

Background

- Activities designed to induce mood states in children (such as videos and recalling emotional memories) impact cognitive performance on a range of tasks (e.g. Tornare et al, 2016; Schnall et al, 2008).
- However, the mechanisms for such effects are often unclear, as mood inductions could impact several affective, motivational and cognitive processes.
- Self-regulation generally improves following positive mood inductions in children (Yates et al., 1981; Fry, 1977), and this could be due to changes in subjective mood, which can promote higher expectations for success (Horn & Arbuckle, 1988), or increases in distracting thoughts or behaviour that redirect attention away from desirable rewards (Mischel et al., 1972; Yates et al., 1981).
- In this study, we aimed to determine whether changes in subjective mood or distractive thoughts could account for improvements in delaying gratification following positive mood induction.

Method

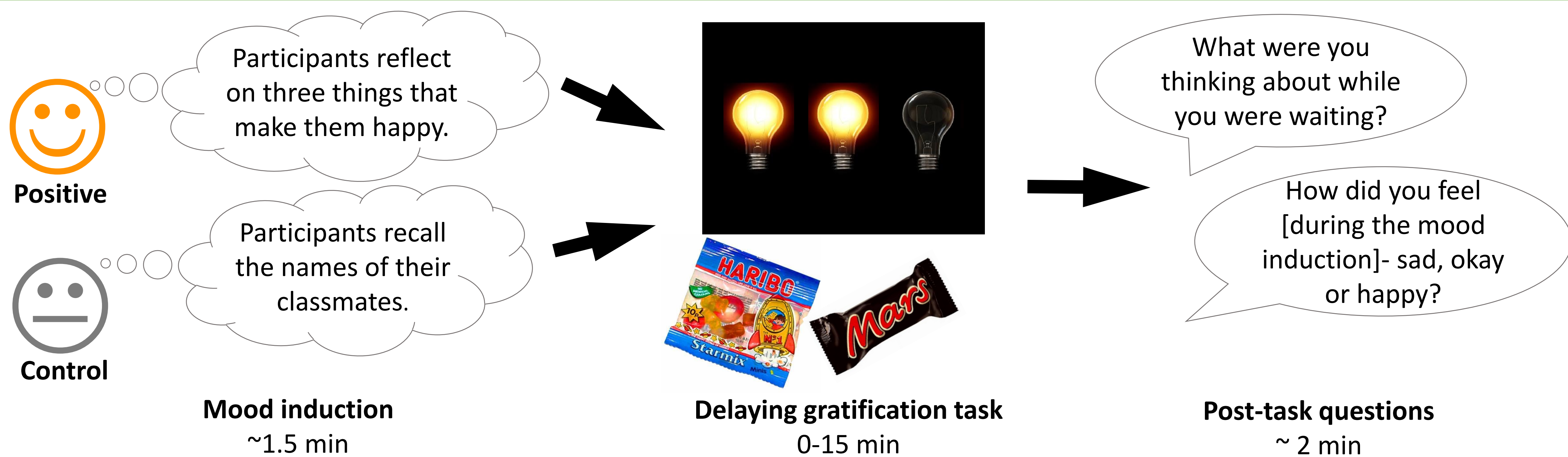
Participants: 87 4 to 6-year olds (4;7 – 6;8 years).

Design: 2 (mood induction: control & positive) x 2 (age group: 4.5-5.5 & 5.5-6.5 years) between subjects. Outcome measures: waiting time, reported thoughts & observed behaviour.

Delayed gratification (DG) task: DG tasks require children to select between a smaller immediate versus a larger long-term reward. In this version, children wait for bulbs to illuminate, with each bulb conferring an additional prize. The first illuminates immediately, the second after 3 minutes and the third after 15 minutes.

Post-task questions & coding: Reported thoughts were coded in 3 ways: (1) Whether they were off-task or on-task, or reported thinking nothing; and (2) For positive mood condition only – whether they referred to activities mentioned during mood induction.

