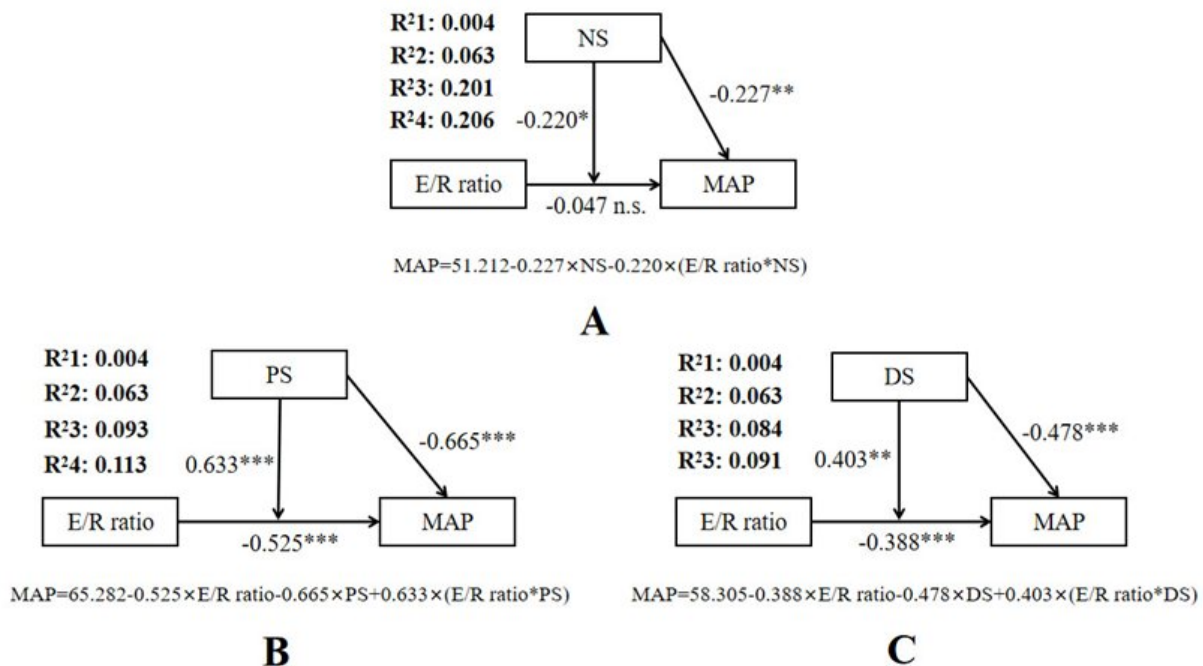


# Negative schizotypal traits predict reward motivation reduction in effort-reward imbalance

June 9 2022, by Zhang Nannan



Moderating models of schizotypal traits in the relationship between E/R ratio and reward motivation. E/R ratio: the ratio of effort/reward; MAP: total scores of Motivation and Pleasure Scale-Self Report; NS: scores of interpersonal subscale of Schizotypal Personality Questionnaire (SPQ); PS: scores of cognitive-perceptual subscale of SPQ; DS: scores of disorganized subscale of SPQ. \* p 0.05. Credit: Raymond Chan

Effort-reward imbalance (ERI) refers to the imbalance between high-effort commitment and low-reward outcome, i.e., when one perceives he/she expends greater effort but gains disproportionately less rewards, which is important for daily life functioning.

Recent findings suggest that participants with high levels of schizotypy are more likely to perceive ERI. Moreover, there is also a correlation between ERI and gray matter volume reduction and altered resting-state functional connectivity in participants with high level of schizotypy. However, the underlying relationship between ERI and motivation to reward is yet fully known. In particular, it is not clear whether the effects of ERI on motivation may vary in different subtypes of schizotypal groups.

To bridge such a gap of knowledge, Drs. Huang Jia and Raymond Chan from the Institute of Psychology of the Chinese Academy of Sciences (CAS) and their [collaborators](#) have conducted a study to investigate to what extent E/R ratio would be related to reward motivation, and whether the relationship between the ERI and reward motivation can be differentially moderated by the schizotypal subtypes.

They recruited 843 [college students](#) to complete a set of online checklists specifically capturing schizotypal personality traits, ERI and motivation. They then conducted multiple linear regressions to construct models to investigate the moderating effects of schizotypal traits on the relationship between ERI and reward motivation.

According to the researchers, stressful ERI situation predicted the reduction of reward motivation. However, schizotypal subtypes showed differential prediction and moderation effects. In particular, negative schizotypal traits showed a significant negative moderating effect on the relationship between ERI and reward motivation while positive and disorganized schizotypal traits had significant positive moderating

effects.

Taken together, these findings suggest schizotypal traits subtypes moderate differently the [relationship](#) between ERI and reward motivation and highlight the importance of developing specific intervention strategies to improve reward [motivation](#) and goal-directed behavior in subclinical populations. The study appears in the *European Archives of Psychiatry and Clinical Neuroscience*.

**More information:** Yong-jie Yan et al, Negative schizotypal traits predict the reduction of reward motivation in effort–reward imbalance, *European Archives of Psychiatry and Clinical Neuroscience* (2022). [DOI: 10.1007/s00406-022-01419-3](https://doi.org/10.1007/s00406-022-01419-3)

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