

## Introduction

- Romantic couple distress is one of the most frequent issues presented to mental health professionals, and relationship betrayals are among the most difficult issues to treat<sup>1</sup>.
- Attachment injuries are defined as an event involving an actual or perceived betrayal of trust or abandonment during a time of need (e.g., infidelity)<sup>2</sup>.
- They can be conceptualised as interpersonal traumas, which can cause functional impairment and precipitate symptoms similar to posttraumatic stress disorder (PTSD) in the injured partner<sup>2</sup>
  - Intrusions, re-experiencing, avoidance, hypervigilance / hyperarousal, negative cognitions and mood, depression.
- Trauma exposure over-activates endogenous stress hormones, leading to a powerfully consolidated emotional memory easily triggered by contextual cues<sup>3</sup>.
- Reconsolidation theory posits that reactivation induces a transient period of lability which is vulnerable to pharmacological interference<sup>4</sup>
- Administration of propranolol, a noradrenergic beta-blocker, 60 minutes prior to memory reactivation can attenuate PTSD symptoms, presumably by reducing the salience of the traumatic memory<sup>4</sup>

## Method

**Objectives:** To determine whether reconsolidation therapy using propranolol alleviates trauma symptoms and psychological distress in individuals with an adjustment disorder stemming from a romantic betrayal.

- Open-label clinical trial
- Repeated measures with wait-list control

### Hypotheses:

- No significant reduction in symptoms while the participants are on a 4 week waiting list.
- 6 sessions (1x/week) of memory reactivation under propranolol will significantly reduce trauma symptoms and psychological distress.

**Treatment:** 1mg/kg of propranolol 1 hour before reactivating the memory of the attachment injury event.

### Measures of treatment efficacy:

- Impact of Events Scale-Revised (IES-R)
  - Intrusion, Avoidance, Hyperarousal
- Hopkins Symptom Checklist-25 (HSCL-25)
  - Depression and Anxiety

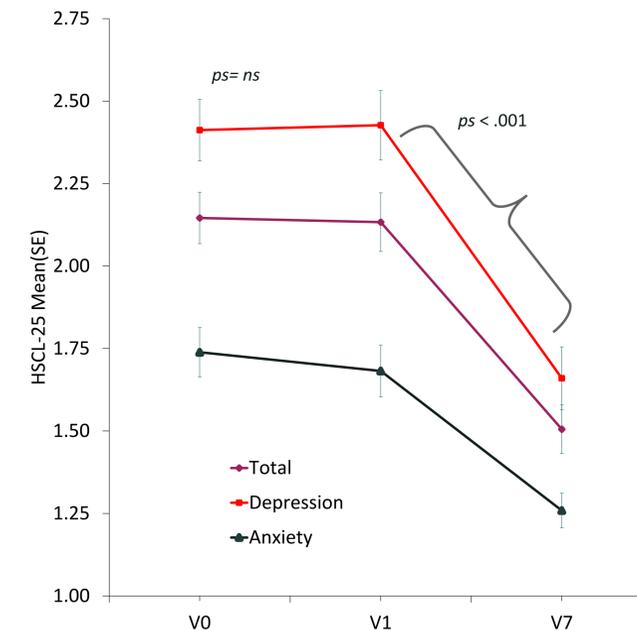
## Trial Design

Time	V0	-	V1	V2 à V6	V7
Week	1	2-5	5	6-10	11
N	57		50	41	39
Procedure	Consent + Eligibility evaluation (baseline)	Waitlist	Writing attachment injury script under propranolol	Reading attachment injury script under propranolol	Post-treatment evaluation

