

# Combining Prolonged Exposure and Compassion-Focused Therapy for PTSD: A Case of Multilevel Analysis for Single-Experimental Case Designs

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## Poster

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## Abstract

Single-case experimental designs (SCEDs) provide valuable insights into psychological interventions but often require advanced statistical techniques to account for within- and between-subject variability. This study employs a multilevel model to analyse the effects of combining Prolonged Exposure (PE) and Compassion-Focused Therapy (CFT) for PTSD, particularly in individuals with trauma-related shame and guilt. Using a withdrawal crossover SCED (N=4), participants alternated between active listening (A), PE (B), and CFT (C) under two conditions: Condition 1 (A/C/B/C/B) and Condition 2 (A/B/C/B/C). A multilevel approach was applied to model treatment effects over time, capturing intra-individual changes, phase transitions, and cross-condition comparisons. Results indicate that both PE and the combined intervention significantly reduced PTSD symptoms, with the CFT-enhanced approach yielding greater reductions in shame. The multilevel analysis further revealed individual differences in treatment response trajectories, highlighting the importance of guilt, experiential avoidance, and identity-related variables in moderating outcomes. These findings demonstrate the utility of multilevel modelling in SCEDs, offering a robust framework for analysing psychological interventions with small samples.

## Keywords

Multilevel modelling; SCED; Withdrawal-crossover design

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