Topography of Human Erogenous Zones

L. Nummenmaa[a,b], J. Suvilehto[a], E. Glerean[a], P. Santtila[c], J. K. Hietanen[d]

[a] Department of Neuroscience and Biomedical Engineering, Aalto University School of Science, Finland
[b] Turku PET Centre, University of Turku, Finland
[c] Department of Psychology and Logopedics, Åbo Akademi University, Finland
[d] Human Information Processing Laboratory, School of Social Sciences and Humanities / Psychology, University of Tampere, Finland

B&M Doctoral Program Brain & Mind

Introduction

- Here we reveal detailed topographical organization of bodily regions sensitive to triggering sexual arousal by self-produced and external touching
- Touching a partner sexually may trigger and maintain their sexual arousal, thus preparing the partner physically for copulation and thus promoting sexual behaviour. It is therefore interesting to compare both sexes' self reports and perception of the opposite sex's erogenous zones to see, to which extent they correspond.
- If sexual touching only functions as a way to modulate sexual arousal, touching patterns should be concordant during masturbation and while having sex with partner. If touching patterns during masturbation and sex with partner differ, it might mean that touching during sexual interaction serves functions unrelated to

Methods

704 Finnish participants (528 females, mean age = 26 years, SD = 6.5 years) used an online tool (Figure 1) to report their own erogenous zones and speculate on opposite sex members' erogenous zones while masturbating and having sex with partner. An independent sample of 88 volunteers (64 females, mean age = 26 years) participated in a control experiment mapping tactile and nociceptive sensitivity of different bodily regions.

1. Data acquisition with the emBODY tool

Initial screen with blank bodies

Use the pictures below to indicate the regions whose touching you would experence sexually arousing while **having sex with a partner**

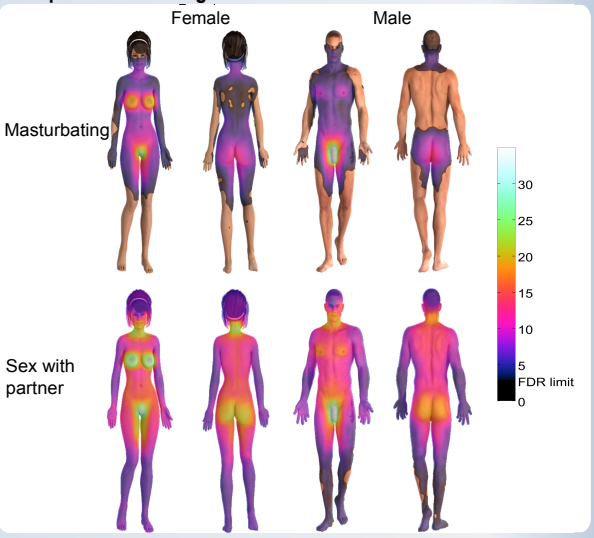
Click here when finished

Subject-wise erogenous zone maps (EZM)

Statistical analyses

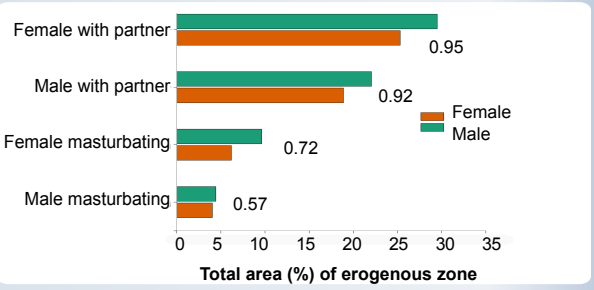
Results

2. Maps of human erogenous zones



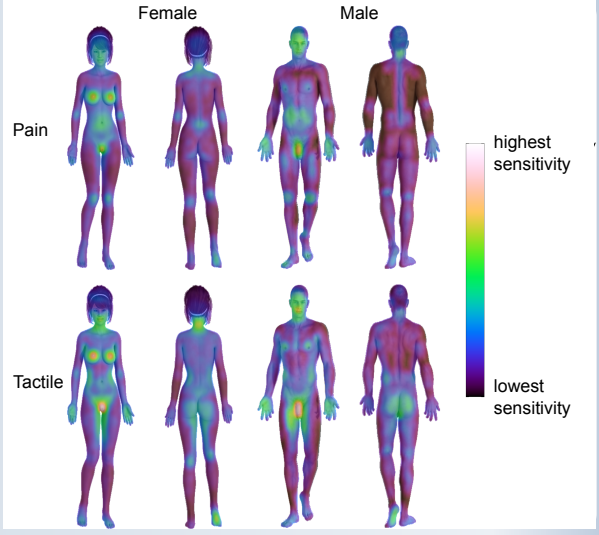
Maps of human erogenous zones during masturbation and sex with a partner. The data are thresholded at $p < 0.05$, FDR corrected. The colour bar indicates the t-statistic range in one sample test.

3. Participant predictions of total area of erogenous zones of the opposite sex is well matched with self reports



Effects of participant sex and touch type (masturbation vs. sex with partner) on the total area of erogenous zones in the male and female body. Number is the correlation between average predicted and reported topographies (all significant at $p > .05$).

4. Mean tactile and nociceptive sensitivity maps



Mean tactile and nociceptive sensitivity maps for males and females. The data are shown on an arbitrary scale [0, 100], scaled individually for females and males, and are square root transformed to better visualize regional variation in the lower tail of the distribution. Tactile sensitivity correlates more strongly with erogenous zones (Fig. 2) than nociception (average correlations with all EZMs 0.64 and 0.32, respectively).

Conclusions

- Whole human body supports triggering of sexual arousal by somatosensory stimulation.
- There is a clear topographical organization of core erogenous zones, which are engaged while masturbating, and extended erogenous zones, which are selectively used when having sex with a partner.
- Selectivity of extended erogenous zones might reflect the role of touching in establishment and maintenance of pair bonds.
- Tactile sensitivity is a good predictor of extended erogenous zones.

Acknowledgements

Supported by Eemil Aaltonen foundation (personal grant to JS),European Research Council (Grant #313000 to LN) and Academy of Finland (MIND program grants #265915 to LN and #266187 to JKH)

Aalto University School of Science

Human Emotion Systems Lab
Department of Neuroscience and Biomedical Engineering

NBE Department of Neuroscience and Biomedical Engineering