

Study on Developmental Course of Neural Activations Mediating the Enhancement of Self-Esteem by Make-Ups

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Cosmetics are often used as a tool to enhance self-esteem of young females. The present study aimed at clarifying the neural region mediating the enhancement of self-esteem by make-up. To achieve this goal, the present study measured event-related potentials (ERPs) elicited in late-adolescent females in viewing normal self face and aesthetically enhanced and degraded self-faces. Aesthetically enhanced and degraded self-face were synthesized on the basis of pictures of the participant's own face using computer graphics techniques. Additionally, we also examined the relation between observed neural activations and the participant's implicit self-esteem. Implicit self-esteem was measured using standardized implicit-association test (IAT). One advantage of IAT over conventional questionnaire method in measuring self-esteem is that IAT is less vulnerable to intentional fraud by the participants.

The results revealed that the amplitude of ERP component called N250 increased selectively for aesthetically degraded self-face. Furthermore, increased N250 amplitude towards self face was linked to lower implicit self-esteem. Taken together, these results seem to indicate that aesthetically degraded self-face is particularly ego-threatening and embarrassing for young females. Furthermore, these observations leads to the hypothesis that one function of make-ups in females is to protect themselves against ego-threatening effects incurred by aesthetically degraded self-image.