Respiratory and Cardiac Interoceptive Sensitivity in 9-month-old infants

Markus R. Tünte, Moritz Wunderwald, Stefanie Höhl, & Ezgi Kayhan

1 Faculty of Psychology, University of Vienna, 2 Developmental Psychology, University of Potsdam, 3 Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig

corresponding author: markus.tuente@univie.ac.at

Introduction

Interoception = perception of internal bodily signals
Interoceptive sensitivity = individual differences to interoceptive input

**iBeat**: experimental paradigm to measure cardiac interoceptive sensitivity in infants

**iBreath**: respiratory interoceptive sensitivity

• we created the novel iBreath paradigm: Infants are presented with stimuli expanding either synchronously or asynchronously with their own breathing, while looking time is measured using eyetracking.
  • Example trials: https://youtu.be/TvnqrzNqRDk

Here we aim at providing insights into early interoceptive sensitivity by reporting preliminary results of a study investigating cardiac- and respiratory interoceptive sensitivity in 9-month-old infants.

Methods

**iBeat**: cardiac interoceptive sensitivity

• we replicated the iBeat paradigm: Infants are presented with stimuli pulsating either synchronously or asynchronously with their own heartbeat, while looking time is measured using eyetracking.
  • Example trials: https://youtu.be/PD0nu04E-Tg

**iBreath**: respiratory interoceptive sensitivity

• we created the novel iBreath paradigm: Infants are presented with stimuli expanding either synchronously or asynchronously with their own breathing, while looking time is measured using eyetracking.
  • Example trials: https://youtu.be/vTznqzNqRDk

Interactive dashboard: [www.ibxx.at](http://www.ibxx.at)

• To visualize our results, we created an interactive dashboard that can be accessed via the link above.

Figure 1. Mean looking time for synchronous (2925ms) and asynchronous (2900ms) trials in the iBeat (n = 14).

Interactive dashboard: [www.ibxx.at](http://www.ibxx.at)

• To visualize our results, we created an interactive dashboard that can be accessed via the link above.

Figure 2. Mean looking time for synchronous (3125ms) and asynchronous (3870ms) trials in the iBreath (n = 11).

Descriptive results indicate that infants were able to distinguish between synchronous and asynchronous stimuli in the iBreath. For the iBeat differences between both conditions remain small.

As the next step, we will continue the data collection and analyses based on our preregistered protocol. We will further characterize the development of interoceptive sensitivity in infancy and its relation to the development of social cognitive abilities.

References


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