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Supplementary information

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A systematic review and meta-analysis of experimental methods for modulating intrusive memories following lab-analogue trauma exposure in non-clinical populations

In the format provided by the authors and unedited

Supplementary Information

Table of Contents

Symbols

Common symbols used in the files:

N	*Total* sample size (participants involved)
j	Number of articles
n	Number of experiments
k	Number of effect sizes
ci.lb	Confidence interval lower boundary
ci.ub	Confidence interval upper boundary
CI	Confidence interval

Guideline and Description for Supplementary Information

The following are the guideline and brief description for each table and figure in the supplementary information. Table 1 and Figure 1 can be found in next section named "Supplementary Information". The other tables were uploaded as individual .csv files.

Coding information

Table 1. Articles, techniques, and their superordinate categorizations

Articles included in the current meta-analysis and their corresponding categorization details. Reference list for all eligible articles is attached at the end of the table. Please find this table on page 8-41.

Table 5. Individual Techniques under each Mechanism-based category

This Excel file displays the individual techniques under different Mechanism-based category.

Table 11. Intrusion Meta Data

This Excel file comprises the comprehensive original coding details for every eligible article and experiment. It includes author information, demographic data of the sample size, internal bias assessment (IBA), superordinate categorization, raw mean and standard deviation, calculated effect sizes (Hedge's *g* and *p* values obtained through standardized mean difference [SMD] method), and various other pertinent information.

Main analysis

Table 2. Main analysis

Hedge's *g* and *p* values were extracted from the three-level multilevel meta-analytical modelling (two-sided *z* tests). Excel filtering function can help to filter out results based on *a priori* hypothesis (i.e., column named "Prediction"), outcomes (i.e., "Outcome"), measurement types of intrusion frequency (i.e., "SubOutcome"), remove outliers or not (i.e., "OutlierRemove").

Publication Analysis

Table 3. Trim & Fill Publication Bias Analysis

Adjusted Hedge's *g* and *p* values were extracted from the three-level multilevel meta-analytical modelling (two-sided *z* tests) with the data augmented by Trim and Fill method. Excel filtering function can help to filter out results based on *a priori* hypothesis (i.e., column named "Prediction"), outcomes (i.e., "Outcome"), measurement types of intrusion frequency (i.e., "SubOutcome"), remove outlier or not (i.e., "OutlierRemove").

Figure 1. Funnel Plots

Contour-enhanced funnel plots for different outcome measures and different hypothesis about intrusion reduction/increase. Imputed studies were calculated from Trim and Fill method. Please find this figure on page 43-45.

Table 4. Three Parameter Selection Model Publication Bias Analysis

Adjusted Hedge's *g* and *p* values were extracted from Three Parameter Selection Models. Excel filtering function can help to filter out results based on *a priori* hypothesis (i.e., column named "Prediction"), outcomes (i.e., "Outcome"), measurement types of intrusion frequency (i.e., "SubOutcome"), remove outlier or not (i.e., "OutlierRemove").

Moderation analysis

Table 6. Moderation analysis at different time points

Data was split based on the timepoints at which a technique was administered. Moderation analysis using Procedure- and Mechanism-based categories as moderators was conducted within each different timepoints via meta-regression. Hedge's *g* and *p* values were obtained for each level within a moderator from the meta-regression (two-sided *z* tests). This Table 6 includes the results of both the moderator and each level under the moderator. **Significance of the moderator** informed the overall moderation effect: whether effect sizes significantly differ among different levels within the corresponding moderator (see below table, red color row).

Significance of the moderator

Analysis	Prediction	Time of Administratio	Outcome	Suboutcome	OutlierRemove	N	i	n	k	Hedgesg	CI	QM	z	p
Moderation Analysis: Procedure-based category	All	Delayed post	Intrusion frequency	NA	no	NA	NA	NA	NA	NA	NA	0.968	NA	0.325
Behavioural	All	Delayed post	Intrusion frequency	NA	no	1018	8	9	31	0.26	[-0.02, 0.54]	NA	1.81839	0.069005
Pharmacological	All	Delayed post	Intrusion frequency	NA	no	65	1	1	2	-0.19	[-1.05, 0.67]	NA	-0.439282	0.660457

Significance of each level as compared to 0

Significance of each level informed the significance of each level when compared to 0 (see below table, blue color rows).

Excel filtering function can help to filter out results based on different time points (i.e., column named "Time of Administration"), measurement types of intrusion frequency (i.e., "SubOutcome"), remove outlier or not (i.e., "OutlierRemove").

Table 8. Moderation analysis across whole dataset

Moderation analysis across whole dataset via meta-regression, including the following moderators:

1) Procedure-based category
2) Mechanism-based category
3) Direct vs. Indirect involvement of Trauma Content
4) Task vs. Instruction of Techniques
5) TraumaStimuliType: Type of trauma stimuli (e.g., audio, film, picture etc.).
6) ComparisonType: the type of comparison condition (e.g., no-task, experimental task etc.).
7) StudyDesign: within or between subject design.
8) ModeOfMeasurement: mode of measurement (e.g., diary, lab monitoring task, self-report questionnaire).
9) TimeOfManipulation: time of the technique being administered.
10) Physio_binary: whether physiology is measured (i.e., yes or no).
11) PublicationStatus: whether the article is published (i.e., published or unpublished).
12) Country_RegionofOrigin: The country or region where the study was conducted.
13) Continent: The continent where the study was conducted
14) MeanAge
15) FemaleRatio

Results include the significance of both the moderator and each level under specific moderators. The former informed whether the moderator significantly influences the effect sizes among different levels. The latter provided information about the significance of each level when

compared to 0 effect size. Hedge's *g* and *p* values were extracted from the meta-regression (two-sided *z* tests).

Excel filtering function can help to filter out results based on different time points (i.e., column named "Time of Administration"), a-prior hypothesis (i.e., column named "Prediction"), outcomes (i.e., "Outcome"), measurement types of intrusion frequency (i.e., "SubOutcome"), remove outlier or not (i.e., "OutlierRemove").

Table 9. Moderation analysis for different Procedure-based categories

Data was split into different Procedure-based categories. Moderation analysis using Time of Administration as a moderator was conducted within different Procedure -based categories via meta-regression. The table includes the results of both the moderator and each level under the moderator. The former informs whether the moderator significantly influences the effect sizes among different levels. The latter provided information about the significance of each level when compared to 0 effect size. Hedge's *g* and *p* values were extracted from the meta-regression (two-sided *z* tests).

Excel filtering function can help to filter out results based on different Procedure-based category (i.e., column named "Procedure-basedCategory"), outcomes (i.e., "Outcome"), measurement types of intrusion frequency (i.e., "SubOutcome"), remove outlier or not (i.e., "OutlierRemove").

Table 10. Moderation analysis for different Mechanism-based categories

Data was split into different Mechanism-based categories. Moderation analysis using Time of Administration as a moderator was conducted within different Mechanism-based categories via meta-regression. The table includes the results of both the moderator and each level under the moderator. The former informed whether the moderator significantly influences the effect sizes among different levels. The latter provided information about the significance of each level when compared to 0 effect size. Hedge's *g* and *p* values were extracted from the meta-regression (two-sided *z* tests).

Excel filtering function can help to filter out results based on different Mechanism-based category (i.e., column named "Mechanism-basedCategory"), outcomes (i.e., "Outcome"),

measurement types of intrusion frequency (i.e., “SubOutcome”), remove outlier or not (i.e., “OutlierRemove”).

