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**Letters to the Editor**

**Response to Letter to the Editor: The application of transcranial direct current stimulation on phantom phenomena**

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I thank you for your letter concerning the pathology linked to the phantom limbs and for the related relationship with the pain that this mental representation arouses (Orrù et al., 2020). The issue adequately falls within the intentions of the MJCP letters to the Editor such as those summarized by Peh & Ng (2010).

It is well known, psychology is gradually consolidating as a science capable of dialoguing with different realities of a structural, functional and pathological order (Conversano, 2019; Hyphantis et al., 2010; Hunter et al., 2014; Merlo, 2019; Settineri & Merlo, 2019). The vastness of the topics covered pushes us to continually confront ourselves with different realities and research needs, which always have in mind the clinic, therefore the diagnosis and treatment of disorders due to psychological and physical factors (Belar, 1995; Rozensky, 1994; Rozensky et al., 2013; Sweet et al., 1994; Tovian et al., 2013).

The clinical implications of this scientific path are really interesting, although the need to investigate the the relationships between subjects and clinicians exists, as well all issues related to the clinicians' education (Caputo, 2013; Caputo et al., 2020a, 2020b; Fregonese et al., 2018; Fusco et al., 2019; Parola & Donsì, 2019; Settineri et al., 2018).

It is evident that these implications involve all the therapeutic alliance figures (Di Giuseppe et al., 2019, 2020), strongly and retroactively influencing the outcome of interventions, diagnoses and therapies (Brunton, 2017; Settineri et al., 2019; Tilson, 2004).

Your psychopathological question can be considered as a bridge between the somatic and the psychic, reducing the alternative positions in a unitary perspective. This fact is fundamental, considering all the research efforts useful to break down the distinctions between mind and body, as in the case of Damasio (1995) and subsequent research data and with particular reference to the phenomenological debates still in progress (Carrier & Mittelstrass, 2019; Frith & Gallagher, 2002; Gallagher, 1986; Motofei & Rowland, 2015, 2016, 2018; Röhricht et al., 2014).

Your consideration of the treated phenomena certainly brings research closer to topics of fundamental importance, which require a consistent study effort. It is surprising how a specific application, such as transcranial stimulation, may be applied in several fields with appropriate technological adjustments. It is equally interesting to suggest to our readers, maintaining the rigor of scientific literature, the way we can propose something interesting in terms of application to the phantom limb phenomenon (Rostami et al., 2020).

Starting from the contribution of Bocci et al. (2019), strongly centered on the theme, it is possible that the discourse assumes inferential characteristics that also allow the reader to compare authors' research experiences directly mastered and data known in the literature and relating to other academic realities (Bolognini et al., 2013; Hesse et al., 2011; Orrù et al., 2019, 2020; Pan et al., 2015; Sattler et al., 2015; Vicario et al., 2019).

The clinical practice to which Clinical Psychology is addressed needs to underline the applicative aspects of the research, indicating first of all the various interdisciplinary areas to which it is addressed and which include the modulation of the psychological effects related to loss (depression) and the plastic organization of the neuronal system (Doan et al., 2015); in fact, even in the latest in-depth reviews, it is known how pain is legitimized in the *mare magnum* of mood disorders both metaphorically and by historical origin of the neurological pathology addressed by Silas Weir Mitchell identified in the context of the American Civil War (Boller & Birnbaum, 2016).

Of course, the studies that followed Mitchell's have increased the insights thanks to all the wars that have followed the author's intuitions. Today the pathologies of the phantom limb have been reduced due to the military origin but are equally represented in the trauma field and this justifies the relative reflections that are placed side by side with the other rehabilitative contributions. The letter that you place as a signal of a therapeutic device aimed at reducing pain

raises questions that go beyond the terms of effectiveness of the instrument, the trans-cranial stimulation, whose practical power is also intuitable for the fewer undesirable effects compared to the family of analgesics.

The bibliographic indications, promptly indicated, let us reflect that the instrument, regardless of the etiopathogenetic articulation, improves the quality of life even if in fact it seems empirically unclear for a *restitutio ad integrum* on the ability to intervene in terms of neuronal networks but it is known in medicine that many successes are linked to empiricism that subsequent demonstrations will be able to modify its explanation parallel to symptomatic relief. Nevertheless, I congratulate you on the clarity in the description of the method which in these cases is the premise of reproducibility and therefore of the comparison with other applicative proposals.

In conclusion, it is expected that new research can expand the data reported by you in a particular way if they come from consolidated clinical protocols.

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