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## Poster Presentation

### Evaluation of Early- Childhood Traumatic Brain Injury on the Emotion Perception

Maryam Jafarian\*

Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran, Iran

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#### **Abstract**

Traumatic brain injury (TBI) is a common injury leading to child disability and is associated with a variety of long-term cognitive, social, and behavioral dysfunctions. Emotion perception (EP) starts up an integral part of social communication is critical to achieve developmentally appropriate goals. This skill, which emerges relatively early in development, is driven by increasing connectivity among regions of a distributed socio-cognitive neural network. Recognizing and comprehending from facial and prosodic points may be vulnerable to disruption from early-childhood traumatic brain injury. These skills are mediated by the “social brain” network, which comprises the superior temporal sulcus, fusiform gyrus, temporal pole, medial prefrontal cortex, orbitofrontal cortex, amygdala, temporoparietal junction, and inferior parietal cortex. Investigations showed that children who sustained TBI between 7 and 17 years of age were significantly less accurate than healthy controls. Survivors of childhood TBI were conflicted with the semantic meaning of the speaker’s message. The vulnerability of the immature social brain network was particularly apparent for the group with severe injuries, they have difficulties to identify facial emotion and integrate emotional information across the visual and auditory modalities. Finally, it seems that severe childhoods TBI may disrupt inter regional connectivity and thus interfere with the functional refinement of areas within the distributed social brain network.

**Keywords:** Injury, Traumatic, Skill.

**\*Corresponding Author:** Maryam Jafarian

**E-mail:** [jafaryanm@yahoo.com](mailto:jafaryanm@yahoo.com)