

# Placebo and nocebo phenomena: a survey of knowledge and attitudes among psychiatrists, psychiatry residents, and medical students in Croatia

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## Background and objective

Placebo and nocebo phenomena are increasingly a topic of intense discussion, debate, and controversy. Neuroscientific and psychological mechanisms of placebo-nocebo effects are a burgeoning area of study and their potential therapeutic application presents a fascinating challenge to contemporary psychiatry and medicine in general.<sup>[1]</sup> Placebo-nocebo reactions are universal phenomena in human communication and are important components in the clinical treatment and research of depression, and mental disorders in general.<sup>[2]</sup>

**Aim:** To assess mental healthcare professionals' knowledge and attitudes about the role of placebo and nocebo in enhancing resilience, self-healing capacities, and creating positive contextual factors in medical practice.

## Subjects and methods

A 14 item questionnaire was designed to measure knowledge of placebo and nocebo mechanisms and assess attitudes about the intentional use of placebo interventions. The questionnaire contained both open-ended questions and closed ended questions with true/false and multiple choice answers. Our sample comprised 200 respondents (Table 1).

**Table 1.** Patients' baseline characteristics (N=200)

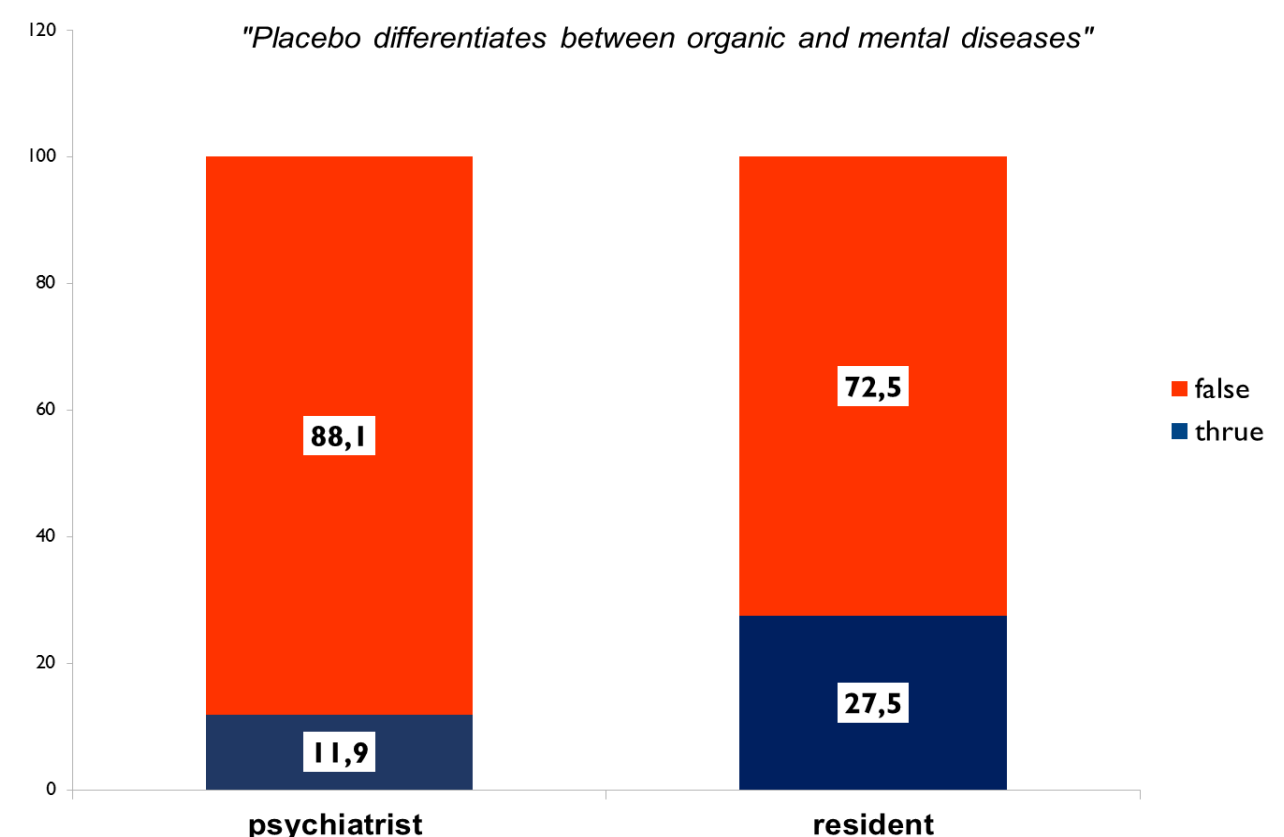
	Psychiatrist	Resident	Student
n	100	50	50
Age	46.02 (32-65)	34.33 (27-49)	23.67 (20-29)
Length of psychiatry service	17.00 (1-42)		
Year of residency		2.75 (1-4)	
Year of study			4.36 (1-6)