Individual Technique Analysis

Table 7. Individual Technique Analysis

Within each timepoint, three-level multilevel meta-analytical analyses were conducted on every individual technique (two-sided *z* tests). Excel filtering function can help to filter out results based on individual technique names (i.e., column named “Individual Technique Name”), different time points (i.e., “Time of Administration”), measurement types of intrusion frequency (i.e., “SubOutcome”), remove outlier or not (i.e., “OutlierRemove”).

Supplementary Information

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Wells & Papageorgiou, 1995	Immediate Post	Film-related Rumination	No-Task	Increase	Film-related Rumination	Behavioral	Verbal	Direct	Task
Wells & Papageorgiou, 1995	Immediate Post	Imagery Re-experience	No-Task	Decrease	Imagery Re-experience	Behavioral	Imagery	Direct	Instruction
Wells & Papageorgiou, 1995	Immediate Post	Letter Cancellation Task	No-Task	Decrease	Letter Cancellation Task	Behavioral	Verbal	Indirect	Task
Wells & Papageorgiou, 1995	Immediate Post	Non-film Related Rumination	No-Task	Increase	Non-film Related Rumination	Behavioral	Verbal	Indirect	Task
Murray, 1997	Peri	Emotional Numbing	No-Task	Increase	Emotional Numbing	Behavioral	Emotion	Direct	Instruction
Murray, 1997	Peri	Emotional Acceptance	No-Task	Decrease	Emotional Acceptance	Behavioral	Emotion	Direct	Instruction
Lepore et al., 2000	Immediate Post	Talk Alone	No-Task	Decrease	Talk Alone	Behavioral	Verbal	Direct	Task
Lepore et al., 2000	Immediate Post	Validate Talk	No-Task	Decrease	Validate Talk	Behavioral	Verbal	Direct	Task
Lepore et al., 2000	Immediate Post	Invalidate Talk	No-Task	Increase	Invalidate Talk	Behavioral	Verbal	Direct	Task
Brewin & Saunders, 2001	Peri	Finger Tapping	No-Task	Increase	Finger Tapping	Behavioral	Imagery	Indirect	Task
Stuart, 2002, Exp. 1	Peri	Clay Modeling	No-Task	Decrease	Clay Modeling	Behavioral	Imagery	Indirect	Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Stuart, 2002, Exp. 2	Peri	Dissociation	No-Task	Increase	Dissociation	Behavioral	Other	Indirect	Instruction
Frasquilho, 2004	Peri	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Frasquilho, 2004	Peri	Number Counting	No-Task	Increase	Number Counting	Behavioral	Verbal	Indirect	Task
Homes et al., 2004, Exp. 1	Peri	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Homes et al., 2004, Exp. 1	Peri	Dissociation	No-Task	Increase	Dissociation	Behavioral	Other	Indirect	Instruction
Homes et al., 2004, Exp. 2	Peri	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Homes et al., 2004, Exp. 3	Peri	Number Counting	No-Task	Increase	Number Counting	Behavioral	Verbal	Indirect	Task
Homes et al., 2004, Exp. 3	Peri	Verbalization During Encoding	No-Task	Decrease	Verbalization During Encoding	Behavioral	Verbal	Direct	Task
Turl, 2005	Immediate Post	Threat Attention Walk	Neutral Attention Walk	Increase	Threat vs. Neutral Attention Walk	Behavioral	Other	Indirect	Task
Turl, 2005	Immediate Post	Threat Attention Walk	Walk	Increase	Threat Attention Walk	Behavioral	Other	Indirect	Task
Turl, 2005	Immediate Post	Walk	Neutral Attention Walk	Increase	Neutral Attention Walk	Behavioral	Other	Indirect	Task
Michael & Ehlers, 2007, Exp. 2	Immediate Post	Autobiographical Memory Elaboration	Control (Word Task)	Decrease	Autobiographical Memory Elaboration	Behavioral	Verbal	Direct	Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Nixon et al., 2007	Peri	Memorize Numbers	No-Task	Increase	Memorize Numbers	Behavioral	Verbal	Indirect	Task
Nixon et al., 2007	Peri	Hyperventilation Provocation Test (HVPT)	No-Task	Increase	Hyperventilation Provocation Test (HVPT)	Behavioral	Other	Indirect	Task
Postma, 2007	Pre	Positive CBM Training	Negative CBM Training	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Kindt et al., 2008, Exp. 1	Immediate Post	Conceptual Processing	Data-Driven Processing	Decrease	Conceptual vs. Data-Driven Processing	Behavioral	Verbal vs. Imagery	Direct	Task
Kindt et al., 2008, Exp. 2	Peri	Data-Driven Processing	Control (Irrelevant Reading Task)	Increase	Data-Driven Processing	Behavioral	Imagery	Direct	Task
Kindt et al., 2008, Exp. 2	Peri	Conceptual Processing	Control (Irrelevant Reading Task)	Decrease	Conceptual Processing	Behavioral	Verbal	Direct	Task
Bisby et al., 2009	Pre	High Dose Alcohol	Placebo	Unspecified	High Dose Alcohol	Pharmacological			
Bisby et al., 2009	Pre	Low Dose Alcohol	Placebo	Unspecified	Low Dose Alcohol	Pharmacological			
Bisby et al., 2009	Pre	Low Dose Alcohol	High Dose Alcohol	Unspecified	Low vs. High Alcohol	Pharmacological			
Dunn et al., 2009	Peri	Emotional Suppression	No-Task	Decrease	Emotional Suppression	Behavioral	Emotion	Direct	Instruction
Dunn et al., 2009	Peri	Emotional Acceptance	No-Task	Increase	Emotional Acceptance	Behavioral	Emotion	Direct	Instruction

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Ehring et al., 2009	Immediate Post	Concrete Processing	Film-related Rumination	Decrease	Concrete Processing vs. Film-related Rumination	Behavioral	Verbal	Direct	Task
Ehring et al., 2009	Immediate Post	Concrete Processing	Control (Irrelevant Word and Reading Task)	Decrease	Concrete Processing	Behavioral	Verbal	Direct	Task
Ehring et al., 2009	Immediate Post	Film-related Rumination	Control (Irrelevant Word and Reading Task)	Unspecified	Film-related Rumination	Behavioral	Verbal	Direct	Task
Holmes et al., 2009	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Krans et al., 2009a	Peri	Number Counting	No-Task	Increase	Number Counting	Behavioral	Verbal	Indirect	Task
Krans et al., 2009a	Peri	Verbalization During Encoding	No-Task	Decrease	Verbalization During Encoding	Behavioral	Verbal	Direct	Task
Krans et al., 2009b	Immediate Post	Memory Test	No-Task	Decrease	Memory Test	Behavioral	Verbal	Direct	Task
Lang et al., 2009	Pre	Positive CBM Training	Negative CBM Training	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Nixon et al., 2009a	Immediate Post	Memorize Numbers + Thought Suppression	No-Task	Increase	Memorize Numbers + Thought Suppression	Behavioral	Verbal + Imagery	Indirect + Direct	Task + Instruction