Procedure



Results

Impact of mood induction on thoughts & subjective mood

- There was no overall difference between conditions in subjective mood ratings ($p=.919$).
- 23% of children in the positive condition reported thinking about the happiness-eliciting events during the delaying gratification task.
- Children in the positive condition were less likely to report on-task thoughts ($p=.004$) and more likely to report no thoughts ($p=.012$) than the control condition.

Impact of mood induction on delaying gratification

- There was no difference in waiting time between conditions ($p=.576$).

Impact of thoughts & subjective mood on delaying gratification

- Children who continued to think about the positive mood induction waited marginally longer than those who didn't ($p=.067$).
- Reports of other types of thoughts were not related to waiting times ($p's>.212$).
- Self-reported mood was not correlated with waiting time ($p=.124$).

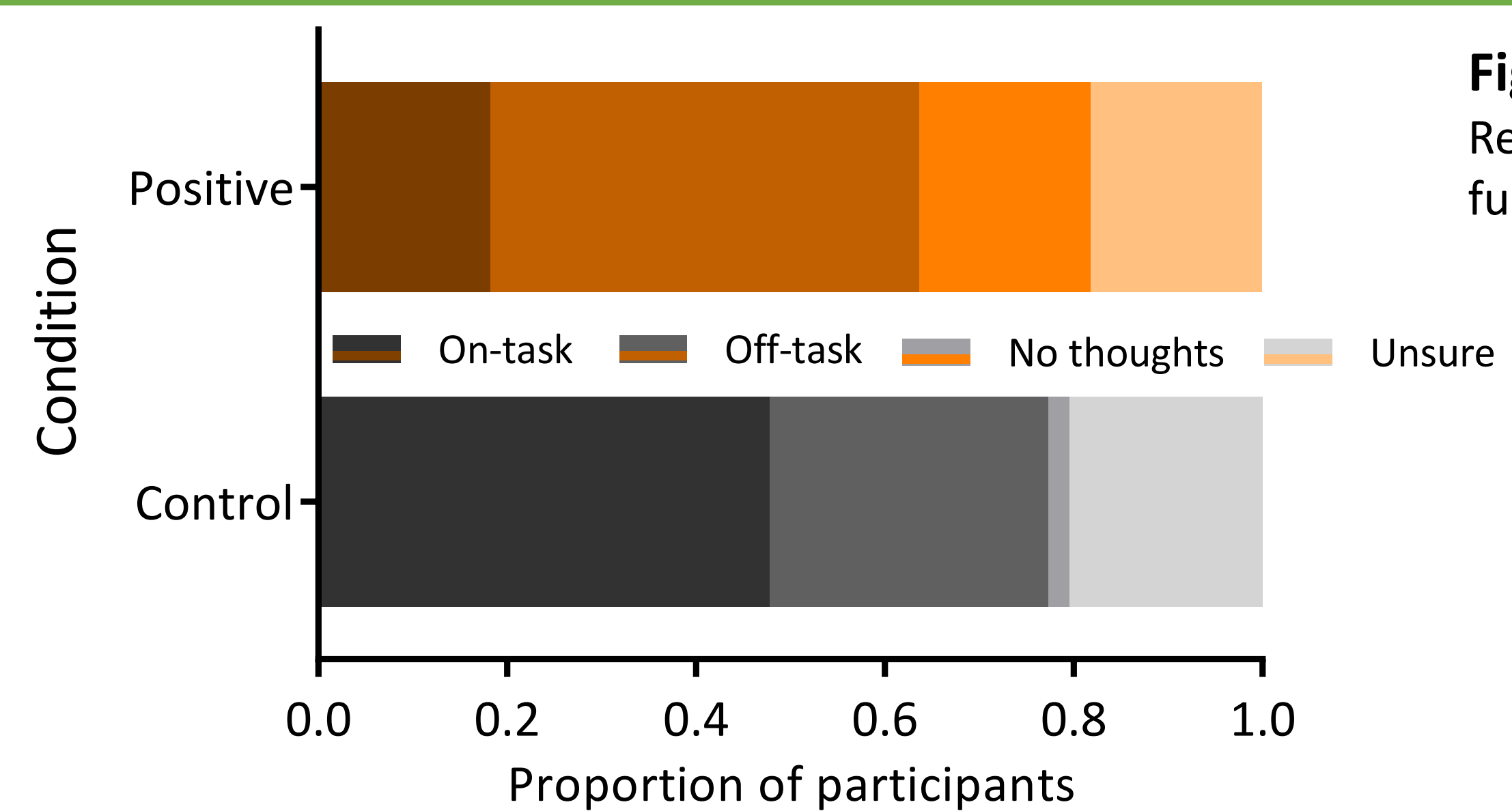


Figure 1.
Reported thoughts as a function of condition.

