# Supplement

Supplementary Table 1. Items assessed to establish risk of bias of individual studies.

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| --- | --- | --- | --- |
| **Item** | **Scoring options for risk of bias** | | |
| *Selection bias* |  |  |  |
| **1.** Random sequence generation | 2 = high | 1 = unsure | 0 = low |
| **2.** Allocation concealment | 2 = high | 1 = unsure | 0 = low |
| *Reporting bias* |  |  |  |
| **3.** Selective reporting | 2 = high | 1 = unsure | 0 = low |
| *Detection bias* |  |  |  |
| **4.** Blinding of outcome assessment | 2 = high | 1 = unsure | 0 = low |
| *Attrition bias* |  |  |  |
| **5.** Incomplete outcome data | 2 = high | 1 = unsure | 0 = low |
| *Bias in measurement or analyses* |  |  |  |
| **6.** Outcome measurement type | 2 = high | 1 = unsure | 0 = low |
| **7.** Treatment integrity | 2 = high | 1 = unsure | 0 = low |
| *Other sources of bias* |  |  |  |
| **8.** Other bias | 2 = high | 1 = unsure | 0 = low |

Supplementary Table 2. Study characteristics of studies examining the effect of dissociation on PTSD psychotherapy treatment outcome

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Study | Reported exclusion criteria regarding comorbid symptoms/disorders2 | Reported trauma type2 (%) | Reported comorbidities2 (%) | Drop-out therapy (%) | Measure  dissociation | Dissociation pre  (*M, SD)* | Dissociation post (*M, SD)* |
| Abramowitz et al. (2010) | Psychosis, severe traumatic brain injury or post-concussion syndrome or  uncontrolled substance abuse. | Combat (100) | NR | 3 | DES | 47.3 (19.9) | 33.4 (23.1) |
| Bae et al. (2016) | Psychosis or neurocognitive disorder | Motor accident (59), physical assault (13), childhood abuse (7), sexual assault (  6), other accident 7), traumatic loss (3), and  life-threatening illness (3) | MDD (55), anxiety dis (26), somatoform/dissociative disorder (9) | 13 | CAPS subtype items + decreased awareness | 2.9 (3.1)4 | 1.8 (2.6)4 |
| Cloitre et al. (2012) | Psychotic symptoms, untreated bipolar dis, acute suicidality requiring immediate treat/hospit substance depen | Childhood sexual/physical abuse (100) | Avoidant PD (32), Paranoid PD (25), Borderline PD (24) | 27 | TSI-DIS averaged score | 1.3 (.9) 3 | NR |
| Gantt et al. (2007)1 | NR | Childhood physical/sexual abuse (57) | Auditory hallucinations (54), DDNOS (47), DID (17) |  | DES | 27 (18) | 16 (15) |
| Haagen et al. (2018) | NR | Combat related trauma (96) | MDD (41), substance use (23) | 6 | DES | 27.9 (17.6) | NR |
| Hagenaars et al. (2010) | Suicidality, substance depen, psychotic disorder | Sexual assault (24), nonsexual assault (30), sexual+nonsexual violence (17), accident (11), miscellaneous (18) | Panic disorder (37), social phobia (18), GAD (11), OCD (3) Mood dis (23), somatoform dis (6), eating dis (4), cluster C PD (17) | 16 | DES | 18.4 (13.4) | NR |
| Halvorsen et al. (2014) | Psychotic disorders, current severe substance abuse, severe suicidal ideations | On average 8.1 traumatic event types according to CAPS, torture (43). | MDD (42) | 33 | CAPS subtype items | 2.0 | NR |
| Harned et al. (2014) | Psychotic disorder, bipolar disorder, mental retardation, required primary treat other condition | Childhood sexual abuse (47), Childhood physical abuse (18), adult rape (18), partner violence (6), threatened with death/serious harm (6) sudden death friend/loved one (6) | Borderline PD (100); recurrent intentional self-injury (100); Other PD than Borderline PD (69), mood dis (88), anxiety dis (88), eating dis (13), substance use dis (44) | 41 | DES | 22.7 (21.6) | 10.0 (16.9) |
| Kleindienst et al. (2016) | BMI < 16.5, schizophrenia, bipolar 1 disorder, substance depen, medical conditions contradicting exposure, life-threatening behaviour < 4 months, intellectual disability | Childhood sexual abuse (100) | Borderline PD (38), MDD (80), on average 3.01 axis-1 disorders | 7 | DES | 31.4 (18.7) | 20.8 (13.4) |
| Kratzer et al. (2018) | NR | Childhood physical/sexual abuse (100), DESNOS (100) | Mood dis (93), anxiety dis (45), OCD (31), somatoform dis (41), eating dis (21), PD (48) | NR | DES | 24.0 (20.1) | 19.1 (17.6) |
| Lampe et al. (2014)1 | NR | Childhood emotional neglect (97), childhood physical abuse (84), childhood sexual abuse (92) | Borderline PD (90), DID (44), sleeping disorder (36), dissociative disorder (15), sleeping dis (36), anxiety dis (33), substance misuse (5), affective dis (62), eating dis (5), somatization dis (33) | 9 | DES | 26.0 (18.5) | 23.4 (19.4) |
| Lynch et al. (2008)1 | NR | Sexual assault/sexual abuse (60) | MDD (39), bipolar (9), DDNOS (9), dysthymia (8), alcohol depen (6), bulimia (4), GAD (3), schizoaffective (2) | NR | DES | 23.6 (17.6) | 21.6 (18.1) |
| Murphy et al. (2015) | Actively suicidal/dependent on alcohol, PD, actively psychotic | Service related trauma (100) | NR | 6 | DES | NR | NR |
| Pabst et al.1 (2014) | Drug abuse, psychosis, acute use of psychoactive substances, acute suicidal behaviour, BMI < 18 | Assault by family member or acquaintance (82), sexual abuse/assault by family member or acquaintance (77) | Borderline PD (100) | 23 | DES | 24.9 (11.3) | 20.0 (12.1) |
| Resick et al. (2012) | Current psychosis, suicidal intent, drug/alcohol depen unwilling to desist usage during treatment | Childhood sexual abuse (78), childhood domestic violence (61), adult physical assault (84), adult sexual victimization (81) | MDD (50), alcohol abuse (1), panic disorder (13) | 27 | TSI-DIS | 63.9 (24.5) | 49.3 (19.1) |
| Steele et al. (2018) | NR | NR | NR | NR | DES | 21.4 (14.6) | 14.8 (13.3) |
| Steuwe et al. (2016) | Psychosis, bipolar disorder, drug use, no non-suicide agreement, suicide attempt < 8 weeks, BMI <16 |  | Borderline PD (100), on average 1.4 comorbid axis-1 disorders | 9 | DES | 26.2 (13.9) | 19.4 (11.0) |
| van Emmerik et al. (2008)1 | Dementia, psychotic symptoms, severe depression with suicidality or severe substance abuse (moderate substance abuse or depression was included) | Traffic accident (20), nonsexual violence (52), sexual violence (9), other (19) | NR |  | DES | 21.9 (16.0) | 17.2 (16.8) |
| Van Minnen et al. (2016) | Extremely high acute suicidality risk, IQ < 70, seclusion/admitted to closed ward | Sexual abuse (61), multiple childhood sexual abuse (38), physical abuse (53), traumatic psychosis (18), emotional childhood abuse (7) other (54) | Lifetime diagnosis psychotic disorder or mood disorder with psychotic features (100) | 22 | CAPS subtype items | NR | NR |
| Wolf et al. (2016) | Current psychotic symptoms, mania, bipolar disorder, substance depen, prominent suicidal/homicidal ideation, current violent relationship, self-harm < 6 months, cognitive impairment | Index event: Sexual abuse (68), physical assault (14), combat exposure (6) | Comorbid axis-1 disorder (78) | 29 | TSI-DIS subtype items  averaged score | .9 (.4) 3 | .8 (.7) 3 |
| Zoet et al. (2018) | Not convicted for sexual assault, no suicide attempt < 3 months | Childhood sexual abuse (43), adult sexual abuse (30) physical abuse (82), work-related trauma (23), accident/disaster/war (25) | Depressive episode (69), dysthymia (49), hypomania (2), panic dis (18), agoraphobia (21), social phobia (32), OCD (13), alcohol depen (16) | 2 | CAPS subtype items | 1.7 | 1.1 |