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Nixon et al., 2009a	Immediate Post	Hyperventilation Provocation + Thought Suppression	No-Task	Increase	Hyperventilation Provocation + Thought Suppression	Behavioral	Other + Imagery	Indirect + Direct	Task + Instruction
Nixon et al., 2009a	Immediate Post	Block Rehearsal + Thought Suppression	No-Task	Increase	Block Rehearsal + Thought Suppression	Behavioral	Imagery	Indirect + Direct	Task + Instruction
Nixon et al., 2009a	Immediate Post	Thought Suppression	No-Task	Increase	Thought Suppression	Behavioral	Imagery	Direct	Instruction
Nixon et al., 2009b	Immediate Post	Memorize Numbers + Thought Suppression	No-Task	Increase	Memorize Numbers + Thought Suppression	Behavioral	Verbal + Imagery	Indirect + Direct	Task
Nixon et al., 2009b	Immediate Post	Thought Suppression	No-Task	Unspecified	Thought Suppression	Behavioral	Imagery	Direct	Instruction
Nixon et al., 2009b	Immediate Post	Memorize Numbers	No-Task	Unspecified	Memorize Numbers	Behavioral	Verbal	Indirect	Task
Zetsche et al., 2009	Immediate Post	Film-related Rumination	Autobiographical Memory Elaboration	Increase	Film-related Rumination vs. Autobiographical Memory Elaboration	Behavioral	Verbal	Direct	Task
Zetsche et al., 2009	Immediate Post	Film-related Rumination	Control (Irrelevant Quiz Question)	Increase	Film-related Rumination	Behavioral	Verbal	Direct	Task
Zetsche et al., 2009	Immediate Post	Autobiographical Memory Elaboration	Control (Irrelevant Quiz Question)	Unspecified	Autobiographical Memory Elaboration	Behavioral	Verbal	Direct	Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Bisby et al., 2010	Pre	Low Dose Alcohol	Placebo	Increase	Low Dose Alcohol	Pharmacological			
Bisby et al., 2010	Pre	High Dose Alcohol	Placebo	Decrease	High Dose Alcohol	Pharmacological			
Bisby et al., 2010	Pre	Low Dose Alcohol	High Dose Alcohol	Increase	Low vs. High Alcohol	Pharmacological			
Bourne et al., 2010, Exp. 1	Peri	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Bourne et al., 2010, Exp. 1	Peri	Number Counting	No-Task	Increase	Number Counting	Behavioral	Verbal	Indirect	Task
Bourne et al., 2010, Exp. 2	Peri	Number Counting	No-Task	Increase	Number Counting	Behavioral	Verbal	Indirect	Task
Holmes et al., 2010, Exp. 1	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Holmes et al., 2010, Exp. 1	Immediate Post	Trauma Reminder + Pub Quiz	Trauma Reminder	Increase	Trauma Reminder + Pub Quiz	Behavioral	Imagery + Verbal	Direct + Indirect	Task
Holmes et al., 2010, Exp. 2	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Holmes et al., 2010, Exp. 2	Immediate Post	Trauma Reminder + Pub Quiz	Trauma Reminder	Increase	Trauma Reminder + Pub Quiz	Behavioral	Imagery + Verbal	Direct + Indirect	Task
Krans et al., 2010a	Peri	Clay Modeling	No-Task	Decrease	Clay Modeling	Behavioral	Imagery	Indirect	Task
Krans et al., 2010a	Peri	Number Counting	No-Task	Unspecified	Number Counting	Behavioral	Verbal	Indirect	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Krans et al., 2010b	Peri	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Krans et al., 2010b	Peri	Chewing Gum	No-Task	Unspecified	Chewing Gum	Behavioral	Other	Indirect	Task
Ball & Brewin, 2012	Immediate + Delayed Post	Film-related Rumination	No-Task	Increase	Film-related Rumination	Behavioral	Verbal	Direct	Instruction
Ball & Brewin, 2012	Immediate + Delayed Post	Non-film Related Rumination	No-Task	Increase	Non-film Related Rumination	Behavioral	Verbal	Indirect	Instruction
Brown et al., 2012	Pre	High Self-efficacy	Low Self-efficacy	Decrease	High vs. Low Self-efficacy	Behavioral	Other	Indirect	Task
Deeprose et al., 2012, Exp. 1	Immediate Post	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Deeprose et al., 2012, Exp. 1	Immediate Post	Number Counting	No-Task	Increase	Number Counting	Behavioral	Verbal	Indirect	Task
Deeprose et al., 2012, Exp. 2	Immediate Post	Trauma Reminder + Finger Tapping	No-Task	Decrease	Trauma Reminder + Finger Tapping	Behavioral	Imagery	Direct + Indirect	Task
Deeprose et al., 2012, Exp. 2	Immediate Post	Trauma Reminder + Number Counting	No-Task	Increase	Trauma Reminder + Number Counting	Behavioral	Imagery + Verbal	Direct + Indirect	Task
Ehlers et al., 2012	Immediate Post	Writing-based Imagery Re-experience	Control (Word Task)	Decrease	Imagery Re-experience	Behavioral	Imagery	Direct	Task
Ehlers et al., 2012	Immediate Post	Autobiographical Memory Elaboration	Control (Word Task)	Decrease	Autobiographical Memory Elaboration	Behavioral	Verbal	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Hagenaars & Arntz, 2012	Immediate Post	Imagery Rescripting	Imagery Re-experience	Decrease	Imagery Rescripting vs. Imagery Re-experience	Behavioral	Imagery	Direct	Task
Hagenaars & Arntz, 2012	Immediate Post	Imagery Rescripting	Positive Imagery	Decrease	Imagery Rescripting vs. Positive Imagery	Behavioral	Imagery	Direct vs. Indirect	Task
Hagenaars & Arntz, 2012	Immediate Post	Imagery Re-experience	Positive Imagery	Unspecified	Imagery Re-experience vs. Positive Imagery	Behavioral	Imagery	Direct vs. Indirect	Task
Hagenaars, 2012	Immediate Post	Imagery Rescripting	Imagery Re-experience	Decrease	Imagery Rescripting vs. Imagery Re-experience	Behavioral	Imagery	Direct	Task
Krans & Bos, 2012	Immediate Post	Unconscious Imagery Re-experience	Imagery Re-experience	Decrease	Unconscious vs. Conscious Imagery Re-experience	Behavioral	Imagery	Direct	Task vs. Instruction
Krans & Bos, 2012	Immediate Post	Imagery Re-experience	Control (Working Memory Task)	Increase	Imagery Re-experience	Behavioral	Imagery	Direct	Instruction
Krans & Bos, 2012	Immediate Post	Unconscious Imagery Re-experience	Control (Working Memory Task)	Unspecified	Unconscious Imagery Re-experience	Behavioral	Imagery	Direct	Task
Pearson et al., 2012, Exp. 1	Pre	Contextual Information	No-Task	Decrease	Contextual Information	Behavioral	Verbal	Direct	Instruction
Pearson et al., 2012, Exp. 2	Pre	Contextual Information	No-Task	Decrease	Contextual Information	Behavioral	Verbal	Direct	Instruction
Pearson, 2012	Peri	Contextual Information	No-Task	Increase	Contextual Information	Behavioral	Verbal	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Verwoerd et al., 2012	Immediate Post	Attentional Bias Modification	Control (Filler Task with No Attentional Modification)	Decrease	Attentional Bias Modification	Behavioral	Other	Direct	Task
Warnock, 2012	Immediate + Delayed Post	Film-related Rumination	Control (Word Task)	Increase	Film-related Rumination	Behavioral	Verbal	Direct	Task
Woud et al., 2012	Immediate Post	Positive CBM Training	Negative CBM Training	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Bryant et al., 2013	Immediate Post	Cold Water Stress Induction	Control (Warm Water)	Increase	Cold vs. Warm Water Stress	Behavioral	Emotion	Indirect	Task
Cheung et al., 2013	Peri	Cold Water Stress Induction	Control (Warm Water)	Increase	Cold vs. Warm Water Stress	Behavioral	Emotion	Indirect	Task
Hawkins & Cougle, 2013	Pre	Nicotine	Placebo	Increase	Nicotine	Pharmacological			
Krans et al., 2013a	Immediate Post	Imagery Re-experience	Control (Working Memory Task)	Unspecified	Imagery Re-experience	Behavioral	Imagery	Direct	Instruction
Krans et al., 2013a	Immediate Post	Unconscious Imagery Re-experience	Control (Working Memory Task)	Decrease	Unconscious Imagery Re-experience	Behavioral	Imagery	Indirect	Task
Krans et al., 2013a	Immediate Post	Imagery Re-experience	Unconscious Imagery Re-experience	Increase	Conscious vs. Unconscious	Behavioral	Imagery	Direct vs. Indirect	Instruction vs. Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
					Imagery Re-experience				
Krans et al., 2013b	Peri	Contextual Information	No-Task	Unspecified	Contextual Information	Behavioral	Verbal	Direct	Instruction
Krans et al., 2013b	Peri	Finger Tapping	No-Task	Decrease	Finger Tapping	Behavioral	Imagery	Indirect	Task
Krans et al., 2013b	Peri	Number Counting	No-Task	Unspecified	Number Counting	Behavioral	Verbal	Indirect	Task
Krans, 2013	Peri	Contextual Information	No-Task	Increase	Contextual Information	Behavioral	Verbal	Direct	Instruction
Krans, 2013	Peri	Contextual Information	No-Task	Unspecified	Contextual Information	Behavioral	Verbal	Direct	Instruction
Woud et al., 2013	Pre	Positive CBM Training	Negative CBM Training	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Marks & Zoellner, 2014	Delayed Post 2 Days	Trauma Reminder + Extinction	Trauma Reminder + Extinction	Decrease	Pre-vs. Post-Extinction Using Trauma Reminder	Behavioral	Imagery	Direct	Task
Marks & Zoellner, 2014	Delayed Post 2 Days	Trauma Reminder + Extinction	Extinction	Decrease	Trauma Reminder + Extinction vs. Extinction	Behavioral	Imagery	Direct	Task
Polack, 2014	Immediate Post	VE Egocentric Recognition Memory Task	Control (Music)	Decrease	VE Egocentric Recognition Memory Task	Behavioral	Imagery	Indirect	Task
Polack, 2014	Immediate Post	VE Allocentric Recognition Memory Task	Control (Music)	Unspecified	VE Allocentric Recognition Memory Task	Behavioral	Imagery	Indirect	Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Takarangi et al., 2014	Immediate Post	More Negative Feedback of The Film	No-Task	Unspecified	Negative Feedback	Behavioral	Verbal	Direct	Task
Takarangi et al., 2014	Immediate Post	Less Negative Feedback of The Film	No-Task	Decrease	Negative Feedback	Behavioral	Verbal	Direct	Task
Wells & Roussis, 2014	Immediate Post	Detached Mindfulness (Disengaged Processing) towards Intrusions	No-Task	Decrease	Detached Mindfulness	Behavioral	Emotion	Direct	Instruction
Wells & Roussis, 2014	Immediate Post	Acceptance towards Intrusions	No-Task	Unspecified	Emotional Acceptance	Behavioral	Emotion	Direct	Instruction
Wells & Roussis, 2014	Immediate Post	Imaginal Exposure towards Intrusions	No-Task	Unspecified	Imaginary Re-Exposure	Behavioral	Imagery	Direct	Instruction
Cheung et al., 2015	Delayed Post 2 Days	Cold Water Stress Induction + Trauma Reminder	Control (Warm Water) + Trauma Reminder	Increase	Cold vs. Warm Water Stress + Trauma Reminder	Behavioral	Emotion	Indirect	Task
Cheung et al., 2015	Delayed Post 2 Days	Cold Water Stress Induction + Trauma Reminder	Cold Water Stress Induction	Increase	Cold Water Stress Induction + Trauma Reminder vs. Cold Water Stress Induction	Behavioral	Imagery	Direct	Task
Gittins et al., 2015	Immediate Post	Writing-based Imagery Re-experience	Control (Irrelevant Writing Task)	Increase	Imagery Re-experience	Behavioral	Imagery	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Gittins et al., 2015	Pre	Real Trauma Video	Fake Trauma Video	Unspecified	Real vs. Fake Trauma Video	Behavioral	Verbal	Direct	Instruction
James et al., 2015, Exp. 1	Delayed Post 24 Hours	Trauma Reminder + Tetris	No-Task	Decrease	Trauma Reminder + Tetris	Behavioral	Imagery	Direct + Indirect	Task
James et al., 2015, Exp. 2	Delayed Post 24 Hours	Trauma Reminder + Tetris	No-Task	Decrease	Trauma Reminder + Tetris	Behavioral	Imagery	Direct + Indirect	Task
James et al., 2015, Exp. 2	Delayed Post 24 Hours	Trauma Reminder	No-Task	Unspecified	Trauma Reminder	Behavioral	Imagery	Direct	Task
James et al., 2015, Exp. 2	Delayed Post 24 Hours	Tetris Only	No-Task	Unspecified	Tetris	Behavioral	Imagery	Indirect	Task
Kubota et al., 2015	Pre	Sad Induction	Control (Neutral Mood Induction)	Increase	Sad Induction	Behavioral	Emotion	Indirect	Task
Kubota et al., 2015	Immediate Post	Sad Induction	Control (Neutral Mood Induction)	Increase	Sad Induction	Behavioral	Emotion	Indirect	Task
Pile et al., 2015	Immediate Post	Trauma Re-Exposure + Verbal Update	Control (View Non-Traumatic Films)	Decrease	Trauma Re-Exposure + Verbal Update	Behavioral	Imagery + Verbal	Direct	Task
Pile et al., 2015	Immediate Post	Trauma Re-Exposure	Control (View Non-Traumatic Films)	Unspecified	Trauma Re-Exposure	Behavioral	Imagery	Direct	Task
Porcheret et al., 2015	Immediate Post	Sleep	No Sleep	Increase	Sleep	Behavioral	Other	Indirect	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Bryant & Foord, 2016	Peri	Attachment Priming	Control (Positive Mood Induction)	Decrease	Attachment Priming	Behavioral	Emotion	Indirect	Task
Das et al., 2016	Immediate Post	Nitrous Oxide	Placebo	Decrease	Nitrous Oxide	Pharmacological			
Dibbets & Arntz, 2016	Immediate Post	Imagery Re-experience	Control (Magazine Reading)	Unspecified	Imagery Re-experience	Behavioral	Imagery	Direct	Task
Dibbets & Arntz, 2016	Immediate Post	Imagery Rescripting	Control (Magazine Reading)	Decrease	Imagery Rescripting	Behavioral	Imagery	Direct	Task
Dorahy et al., 2016	Peri	Spinning Dot (Dissociation)	Control (View Neutral Image)	Increase	Dissociation	Behavioral	Other	Indirect	Task
Dorahy et al., 2016	Peri	Mirror Group (Dissociation)	Control (View Neutral Image)	Increase	Dissociation	Behavioral	Other	Indirect	Task
James et al., 2016	Pre	Tetris Only	No-Task	Decrease	Tetris	Behavioral	Imagery	Indirect	Task
Kleim et al., 2016	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task
Krans et al., 2016	Peri	Moderate Outcome Contextual Information	No-Task	Unspecified	Contextual Information	Behavioral	Verbal	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Krans et al., 2016	Peri	Severe Outcome Contextual Information	No-Task	Increase	Contextual Information	Behavioral	Verbal	Direct	Task
Segovia et al., 2016	Peri	Conceptual Processing	No-Task	Increase	Conceptual Processing	Behavioral	Verbal	Direct	Instruction
Segovia et al., 2016	Peri	Data-Driven Processing	No-Task	Unspecified	Data-Driven Processing	Behavioral	Imagery	Direct	Instruction
Tabrizi & Jansson, 2016	Immediate Post	Number Counting	No-Task	Decrease	Number Counting	Behavioral	Verbal	Indirect	Task
Tabrizi & Jansson, 2016	Immediate Post	Clay Modeling	No-Task	Unspecified	Clay Modeling	Behavioral	Imagery	Indirect	Task
White & Wild, 2016	Peri	Concrete Processing	Film-related Rumination	Decrease	Concrete Processing vs. Film-related Rumination	Behavioral	Imagery vs. Verbal	Direct	Instruction
Bryant & Chan, 2017	Delayed Post 2 Days	Attachment Priming	Control (Positive Mood Induction)	Unspecified	Attachment Priming	Behavioral	Emotion	Indirect	Instruction
Bub & Lommen, 2017	Immediate Post	Guilt Induction	No-Task	Increase	Guilt Induction	Behavioral	Emotion	Direct	Task
Cheung & Bryant, 2017	Immediate Post	Negative Appraisal of Intrusion	No-Task	Increase	Negative Appraisal	Behavioral	Verbal	Direct	Instruction
Cheung & Bryant, 2017	Immediate Post	Benign Appraisal of Intrusion	No-Task	Unspecified	Positive Appraisal	Behavioral	Verbal	Direct	Instruction
Graebener et al., 2017	Delayed Post 24 Hours, 2 Days, 3 Days	Hydrocortisone	Placebo	Decrease	Hydrocortisone	Pharmacological			

