

## **DECOMPOSING THE THERAPEUTIC PROCESS: EASE OF TASK DECOMPOSABILITY AND CONFIRMATORY HYPOTHESIS TESTING**

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**Background:** The psychotherapy session is a context in which it is difficult to decompose and analyse information in parts. Such non-decomposable contexts favor holistic intuitive judgments (Hammond et al., 1987) and constrain the interpretation of subsequent information according to the initially activated scheme (e.g., Gilbert, 1999; Eyal et al., 2011).

**Aims:** The present research explores confirmatory tendencies underlying clinical judgements. We hypothesize that holistic processing of information, when compared to sequential processing, favors confirmatory hypothesis testing strategies and primacy effects (Jacinto et al., 2018).

**Method:** Four experimental behavioral studies manipulated ease of decomposability. Participants listened to session recordings that elicited the diagnosis of depression, with (sequential processing) or without (holistic processing) interruptions. Participants then rated the likelihood of three diagnosis hypothesis. To further explore the neurocognitive processes of confirmatory tendencies, we adapted the behavioral paradigm to an EEG study. Specifically, we explored the N400 component in the integration of incongruent information, when participants were reading the session recordings; and explored the components N2 and P3 when participants were judging the likelihood of the elicited diagnosis.

**Results:** The behavioral studies indicate that sequential processing led to lower ratings of the elicited diagnosis of Depression, reducing confirmatory tendencies (study 1 and 2). Moreover, eliciting two alternative diagnoses that shared symptoms (Depression and Generalized Anxiety) did not reduce the confirmatory processing in the holistic condition (study 3), but eliciting two diagnosis that do not share symptoms (Depression and OCD) reduced the confirmatory tendencies of holistic processing (Study 4). EEG data show that the holistic condition led to higher sensitivity to incongruent information (enhanced N400) than sequential condition. Additionally, we found stronger processes of monitoring and updating responses (enhanced N2 and P3) in the holistic condition than in the sequential condition.

**Conclusions:** Confirmatory tendencies guide clinical judgments. Whether information is processed holistically or sequentially leads to rely more or less in the activated schema. This research has implications for psychotherapy training and practice and for mental illness stigma.

**Keywords:** Clinical decision making, Intuition, Confirmation bias, Holistic processing, ERPs N400/N2/P3

**Publications:**

\*\*Jacinto, S., Lewis, C., Braga, J., Scott, K., (2018). A conceptual model for generating and validating in-session clinical judgments. *Psychotherapy Research*, 1, 91-105. doi: <http://dx.doi.org/10.1080/10503307.2016.1169329>

**Publications in preparation and under review**

\*Jacinto, S., Braga, J., Ferreira-Folgado, M., Collins, E., & Lewis, C., Decomposing the therapeutic process: Ease of task decomposability and confirmatory hypothesis testing in psychotherapy.

\*Jacinto, S., Frade, S., Ferreira-Folgado, M., Krendl, A., C., Ease of task decomposability and confirmatory processing: An event related potentials study.

\*\*Jacinto, S., Braga, J., Ferreira-Folgado, M., Krendl, A., Collins, E., & Lewis, C., Psychological Disorder Diagnosis are no cure for trait inferences.

\*\*Jacinto, S., Ferreira-Folgado, M., Braga, J., Krendl, A., & Collins, E., Body over Mind: Mental illness stigma and perceived competence to request euthanasia (to be submitted to *Psychological Science*).

\*Publications stemming directly from research presented in the abstract.

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