

The magic sextet of clinical research

O sexteto mágico da pesquisa clínica

Guilherme Benjamin Brandão PITTA¹, Francelise Pivetta ROQUE², Marina Regueira PITTA³

RBCCV 44205-1064

Abstract

This article approaches some general guidelines for evaluating clinical research (design, execution and reporting), including the initial research “idea” (or question to be answered), “hypothesis and objective” which should be aligned with the “primary variable” to be investigated and the “conclusions” reached on the basis of the results of the study. One cannot forget that the study “title” should reflect the “idea” and relative “objective” of the study and the “conclusion”, emphasizing the “Magic Sextet of Research”.

Descriptors: Biomedical research. Journal article. Investigative techniques.

Resumo

Este artigo aborda orientação geral para a avaliação da pesquisa clínica (planejamento, execução e divulgação) desde a sua “idéia brilhante e a pergunta de pesquisa”, “hipótese e objetivo”, que precisam estar alinhadas com a “variável primária” a ser determinada e, por sua vez, coincidindo com a “conclusão” do trabalho de pesquisa. Não esquecemos o “título” do trabalho de pesquisa que reflete a “idéia brilhante” que você teve e corresponde ao “objetivo” alcançando, relacionando-se com a “variável primária” e coincidindo com a “conclusão”, enfatizando como “O Sexteto Mágico da Pesquisa”.

Descritores: Pesquisa biomédica. Artigo de revista. Técnicas de pesquisa.

INTRODUCTION

When participating in evaluations of scientific articles, the works of scientific initiation, end-of-course assignment, the boards of master’s degree dissertation or doctorate thesis, we always focused on the main components of these works, by understanding as the most important, “*the*

brilliant idea and the research question”, the “*hypothesis*”, the “*purpose of the study*”, the “*primary variable*”, the “*conclusion*” and the “*title of the research study*”, composing “*The Magic Sextet of Clinical Research*” (Figure 1), that means the “alignment”, or that is, the direct and consecutive relationship between steps of the scientific publication.

1. PHD in Vascular Surgery by the Federal University of São Paulo (UNIFESP). Adjunct Professor of Surgery of the Health Sciences State University of Alagoas (UNCISAL).
2. Master’s Degree in Human Communication Disorder (UNIFESP). Assistant Professor of Phonoaudiology (UNCISAL).
3. Scientific Initiation Student (UCB). Medicine Student (UCB).

This study was carried out at the Health Sciences State University of Alagoas (UNCISAL), Campus Governador Lamenha Filho, Maceió, AL, Brazil.

Correspondence address:
Guilherme Benjamin Brandão Pitta
Rua Desportista Humberto Guimarães, 1081/702 - Ponta Verde –
Maceió, AL, Brazil -CEP 57035-030.
E-mail: guilhermepitta@lava.med.br