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Hagenaars et al., 2017	Delayed Post 4 Days	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Hagenaars et al., 2017	Delayed Post 4 Days	Trauma Reminder + Word Game	Trauma Reminder	Decrease	Trauma Reminder + Word Game vs. Trauma Reminder	Behavioral	Verbal	Direct + Indirect	Task
Keyan & Bryant, 2017a	Delayed Post 2 Days	Trauma Reminder + Exercise	Trauma Reminder	Increase	Trauma Reminder + Exercise vs. Trauma Reminder	Behavioral	Other	Indirect	Task
Keyan & Bryant, 2017a	Delayed Post 2 Days	Trauma Reminder	Exercise Only	Unspecified	Trauma Reminder vs. Exercise	Behavioral	Imagery vs. Other	Direct vs. Indirect	Task
Keyan & Bryant, 2017a	Delayed Post 2 Days	Exercise Only	Trauma Reminder + Exercise	Unspecified	Exercise vs. Trauma Reminder + Exercise	Behavioral	Imagery	Direct	Task
Keyan & Bryant, 2017b	Immediate Post	Exercise Only	Walk	Increase	Exercise vs. Walk	Behavioral	Other	Indirect	Task
Kubota & Nixon, 2017, Exp. 1	Immediate Post	Film-related Rumination	Control (Irrelevant Quiz Question)	Increase	Film-related Rumination	Behavioral	Verbal	Direct	Task
Kubota & Nixon, 2017, Exp. 2	Immediate Post	Film-related Rumination	Control (Free Thinking)	Increase	Film-related Rumination	Behavioral	Verbal	Direct	Task
Marks, 2017	Delayed Post 2 Days	Trauma Reminder + Extinction	Extinction	Decrease	Trauma Reminder + Extinction vs. Extinction	Behavioral	Imagery	Direct	Task
Marks, 2017	Delayed Post 2 Days	Trauma Reminder + Extinction	Trauma Reminder + Extinction	Decrease	Pre-Neutral vs. Pre-Negative Trauma Reminder	Behavioral	Imagery	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Marks, 2017	Delayed Post 2 Days	Trauma Reminder + Extinction	Trauma Reminder + Extinction	Decrease	Pre-vs. Post-Extinction Using Trauma Reminder	Behavioral	Imagery	Direct	Task
Page & Coxon, 2017	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Ripley et al., 2017	Immediate Post	Sad Induction	Humor Induction	Unspecified	Sad vs. Humor Induction	Behavioral	Emotion	Indirect	Task
Woodward & Beck, 2017	Peri + Immediate Post	Social Support	No-Task	Decrease	Social Support	Behavioral	Emotion	Indirect	Task
Asselbergs et al., 2018, Exp. 1	Immediate Post	Trauma Reminder + Traumagameplay1	No-Task	Decrease	Trauma Reminder + Traumagameplay1	Behavioral	Imagery	Direct + Indirect	Task
Asselbergs et al., 2018, Exp. 2	Immediate Post	Traumagameplay2	No-Task	Decrease	Traumagameplay2	Behavioral	Imagery	Indirect	Task
Asselbergs et al., 2018, Exp. 2	Immediate Post	Imagery Re-experience + Traumagameplay2	No-Task	Decrease	Imagery Re-experience + Traumagameplay2	Behavioral	Imagery	Direct + Indirect	Task
Asselbergs et al., 2018, Exp. 2	Immediate Post	Imagery Re-experience	No-Task	Unspecified	Imagery Re-experience	Behavioral	Imagery	Direct	Task
Jaffe, 2018	Pre	High Dose Alcohol	Placebo	Decrease	High Dose Alcohol	Pharmacological			
Jaffe, 2018	Pre	Low Dose Alcohol	Placebo	Increase	Low Dose Alcohol	Pharmacological			
Krans et al., 2018, Exp. 1	Pre	High Self-efficacy	Control (Recall Important Memory)	Decrease	Self-efficacy	Behavioral	Other	Indirect	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Krans et al., 2018, Exp. 1	Pre	Low Self-efficacy	Control (Recall Important Memory)	Increase	Self-efficacy	Behavioral	Other	Indirect	Task
Krans et al., 2018, Exp. 2	Immediate Post	High Self-efficacy	Control (Recall Important Memory)	Decrease	Self-efficacy	Behavioral	Other	Indirect	Task
Krans et al., 2018, Exp. 2	Immediate Post	Low Self-efficacy	Control (Recall Important Memory)	Increase	Self-efficacy	Behavioral	Other	Indirect	Task
Lass-Hennemann et al., 2018	Immediate Post	Therapy Dog Interaction	No-Task	Unspecified	Therapy Dog Interaction	Behavioral	Emotion	Indirect	Task
Lass-Hennemann et al., 2018	Immediate Post	Dog Interaction Film	No-Task	Unspecified	Dog Interaction Film	Behavioral	Emotion	Indirect	Task
Oulton et al., 2018	Immediate Post	Imagery Trauma Elaboration	Control (Read Intrusions)	Increase	Imagery Trauma Elaboration	Behavioral	Imagery	Direct	Task
Woud et al., 2018	Immediate Post	Positive CBM Training	Negative CBM Training	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Woud et al., 2018	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task
Allen, 2020	Immediate Post	Expressive Trauma Disclosure	Factual Trauma Disclosure	Decrease	Expressive vs. Factual Trauma Disclosure	Behavioral	Verbal vs. Imagery	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Bruehl et al., 2019	Immediate Post	Tetris Only	No-Task	Decrease	Tetris	Behavioral	Imagery	Indirect	Task
Bruehl et al., 2019	Immediate Post	Exercise Only	No-Task	Decrease	Exercise	Behavioral	Other	Indirect	Task
Horlyck et al., 2019, Exp. 1	Immediate Post	Wakeful Rest	Control (0-back Vigilance Task)	Unspecified	Wakeful Rest	Behavioral	Other	Indirect	Task
Horlyck et al., 2019, Exp. 2	Immediate Post	Wakeful Rest	Control (0-back Vigilance Task)	Unspecified	Wakeful Rest	Behavioral	Other	Indirect	Task
Kubota & Nixon, 2019	Immediate Post	Mindfulness	Muscle Relaxation	Decrease	Mindfulness vs. Muscle Relaxation	Behavioral	Other	Indirect	Task
Kuiling et al., 2019	Peri	Behavioral Control	No Behavioral Control	Decrease	Behavioral Control	Behavioral	Other	Indirect	Task
Lau-Zhu et al., 2019, Exp. 1	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Lau-Zhu et al., 2019, Exp. 2	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Lau-Zhu et al., 2019, Exp. 3	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Meyer et al., 2019	Immediate Post	Past Verbal Training	Now Verbal Training	Decrease	Past vs. Now Verbal Training	Behavioral	Verbal	Direct	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Mooren et al., 2019	Immediate Post	Field Perspective Recall	Observer Perspective Recall	Increase	Field vs. Observer Perspective Recall	Behavioral	Imagery	Direct	Task
Mooren et al., 2019	Immediate Post	Observer Perspective Recall	Control (Neutral Memory Recall)	Unspecified	Observer Perspective Recall	Behavioral	Imagery	Direct	Task
Mooren et al., 2019	Immediate Post	Field Perspective Recall	Control (Neutral Memory Recall)	Increase	Field Perspective Recall	Behavioral	Imagery	Direct	Task
Porcheret et al., 2019	Immediate Post	Sleep	No Sleep	Increase	Sleep	Behavioral	Other	Indirect	Task
Rahman et al., 2019	Pre	High Self-efficacy	Control (Puzzles and Verbal Tests)	Decrease	Self-efficacy	Behavioral	Other	Indirect	Task
Rahman et al., 2019	Pre	Low Self-efficacy	Control (Puzzles and Verbal Tests)	Increase	Self-efficacy	Behavioral	Other	Indirect	Task
Siegesleitner et al., 2019	Delayed Post 24 Hours	Imagery Rescripting	No-Task	Decrease	Imagery Rescripting	Behavioral	Imagery	Direct	Task
Siegesleitner et al., 2019	Delayed Post 24 Hours	Imagery Re-experience	No-Task	Decrease	Imagery Re-experience	Behavioral	Imagery	Direct	Task
Sopp et al., 2019a	Immediate Post	Sleep	No REM Sleep	Decrease	REM Sleep	Behavioral	Other	Indirect	Task
Voss et al., 2019	Pre	Anodal tDCS	Placebo	Decrease	Anodal tDCS	Neuromodulation			

