

## **Abstract**

Perfectionism has been identified as a personality trait underlying psychopathologies. Yet, the nature of this construct has been controversial and its impact on cognitive processing remained vague. The present study aimed to divulge the cognitive mechanism of perfectionism by examining how discrepancy, which segregates the adaptive and maladaptive perfectionists, modulate the uncertainty processing and regularity formation in pre-attentive change detection, measured by the Mismatch Negativity (MMN). Participants watched a self-selected silent subtitled movie and ignored the background auditory events comprised of frequent standards and rare deviants. Feature-varying and feature-constant phonemes and emotional speech served as the auditory events with high to low uncertainty level. Result suggested that during pre-attentive change detection, discrepancy affected the sensitivities of perfectionists and non-perfectionists in detecting deviants with different levels of variance and stimulus type respectively. Discrepancy could be related to the violation reactivity that possessed unique influence on perfectionists. This shed new light on the conceptualization of perfectionism that underpinned adaptive and maladaptive behaviors.

*Keywords:* Perfectionism, MMN, Discrepancy, Violation