## Characteristics of the Sample (N = 57)

Frequencies		Descriptives	
Gender	N(%)		M(SD)
Male	19(33.3)	Age (years)	40.6(11.9)
Female	38(66.7)	Education (years)	17.1(2.6)
<b>Marital status</b>		Time since event (years)	3.0(4.0)
Single	28(49.1)	Duration of relationship before event (years)	7.6(9.3)
In a relationship	17(29.8)	Total duration of relationship (years)	9.1(10.1)
Divorced	12(21)	IES-R Total at Time 0	52.8(14.1)
<b>Type of betrayal</b>		HSCL Total at Time 0	2.2(0.5)
Infidelity	36(63.2)	WHO Quality of Life	6.8(1.5)
Other	21(36.8)		
<b>Still in same relationship?</b>			
Yes	16(28.1)		
No	40(70.2)		

## Results RM ANOVA : HSCL- 25 (N = 39)



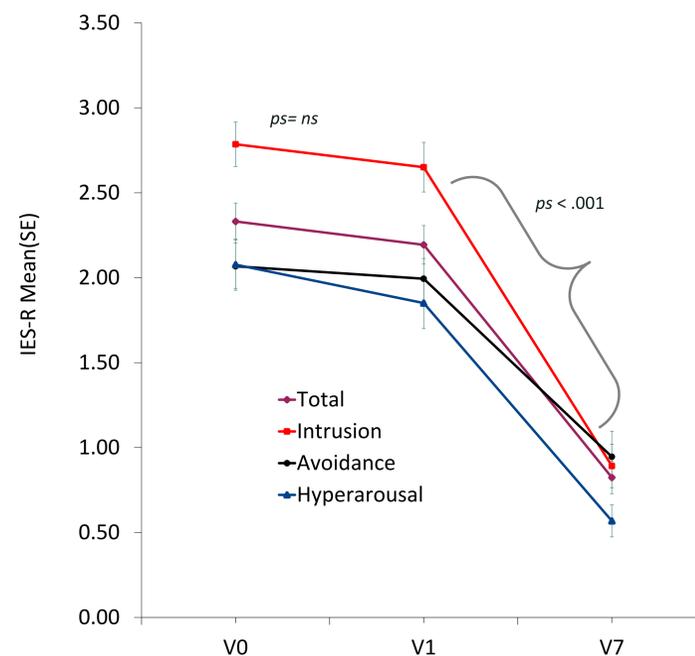
**HSCL Total:**  $F(2, 76) = 58.44, p < .001, n^2 = .61$

**HSCL Depression:**  $F(2, 76) = 52.13, p < .001, n^2 = .58$

**HSCL Anxiety:**  $F(2, 76) = 17.81, p < .001, n^2 = .44$

*A priori* Bonferroni corrected contrasts were significant between T1 and T7, but not between T0 and T1

## Results RM ANOVA : IES-R (N = 39)



**IES-R Total:**  $F(1.6, 62.1) = 127.45, p < .001, n^2 = .77$

**IES-R Intrusions:**  $F(1.7, 65.4) = 136.63, p < .001, n^2 = .78$

**IES-R Avoidance:**  $F(1.3, 49.4) = 39.12, p < .001, n^2 = .51$

**IES-R Hypervigilance:**  $F(2,76) = 81.63, p < .001, n^2 = .68$

*A priori* Bonferroni corrected contrasts were significant between T1 and T7, but not between T0 and T1

## Discussion

- Results support the use of reconsolidation therapy under propranolol to treat clinically significant trauma-related symptoms resulting from romantic partner betrayal.
- Re-experiencing and intrusions seem to be particularly important in this population; they were the most severe at baseline and demonstrated the greatest improvement.
- Depression and general anxiety symptoms also significantly improved.
- The treatment was generally well-tolerated among the participants; there were no withdrawals due to the demands of the treatment procedures.

### Future directions and limitations:

- Longitudinal research on adjustment disorders resulting from attachment injuries
- Randomized double-blind, placebo controlled trials
- Implementation into clinical practice

## References

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- Loneragan, M. H., Olivera-Figueroa, L. A., Pitman, R. K., & Brunet, A. (2013). Propranolol's effects on the consolidation and reconsolidation of long-term emotional memory in healthy participants: a meta-analysis. *Journal of Psychiatry & Neuroscience, 38*(4)
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