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Voss et al., 2019	Pre	Cathodal tDCS	Placebo	Increase	Cathodal tDCS	Neuromodulation			
Woud et al., 2019	Pre	Low Resistance to Proactive Interference	High Resistance to Proactive Interference	Unspecified	Low vs. High Resistance to Proactive Interference	Behavioral	Other	Indirect	Task
van Schie et al., 2019, Exp. 1	Immediate Post	Imagery Re-experience + Eye Movement	No-Task	Decrease	Imagery Re-experience + Eye Movement	Behavioral	Imagery + Other	Direct + Indirect	Task
van Schie et al., 2019, Exp. 1	Immediate Post	Imagery Re-experience + Number Counting	No-Task	Decrease	Imagery Re-experience + Number Counting	Behavioral	Imagery + Verbal	Direct + Indirect	Task
van Schie et al., 2019, Exp. 2	Immediate Post	Imagery Re-experience + Eye Movement	No-Task	Decrease	Imagery Re-experience + Eye Movement	Behavioral	Imagery + Other	Direct + Indirect	Task
van Schie et al., 2019, Exp. 2	Immediate Post	Imagery Re-experience + Number Counting	No-Task	Decrease	Imagery Re-experience + Number Counting	Behavioral	Imagery + Verbal	Direct + Indirect	Task
van Schie et al., 2019, Exp. 3	Immediate Post	Imagery Re-experience + Eye Movement	No-Task	Decrease	Imagery Re-experience + Eye Movement	Behavioral	Imagery + Other	Direct + Indirect	Task
van Schie et al., 2019, Exp. 3	Immediate Post	Imagery Re-experience + Number Counting	No-Task	Decrease	Imagery Re-experience + Number Counting	Behavioral	Imagery + Verbal	Direct + Indirect	Task
van Schie et al., 2019, Exp. 3	Immediate Post	Imagery Re-experience	No-Task	Unspecified	Imagery Re-experience	Behavioral	Imagery	Direct	Instruction
Badawi et al., 2020	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Badawi et al., 2020	Immediate Post	Trauma Reminder + D-Corsi	Trauma Reminder	Decrease	Trauma Reminder + D-Corsi vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Kamboj et al., 2019	Immediate Post	Propranolol	Placebo	Decrease	Propranolol	Pharmacological			
Kamboj et al., 2019	Immediate Post	Hydrocortisone	Placebo	Decrease	Hydrocortisone	Pharmacological			
Kessler et al., 2020	Delayed Post 3 Days	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Kessler et al., 2020	Delayed Post 3 Days	Trauma Reminder + Word Game	Trauma Reminder	Unspecified	Trauma Reminder + Word Game vs. Trauma Reminder	Behavioral	Verbal	Direct + Indirect	Task
Kubota & Nixon, 2019	Immediate Post	Mindfulness	Muscle Relaxation	Decrease	Mindfulness vs. Muscle Relaxation	Behavioral	Other	Indirect	Task
Meyer et al., 2020, Exp. 1	Immediate Post	High Visual Stimulation	No-Task	Decrease	Visual Stimulation	Behavioral	Imagery	Indirect	Task
Meyer et al., 2020, Exp. 1	Immediate Post	Low Visual Stimulation	No-Task	Unspecified	Visual Stimulation	Behavioral	Imagery	Indirect	Task
Meyer et al., 2020, Exp. 2	Immediate Post	High Visual Stimulation Imagery	No-Task	Decrease	Visual Stimulation Imagery	Behavioral	Imagery	Indirect	Task
Meyer et al., 2020, Exp. 2	Immediate Post	Trauma Reminder + High Visual Stimulation Imagery	No-Task	Increase	Trauma Reminder + Visual Stimulation Imagery	Behavioral	Imagery	Direct + Indirect	Task
Nagulendran et al., 2020	Peri	Emotional Suppression	No-Task	Increase	Emotional Suppression	Behavioral	Emotion	Direct	Instruction

