

**MEASURING AND UNDERSTANDING
POSITIVE BELIEFS ABOUT DISSOCIATION**

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Word Count

Thesis Section	Text (excluding key words, tables, figures, highlights and references)	Tables and figures	Total
Thesis abstract	337	-	337
Paper 1	8737	1068	9805
Paper 2	6947	666	7613
Paper 3	4691	-	4691
Total	20712	1734	22446

Thesis Abstract

Dissociation generally has a negative discourse surrounding it, whereby people tend to view it as dysfunctional. Emerging qualitative research has indicated that people may have functions or positive beliefs of dissociative experiences. Within the current literature, there is mixed findings as to whether dissociation tends to interfere with therapy efficacy. A better understanding of how dissociation can influence treatment outcome and be a somewhat 'functional' experience, could have important implications for psychological therapies for those who experience dissociation. Furthermore, this may encourage a more open minded, balanced approach to dissociation, guiding clinicians away from assumed pathology.

A systematic literature review is presented in paper one. This review explored if dissociation influenced psychological treatment efficacy within randomised controlled trials, for clients with mental health difficulties. The majority of studies included within this paper found that dissociation did not influence outcomes, although this lack of association may be the case as interventions could have indirectly targeted dissociation related difficulties. Mixed findings were found as to whether dissociation influenced therapy drop out. Clinical and research implications are discussed.

An empirical study is presented in paper two. This study is the first to explore if individuals have positive beliefs of their dissociative experiences, and if these beliefs can maintain dissociation itself. To explore this, a novel-self report questionnaire; the positive beliefs about dissociation questionnaire (PBD-Q) was developed and the psychometric properties were assessed. An exploratory factor analysis revealed three different factors which were termed: positive beliefs about emotion management, positive beliefs about self-expression, and positive beliefs about maintaining social image. The PBD-Q has excellent psychometric properties. Clinical and research implications are discussed.

A personal reflection and critical evaluation of the research is presented in paper three. This paper provides a reflective discussion of the researcher's experience of undertaking the study and how this research is connected to her personal lived experience of trauma and dissociation. A critical evaluation will also explore strengths and limitation of the research, and further expand on the rationale for certain decisions throughout the study.

Declaration

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Paper 1

A systematic review of the influence of dissociation on treatment outcomes within Randomised Controlled Trials of psychological interventions for mental health difficulties

Word Count: (8737) (excluding figures, tables, and references)

This paper has been formatted according to the publication guidance of Clinical Psychology Reviews (see Appendix A), and will be submitted for publication as Marsden, L., Morrison, A., & Longden, E., & Varese, F. *A systematic review of the influence of dissociation on treatment outcomes of Randomised Controlled Trials of psychological interventions for mental health difficulties*

Abstract

Objective: This review explored if dissociation influenced treatment outcomes and therapy dropout within randomised controlled trials for people with mental health difficulties. **Method:** A systematic database search using PsychINFO, MEDLINE and CINAHL identified 17 eligible studies, comprising 2063 participants. A narrative synthesis was used to tabulate and summarise extracted data. The Risk of Bias Revised tool was used to quality assess the papers. **Results:** Most studies (70%) found no evidence of dissociation influencing treatment outcomes, this was particularly the case for clients with PTSD. Findings suggest that interventions which directly or indirectly focused on dissociation generally observed dissociation had no effect. Mixed findings were observed as to whether dissociation can influence therapy dropout. The majority of studies had high risk of bias. **Conclusion:** This review found limited evidence of dissociation interfering in treatment outcomes, although this may be due to interventions indirectly targeting dissociation. Clinical implications are that people experiencing dissociation should not be excluded from psychological interventions as they can show improvements, and could guide clinicians to use particular interventions, to reduce the impact dissociation may have on psychological treatment.

Keywords: dissociation, randomised controlled trials, mental health difficulties, treatment effect moderator

Highlights:

- Findings suggest dissociation does not interfere with treatment
- Specific interventions may indirectly target dissociation, explaining the findings
- People experiencing dissociation should not be excluded from treatment
- Clinicians could use specific interventions to reduce dissociation

Introduction

Dissociation is a broad conceptual term that encompasses a disconnection in the integration of emotion, memory, identity, consciousness, perception, motor control and behaviour (American Psychiatric Association [APA], 2013). Phenomenological forms of dissociative experiences can include compartmentalisation (i.e. parts of a person's personality function independently), derealisation (e.g. feeling the world is not real), depersonalisation (e.g. feeling detached from one's body), amnesia (e.g. retrospectively reported memory gaps) and absorption (e.g. becoming immersed in internal or external stimulus, whilst overlooking other stimuli) (Kennedy, Kennedy & Pearson et al 2013).

Several theoretical models conceptualise dissociation as a strategy to manage overwhelming emotions, particularly (but not exclusively) those that arise from exposure to traumatic experiences. Freud (1963) proposed that from a psychodynamic perspective dissociation acts as a defence mechanism or a way to 'detach' from overwhelming affect and memories. From an information-processing perspective, Spiegel and Cardena (1990) likewise propose that dissociation can lower emotional processing following a traumatic event. For instance dissociation may reduce the intensity of emotion in the short term, although may prevent habituation to trauma-related emotions long term, leading to the development of post-traumatic stress disorder (PTSD) (Spiegel and Cardena, 1990). In turn, Kennerley (1996) recommends formulating the maintenance of dissociative reactions using behaviourism through the mechanisms of classical conditioning. For instance, when one is emotionally overwhelmed, a dissociative state is triggered and consequently reinforced as it provides an escape from overwhelming affect (Kennerley, 1996).

Although such theories conceptualise dissociation as an adaptive coping mechanism for overwhelming affect, it also has the potential of becoming dysfunctional

(Warshaw et al, 1993). For example, dissociation is a cardinal feature of dissociative disorders, which can be extremely disabling and are associated with functional difficulties in relationships, employment, self-harming behaviours and suicidal ideation (Ackner, 1954; Mueller-Pfeiffer et al, 2012; Nobakht and Yngvar 2017). Dissociation is also a prominent feature of PTSD, with elevated rates of dissociation reported in PTSD compared to other diagnoses (Carlson, Dalenberg & McDade-Montez, 2012). In this respect, the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) has included a dissociative subtype (DS) of PTSD, whereby individuals meeting criteria for this PTSD subtype, also show symptoms of depersonalisation or derealisation (APA, 2013). Evidence has reported that 15-30% of individuals with PTSD are classified as belonging to the DS (Stein et al, 2013; Wolf et al, 2012). Likewise dissociation is also experienced by people diagnosed with numerous mental health conditions, such as borderline personality disorder (BPD) (Ross, 2007), eating disorders (LaMela, Maglietta, Castellini, Amoroso, & Lucarelli, 2010), mood and anxiety disorders (McManus, Sacadura, & Clark, 2008), substance abuse (Seedat, Stein, & Forde 2003), psychosis (Bacon and Kennedy, 2015) and somatoform disorder (Nijenhuis et al, 2003). This highlights that dissociation is a process which can negatively impact on people who experience different mental health conditions.

