

STRESS HORMONE AND NEUROPSYCHOLOGICAL FUNCTIONING PREDICT ATTENTION BIAS TOWARDS THREAT IN HEALTHY INDIVIDUALS

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Introduction/objectives: Attention bias (AB) is a biased information processing towards threat among competing stimuli occurred in early stage of sensory input. Substantial evidence indicates that AB is involved in the development and maintenance of anxiety and depressive disorders. However, little is known about the relationships between AB and individual differences of endocrine and neuropsychological functions.

Methods: Thirty healthy participants without major physical illness or axis I/II mental disorders as evaluated with the Mini-International Neuropsychiatric Interview, were enrolled. Participants completed a dot-probe task, the Temperament and Character Inventory (TCI), the Beck Depression Inventory-II (BDI-II), the Interpersonal Sensitivity Measure, and the Trail Making Test (TMT). Salivary cortisol levels were measured at three time points per day for consecutive 2 days: immediately and 30 min after awaking in the morning and before sleep at night. Correlation analyses were performed between AB and psychological measures, cortisol levels, and attention measures.

Results: As predicted, AB significantly correlated with BDI-II and Harm avoidance sub-dimension of the TCI. Above all, when those variables that were significantly correlated with AB were included in a step-wise multivariate regression analysis, higher cortisol level at night remained the most influential predictor for AB.

Conclusions: Our results suggest that AB is significantly influenced not only by anxious personality traits and depressive symptoms but also by individual differences of attention function and stress hormonal levels. Particularly, AB modification approach might have a beneficial effect on anxiety in individuals who have high cortisol levels.