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Rijkeboer et al., 2020	Immediate Post	Imagery Rescripting	No-Task	Decrease	Imagery Rescripting	Behavioral	Imagery	Direct	Task
Rijkeboer et al., 2020	Immediate Post	Writing-based Rescripting	No-Task	Decrease	Writing-based Rescripting	Behavioral	Imagery	Direct	Task
Rijkeboer et al., 2020	Immediate Post	Imagery Re-experience	No-Task	Unspecified	Imagery Re-experience	Behavioral	Imagery	Direct	Instruction
Shkreli et al., 2019	Pre	Losartan	Placebo	Decrease	Losartan	Pharmacological			
Siegesleitner et al., 2020	Immediate Post	Imagery Rescripting	No-Task	Decrease	Imagery Rescripting	Behavioral	Imagery	Direct	Task
Siegesleitner et al., 2020	Immediate Post	Imagery Re-experience	No-Task	Unspecified	Imagery Re-experience	Behavioral	Imagery	Direct	Task
Brennen et al., 2021	Delayed Post 24 Hours	Trauma Reminder + Tetris	Control (Music)	Decrease	Trauma Reminder + Tetris	Behavioral	Imagery	Direct + Indirect	Task
Brennen et al., 2021	Delayed Post 24 Hours	Tetris + Trauma Reminder	Control (Music)	Null	Tetris + Trauma Reminder	Behavioral	Imagery	Indirect + Direct	Task
Brennen et al., 2021	Delayed Post 24 Hours	Trauma Reminder + Break + Tetris	Control (Music)	Decrease	Trauma Reminder + Break + Tetris	Behavioral	Imagery	Direct + Indirect	Task
Franke et al., 2020	Immediate Post	Extinction	No-Task	Decrease	Extinction	Behavioral	Imagery	Direct	Task
Guzey et al., 2021	Pre	Concrete Processing	No-Task	Decrease	Concrete Processing	Behavioral	Imagery	Indirect	Task
Karl et al., 2021	Pre	Oxytocin + Attachment Priming	Oxytocin + Control (Irrelevant Writing Task)	Unspecified	Attachment Priming	Behavioral	Emotion	Indirect	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Karl et al., 2021	Pre	Placebo + Attachment Priming	Placebo + Control (Irrelevant Writing Task)	Decrease	Attachment Priming	Behavioral	Emotion	Indirect	Task
Karl et al., 2021	Pre	Oxytocin + Attachment Priming	Placebo + Attachment Priming	Unspecified	Oxytocin	Pharmacological			
Karl et al., 2021	Pre	Oxytocin + Control (Irrelevant Writing Task)	Placebo + Control (Irrelevant Writing Task)	Decrease	Oxytocin	Pharmacological			
Lau-Zhu et al., 2021	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Nguyen, 2021	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task
Sopp et al., 2021	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task
Wilhelm et al., 2021	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task
Zeng et al., 2020	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task
Espinosa et al., 2022	Immediate Post	Social Support	Control (Magazine Reading)	Decrease	Social Support	Behavioral	Emotion	Indirect	Task
Espinosa et al., 2022	Immediate Post	Unsupportive Social Interaction	Control (Magazine Reading)	Increase	Unsupportive Social Interaction	Behavioral	Emotion	Indirect	Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Herzog et al., 2022	Immediate Post	Negative Expectation towards Intrusion	No-Task	Increase	Negative Expectation towards Intrusion	Behavioral	Verbal	Direct	Instruction
Herzog et al., 2022	Immediate Post	Positive Expectation towards Intrusion	No-Task	Decrease	Positive Expectation towards Intrusion	Behavioral	Verbal	Direct	Instruction
Hilberdink et al., 2022	Pre	Cold Water Stress Induction	Control (Warm Water)	Increase	Cold vs. Warm Water Stress	Behavioral	Emotion	Indirect	Task
Hoffman & Nickerson, 2021	Pre + Peri	Guilt Induction	No-Task	Null	Guilt Induction	Behavioral	Emotion	Direct	Task
Hoffman & Nickerson, 2021	Pre + Peri	Guilt Induction	No-Task	Increase	Guilt Induction	Behavioral	Emotion	Direct	Task
Jones & McNally, 2020	Pre	Broad Belief About Trauma	Narrow Belief About Trauma	Increase	Broad vs. Narrow Trauma Belief	Behavioral	Verbal	Direct	Task
Kube et al., 2022	Immediate + Delayed Post	Deceptive Placebo	No-Task	Decrease	Deceptive Placebo	Pharmacological			
Kube et al., 2022	Immediate + Delayed Post	Open-label Placebo	No-Task	Decrease	Open-label Placebo	Pharmacological			
Meyer & Morina, 2022	Immediate Post	Similar Background - Vulnerable Social Comparison	No-Task	Unspecified	Social Comparison	Behavioral	Other	Direct	Task
Meyer & Morina, 2022	Immediate Post	Similar Background- Resilient Social Comparison	No-Task	Unspecified	Social Comparison	Behavioral	Other	Direct	Task

