

# Not Worrying About Reward Valuation: The Unique Contribution of Worry on RewP After Controlling for Anhedonia

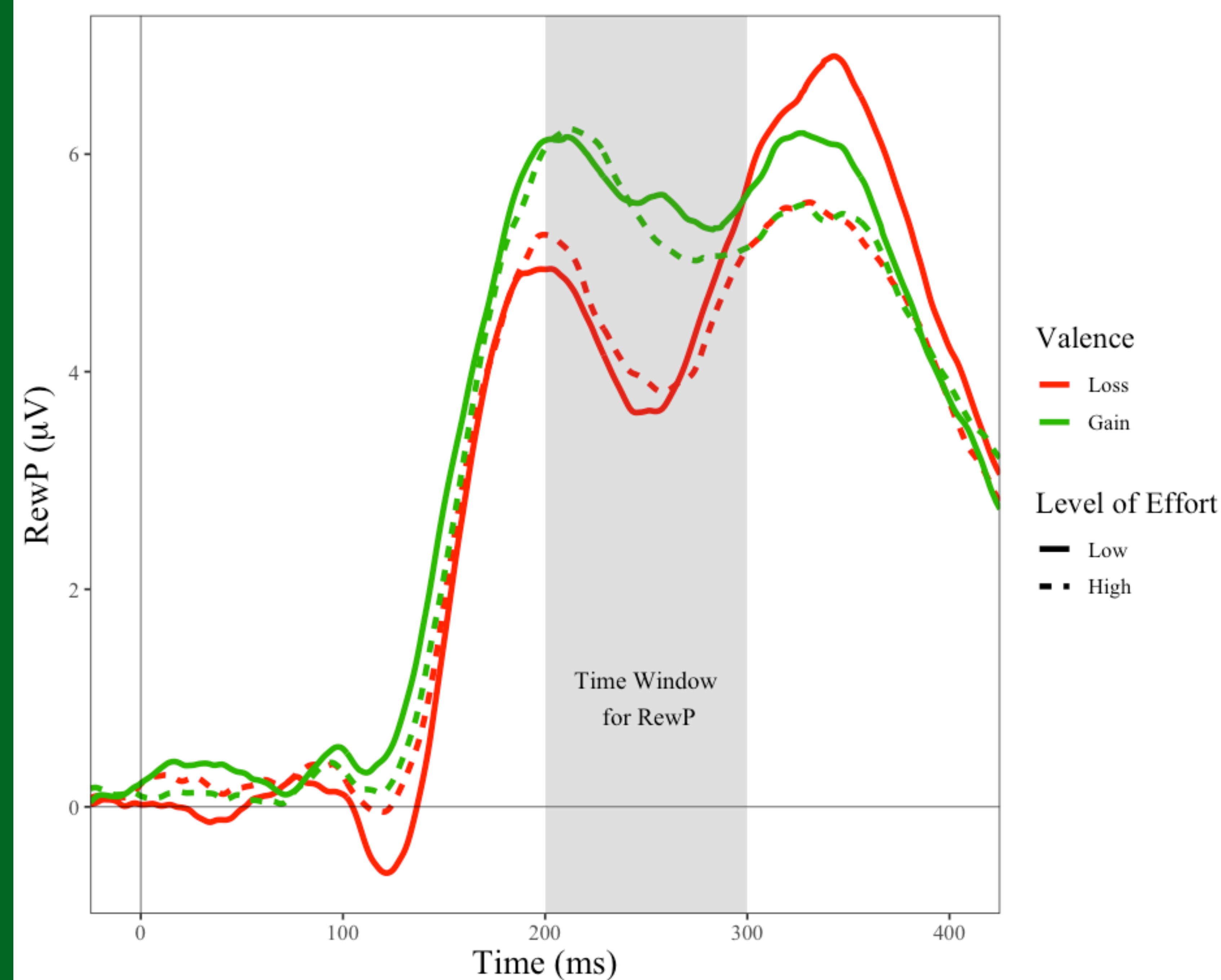
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## Background:

- RewP is an early marker of reward processing that is sensitive to the valence of the feedback stimulus. The effect of exerting varying degrees of effort on reward valuation has not been fully fleshed out, with mixed findings having been observed across different paradigms.
- Relationships between worry and RewP have not been observed in most cases, while a reduced RewP has been consistently observed in those with greater levels of anhedonic symptoms.
- The current analyses will help identify the unique influences of worry and depression on reward valuation following exertions of physical effort.