Emerging clinical and empirical evidence suggests that dissociation might be a moderating factor for the effect of psychological treatments across a range of mental health problems. For example, Emotional Processing Theory (Foa and Kozak, 1986) assumes that in order to reduce PTSD symptoms, the fear network associated with traumatic memory must be repeatedly activated until the individual habitually processes the fact that the emotional reaction is unnecessary, also resulting in processing of trauma related information. However, dissociation is proposed to impede the processing of trauma-related

emotions by preventing the fear network from being activated (van Minnen, Harned, Zoellner, & Mills, 2012). Furthermore, dissociation is hypothesised to restrict access to traumatic memories and impair the process of creating or retaining new, restructured cognitions, also hindering the adapted reappraisal of the trauma memory being integrated into autobiographical memory (Ehlers and Clark, 2000; Wolf et al, 2016). Dissociative experiences have been hypothesised to impede emotional learning processes, therefore preventing corrective learning during psychological treatment (Ebner-priemer et al, 2009). An alternate view, from a neuropsychological perspective, is that there are multiple cognitive deficits associated with dissociation, such as short-term memory, attention and processing speed, which may interfere with treatment response (Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2008). For instance, if a client has short-term memory deficits or is not processing material during the therapy session, this information may not be properly encoded, or the client may not recall information after the session. All these proposals reasonably hypothesise that dissociation would lead to poorer treatment outcomes for PTSD, which could in turn be generalised to psychological treatments for other mental health difficulties which involve the processing and/re-evaluation of emotional material.

However, despite this theoretical rationale, there have been mixed findings from studies exploring whether dissociation impacts on psychological treatments. Some studies found that dissociation has small or no effects on PTSD treatment outcomes (Resick, Suvak, Johnides, Mitchell, and Iverson, 2012; Cloitre et al 2012; Hageraars, van Minnen, & Hoogduin, 2010). In contrast, other studies do provide evidence that dissociation may indicate poorer response to intervention for PTSD (Price, Kearns, Houry, & Rothbaum, 2014; Wolf et al, 2016). Similarly, there are mixed findings for whether dissociation influences treatment outcomes for mental health difficulties beyond PTSD, with some

studies reporting a negative impact (Kleindienst et al, 2016; Arntz, Stupar-Rutenfrans, Bloo, van Dyck, & Spinhoven 2015; Rufer et al, 2006), others reporting no effect (Schweden et al, 2016), and one study identifying that higher levels of dissociation at baseline can predict positive outcomes (Price, 2008). In summary, there appears to be conflicting results about whether dissociation influences treatment outcomes for mental health difficulties, highlighting the importance of this review.

The investigation of treatment effect moderators (variables that influence the efficacy of psychological treatment) is important because it aids understanding about which treatments are most effective for which people, optimising therapy effectiveness and tailoring therapy to individual differences. Within this review, dissociation is hypothesised as a treatment effect moderator to explain whether dissociation can account for the variation within mental health treatment outcomes. There are multiple approaches to investigate treatment effect moderators within RCTs. One approach is to use correlation or regression models to establish whether certain baseline variables predict treatment outcomes (Kraemer, Wilson, Fairburn & Agras, 2002). A limitation of these approaches is that it is unclear if the moderator interferes with treatment efficacy between the different conditions. A more robust approach is for studies to use treatment by moderator interaction, which examines whether the interaction between treatment allocation (i.e. assignment to active treatment compared to TAU) and the moderator variable (i.e. dissociation severity) influences treatment efficacy (Kraemer et al, 2002).

In summary, several theoretical models suggest mechanisms through which dissociation may impact treatment for mental health difficulties, yet empirical evidence has so far been inconclusive. To date no systematic review has been conducted to determine whether dissociation influences mental health treatment outcomes, highlighting the importance of this review. This review will therefore examine whether dissociation

represents an important treatment effect moderator of the efficacy of psychological interventions for mental health difficulties. More specifically, it will focus on research studies that evaluated whether dissociation influences the treatment outcomes of RCTs that reported on the efficacy of psychological interventions for mental health difficulties. In doing so, the review has potential to advance theoretical understandings of whether dissociation impacts on psychological treatment for mental health difficulties. This has the potential to inform clinical practice by helping clinicians to reduce the negative impact dissociation may have on the efficacy of psychological interventions which are commonly offered to individuals experiencing a range of mental health difficulties.

Method

Search Strategy

The current review followed the standards and conventions outlined in the PRISMA statement (Moher et al 2009). The protocol was registered on PROSPERO (CRD42018106023). Systematic searches were completed on 25th October 2018 and were carried out on PsychINFO, MEDLINE and CINAHL using search terms informed by relevant National Institute of Clinical Excellence guidelines (Forti-Buratti, Saikia, Wilkinson & Ramchandani, 2016; Sukhato et al, 2017) and existing Cochrane and systematic reviews on related topics (Jung, Mi, Wang & Zhang, 2017). The search terms were searched within the articles titles, abstracts and full text.

The search terms used were: (absorption or derealisation or depersonalization or depersonalisation or derealization or dissociat* or dissociation* or multiple personalit* or dissociative identity disorder* or fugue* or psychogenic amnesia) and (Psychotherap* or psychological therap* or psychological treatment* or EMDR* or dialectical behaviour* or DBT* Cognitive Behaviour* or CBT* or Cognitive therap* metacognitive therap* or metacognitive treatment* or cognitive treatment* or behavioural therap* or behavioural

treatment* or cognitive analytic therap* or cognitive analytic treatment* or solution focused therap* or solution focused treatment* or narrative therap* or systemic therap* or systemic treatment* or narrative treatment* acceptance* or Schema therap* or schema treatment* or SFT* or STAIR* or exposure response prevention* or exposure therap* or mindful* family therap* or skills training or exposure treatment* or ERP or rehabilitation therap* or counselling* or couples therap* or psychoanalytic therap* or psychodynamic interpersonal therap* or psychodynamic interpersonal treat* or PIT or interpersonal therap* or interpersonal treatment* or Eye movement desensitization reprocessing or eye-movement desensitization reprocessing) and (random* control* or randomised control trial* or randomized control trial* or randomised controlled trial* or randomized controlled trial* or RCT* or group-randomised* OR place-randomised* OR group-randomized* OR place-randomized* or Cluster-randomised* OR cluster-randomized* OR cluster* OR cross-over trials* OR trial* OR place* OR group* OR random allocat*). All the searches were additionally expanded using relevant Medical Subject Headings (MeSH) terms. Forward and backward searching was completed to check for additional eligible studies, whereby reference lists of eligible studies and their citations were hand-searched.

Eligibility criteria

Study eligibility was based on meeting the following criteria: (1) published from 1986, to coincide with the publication date of the most widely used measure of dissociation (the Dissociative Experience Scale [DES]; Bernstein & Putnam, 1986); (2) employed an RCT design; (3) evaluated the use of psychological/psychotherapy interventions which were structured and standardised to a protocol or a defined method which was clearly distinct from standard care (4) used a validated measure of dissociation to report at least at pre-treatment/baseline assessments (5) included valid measures of mental health symptoms, measured at pre-treatment and post treatment; (6) recruited

participants with mental health difficulties, evidenced through either a psychiatric diagnosis, or participants screened for the presence of specific mental health symptoms using validated self-report measures (7) Written in English language; (8) Contained statistical analysis pertaining to whether dissociation moderates efficacy of psychological treatment in a given trial (e.g. subgroup analyses; treatment allocation by moderator interaction in regression analyses).

