SPSS (Statistical Package for the Social Sciences) is the major statistical software that will be covered to help in explaining the topics and giving some related dental examples. STATA software will be used when it is necessary.

We do not expect dentists who works only as clinicians to thoroughly learn all of the statistical topics in the following articles in next volumes, but it will be beneficial for dental researchers to learn all of them. Therefore, we consider dental researchers as the main readers of this series.

### **Conflict of Interest**

Authors have no Conflict of Interest.

### **References**

1. Scheutz F, Andersen B, Wulff HR. The knowledge and understanding of commonly used statistical terms among Danish dentists and dental students. *Tandlaegebladet* 1988; 92(19): 763-7. [In Danish].
2. Haron IM, Sabti MY, Omar R. Awareness, knowledge and practice of evidence-based dentistry amongst dentists in Kuwait. *Eur J Dent Educ* 2012; 16(1): e47-e52.