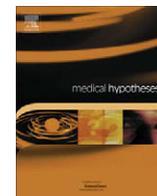




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Meta-meta-placebo and -curabo: You might get better just by reading this paper

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SUMMARY

Three separate but related ideas build on van Deventer's concept of the "meta-placebo" effect in which placebo effects are hypothesized to help patients even when patients know they are receiving a placebo. First, a method is proposed to experimentally validate the meta-placebo effect without lying to experimental subjects. Second, the idea of a meta-placebo is extended to a condition where patients experience many of the elements of placebo treatments that are hypothesized to cause placebo benefits, such as an optimistic prognosis by a doctor, but patients do not actually take a placebo pill: a "curabo effect". The final section proposes that patients might be able to experience enough placebo- and -curabo-related treatment elements to gain a beneficial effect without either a pill or a doctor. Instead, simply having the knowledge that one can derive medical benefit from placebo, meta-placebo, and -curabo treatments, and without medicine, might in itself suffice to cause some to feel better: the hypothesized meta-meta-placebo and -curabo (or "meta-bo," for short) effect.

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Introduction

What procedural elements are necessary to cause a placebo benefit? Taking a pill or experiencing some medical treatment is typically one piece of the equation, and knowledge of the possible effect of the treatment is another: subjects who think a neutral treatment might help feel better (the placebo effect) and those who think the treatment might hurt feel worse (the nocebo effect [1]). However, van Deventer proposes that placebo benefits might occur even if doctors are honest and forthcoming and tell patients that the treatments are placebo (the meta-placebo effect [2]), and Graz et al. suggest that optimistic prognoses might cause benefits (a self-fulfilling prognosis or "curabo" effect [3]). These recent theories show that the necessary and sufficient conditions to cause placebo benefits are far from fully understood, and imply that there might be a range of placebo benefits yet to be harnessed that could help patients with various medical conditions.

To my knowledge, we have theories, but not yet experimental confirmation, that neither false beliefs nor sham treatments are necessary for patients to experience placebo benefits. In the first two sections below, experimental methods are proposed that could validate the meta-placebo and -curabo effects without deception on the part of the experimenters (as explained below, van Deventer was at a loss for how to validate the meta-placebo effect without lying to subjects). In the third section, furthering the concepts behind the meta-placebo and -curabo effects, a novel treatment is outlined that might cause placebo benefits but with neither doctors nor pills as part of the procedure. Instead, placebo benefits

might result in part from the very knowledge that placebo benefits can occur without doctors or pills: a hypothetical "meta-bo" effect.

Testing the meta-placebo effect without deception

Van Deventer's [2] hypothesized meta-placebo effect runs into an ethical paradox: how can a doctor honestly recommend a placebo without knowing that the meta-placebo effect is valid, and how can we experimentally test the validity of the meta-placebo effect if the validation trial does not include the experimenter, like the doctor, honestly telling subjects that treatments are placebos and will produce a benefit? As a result, van Deventer ironically concludes that "[a] correctly performed experiment will involve lying to the patient:" for the sake of validating the meta-placebo effect, experimenters would tell subjects that a placebo pill will help them, and, if it indeed does, then doctors could subsequently honestly recommend a placebo to patients. However, while feasible, it might be suboptimal and unnecessarily ironic to validate the meta-placebo effect, which reduces deception, by using deception. Below is an alternate path to validate this effect without deception.

The essence of the meta-placebo effect rests more in patients knowing they are taking a placebo than in doctors lying or telling the truth. Placebo effects might be strengthened by a respectable doctor's honest and hearty recommendation, but placebo effects occur even in the face of uncertainty, such as when people know they are receiving either an experimental medicine or a placebo (neither of which the doctor can vouch for as previously validated) as well as when patients do not consult a doctor at all, such as when people buy homeopathic medicine from a health-food store. The meta-placebo effect might therefore initially be validated without the experimental element of an honest recommendation by a doctor.