Article received on March 4th, 2009
Article accepted on March 24th 2009

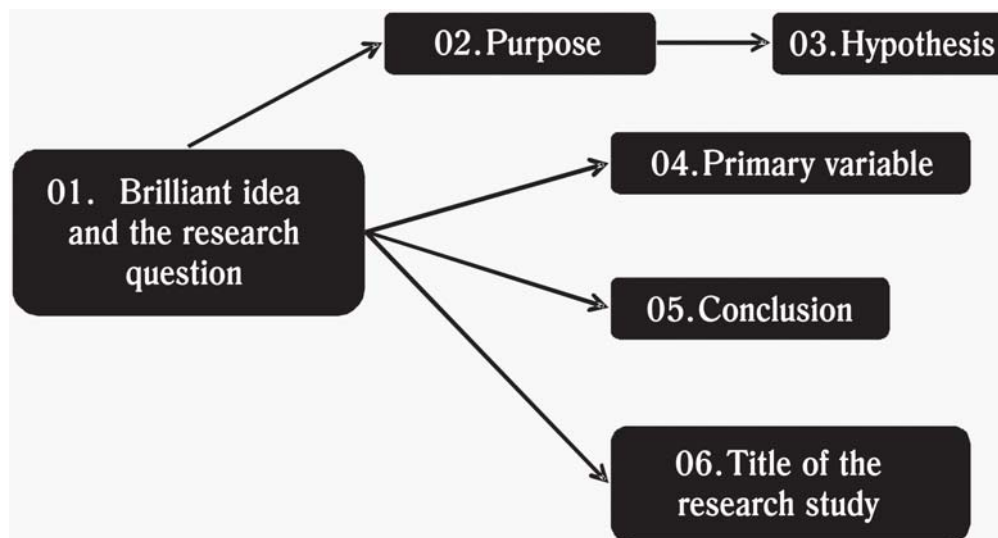


Fig. 1 - "The Magic Sextet of Clinical Research"

These important components are [1]:

1. The "Brilliant idea and the research question";
2. The "Hypothesis";
3. The "Purpose of the study";
4. The "Primary variable";
5. The "Conclusion" and
6. The "Title of the research study".

These are important factors, and they must be well aligned and present in the disclosure of research, both as an end-of-course alignment, scientific article, master's degree dissertation or doctoral thesis, and mean a great step for an appropriate scientific study and the possibility of publishing of the original article in a scientific journal of proven quality.

Currently, there is a demand for quality of these articles by these scientific journals for acceptance for publication, since they are being subjected to increased criteria of demands for evaluation by CAPES (Coordination for the Improvement of Higher Level Personnel) for classification and qualification and by SciELO (Scientific Electronic Library Online) for online publication of these scientific articles [2].

All these components of "Magic Sextet of Clinical Research" participate in clinical research and its publication.

Clinical research is a class of activities that uses human beings and animals for experimentation as analysis units, whose objectives are development and contribution to the knowledge that can be applied in patients or healthy individuals in similar clinical conditions [3].

Such researches have results that may corroborate or contradict directly clinical practice by using clinical irrefutable variables [3].

Clinical research is important for generation of knowledge, publication of results and contribution to public health of our country. It is also important for those already familiar with this methodology, by providing update and awakens to new themes, behaviors and learning of their graduate and postgraduate students [4].

It is up to the physician the interpretation of these results to apply them to their patients. The ideal would be that all clinical researches would be perfect, so that we would not have to worry about their quality and we could, in the decision making process, use the confidence interval of 95% of their results [3].

HOW DO WE PERFORM THE CLINICAL RESEARCH?

To perform a scientific research, we must start from three basic prerequisites [4]:

1. Knowing well and to be competent in the subject to be researched;
2. Having access and control the sample;
3. Depending on the minimum possible of third parties to perform the research.

We also should appreciate the scientific method and feel motivated for the learning that we may have during this learning process of the clinical or experimental research [4].

The accomplishment of the scientific research and subsequent publication of the results through original article in scientific journal begin with the brilliant idea that we may have from the research question we want it answered.

For example, if we want to know which is the best method for treatment of the thoracic-abdominal aortic aneurysms: open surgery or endovascular treatment, we should propose a scientific study to answer this question, starting from the “*brilliant idea and the research question*”, proposing a “*hypothesis and a purpose of the research*”, according to the plan of intent, review of literature, instruments and procedures tests, finishing with the research project, which contains the proposed “*primary variable*”, corresponding to:

- a) first stage of research planning, followed by:
- b) second phase of research accomplishment finished with the final report and;
- c) third stage of research disclosure, mainly in the form of original article publication [4].

Each research will be composed of three phases: planning, accomplishment, disclosure, consisting the research steps [3] (<http://www.metodologia.org/pesquisa>) resulting in the publication that will be the contribution of the author or authors to the disclosure of scientific knowledge.

CONCLUSION

When we are called to evaluate scientific studies, we always note the presence of “*The Magic of Sextet of Research*” as a starting point for the beginning of this evaluation. If present, such sextet represents a good initiation of the clinical research and appropriate structuring of the course conclusion paper, scientific article, master’s degree dissertation and doctorate thesis.

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