

NEED FOR SYSTEMATIC REVIEW AND META ANALYSIS IN ORAL MEDICINE IN INDIA

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ABSTRACT

“The past is the source of knowledge, and the future is a source of hope, love of the past implies faith in the future” so let us discuss and know the need for systematic review and meta-analysis in oral medicine in India. In a trouble-free statement to say, a systematic review is a form of “secondary study”, Meta-analysis can be thought of as “conducting research about previous research”. Systematic review is at the heart of meta-analysis and it stresses the necessity to present a balanced, unbiased and impartial summary of the existing research, enabling decisions on efficacy to be based on all pertinent studies of adequate quality. Often, such systematic reviews provide a quantitative (statistical) estimation of net benefit aggregated over all the incorporated studies; such an approach is termed as meta-analysis, and is often, but not always vital components of a systematic review procedure.

INTRODUCTION

We, being a specialist in “Oral Medicine Specialist” are proud to say that, Oral Medicine is the discipline of dentistry concerned with the oral health care and practitioners are experts in complex oral and dental situations, which are familiar with and talented to take care of many complex circumstances, from the past, till today & forever....this is mainly probable once the specialist is rationalized with the current trends when compared to past and its potential outcomes and effects. For this motive systematic review must take, in identifying, evaluating and interpreting each available research relevant to a particular topic area, or phenomenon of interest [1].

In India for many of the oral medicine specialists, it is frequent to locate that several trials have attempted to contradict similar questions in relation to clinical efficiency. For the best example to say, “How Well the Newer Treatment Modalities Demonstrate Significant Benefits When Compared to Conventional Treatments”

frequently many of the individual trials will be ineffective to demonstrate a statistically significant disparity among the two treatments modalities. But, while the results from the individual studies are collective by means of suitable techniques (meta-analysis), significant benefits of treatment may be revealed. One of the best examples of this is that, a retrospective review of the evidence on the effectiveness of “Acupuncture: An Alternative Therapy in Dentistry and Its Possible Applications as a traditional Chinese medicine” meta-analysis regarding the study had conducted at the ancient time and in the Geneva WHO 2003 report [2], acupuncture has been proven through controlled trials, to be an effective treatment for orofacial pain in dentistry, but many of the expert oral physicians remained ignorant of its benefits for several decades, in fact till today, and patients were not given an effective therapy, so meta-analyses are currently a hallmark of evidence-based dentistry.

As an oral medicine specialist all of us know the well-known fact that “Mouth Is The Mirror of the Body & Oral Health Predicts Over All Health”, as the time is advancing from past to till date, numerous newer oral manifestations were identified, because of multifactorial or mysterious causes by the Indian researches and oral

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physicians, but every expert specialist is not updated with the current manifestations for the purpose of comparative studies and for better diagnosing the patient, this is because of lack of inappropriate systematic review & meta-analysis.³ Therefore practitioner can congregate the statistics in a systematic and concise way and utilize these facts in order to arrive at the individual diagnosis necessary to make case diagnosis.

It should come as no surprise that, the health care systems of Indian is different in many ways from other countries, but what may be surprising is that, each country can learn from the other as it pursues improvements in health care system. So by conducting systematic review & meta- analysis oral physician can be updated with similarities and dissimilarities between the countries for the statistical analysis and utilizing the data for comparative studies [4].

India is the seventh largest country by area, the second most populous country with over 1.2 billion people, and the most populous democracy in the world. Different kinds of people are living in different parts of the country and differ from each other in many ways, and having effected differently at different places, at different timings with different diseases definitely. So the detailed systematic review and analysis of geographic pattern of oral diseases may play a central role in descriptive epidemiology, and has led to some distinguished etiologic insights. The methodologic challenge is obvious to construct objective, statistically valid analysis of geographic distribution in ill-health and its determinants, with meticulous emphasis on developments to unite the best features of individual level and ecologic studies. In this scenario systematic review and meta-analysis play a major role, otherwise oral medicine experts may be lagging behind with the geographic distribution of diseases at different parts of the country. One of the best suitable examples of this is that, very little work is being done in the field of geography of oral cancer in India, partly due to the limitations in the availability of systematic incidence data [5].

BENEFITS OF DOING SYSTEMATIC REVIEW AND META ANALYSIS IN ORAL MEDICINE

- It is feasible to unite data using meta-analytic techniques, escalating the probability of detecting authentic effects that, individual minor studies are incapable to perceive.
- Can provide information about the effects of some incidence across a broad range of settings and experimental methods.
- Outcome can be generalized to a large group of people.
- The presence of publication bias can be investigated and can be modified accordingly.

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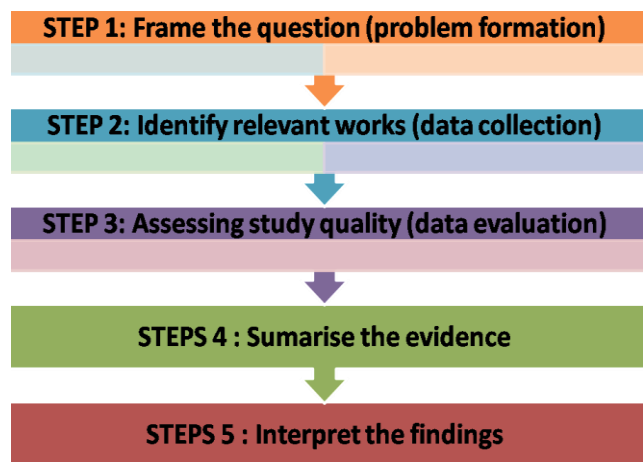
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- The precision and accuracy of estimates can be enhanced as larger data is used and in turn, might increase the statistical power.
- Hypothesis testing can be applied on review estimates [6]

PITFALLS

The risk of unsystematic review and meta-analysis with the only part of relevant studies included may result in bias and a good quality meta-analysis of badly designed studies will still result in bad statistics. This would mean that only methodologically sound studies should be incorporated in a meta-analysis, a practice called “best evidence synthesis”, so meta-analysis carried out on a thorough systematic review can conquer these dangers offering an unbiased synthesis of the experimental data [7].

In order to prevent these pitfalls or risk of unsystematic review and meta-analysis, one should follow some of the guidelines and important steps in conducting a systematic review. Those include [8].



Finally to conclude, in distinction to the conventional or narrative review, systematic reviews employ a more meticulous and definite approach to review the prose in a specific subject and Meta-analysis offers a balanced and obliging way of dealing with a number of practical difficulties that beset anyone trying to make sense of effectiveness research, so concise summary of the findings, describing current knowledge and offering a rationale for conducting future research.

We Being Oral Medicine Experts Let Us Transmit The Best Possible Reviews & Analysis For A Better Future & To Be A Unique Speciality Forever To Serve The People.....



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