Examination of cognitive function and cognitive bias for the prediction and prevention of suicidal behaviors in individuals with traumatic experiences

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Summary:
This research project aims to develop methods for objectively and quantitatively predicting and effectively preventing suicidal behaviors in people with trauma, focusing on cognitive function and cognitive style. Statistical analyses confirmed that PTSD patients had a significantly higher risk of suicide than healthy controls, as well as significantly lower cognitive function and greater negative memory bias. Among the patient group, those with negative cognitive styles and poor cognitive functions such as memory and attention were shown to have a higher risk of suicide. Furthermore, in the patient group, the extent of childhood traumatic experience was significantly correlated with negative cognitive style. A multiple regression analysis revealed that negative cognitive style, low cognitive function, and childhood trauma in the patient group were significant predictors of suicide risk, while age and PTSD severity did not significantly predict suicide risk. These results suggest that cognitive problems are prominent in patients with PTSD, especially those with childhood traumatic experiences, and that treatments targeting these cognitive problems may reduce suicide risk. Furthermore, we examined the relationship between suicide risk and blood levels of inflammatory substances (high-sensitivity CRP and IL-6) and also explored the influence of inflammatory genes, and found a positive correlation between suicide risk and inflammatory substance levels and an association of single nucleotide polymorphisms in the CRP gene and IL6 gene, which affect their respective protein concentrations, with suicide risk. It is therefore expected that investigating inflammatory gene polymorphisms will lead to the early detection of suicide risk in PTSD patients.