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Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Meyer & Morina, 2022	Immediate Post	Different Background-Resilient Social Comparison	No-Task	Unspecified	Social Comparison	Behavioral	Other	Direct	Task
Schultebraucks et al., 2022	Pre	Oxytocin	Placebo	Increase	Oxytocin	Pharmacological			
Varma & Hu, 2022, Exp. 1	Immediate Post	Prosocial	Control (Number Judgement)	Decrease	Prosocial Behavior	Behavioral	Other	Indirect	Task
Varma & Hu, 2022, Exp. 2	Immediate Post	Prosocial	Control (Proself)	Decrease	Prosocial Behavior	Behavioral	Other	Indirect	Task
Würtz et al., 2022	Immediate Post	Positive CBM Training	Negative CBM Training	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Würtz et al., 2022	Immediate Post	Positive CBM Training (World)	Negative CBM Training (World)	Decrease	Positive vs. Negative CBM Training	Behavioral	Emotion	Indirect	Task
Espinosa et al., 2023	Immediate Post	Positive Social Reappraisal	No-Task	Decrease	Positive Social Reappraisal	Behavioral	Emotion	Direct	Task
Espinosa et al., 2023	Immediate Post	Negative Social Reappraisal	No-Task	Increase	Negative Social Reappraisal	Behavioral	Emotion	Direct	Task
Friesen et al., 2023	Delayed Post 24 Hours	Sleep-directed Hypnosis	Control (Listen to Control Text)	Decrease	Sleep-directed Hypnosis	Behavioral	Other	Indirect	Task
Gvozdanovic et al., 2023	Immediate Post	Sleep	No Sleep	Decrease	Sleep	Behavioral	Other	Indirect	Task

Table 1. Articles, techniques, and their superordinate categorizations

Citation	Time of Administration	Experimental Condition	Control Condition	A Prior Hypothesis	Individual Techniques	Procedure-based Category	Mechanism-based Category	Direct vs. Indirect Trauma Involvement	Task vs. Instruction of Techniques
Hemi et al., 2023	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Li et al., 2023	Immediate Post	Challenged Memory	Unchallenged Memory	Decrease	Challenged vs. Unchallenged Memory	Behavioral	Verbal	Direct	Task
Maslahati et al., 2023	Immediate Post	Oxytocin	Placebo	Decrease	Oxytocin	Pharmacological			
Xu et al., 2023	Immediate Post	Bilateral Eye Movement	Eye Fixation	Decrease	Bilateral Eye Movement	Behavioral	Imagery	Direct	Task
Asselbergs et al., 2023	Immediate Post	Trauma Reminder + Tetris	Trauma Reminder	Decrease	Trauma Reminder + Tetris vs. Trauma Reminder	Behavioral	Imagery	Direct + Indirect	Task
Asselbergs et al., 2023	Immediate Post	Trauma Reminder + Imagery Rescripting	Trauma Reminder	Decrease	Trauma Reminder + Imagery Rescripting vs. Trauma Reminder	Behavioral	Imagery	Direct	Task

Note. Mechanism-based superordinate category "Other" was excluded from relevant analysis.

