

**Abstract**

Apart from the relational value of social feedback, the consistency between social feedback and one's self-esteem could determine whether adaptive outcomes could be perceived by an individual. Extending from previous study on affect, this study, with the use of heart rate variability (HRV) as an outcome variable, examined the interaction between two target constructs at a physiological level. We investigate how role, social feedback and self-esteem influence the response of HRV during a modified social feedback task. Grouped as pairs, participants ( $N = 120$ ) provide each other with social feedback based on the performance in a cold pressor task. In the social feedback task, participants received feedback that is preset by the experimental condition, and the level of HRV were recorded. A regression analysis shows that high self-esteem participants who received negative-dominant feedback condition showed higher HRV, while an opposite pattern was found for low self-esteem group. This finding revealed that HRV, instead of subjective feeling, elicited during a highly fluctuated and stressful environment could be a marker of self-regulation in the context of dealing with self-esteem-inconsistent feedback, in which higher level of HRV signaled higher effort to accommodate the epistemic confusion elicited by the self-inconsistent information.

*Keywords:* self-esteem, social feedback, epistemic confusion, heart rate variability, self-regulation