

Prosocial behaviour reduces unwanted intrusions of experimental traumatic memories

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Trauma and Prosocial Behaviour

- More traumatic exposures associated with more prosocial behaviour (Frazier et al., 2013)
- Helping others post trauma associated with emotional benefits: higher positive affect and reduced distress (Piferi et al., 2006)

Causal Effects of Prosocial Behaviour

- Prosocial spending promotes happiness across cultures (Aknin et al. 2013).
- Helping others reduce stress levels (Raposa et al. 2016) and blood pressure (Whillans et al. 2016)
- Performing donations activate brain regions involved in reward-processing (e.g. OFC, vmPFC; Hare et al. 2010, Moll et al, 2006)
- Volunteering reduced mortality risk by 47% (Okun et al. 2013) and pain perception in cancer patients (Wang et al., 2020)

Why Target Traumatic Intrusions

- Trans-diagnostic symptom for various psychiatric disorders like PTSD, depression (Hu et al, 2017)
- Recurrent, acutely distressing involuntary memories of trauma (Ehlers et al. 2004)
- Previous research on reducing intrusions involve re-exposure and direct confrontation of trauma (e.g. James et al. 2015)

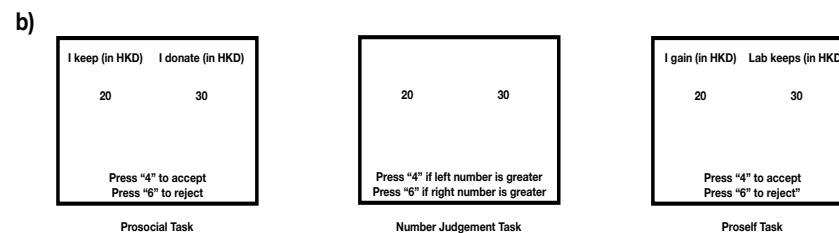
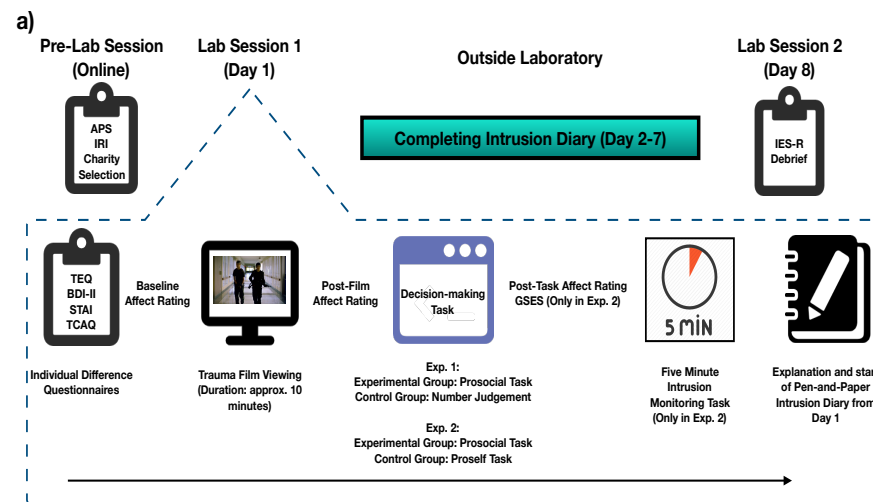
Research Question

Can prosocial behaviour offer a socio-emotional approach in reducing trauma-relevant symptoms, such as involuntary intrusion, without trauma re-exposure?

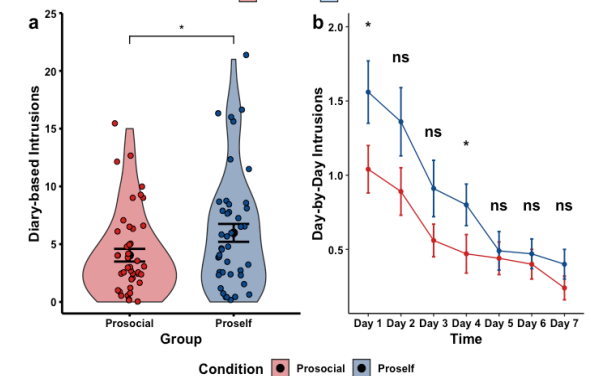
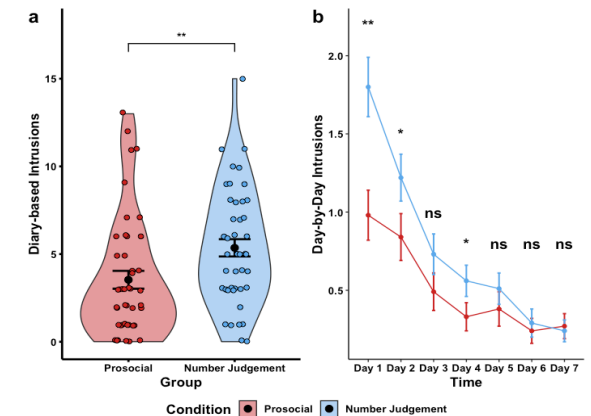
Methods

- Two **pre-registered** experiments (Total $N = 180$)
- Between-subject design
- Exp. 1: **Prosocial vs. Neutral task**
- Exp. 2: **Prosocial vs. Proself task**
- Each task has 60 unique trials.
- Trauma Exposure: 10-min trauma film showing real-life trauma events (James et al. 2016)
- Key DV: Traumatic intrusion frequency outside laboratory during **1-week period**

Overview of Experimental Procedure and Prosocial/Neutral/Proself Task Trials



Results



Conclusions

- In both experiments, prosocial behaviour post trauma exposure reduced intrusions.
- Prosocial behaviour enhanced positive affect and reduced negative affect post trauma exposure but this affect-based mechanism only partially explains intrusion reduction because proself behaviour also had similar affect changes but no significant intrusion reduction.
- Open Question: What is the neural mechanism of prosocial effect on traumatic intrusions?