1Note: these studies provided additional data for a sub-sample of patients who met inclusion criteria of this meta-analysis so patient characteristics stated in this table are an estimation based on complete study sample

2Note: information based on original article, information may not be completely comprehensive

3Note: averaged item score

4Note: sum score of items: decreased awareness, derealisation, and depersonalization

NR = Not Reported; MDD = Major Depressive Disorder; treat = treatment; hospit = hospitalization; depen = dependency; PD = Personality Disorder; DDNOS = Dissociative Disorder not otherwise specified; DID = Dissociative Identity Disorder; GAD = Generalized Anxiety Disorder; OCD = Obsessive Compulsive Disorder; dis = disorder; DESNOS = Disorder of Extreme Stress Not Otherwise Specified; DES= Dissociative Experiences Scale; CAPS = Clinician-administered PTSD scale; TSI-DIS = Trauma Symptom Inventory dissociation subscale.



**Study name Correlation and 95% CI Statistics for each study**

**Correlation**

**Upper limit**

**Lower limit**

**Positive effect Negative effect**

**Positive effect Negative effect**

**Positive effect Negative effect**

**Positive effect Negative effect**

**Positive effect Negative effect**

**Supplementary Fig. 1** Pearson’s Correlation coefficient (*r)* between baseline dissociation and change in PTSD symptoms from pre to post-treatment with completely trauma-focused and not completely trauma focused arms included separately for the moderation analysis of trauma focus of the treatment.

**Positive effect Negative effect**

**Positive effect Negative effect**

**Positive effect Negative effect**

**Positive effect Negative effect**