Study selection

There were three screening stages to determine eligibility: titles of articles, abstracts and full papers. The first author led the screening and liaised with another member of the research team to resolve any queries around eligibility. The PRISMA diagram in Figure 1 presents the full systematic search and eligibility screening procedure.

Interrater reliability of the study selection process was assessed via an independent rater screening 20% percent of titles (986 papers), 20% of abstracts (35 papers), 50% of full papers (32 papers) and 100% of all eligible papers (18 papers).

The guidelines by Cohen (1988) were used to interpret and evaluate size of kappa agreement. For title screening, kappa was considered 'substantial' at .712 ($p < .001$), sensitivity was 98.0% whilst specificity was 72.2%. For abstract screening, kappa was considered an 'almost perfect agreement' at .820 ($p < .001$), sensitivity was 86.7% whilst specificity was 94.7%. For full papers and all eligible papers, Kappa was considered a 'perfect agreement' at 1.000 ($p < 0.001$), sensitivity was 100%, whilst specificity was 100%.

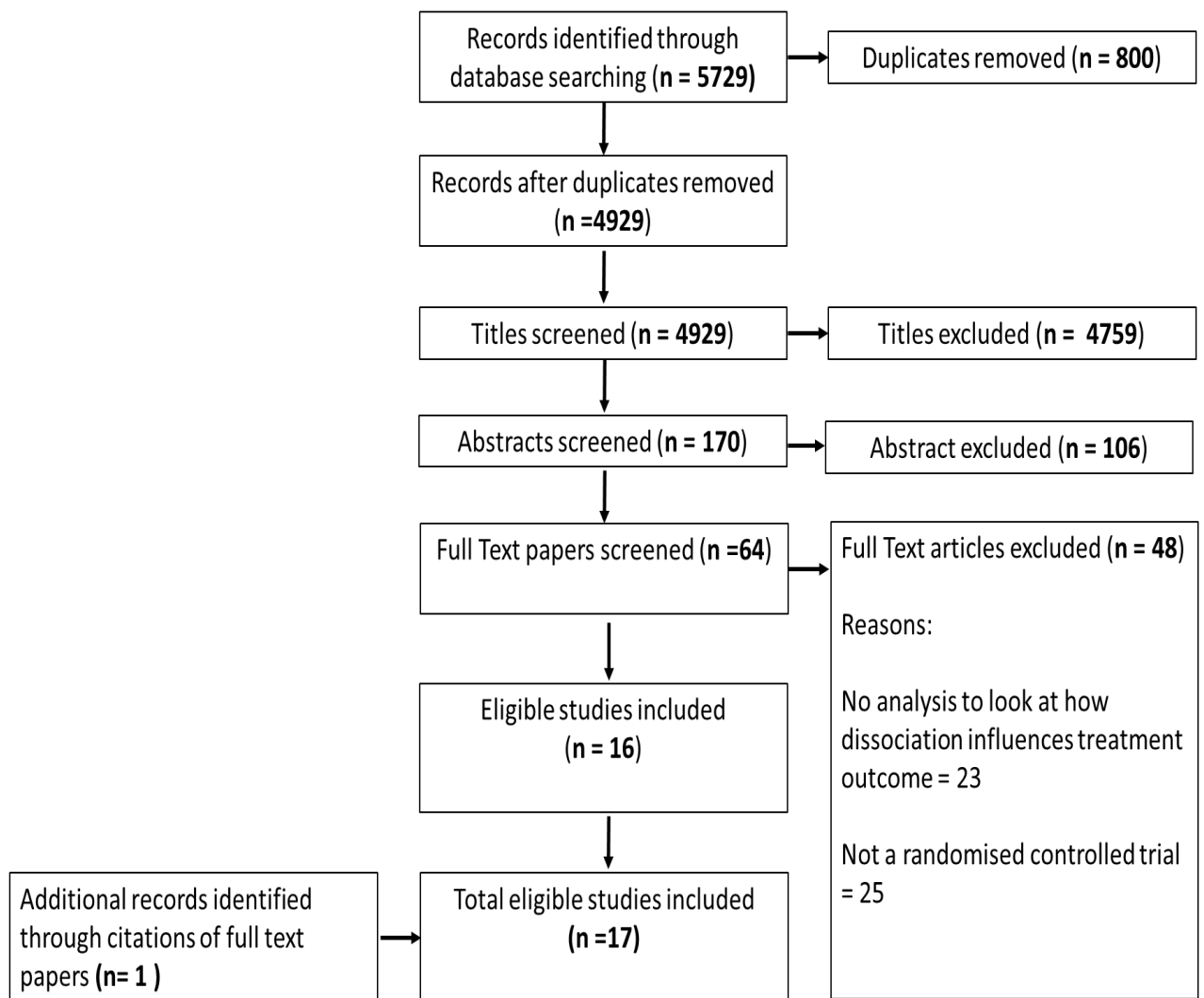


Figure 1. A PRISMA diagram of the screening process

Data extraction and synthesis

The first author extracted data from eligible studies based on PICO (participant, intervention, comparator, outcome), to record details regarding the study population, demographics, intervention characteristics, comparator type, relevant assessment measures, analytic method and results/outcome in a data extraction table. Extracted data was tabulated and synthesised into a narrative review by the first author which was

overseen by a second research team member. A meta-analysis was deemed inappropriate as there was a high degree of heterogeneity across statistical and methodological approaches used in included studies, which may have resulted in misleading results.

Quality assessment

The revised Cochrane Risk-of-Bias tool (ROB2), which specifically focuses on evaluation of randomised controlled trials, was used to assess the quality of eligible studies (Higgins et al, 2018). The tool is structured into five domains to assess bias arising from: (1) the randomisation process; (2) deviations from intended interventions; (3) missing outcome data; (4) measurement of the outcome; (5) selection of the reported result(s). ROB2 contains signalling questions within each domain to elicit relevant information, with responses ranging from: yes, probably yes, probably no, no or no information. A developed algorithm ascertains the total risk of bias (low risk of bias, some concerns and high risk of bias). The first author completed the initial evaluation. An independent external researcher then completed the ROB2 on 50% of eligible papers which were randomly selected. Discrepancies were resolved through consensus, using a third independent rater where necessary. For domain ratings, Kappa was considered a 'substantial agreement' at .744 ($p < 0.001$). For overall paper ratings, Kappa was considered a 'perfect agreement' at 1.000 ($p < 0.001$), sensitivity and specificity were 100%.

Results

Overall Summary of Studies

Seventeen studies were retained for review, whereby 11 of these 17 studies used secondary data from an original RCT and the other six studies were primary RCT. The 11 secondary data analyses were completely separate to the 6 primary analyses. Fifteen studies explored if dissociation influenced treatment efficacy and 11 studies explored if dissociation impacted on therapy drop out.

Within the 15 studies that examined the influence of dissociation on treatment outcomes for mental health difficulties, 2 studies looked at 2 separate outcomes (i.e. PTSD and depression symptoms), which equalled 17 outcomes were investigated in total. Of these 17 outcomes, four (24%) reported poorer treatment outcomes, 12 reported no impact (70%) and one (6%) found evidence for a positive influence.

The eleven studies that looked at how dissociation influences dropout, three (27%) showed higher levels of baseline dissociation increased dropout, seven found no influence of dissociation on drop out (64%), and one (9%) found that participants with higher baseline dissociation were less likely to dropout. Table 1 summarises the characteristics and main findings of all the studies included in the review.

