

Interoception, pregnancy and the categorization of abstract and concrete concepts

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A growing body of research is focusing on the role of interoception –the sensing of the physiological condition of the body - in cognitive processes. Here, we asked whether the physiological changes experienced by women during pregnancy might affect conceptual representation, particularly of abstract concepts (for whom the interoceptive dimension seems particularly relevant).

A sample of 40 women (37 controls and 3 pregnant women) performed the Heartbeat Counting Task (a measure of interoceptive accuracy) and an ‘interoceptive-exteroceptive’ categorization task of abstract and concrete concepts varied for their grounding in interoceptive and sensorimotor experiences (emotional, philosophical, natural, artefact). Participants responded by moving the computer mouse.

Overall, concrete-artefact concepts were categorized faster and more correctly (as exteroceptive) than the other concepts, suggesting that they clearly convey exteroceptive features. Differently, concrete-natural concepts elicit interoceptive features to a greater extent with slow responses, a high number of (interoceptive) misclassification, and movement trajectories attracted by the competing (interoceptive) response option. Interoception confirms to be particularly relevant for abstract-emotional concepts, as indicated by the lower chance of misclassifying them compared to abstract-philosophical ones.

Results on group differences (to be considered preliminary as the reduced size of the pregnant group) indicates no major differences in the speed and accuracy of interoceptive-exteroceptive categorization of the concepts considered. Enhanced ‘interoceptive attraction’ of the trajectories’ of concrete-natural concepts is observed in the pregnant group, which suggests a greater relevance of the interoceptive dimension in this population (to be confirmed once the study group has been expanded).

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