

# **Habitual Sleep Quality Moderated the Effects of Sleep Deprivation on Emotion Regulation by Third-Person Self Talk: Event-Related Potential (ERP) and Behavioral Findings**

**Yeuk Ching Lam**

the Education University of Hong Kong, Hong Kong, Hong Kong

**Esther Yuet Ying Lau**

the Education University of Hong Kong, Hong Kong, Hong Kong

**Janet Hsiao**

University of Hong Kong, Hong Kong, Hong Kong

**Cheng Li**

the Education University of Hong Kong, Hong Kong, Hong Kong

**Lydia Ting Sum Yee**

the Education University of Hong Kong, Hong Kong, Hong Kong

## **Abstract**

The current study investigated the impact of sleep deprivation (SD) on the use of third-person self-talk, a relatively effort-less strategy, to regulate emotion. Twenty-four participants (age = 22.75 ± 2.68, 54.17% male, 33.33% good sleepers) completed a cue-picture ERP paradigm after normal sleep and SD conditions, in which they viewed negative or neutral stimuli and reflected on their feelings using either the pronoun I or their name (third-person). We calculated post-instruction late positive potential (LPP) that has been found sensitive to emotion regulation strategies and closely related to amygdala activity. While poor sleepers showed greater LPP amplitudes overall,  $F(1,7) = 17.50$ ,  $p = .004$ , SD only increased the LPP for negative picture trials among good sleepers but not poor sleepers,  $F(1,7) = 5.37$ ,  $p = .054$ , suggesting that the effect of SD on emotion regulation using third-person self talk was moderated by habitual sleep quality.