Participants

The eligible studies provided data on a total of 2063 participants, of which 1650 were female and 413 were male. The weighted mean age was 38.23 years. Fourteen of the 17 trials recruited participants with a diagnosable psychiatric disorder: one for social anxiety disorder (SAD) (Schweden et al, 2016); nine for a single PTSD diagnosis (Resick et al, 2012; Cloitre et al, 2012; Emmerik et al, 2008; Halvorsen et al, 2014; Crockett, 2018; Burton et al, 2018; Zlotnick et al, 1997; Cloitre et al, 2016; Wolf et al, 2016); two for PTSD and a comorbid condition of either substance misuse (Calderia, 2004) or psychotic disorder (Minnen et al, 2016); one for BPD (Arntz et al, 2015); and one for alcohol or substance misuse (Price & Hunting, 2013)). Of the three studies that did not base recruitment on psychiatric diagnosis, one study recruited participants with HIV who had a history of sexual abuse (Hansen et al, 2007); one recruited participants who had a history of sexual abuse (Price et al, 2008) and one recruited participants who had recently experienced a Criterion A trauma (Price et al, 2014).

Interventions

Six different therapy modalities were reported in the intervention arm of the included trials: cognitive therapy (n=1), prolonged exposure (behavioural therapy; n=5), cognitive behavioural therapy (CBT; n=2), ‘third wave’ CBT (cognitive processing therapy; narrative exposure therapy; schema therapy and skills training in affective and interpersonal regulation, followed with narrative story telling; n=5), emotional coping and skills management groups (n=2) and mindful awareness-body oriented therapy (n=2).

Comparators

Specific details of the comparators used in these RCTs are presented in Table 1. Thirteen trials had one comparator group, whereby seven used active interventions, one used a waitlist control (WLC), one used treatment as usual (TAU), one used an assessment only group and one used TAU alongside psychiatrist support. Eight trials had a second comparator group, whereby three used a WLC, two used active interventions, one used healthy control, and one used a community care support group.

Measures

Details regarding the measures used to assess dissociation and mental health treatment outcomes are shown in Table 1. In all studies, dissociation was measured at baseline and five different types of dissociation were measured: depersonalisation, derealisation, bodily dissociation, post-event dissociation, and general dissociation. Nine different measures were employed, the most common being the DES (Bernstein and Putnam, 1986) which was used in six studies and the Dissociation Subscale on the Trauma Symptom Inventory (TSI; Briere, 1995), which was used in five.

Fifteen studies investigated whether dissociation influenced treatment efficacy by comparing symptom severity pre- and post-treatment. Twenty-five different measures

were used to assess psychiatric symptoms, the most common being the Clinical-Administered PTSD Scale (CAPS; Blake et al, 1995) which was used in eight studies. Two studies additionally assessed the removal of a PTSD diagnosis (Burton et al, 2018; Wolf et al, 2016) and 12 studies monitored whether dissociation influenced treatment discontinuation/dropout and treatment attendance.

Does dissociation influence the treatment outcomes of psychological interventions?

This section describes the outcomes for each of the 15 studies that examined whether dissociation influenced the efficacy of psychological interventions across a range of mental health difficulties.

Borderline personality disorder

Arntz et al. (2015) conducted an RCT comparing schema therapy (ST) versus transferred focused psychotherapy (TFP) amongst 86 people with a diagnosis of BPD. Recovery was assessed on the basis of a statistically derived criterion, defined as a score of <15 on the BPD severity index version IV (BPDSI; Arntz, Hoorn., & Verhuel, 2003). A backward logistic regression revealed that subjective burden of dissociation at baseline predicted a smaller chance of recovery. Amongst individuals with lower levels of dissociation, 73% recovered after receiving ST compared to a rate of 32% for individuals with higher levels of dissociation. Moderation analyses confirmed that similar findings were also observed in the TFP arm (47% and 14% respectively), suggesting that higher levels of dissociation may be associated with worse outcomes. To note, there was a large number of tests conducted with uncorrected p-levels in this study, which may have increased the chance of type 1 or 2 errors. The sample size was also insufficient to detect subtle difference, so small/medium effect sizes may have been missed.

Further analysis in the same trial used logistic regression to control for treatment condition and found that in-session dissociation also significantly decreased rates of BPD

recovery. A mediation analysis was additionally used, in order to test the significance of the indirect path between baseline dissociation (independent variable) and recovery (dependent variable) via in-session dissociation (the mediator). This analysis indicated that in-session dissociation mediated the observed effects of baseline dissociation on recovery, and that baseline dissociation still predicted lower recovery overall. It should be noted, however, that only one session of in-session dissociation was rated for each participant, limiting the representation of findings per individual.

Depressive symptoms

Halvorsen et al. (2014) presented a secondary analysis of a previously conducted RCT that compared narrative exposure therapy (NET) to TAU for 81 refugees and asylum-seekers with PTSD. Blockwise regression analysis with interaction terms was conducted, with depression outcomes as the dependent variable, depersonalisation/derealisation as independent variables, as well as interaction terms between treatment condition and depression outcomes and between treatment condition and derealisation/depersonalisation. Derealisation scores and NET predicted better depressive outcomes at post treatment. However, the treatment interaction was not significant, indicating that baseline derealisation did not moderate treatment outcome in NET more than TAU and that derealisation was a more general predictor of depressive outcomes rather than a treatment moderator. One possible reason that NET predicted better depressive outcomes is that it contains written accounts, which may assist with re-constructing trauma memories and alleviating dissociative experiences. Additionally, whilst narrating (reliving the emotions/traumatic event) the therapist uses frequent reminders to help keep the client connected to the “here and now”, which could be viewed as a grounding technique to reduce dissociative responses. However, this does not explain the findings in TAU. This trial additionally had a limited sample size, and the failure to observe an impact of

dissociation in treatment outcomes might reflect low statistical power. Furthermore, secondary analyses are prone to type I error which means the results should be interpreted with caution.

PTSD symptoms (participants with a formal PTSD diagnosis)

Nine studies investigated whether dissociation influenced treatment outcomes for PTSD symptoms amongst participants with either a single PTSD diagnosis (n=7) or those with a diagnosis of PTSD comorbid with another condition (n=2). Of these studies, eight found that dissociation did not influence treatment outcomes.

Burton et al. (2018) conducted an RCT comprising prolonged exposure versus treatment with an anti-depressant (sertraline) for 200 individuals with chronic PTSD. As a first step, latent transition analysis (LTA) was used to aggregate participants into dissociative classes: (1) participants with low-dissociation at baseline, but different PTSD symptoms (*nondissociative-avoidant* and *nondissociative-dysphoric*); (2) participants with higher severity of dissociative and PTSD symptoms at baseline (*moderate psychopathology*), and (3) participants with high dissociative and reexperiencing symptoms at baseline (*dissociative-reexperiencing*). Two post treatment classes were additionally employed to reflect participants' respective responses to treatment (e.g. *high response to treatment vs low treatment response*). Logistic regression analyses examined the relationship between baseline dissociative re-experiences class and subsequently transitioning to the high response class post-treatment. The findings indicated that dissociative-reexperiencing participants receiving sertraline were less likely to be classed as high responders compared to those in the prolonged exposure condition. The trial also found that those in the dissociative-experiencing class did not differ in PTSD symptom severity change (average reduction in PTSD symptoms: 14.38) across treatment compared to the rest of the sample (13.81). However, further analyses indicated that those in the

dissociative-reexperiencing class at baseline were less likely to lose their PTSD diagnosis compared to the rest of the sample. These findings therefore suggest that clients with high dissociative symptoms can respond positively to prolonged exposure treatments but might not respond as well as those without. To note, within the PE protocol, intervention strategies such as breathing retraining or progressive muscle relaxation are ways of teaching clients to manage extreme emotions, which could indirectly reduce dissociative experiences (Foa, Hembree & Rothbaum, 2007).