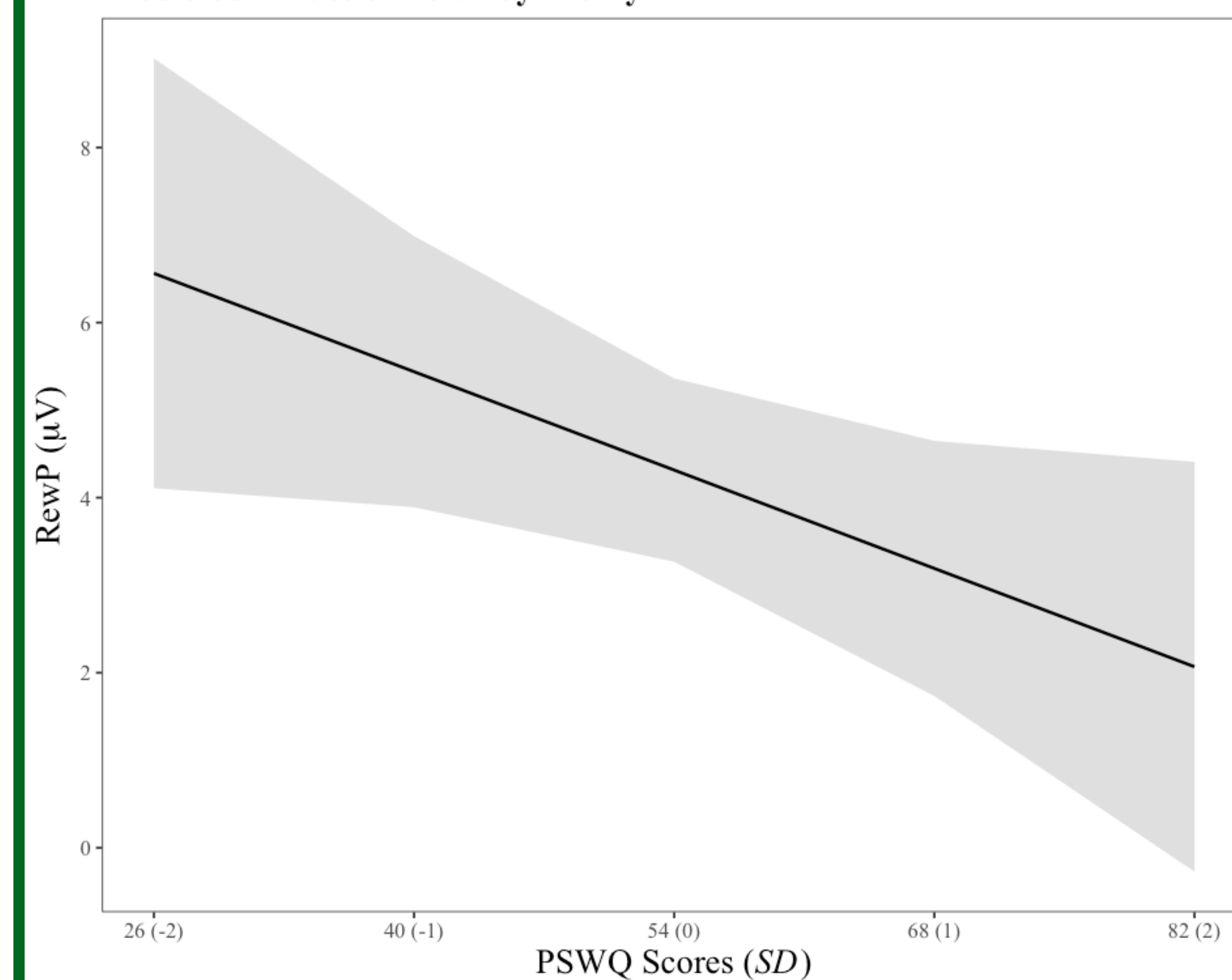
RewP on the Effort-Doors Task



## Methods:

- Data from 40 participants who completed the effort-doors task, the Penn State Worry Questionnaire (PSWQ), and the Mood and Anxiety Symptoms Questionnaire (MASQ) were used.
- A multilevel model with fixed effects for valence, level of effort, PSWQ, MASQ-Anhedonic Depression, the four-way interaction, and all constituent lower-order interactions was fit. Random intercepts were included for participants, with random slopes for valence and effort.

Predicted Values of RewP by Worry



## Results:

- There was not a significant effect of level of effort on RewP, but there was a statistically significant main effect of valence, ( $\beta=1.28$ ,  $SE=.43$ ,  $p<.05$ ). The two-way interaction between valence and level of effort was not significant.
- Main effect of anhedonia was not significant, although the effect of worry on RewP was significant, such that those higher on the PSWQ had a reduced RewP, ( $\beta=-1.13$ ,  $SE=.55$ ,  $p<.05$ ). None of the interactions between the self-report measures and task factors were significant.

## IMPLICATIONS:

- RewP is an early marker of reward valuation, with heightened activity being associated with positive valuations. The expenditure of varying amounts of physical effort does not influence RewP, supporting the notion that RewP is an early marker of reward valuation not contingent on task demands.
- There is a unique relationship between worry and reward processing, which is not accounted for by individuals' anhedonic symptoms. Specifically, there is a unique relationship indicating that those high in worry exhibit reduced motivation and attention towards the valuation of received rewards.