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## Prosocial behavior reduces unwanted intrusions of experimental traumatic memories

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Involuntary intrusions of traumatic experiences can be debilitating and deteriorating mental health. Based on established evidence that prosocial behavior brings a host of emotional/health benefits to helpers, we tested a novel hypothesis that whether post-trauma prosocial help could reduce unwanted intrusive memories. We conducted two pre-registered studies (total N=180) using a trauma film paradigm to induce trauma exposure in lab settings. Results showed that compared to non-prosocial behavior, prosocial donations to participants' preferred charities led to fewer involuntary traumatic intrusions in both lab settings and in daily life as evidenced by 1-week intrusion diaries. Prosocial behavior's therapeutic benefits cannot be attributed to affect changes, because proself behavior had comparable emotional benefits as prosocial behavior but there were no reductions in intrusive memories. To the extent that prosocial behavior reduces emotional distress and involuntary intrusions, future research could consider prosocial behavior as interventions to promote mental well-being following trauma exposures.

## **Statement of Relevance**

Prosocial behaviour not only helps those who are in need, but also brings emotional benefits to help-providers. When people suffer from trauma-related symptoms such as flashbacks, can prosocial behaviour help alleviate their reactions to trauma? In two pre-registered experiments, we found that post-trauma prosocial charity donations led to fewer involuntary intrusions of traumatic memories compared to non-prosocial behavior. These findings provided novel evidence supporting prosocial behavior's therapeutic benefits in the context of trauma and unwanted memories, and bear theoretical implications to social/cognitive psychology and affect/clinical science. Given prosocial behavior's straightforward benefits to help-recipients, as well as the emotional/health benefits to help-provides, prosocial behaviour (charity donations, emotional support) could serve as an effective coping strategy to help people maintain mental health and to promote cooperation and resilience in our society.