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For example, in hypothetical Experiment 1, a group of volunteers who suffer from headaches and who are interested in experimental medicine can be randomly assigned to no treatment or Pill P (labeled “Placebo Pill: Placebo effects are real”). The meta-placebo effect would be validated if Pill P-takers report more improvement than those in the no treatment condition. Then, in Experiment 2, experimenters could (honestly) tell subjects, “The placebo effect is real, and even occurs when patients know they are taking a placebo. You are in treatment group 1, the placebo condition, and your improvement will be compared to subjects in group 2, who receive no treatment. Please have this prescription for a sugar pill filled, take one twice a day for a week, and then fill out this questionnaire.” Even if Experiment 2 does not have every possible element that might aid a meta-placebo effect, such as a respectable doctor’s statement that the placebo effect works even when a doctor informs the patient that the treatment is a placebo, it does include a trip to a doctor, a believable, honest scientific environment, a plausible recommendation, a prescription, and a schedule of pill-taking. Here, even a small positive effect of taking the placebo versus no treatment in Experiment 2 would validate van Deventer’s meta-placebo effect and let subsequent respectable doctors make the honest recommendation that a prescribed placebo will help even when a doctor tells the patient the prescription is a placebo.

Self-fulfilling prognosis/the “curabo” effect

If the element of a respectable doctor’s honest opinion can induce some medical benefit such as relief from pain when a subject takes a sugar pill (the placebo effect), maybe we do not even need the pill. Instead, we might rely on the “curabo” effect, named and proposed but not tested by Graz et al. [2] who found correlational data consistent with beneficial effects of optimistic prognoses on back pain. To create a curabo effect, a doctor might convey to a relevant patient Prognosis P: “in my opinion, you will probably start feeling better now.”

The causal healing power of Prognosis P could be experimentally tested in various ways without deception. For example, volunteer subjects who suffer from headache could each be examined by 10 respectable doctors who report their prognosis to experimenters. Then, among subsets of subjects who are, on average, rated equally likely by the group of doctors to improve, experimenters could randomly assign subjects to hear their prognosis from a doctor who happens to think the subject will get better (Prognosis P) or from a doctor who happens to think the subject’s headache is likely to continue.

If individuals who receive Prognosis P report more improvement than other subjects, the curabo effect would be established. Subsequently, doctors could deliver Prognosis P with straight faces, fully expecting – and, indeed, causing – improvement as a result: a valid, self-fulfilling prognosis. (If the curabo effect were validated, additional elaborations might also test whether the curabo effect holds when patients are fully informed that the doctor is relying for the content of her prognosis on the curabo effect. This would be a curabo effect based in part on knowledge of the (efficacious, real) curabo effect: a meta-curabo effect.)

You might get better just by reading this article

In the placebo effect, patients feel better after taking a sugar pill that they think might be real medicine. In van Deventer’s meta-placebo effect, patients might feel better after taking a sugar pill even though they know it is only a sugar pill, in part because they would know the placebo effect is real. In Graz et al’s curabo effect, a patient might feel better after a doctor gives his opinion that the patient’s condition will improve. The more believable the doctor, the stronger these effects might be, but any knowledge at all of these effects might be enough for some to feel better, without a pill, and perhaps, even without a personalized doctor’s recommendation: a “meta-meta-placebo/meta-meta-curabo effect” (or “meta-bo” for short) might let some people feel better through mere knowledge of the placebo, curabo, and meta-versions of these effects.

This article, this very explanation, might be the pill for some who are able to say, “yeah, I understand the placebo effect and the plausibility of the meta-placebo effect and the self-fulfilling curabo effect: entirely in line with logical, Western, empirical science, I don’t necessarily need actual medicine in order to feel better. And I don’t need a sugar pill or a doctor’s words, either: I am going to start feeling better now.”

A logical extension of the meta-placebo and-curabo concepts, the meta-bo effect relies on knowledge itself and does not need an actual pill or doctor “at the bottom” bolstering each application: knowledge of the plausibility of the meta-bo effect is the beginning of the meta-bo treatment, and feeling better is the hypothetical result.

Validation of the self-fulfilling ability of the ideas in this article to make people feel better could be accomplished by randomly assigning headache sufferers to read this article versus other texts, followed by a measure of symptom reductions. The experiences of paying for and taking pills or a doctor’s soothing voice and white coat might or might not be necessary for placebo and-curabo effects to work at maximum strength, but the mere contemplation of relevant concepts could well be enough to cause similar benefits.

There is potential healing power in proper experimental validation of the meta-placebo effect, the curabo effect, and the meta-bo effect of reading this article, for such validations would bolster knowledge of the plausibility of each treatment – and if none of these treatments turn out to be effective, so be it. To the extent these psychological treatments do turn out to be effective, we might be able to relieve suffering not only with less reliance on superstition, healers, homeopathic medicine, and deception, but also with less reliance on pills and doctors, too.

Good luck, and feel better!

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