

# *Placebo Papers*

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It wouldn't be strange that when it comes to choosing a magazine for article publication, within the criteria considered by the authors, we would find some that are classified as placebo.

The placebo effect is usually synonymous of something useless within health treatments. It is also used within medical science as a methodological instrument to rule out and even discredit various treatments for being ineffective and/or with adverse effects. While it is true that in the placebo there is no active principle that justifies its use, it is possible to observe actual and measurable effects in people treated with them.

We can identify a large variety of placebo, associated with different traditions, rituals or superstitions<sup>1</sup>. All of them coincide in activating precise neurobiological mechanisms where specific neurotransmitters intervene and relevant areas of the brain, like the prefrontal cortex, anterior insula, cingulate cortex and the amygdala<sup>2</sup>. On the other hand, progress is made on the identification of the genetic biomarkers that point out those who are more prone to respond to placebos<sup>3</sup>. For example, clinical studies show evidence of mechanisms and ways that use the placebo, like in the use of analgesia, that do not differ from those used by the active substances in pain medication<sup>4</sup>. A recent study on E.R patients with severe pain revealed that acupuncture was more effective, quicker and more tolerant than morphine through an IV line<sup>5</sup>.

Even though research has revealed the responses of placebo on the neurobiological pathways, the data suggests that the therapeutical benefits associated with this do not alter the pathophysiology of the disorders beyond the manifestation of the symptoms. The benefits on the symptomatology go hand in hand with a clear emotional and cognitive commitment from both the therapist and the patient and, why not to say, an important

group of society that willingly accepts the positive effects of various substances and treatments. This symbolic efficiency<sup>6</sup>, linked to the commitment of the participants and a mayor sense of control<sup>1</sup>, coincide with what Marqués de Puységur would describe in 1786 as the key elements to the effectiveness of the animal magnetism – a technique developed by Frans Mesmer and precursor of the modern hypnosis that was widely used on the second half of the XVIII century<sup>7</sup>.

The choice that every author makes in regards of where to publish also complies with tradition and academic culture properties. That's how we find that the more an article is cited, the bigger impact it has, assuming that a bigger impact means, without question, a better quality magazine. This incorrect but, commonly accepted idea (sometimes supported by editors) could be understood as a type of placebo when it comes to making the decision of where to publish<sup>8,9</sup>.

In the same way we observe the relevancy of the way of administration, color, form and price of placebo when it comes to obtaining a higher therapeutical response with the patients<sup>10,11</sup>, recent studies show how the credibility of a cognitive neuroscientific article will be higher if the text is accompanied by images of the brain<sup>12</sup>. The use of graphical elements and data tables in a psychological article are also associated with the approach of the field's most difficult topics<sup>13</sup>.


Every scientific article is read in a subjective way where not only we evaluate the topic but also the credibility and prestige of the magazine where its published. This type of reading remains as evidence when its content is used as an argument, in addition to the origin and prestige of the magazine. While it is a common error to consider the impact factor and other metrics, which are constructed to measure the efficiency of the magazine as a way to

point out quality and scientific relevancy in an article and/or author, the necessity to perfect these measurements and educate their real scopes are also recognized<sup>14, 15, 16</sup>.

Regardless of this necessary improvement, as long as the common and widespread use of these bibliometric indicators in a institutional and governmental level, their placebo effect in some behaviors of many investigators will be inevitable.

This tendency could be related to the fact that the magazines that publish are considered as a goal and point of arrival instead of a transit area, i.e. the support from which their ideas and discoveries are spread seeking to reach as many potential researchers and professionals as possible. There is no doubt that the editors contribute to this view by focusing their worries on more and better index over their increasing number of appropriate readers for their publication. Fortunately, with the increasing sustained and professional use of social media<sup>17</sup>, and the rise of the *Megajournals*<sup>18</sup>, we're in the presence of a change in the concern of the investigator. I.e. from the way the article will be received by a target magazine to a greater interest to a greater interest in how the article will be received and used by their peers, whether they are investigators, professionals, teachers, students, editors, government and general public<sup>19, 20, 21</sup>.

If we consider that publishing in a magazine with high impact factor does not guarantee a great visibility or citation<sup>22</sup>, the challenge will consist in that no article published in peer-reviewed journals, will be viewed as insignificant, being as all of them will at least give necessary information to improve the precision in the results of the increasingly meta-analysis of behavioral studies. With the appearance of alternative metrics and digital resources<sup>23, 24, 25</sup>, focus shall be put on the article and the data, instead of the magazines as a whole.

Beyond academic productivity, scientific literacy, to understand that the prestige or influence of an investigation cannot be reduced to only results and above all, not be seduced by the placebo effects of the article, seem to be the new challenges for authors, readers and most importantly, the editors. 

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