

## Posterior Insula: Relationship Between Visual Attention and Genital Response

Nicoletta Cera<sup>a</sup>, Nicoletta Cera<sup>a</sup>, Joana Carvalho<sup>b</sup>, Ana Quinta\_Gomes<sup>a</sup>, Cátia Oliveira<sup>a</sup>, João Castelhan<sup>c</sup>, Erick Janssen<sup>d,e</sup>, Miguel Castelo Branco<sup>c</sup> and Pedro Nobre<sup>a</sup>

<sup>a</sup>Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, Porto, Portugal ; <sup>b</sup>Universidade Lusófona de Humanidades e Tecnologias, Lisbon, Portugal; <sup>c</sup>CIBIT, ICNAS, University of Coimbra, Coimbra, Portugal; <sup>d</sup>Institute for Family and Sexuality Studies, Department of Neurosciences, University of Leuven, Leuven, Belgium; <sup>e</sup>The Kinsey Institute for Research in Sex, Gender, and Reproduction, Indiana University, Bloomington, IN, USA.

**Introduction & objectives:** Anterior and posterior Insula are important brain regions taking part in the cycle of pleasure. This study investigated the functional connectivity (FC) pattern during visual sexual stimulation and its contribution in processing of visual attention and genital response phases in sexual healthy men.

**Methods & Sample, Results:** Participants were 19 HC (age: 25-45). After urological, and clinical assessment, fMRI data were collected using a 3T scanner during the presentation of the sexual and neutral clips (T2\*:EPI, TR = 2500ms, TE = 30ms, voxel size 2, 5 × 2, 5 × 3mm, 360 volumes-max, 39 slices; T1: matrix = 256 × 256, FOV = 256mm, voxel size 1mm<sup>3</sup>). Penile tumescence (PT) and eye movements were assessed. Seed based FC has been carried out for the anterior and posterior Insulae. Given the results, involving the bilateral insulae during the comparison between sexual and neutral clips, 2 bilateral seed regions (anterior and posterior insulae) were selected on the anatomical bases. We then calculated correlations between Seed time-courses and whole- brain voxels time-course. To test the role of each subregion FC pattern related to the eye-movements, single-ROI-GLMs were performed on the bases of the areas of

interest (AOI) to which subjects directed their visual attention (fixations). The AOIs were “Faces”, “Genitals,” and “Background”. A series of single-ROI-GLMs with the contrast “Genitals > Faces” was applied. Moreover, a series of single-ROI GLM with baseline onset and sustained PT response for the sexual clip was applied.

**Results:** FC results ( $p < 0.05$  Bonf.Corr) for the anterior and posterior Insula are consistent with previous studies. Posterior Insula FC pattern showed significant results for the AOI contrast (“Genitals > Faces”) and for the PT (“Onset > Baseline and Sustained > Baseline”) in the Superior Temporal Gyrus, S2 and Fusiform Gyrus ( $p < 0.01$ ).

**Conclusion & recommendations:** These results indicate a more complex role played by posterior Insula in the visual focused attention, somatosensory and emotional component of male sexual behavior.

**Keywords:** fMRI, Eye Movements, Sexual Arousal

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## Embodiment in Sexuality: An Empirical Examination of Arousal Modes According to the Sexocorporel Concept

Stefanie Gonin-Spahni<sup>a</sup>, Michèle Borgmann<sup>b</sup> and Sandra Gloor<sup>b</sup>

<sup>a</sup>University of Bern, Institute of Psychology, Department of Health Psychology and Behavioral Medicine, Switzerland; <sup>b</sup>University of Bern, Institute of Psychology, Department of Health Psychology and Behavioral Medicine, Berne, Switzerland

**Introduction & objectives:** Embodiment emphasizes the interaction between body and mind. The approach Sexocorporel by Jean-Yves Desjardins applies this assumption to sexuality by emphasizing the importance of body movement and muscle tension for sexual arousal and experience. These arousal modes are

mainly seen in masturbation, where the focus lies on one's own excitation. This have hardly been considered in research so far. The aim of the study was to test the validity of the two factors body movement and muscle tension and to examine their significance for sexual experience.