References

This list includes all eligible articles from the literature search and they were coded in our detailed coding sheet (Table S9). Those with * are articles not included in the meta-analysis due to missing data.

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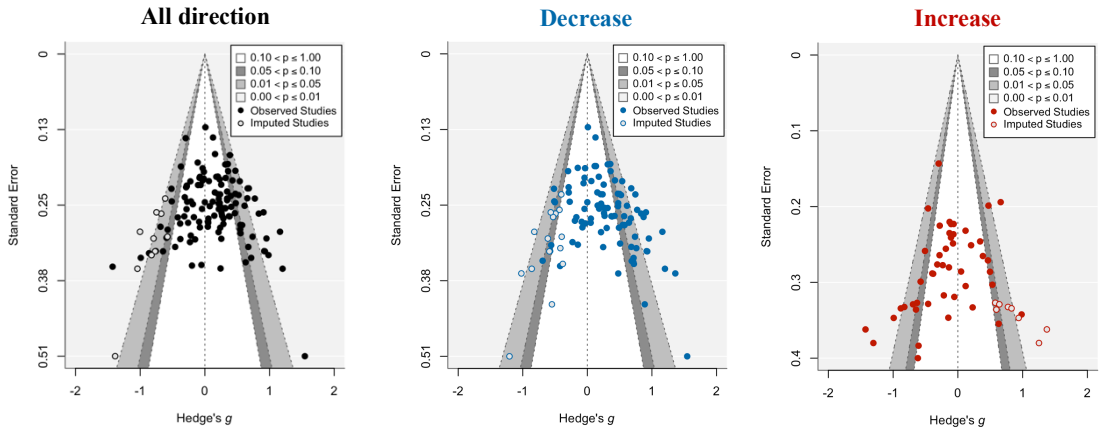
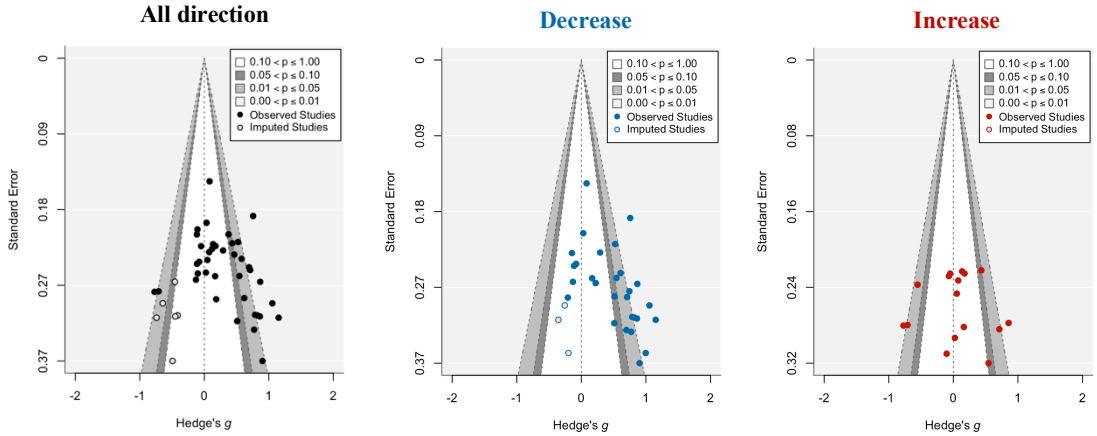
Figure 1. Funnel plots

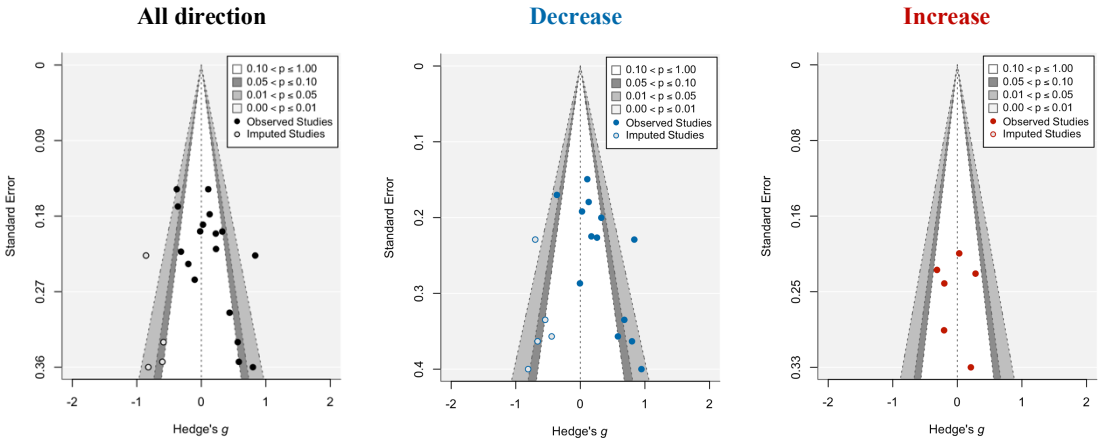
A. Contour-enhanced funnel plots for diary-based intrusion frequency across different hypothesis directions. Imputed studies were calculated through Trim and Fill method.



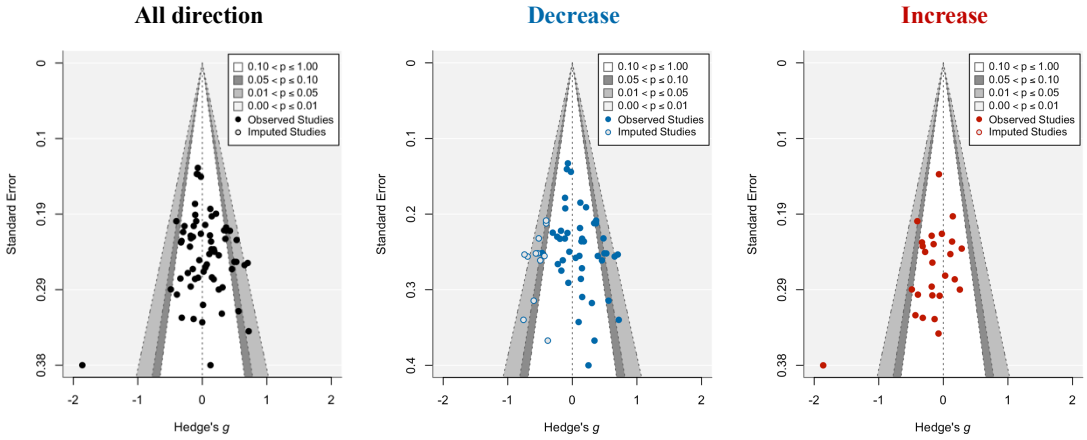
B. Contour-enhanced funnel plots for lab-based intrusion frequency across different hypothesis directions. Imputed studies were calculated through Trim and Fill method.



C. Contour-enhanced funnel plots for questionnaire-based intrusion frequency across different hypothesis directions. Imputed studies were calculated through Trim and Fill method.



D. Contour-enhanced funnel plots for intrusion-related distress across different hypothesis directions. Imputed studies were calculated through Trim and Fill method.



E. Contour-enhanced funnel plots for Intrusion symptoms across different hypothesis directions. Imputed studies were calculated through Trim and Fill method.