Crockett et al. (2018) conducted an RCT evaluating prolonged exposure versus WLC amongst 47 people with PTSD to see whether baseline dissociation impacted on traumatic stress symptoms during therapy. A moderator regression analysis identified that baseline dissociation did not significantly predict CAPS or PCL scores post-treatment. Like Burton et al. (2018), this study therefore provides corroborative evidence to suggest PE may indirectly reduce dissociative experiences.

Cloitre et al. (2012) presented a secondary analysis of a previously conducted RCT for 104 women with PTSD. The trial comprised three different two-component treatments, namely skills training in affective and interpersonal regulation followed with narrative story telling (STAIR/NST), STAIR followed by supportive counselling (STAIR/SC) or SC followed by NST (SC/NST). The analysis showed that dissociation levels did not moderate the effects of the treatments on PTSD symptoms; possibly because both treatment arms included skills training, whose emphasis on affective and interpersonal regulation may help reduce dissociative symptoms (Cloitre et al, 2012). In turn, the narrative component within STAIR/NST may support people with dissociative experiences to more easily connect with highly emotive material, thereby increasing engagement with the cognitive and emotional processes necessary to reconstruct trauma memories. In support of this contention, Cloitre et al. (2012) also found that STAIR/NST produced the greatest

reduction in dissociative symptoms amongst participants with higher levels of baseline dissociation, whereas all treatments were equally effective amongst individuals with at low levels of baseline dissociation. This suggests that components of STAIR/NST could be reducing dissociative experiences. However, it is also possible that no effect was observed because of the relatively small sample size of this study, which may bias result and increase the risk of type I error.

Cloitre et al. (2016) undertook an additional secondary analysis of the same RCT. In this study a standard moderator analysis was conducted by modelling the CAPS scores at three different time intervals (post treatment, 3- and 6-months follow-up) then testing for significance of the three-way interaction between treatment, dissociation and time. However, these analyses likewise indicated that dissociation did not moderate PTSD symptoms in treatment.

The RCT described previously by Halvorsen et al. (2014) additionally found that derealisation and depersonalisation overall do not moderate treatment outcomes for PTSD in either TAU or NET.

Resick et al. (2012) also presented a secondary analysis of data collected during a previously conducted RCT that comprised cognitive processing therapy (CPT), cognitive therapy without written accounts (CPT-C) or written accounts only (WA) amongst 150 women with PTSD. The analysis did not find that dissociation influenced outcome when averaged across treatments. However, dissociation levels did impact the treatment conditions differently, in that participants with low levels of dissociation at baseline responded better to CPT-C, whereas those with higher baseline levels responded better to CPT. Resick et al. (2012) suggested that this may be because CPT combines written accounts of the trauma with reconstructing the traumatic event, unlike CPT-C which omits the written accounts. The written accounts in combination may therefore assist the process

of reconstruction for people with high levels of dissociation in order to aid processing the traumatic event. Hence, these findings infer that individuals with dissociation may benefit from written trauma accounts to assist them in reconstructing trauma memories.

Another secondary analysis of a previously conducted RCT is presented by Wolf et al. (2016), who used latent growth curve modelling to assess the effects of prolonged exposure vs. present centred therapy for 284 female veterans with and without the DS of PTSD. Participants with the DS of PTSD showed significant improvements in symptoms from pre- to post-therapy. However, this group also had significantly less reductions of PTSD symptoms from baseline to 6 months of therapy compared to those without the DS. For instance, participants without the DS subtype decreased on average 9.75 more in PTSD severity symptoms on the CAPS than those with DS. Hence, this trial indicates that while patients with the DS can show improvements during therapy they did not respond as well as those without DS, therefore indicating that dissociation can impact on treatment efficacy. Similarly, Wolf et al. (2016) found that those with high levels of PTSD and dissociation were less likely to lose their PTSD diagnosis compared to those in the moderate PTSD group (without dissociative symptoms). However, participants with high levels of PTSD (without dissociation) were also less likely to lose their diagnosis in comparison to the moderate PTSD group, indicating that more severe symptoms in general may indicate people are less likely to lose their diagnosis.

Calderia et al. (2004) conducted an RCT comparing two CBT interventions, relapse prevention training (RPT) and integrated safety seeking (SS), with a standard community care (CC) group for 107 people with a diagnosis of substance misuse (SU) and PTSD. The trial examined if higher levels of dissociation predicted worse symptom outcome on post-traumatic symptoms assessed using the CAPS and Impact Events Scale (IES; Horowitz, Wilner & Alvarez, 1979) scores. Analysis showed that, no significant correlation was

found between baseline dissociation and PTSD outcomes for either of the CBT intervention groups. However, for the CC group, significant positive correlations were found between higher levels of baseline dissociation and PTSD symptoms at all therapy follow up points. Caldeira et al (2014) hypothesized that elements within both SS and RPT aimed to specifically target and reduce dissociative experiences (e.g., a focus on grounding techniques, stabilization periods and gaining control over extreme symptoms) which might therefore explain why baseline dissociation did not predict worse outcomes in SS and RPT compared to CC. Speculatively, this could be seen to support the contention that dissociation does not lead to worse treatment outcomes in interventions which use techniques to reduce dissociation. However, correlation analyses are considered a weak methodology as it does not assess whether treatment interaction impacted on the results. This could therefore explain why no moderator effect was found. Another limitation of Calderia et al (2004) was that the treatment was only for three months, whereas other studies with longer therapies, perhaps are suggestive that clients need at least one year before a treatment effect is apparent (Artanz et al, 2015).

Finally, Minnen et al. (2016) present a secondary analysis of an RCT comparing 8 sessions of prolonged exposure (PE) versus eye movement desensitisation and reprocessing therapy (EMDR) versus a WLC, comprising 155 participants with a diagnosis of psychosis with or without the DS of PTSD. There was no significant difference between the decrease in post-treatment CAPS scores for those with and without the DS suggesting that dissociation did not interfere with therapy effectiveness. However, pre-treatment emotional regulation skill training was not stipulated either within the PE manual (Foa et al, 2007) or the 8-phase EMDR protocol (Shapiro, 2001), meaning that interventions which could potentially ameliorate dissociation were not included

PTSD symptoms (participants without a formal diagnosis of PTSD)

Four studies explored whether baseline dissociation impacts treatment efficacy for post-traumatic stress symptoms in those without a formal PTSD diagnosis. One study found that dissociation did not influence outcomes (Hansen et al, 2007), two studies found dissociation predicted worse outcomes (Price and Herting, 2013; Price et al, 2014) and one study found high baseline dissociation predicted better treatment outcomes (Price et al, 2008).