## Results

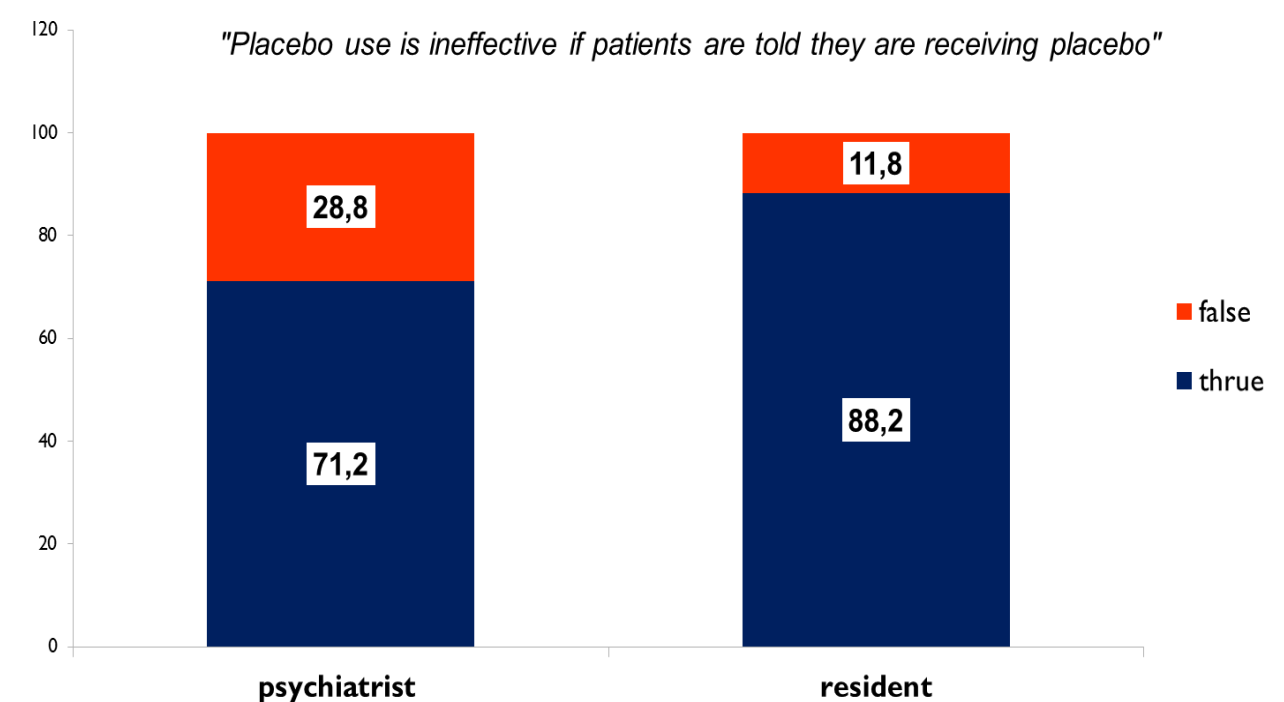
The terms placebo and nocebo were variously defined, with many different meanings attached to those definitions. The variability and lack of agreement suggest a lack of conceptual clarity and less than perfect knowledge of placebo and nocebo. All physicians were familiar with placebo interventions and response. The nocebo phenomenon appears to be shrouded in mystery, unknown and misunderstood to the majority of physicians and almost all medical students.

Many physicians were aware of possible placebo or treatment context effects, but were unsure how to use them in a non-deceptive, transparent manner.

Statistically significant Chi-squared tests revealed that residents, in comparison to psychiatrists (Figures 1 and 2), are more likely to believe that placebo response differentiates organic from psychological disease ( $\chi^2=4.302$ ,  $df=1$ ,  $p=0,038$ ), and are more likely to believe that placebo is ineffective if patients are informed about it ( $\chi^2=4.808$ ,  $df=1$ ,  $p=0.028$ ).



**Figure 1.** Percentages of TRUE/FALSE responses on Item 4



**Figure 2.** Percentages of TRUE/FALSE responses on Item 5

## Conclusion

Knowledge about placebo, and nocebo in particular, remains insufficient among physicians and medical students. Our study exposed misconceptions and various degrees of unfamiliarity with respect to placebo and nocebo mechanisms, and different attitudes toward their ethical application.

We believe that continued educational efforts will help alert healthcare professionals to the potential therapeutic benefits of placebo within the context of creative psychopharmacotherapy. Optimal knowledge and therapeutic clinician patient relationships stimulate placebo responses and prevent nocebo reactions, while anti-therapeutic relationships and lack of knowledge stimulates nocebo responses and prevent placebo reactions. Despite many complimentary theories and a growing body of research on placebo and nocebo response, the application of our knowledge for the benefit of research, clinical trials and routine clinical practice remains limited.