

平成 2 4 年度 博士学位論文要旨

Title : Gender Differences of Brain Activity in the Conflicts Based on Implicit Self-Esteem

論文題目 : 潜在的自尊心に基づく葛藤時の脳活動の性差

学位の種類 : 博士 (健康科学)

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注 : 1,000 字程度 (欧文の場合 300 ワード程度) で、本様式 1 枚 (A 4 版) に収めること

There are gender differences in global and domain-specific self-esteem and the incidence of some psychiatric disorders related to self-esteem, suggesting that there are gender differences in the neural basis underlying one's own self-esteem. We investigated gender differences in the brain activity while subjects (14 males and 12 females) performed an implicit self-esteem task, using fMRI. While ventromedial prefrontal cortex (vmPFC) was significantly activated in females, medial and dorsomedial PFC (dmPFC) were activated in males in the incongruent condition (self=negative) compared with the congruent condition (self=positive). Additionally, scores on the explicit self-esteem test were negatively correlated with vmPFC activity in females and positively correlated with dmPFC activity in males. Furthermore, the functional relationships among the regions found by direct gender comparisons were discussed based on the somatic-marker model. These showed that, compared to males, females more firmly store even the incongruent associations as part of their schematic self-knowledge, and such associations automatically activate the neural networks for emotional response and control, in which vmPFC plays a central role. This may explain female cognitive/behavioral traits; females have more tendency to ruminate more often than males, which sometimes results in a prolonged negative affect.