Hansen et al.'s (2007) study represents a secondary data analysis from a previous RCT of an HIV coping group vs. a support group for 177 HIV-positive survivors of childhood sexual abuse. A classification regression trees analysis (C&RTs) identified which predictor variables were significant within each condition to predict outcomes in post-traumatic symptoms as assessed by the IES. Dissociative symptoms were found to be a predictor of worse outcomes within the support group condition only. Specifically, only 31.8% of participants in the support group with high levels of dissociative experiences (>9.5 on TSI dissociation subscale) improved, whereas those with low levels of dissociation (<=9.5) had an 82.3% improvement after therapy. As no information was reported about dissociation being a predictor variable for the intervention group, it is assumed that this did not impact treatment efficacy. To note, the support group was an unstructured intervention for peer-support, whereas the coping group had focused stabilization and skill acquisition phases to work on trauma material. This may likely have included strategies that could help reduce dissociative experiences and could therefore explain why dissociation may not have been identified as a predictor of outcome, unlike the support group. A limitation of this study was the small sample size which was

underpowered for C&RTs which makes it unclear whether other predictive categories could have been detected.

Price and Herting (2013) present a secondary analysis of an RCT comprising 8 sessions of mindful awareness body-oriented therapy (MABT) plus TAU or TAU only, for 52 women with SUD. TAU comprised 3-week residential care followed by intensive outpatient treatment for 16 weeks. Price and Herting (2013) investigated whether bodily dissociation (BD; defined as limited awareness of or feeling separated from sensations of the body; Price & Thompson, 2007) was a mediator within the direct effect of PTSD symptoms at baseline (IV) and PTSD symptoms at the end of treatment (DV). Using path analysis, the study found that BD led to significantly worse PTSD symptoms post-treatment. Additionally, BD in itself led to worse treatment outcome via reduced emotion regulation difficulties. Furthermore, the fact BD appears to impact PTSD symptoms indirectly through emotional regulation difficulties may explain why interventions which have emotion regulation techniques could prevent dissociation interfering with treatment outcomes.

Price et al (2014) presented a further secondary analysis of RCT data to determine whether dissociation influenced early intervention outcomes for three sessions of adapted PE versus an assessment only group, for 137 people directly following exposure to Criterion A trauma. Dissociation at the start of treatment was significantly positively associated with PTSD symptoms at week 12 following PE, therefore indicating that high levels of baseline dissociation may lead to poorer responses. To note, the adapted three sessions of PE in this study did not appear to use stabilisation skills, and therefore may not have employed specific strategies to ameliorate dissociation, unlike other studies. Also, three sessions of PE are considered a very limited number, which may explain why no improvement in symptoms were found. Furthermore, the sample size was also insufficient

to detect small or medium effect sizes, which limits the amount of confidence that can be placed in the results.

Price (2008) likewise presents a secondary analysis of a previous RCT conducted to assess the efficacy of treatment outcomes of body-oriented therapy vs. standardized massage for 24 participants with a history of childhood sexual abuse. The impact of baseline dissociation on PTSD symptoms was assessed using the crime-related PTSD scale (CR-PTSD; Saunders, Arata and Killpatrick, 1990) with ANOVA analysis used to compare the change in pre-post intervention scores between two subgroups of participants with moderate dissociation (>13 on the DES) and low dissociation (<13 on the DES). Analyses were also conducted by combining data from both treatment conditions owing to similarity between groups for change across time in the primary study. The trial analysis indicated that both the low and moderate dissociation groups had a significant improvement from pre-post intervention for PTSD. Interestingly, participants with moderate levels of dissociation at baseline showed significantly greater reductions in PTSD symptoms than those with lower dissociative experiences. This study therefore provided markedly different evidence from other studies in the review, in that higher levels of dissociative symptoms appeared to increase positive treatment outcomes compared to participants with low dissociative experiences. To note, these intervention strategies appeared to specifically target dissociative experiences; for instance, both involved a check whereby participants were asked about any discomfort in relation to their bodily sensations, such as dissociative experiences, which may have helped increase somatic awareness and connection. It is therefore a possibility that these intervention techniques can explain why participants with higher levels of dissociation experienced greater improvements. Furthermore, this trial was considerably underpowered with only 24 participants, so may have been unable to detect relevant effects.

Social anxiety symptoms

A single study explored whether baseline dissociation influenced social anxiety symptoms via a secondary analysis of data from an RCT comprising cognitive therapy vs. WLC for 40 people with social anxiety disorder (Schweden et al, 2016). Linear regression analysis showed no indications that baseline depersonalisation mediated/predicted treatment outcome for social anxiety symptoms. This is not necessarily surprising given that the therapy used in this study was based on the cognitive model of SAD, which does not use techniques to explicitly target or focus on dissociation. However, this trial had a limited sample size so it is also possible that failure to observe an effect might reflect the limited statistical power. Additionally, no formal test of moderation was attempted, so it is unclear whether there was a treatment interaction.

Substance misuse symptoms

One previously mentioned study (Caldeira et al., 2014) additionally explored whether dissociation influenced treatment efficacy for substance misuse symptoms. Similar outcomes were found, in that the CBT group's baseline dissociation scores did not correlate with worse SU outcomes, whereas in the CC group higher levels of baseline dissociation predicted worse outcomes for SU symptoms.

Other general outcomes

The RCT previously described by Price (2008) further examined whether baseline dissociation impacted on psychological distress, physical symptoms and body connection symptoms. ANOVA analysis showed that participants with moderate levels of dissociation (versus low dissociation) had a significantly greater reduction in symptoms for all three variables. However, no significant differences in reduction for physical symptom discomfort, body association or body investment were found between moderate vs. low dissociation. One possible explanation is that these latter three symptoms are equally likely

to change regardless of baseline dissociation, as general touch through body work may help increase body association and investment (Price, 2008).

The RCT previously described by Calderia et al. (2004) also explored whether baseline dissociation was associated with therapeutic alliance and found that they were negatively correlated. They also conducted exploratory analyses to evaluate effect of baseline dissociation on therapist effects. Interestingly, the trial found that some therapists were more effective at reducing dissociation scores, suggesting baseline dissociation could impact treatment differently depending on the individual therapist.

Does dissociation influence levels of dropout in psychological therapy?

Eleven RCTs explored whether dissociation predicted treatment discontinuation. Of these studies, seven (64%) found that baseline dissociation did not significantly predict treatment discontinuation (Artanz et al, 2015; Calderia et al, 2004; Halvorsen et al, 2014; Minnen et al, 2016; Resick et al 2012; Scheweden et al, 2016; Wolf et al, 2016). These trials therefore suggest that psychological treatments are not intolerable for those with dissociative experiences. To note, there did not appear to be a pattern in relation to whether interventions had reduced dissociation and the likelihood of participants dropping out.

Comparatively, three RCTs (27%) found higher levels of dissociation at baseline for participants who dropped out of the waitlist and treatment group (Crockett et al, 2018; Emmerik et al, 2008; Zlotnick et al, 1997). Crockett et al.'s (2018) study was described in the previous section. Zlotnick et al. (1997) conducted an RCT comprising an affect-management treatment group vs. waitlist control for 96 women with PTSD. Higher levels of baseline dissociation were found for people who dropped out of treatment for both groups. Emmerik et al (2008) likewise compared baseline dissociation severity between participants with PTSD or Acute Stress Disorder who either completed or dropped out of therapy. It was found that participants who completed the follow-up had lower baseline

dissociation, although no significant difference was found in baseline dissociation at post-test between completers and dropouts.