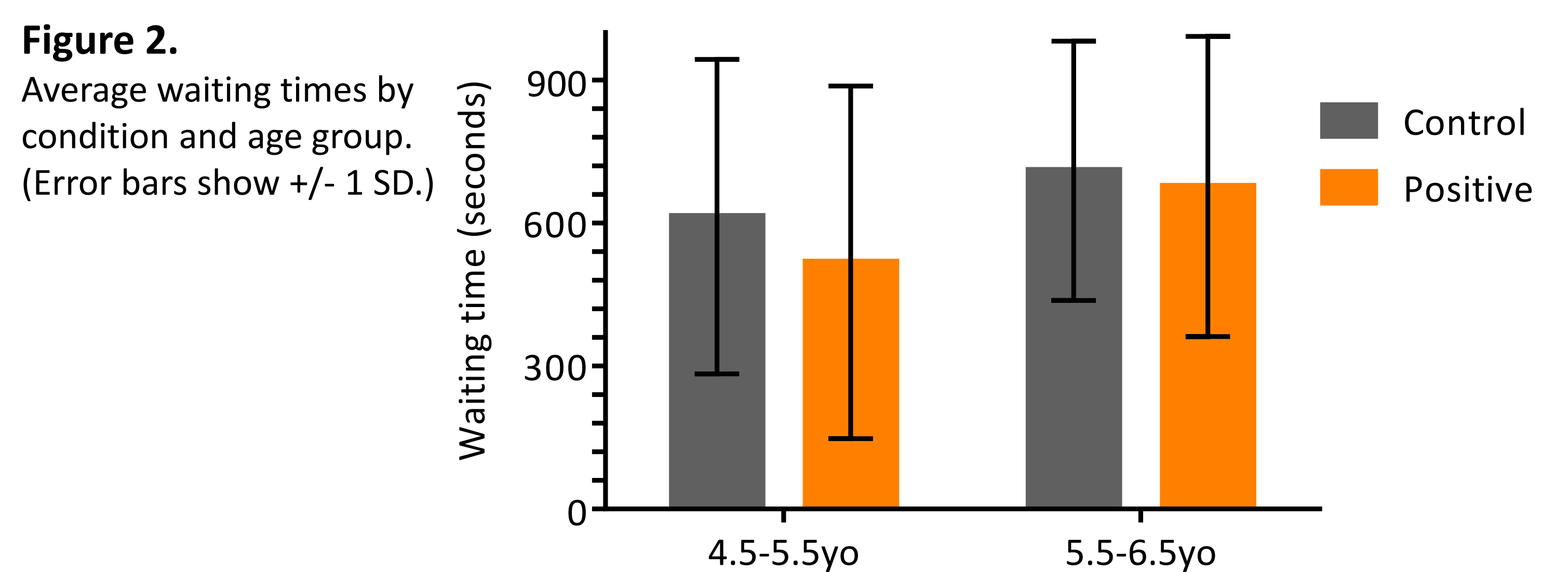


Figure 2.
Average waiting times by condition and age group. (Error bars show +/- 1 SD.)

Discussion

- Our findings suggest that sustaining positive off-task thoughts increases waiting times when delaying gratification, which could account for previous findings of effects of positive mood inductions on DG.
- Conversely, subjective mood was neither affected by mood induction nor related to delaying gratification.
- Effects of thought-based mood induction on self-regulation may not be robust across age groups or paradigms, as we failed to replicate overall benefits of induction to delaying gratification performance.

References

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