

An infodemiology of neurotechnology? How (mis)information affects end-user risk

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In light of mounting commercial interest and within the current social media culture, it is becoming increasingly hard to sift through the constant flow of information regarding novel technologies and find reliable sources. This is particularly daunting in the context of healthcare neurotechnologies, which encompass numerous tools for invasive and non-invasive diagnosis and therapy. Each of these present specific abilities and risks, some unprecedented, insufficiently tested and regulated (Bublitz, 2023), and often accompanied by vast amounts of information from various sources. The public relies on external mediators and internal capacities to navigate this influx of information and is limited in its ability to assess its quality and make informed decisions about personal use (Buzzell & Rini, 2023). However, without proper awareness and guidance, misinformation can have a detrimental impact on issues such as safety, autonomy, and inclusivity (Levy, 2018; Southwell et al., 2023). Neurotechnology is particularly vulnerable to information-related risks, as it is based on one of the youngest scientific fields - neuroscience- where abundant uncertainty remains (Cohen, 2023), leaving room for much speculation and exaggeration. This paper examines topics relating to the infodemiology of neurotechnology, emphasizing existing and potential threats to users, from misguided self-diagnosis to information fatigue leading to under-treatment, with examples from neuroenhancement, neuroimaging and DBS use (Gaillard, 2019; Schleim & Quednow, 2018). Infodemiology is a term which refers to the study of online health-related data seeking and sources, as well as their effects on health (Eysenbach, 2002), the importance of which was emphasized during the Covid-19 epidemic (Eysenbach, 2020). Within the current information culture, plagued by fake news, information overload and political influences, infodemiologic measures are suggested to be invaluable for understanding and regulating negative effects of many other emerging phenomena impacting human health. Drawing on works from established scholars in the field (Buzzell & Rini, 2023; Levy, 2018, 2021), the discussion will be placed within the framework of epistemic degradation and will outline the challenges and risks the current information environment poses to end-users of neurotechnology.

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