However, one study (9%) found contrasting evidence, in that those with high levels of dissociation at baseline were less likely to drop out compared to those with low levels of dissociation (Cloitre et al, 2012). The RCT previously described by Cloitre et al (2012) suggested that as this was a trial aiming to understand whether dissociation impacts treatment, clinicians were already knowledgeable about dissociative experience and were using treatment which focusses on reducing it, which in itself could increase engagement explaining this controversial finding.

Results of Quality Assessment

No identifiable pattern was found in the quality assessment to guide interpretation of the reviewed studies, as all were rated ‘high risk’ of bias. It therefore appears that variance in findings was not associated with the methodological quality of the trials. See appendix B for a full table containing the results for all domains within the quality assessment. The main reasons for this rating was due to trials automatically having ‘some concerns’ in domains two, four and five, (domains are previous described in the subheading quality assessment).

For domain two, all trials automatically were categorised as ‘some concern’. This is largely due to the nature of psychological interventions themselves, as it is very difficult to blind clinician and participants from what intervention they are receiving. Additionally, while the ROB2 states that failures to adhere could indicate deviations from the intervention, there is a tendency for dropout levels in psychological interventions to always be above 10%, particularly within this client group.

Likewise, for domain four all trials automatically received ‘some concerns’ due to their use of self-report measures. As participants were not blind to allocation which may potentially have led to biased responses.

Regarding domain five, it was very unclear if the majority of trials had a pre-specified protocol or pre-analysis plan. If they did, there was likewise limited information about the plan itself, or the measurements that authors intended to use. It was therefore unclear whether they had selected outcome measure or analysis post-hoc based on the results, leading to ‘some concerns’. Additionally, as most studies were secondary analyses, they could not blind outcome data prior to analysis.

Quality of moderation analysis

As there is such a variety of different moderator analyses used within the primary studies, it is important to additionally assess the quality, to see if different analysis used could explain or identify patterns in observed findings. This was not incorporated into the above quality assessment tool as the ROB-2 is a robust and standardised risk of bias assessment tool with the NICE guidelines and Cochrane reviews, which already has a well-developed algorithm for assessing the quality of studies for specific domains. In addition, the outcome of ROB-2 showed high risk for all studies, hence the additional inclusion of quality of moderation analysis would have had little impact on the overall conclusions about risk of bias for individual studies. No identifiable pattern was found in the quality of moderator analysis to guide interpretation of the reviewed studies. See Appendix P for a full table containing the results of the quality assessment for different moderator analysis and how these conclusions were reached.

Table1: Summary of review findings

Study	Population	Intervention	Comparator One	Comparator two	Predictor measure (Baseline dissociation)	Outcome measure	Analytic Method	Did dissociation influence treatment efficacy?	Did higher levels of dissociation increase drop out?
Arntz et al (2015)	BPD N=86; Age: M=30.58; Gender: female (N=80)	ST (50-minute sessions, twice weekly for three years)	TFP (50-minute sessions, twice weekly for three years)	N/A	BPDSI-IV (sum of item 9)	1= BPDSI	Regression	Negatively	No
Burton et al (2018)	PTSD N=200; Age: =37.41; Gender: Female (N=151)	PE (Ten 90-120-minute sessions weekly)	Sertraline treatment and psychiatrist support (ten 30-minute sessions weekly)	N/A	DES	2 = PSS-I	Latent transition analysis and regression	No	NA
Calderia et al (2004)	PTSD and SU N=107; Age: M=37.04; Gender: Female N=107	CBT (12 45-minute sessions, twice weekly)	CBT (12, 45-minute sessions, twice weekly)	Community care control	DES	2 = CAPS; IES 3 = CGI; SUI; ASI	Correlation	2 = No 3 = No	No
Cloitre et al (2012)	PTSD N=104; Age: M=36.33; Gender: Female N=104	STAIR/NST (16 60-minute sessions weekly)	STAIR/SC (16 60-minute sessions weekly)	SC/NST (16 60-minute sessions weekly)	TSI-DIS	2 = CAPS	TMI	No	Higher levels of dissociation less likely to drop out
Cloitre	PTSD	STAIR/NST	STAIR/SC (16	SC/NST	TSI-DIS	2 = CAPS	TMI	No	NA

et al (2016)	N=104; Age: M=36.33; Gender: Female N=104	(16 60-minute sessions weekly)	60-minute sessions weekly)	(16 60- minute sessions weekly)						
Crockett et al (2018)	PTSD N=47; Age: M= 38.97; Gender: Female N=32	PE (Nine, 90- 120-minute sessions weekly)	Waitlist	N/A	DES	2 = CAPS; PCL	TMI	No	Yes	
Emmeri k et al (2008)	PTSD N=125; Age: M=40.15; Gender: Female N=84	CBT (Five, 90-minute sessions weekly)	SWT (Five, 90-minute sessions weekly)	Waitlist	DES	2 = IES	Chi- Squared	N/A	Yes	
Halvors en et al (2014)	PTSD N=81; Age: M=35.55; Gender: Female N=25	NET (Ten 90- minute sessions weekly)	TAU (Ten 90- minute sessions weekly)	N/A	CAPS (Dissociation subscales)	2 = CAPS 4= HRSD	Regression	2 = No 4 = No	No	
Hansen et al (2007)	HIV with HCSA N=177 Age: M=42.80 Gender: Female N=107	HIV and Trauma Coping Group (15 90-minute weekly sessions)	Support Group Intervention (15 90-minute weekly sessions)	Waitlist	TSI-DIS	2 = IES	Classificati on and regression trees	No	NA	
Minnen et al (2016)	PTSD & Psychosis N=155; Age: M=41.10; Gender: Female N=84	PE (Eight 90- minute sessions weekly)	EMDR (Eight 90-minute sessions weekly)	Waitlist	CAPS (dissociation subscales)	2 = CAPS	T-test	No	No	
Price and Herting	SU N=104 Age: M=38.83	Mindful Awareness Body-oriented	TAU	N/A	SBC	2 = MPSS	Path analysis approach	Negatively	NA	

(2013)	Gender: Female N=104	Therapy plus TAU (Eight 90minute weekly sessions)								
Price et al (2008)	HCSA N=24; Age: Mean=41.00; Gender: Female N=24	Body Oriented Group Therapy (Eight, 60- minute sessions weekly)	Massage Group (Eight, 60-minute sessions weekly)	N/A	DES	2 = CR- PTSD	ANOVA	Positively	NA	
Price et al (2014)	Criteria A trauma N=137; Age: M=31.48; Gender: Female N=89	Adapted PE (Three, 60- minute sessions weekly)	Assessment only	N/A	ISRC	2 = PSS-I	TMI	Negatively	NA	
Resick et al (2012)	PTSD N=150; Age: M=35.44; Gender: Female N=150	CPT (12, 60- minute sessions, twice weekly)	WA (Nine, 120-minute sessions weekly)	CPT-C (12, 60-minute sessions twice weekly)	TSI-DIS	2 = CAPS; PDS	TMI	No	No	
Schwed en et al (2016)	SAD N = 61; Age: M =25.68; Gender: Female N= 25	Cognitive therapy (25 sessions, 50/100- minutes long)	Waitlist	Healthy control	CDS	5 = LSAS	Regression	No	No	
Wolf et al (2016)	PTSD-DS N=284; Age: M=44.75; Gender: Female N=284	PE (Ten 90- minute sessions weekly)	Present- Centered Therapy (Ten 90-minute sessions	N/A	TSI-DIS	2 = CAPS	Latent growth curve modelling and TMI	Negatively	No	

			weekly)						
Zlotnick et al (1997)	PTSD N = 96; Age: M=39.00; Gender: Female N=96	Affect- management treatment group (15 120- minutes sessions weekly)	Waitlist	N/A	DES	2 = DTS and SCL- 90-R	Ancova	N/A	Yes

Note. 1 = BPD; 2= PTSD; 3 = SU; 4 = Depression; 5 = Social anxiety; BPD = Borderline personality disorder; ST = schema therapy, TFP = transferred focused psychotherapy; N/A = not applicable; BPDSI-IV = The Borderline Personality Disorder Severity Index-IV (Arntz et al., 2003); PTSD = Post traumatic stress disorder; PE = Prolonged Exposure; DES = Dissociative experiences scale (Bernstein and Putnam, 1986); PSS-I = PTSD symptom scale-Interview (Foa, Riggs, Daneu & Rothbaum, 1993); SU = substance misuse; CBT = cognitive behavioural therapy; CAPS = Clinical Administered PTSD scale (Blake et al, 1995); IES = Impact of events scale (Horowitz, Wilner & Alvarez, 1979); CGI = Clinical Global Impression (Guy, 1976); SUI = the Substance use inventory; ASI = Addiction severity index (McLelln et al, 1985); STAIR = skills training in affective and interpersonal regulation; NST = narrative story telling; SC = supportive counselling; TSI-DIS = The trauma symptom inventory dissociation subscale (Briere, 1995); TMI = Treatment by moderator interactions; PCL = Posttraumatic Stress Disorder Checklist (Weathers, Litz, Herman, Huska & Keane, 1993); SWT = structured writing therapy; NET = narrative exposure therapy; TAU = treatment as usual; HRSD = The Hamilton rating scale for depression (Hamilton, 1960); HCSA = history of childhood sexual abuse; EMDR = eye movement desensitization therapy; SBC = a subscale of the Scale of Body Connection (Price and Thompson, 2007); MPSS = The Modified PTSD symptom scale (MPSS; Falsetti et al, 1993); CR-PTSD = Crime-related PTSD scale (Saunders, Arata and Killpatrick, 1990); ISRC = post event dissociation subscales of the Immediate stress reaction checklist (Fein, Kassamadams, Vu and Datner, 2001); CPT = cognitive processing therapy; WA = written trauma accounts only; CPT-C = cognitive therapy only; PDS = posttraumatic diagnostic scale (Foa et al, 1997); SAD = social anxiety disorder; CDS = Adapted Cambridge Depersonalisation scale (Michal et al, 2004); LSAS = German Liebowitz Social Anxiety Scale (Stangier and Heidenreich, 2005); PTSD-DS = dissociative subtype of PTSD; DTS = The Davidson Trauma Scale (Davidson et al, 1997) and SCL-90-R = Symptom Checklist 90-R (Derogatis, Lipman & Covi, 1973).

Discussion

Summary and discussion of findings

A narrative synthesis of 17 studies has been provided to summarise the current empirical literature on whether dissociation could be regarded as a treatment effect moderator of psychological treatment for mental health difficulties. All eligible studies were RCTs, although they were heterogeneous in terms of analytic method, measures used, intervention type, treatment duration and population characteristics. Overall, four studies out of seventeen outcomes (24%) found evidence to suggest dissociation led to worse treatment outcomes, twelve studies (70%) found no evidence of dissociation effecting treatment outcomes, and one study (6%) found that dissociation was associated with more positive treatment outcomes. As such the evidence suggests that dissociation does not moderate treatment efficacy in most cases. However, an emerging pattern indicates that this may be partly due to the specific interventions under study and whether they included techniques that, either directly or indirectly, could ameliorate dissociation.

Perhaps unsurprisingly, given the focus on trauma, this review found that the majority of studies considered the efficacy of PTSD treatment (nine studies with a PTSD diagnosis compared to 4 studies without). Of the nine studies with a PTSD diagnosis, eight of them found dissociation did not impact treatment efficacy. These findings do not appear to provide support for the two models outlined previously: (1) that dissociation may stop activation of the fear network, impeding processing of emotions in relation to traumatic event (Van Minnen et al, 2012) and (2) that dissociation may restrict access to traumatic memories, preventing restructured cognitions being formed (Ehlers & Clark, 2000). However, it is important to note that, the majority, if not all, of the interventions considered in these PTSD trials could have reduced dissociative experiences, perhaps

preventing dissociation from having an adverse impact on the therapy process and outcomes.

In contrast, the four studies that considered how dissociation influenced the efficacy of trauma treatment for those without a PTSD diagnosis found mixed results, in that one found dissociation had no impact, two found dissociation had a negative impact and one found dissociation had a positive impact on treatment outcomes. These mixed results suggest that more research is needed in this client group to make firmer conclusions. However, it should be noted the proposal that interventions which include components to target dissociation might prevent dissociation from interfering with treatment outcomes also seems to hold in this group of studies (Price et al., 2014; Hansen et al., 2007; Price, 2008). Conversely, the study by Price and Herting (2013), which found dissociation led to worse outcomes, did use an intervention which may have reduced dissociation. Interestingly, however, the authors found that when dissociation indirectly reduced emotional regulation difficulties then this also reduced PTSD symptoms. Ultimately, however, this evidence is inconclusive to provide support for the previously described proposals of dissociation interfering with treatment (Van Minnen et al., 2012; Ehlers & Clark, 2000). Further research is needed to support or disconfirm these proposals for trauma treatment amongst patients without a PTSD diagnosis.

In turn, these mixed findings appear to be replicated in treatment efficacy within general mental health conditions. Of the four relevant studies, three found dissociation did not moderate treatment efficacy for depressive symptoms (Halvorsen et al., 2014), social anxiety disorder (Schweden et al., 2016) or substance misuse symptoms (Calderia, 2004), whereas one study found dissociation predicted worse outcomes for BPD (Arntz et al. 2015). Interestingly, the intervention (ST and TFP) within the Arntz et al. (2015) trial did seem to use techniques that could reduce dissociation. However, Schweden et al. (2016)

used cognitive therapy, with no techniques mentioned in the protocol which might have reduced dissociation, yet still found no moderation effect. However, it is important to note that data from only four studies are too limited to draw firm conclusions. Furthermore, the mixed results could potentially be explained by the clinical variability of the different conditions under investigation. Further research with different mental health conditions is therefore needed.

Another outcome that was of interest within the current review was therapy dropout. Dropouts are a major problem in psychotherapy, particularly for trauma treatments (Barkham et al, 2006; Souto & Crosland, 2005). Eleven of the RCTs within the review explored whether baseline dissociation predicted therapy dropout, of which seven studies (64%) found it did not, three (27%) found higher levels of dissociation increased drop out and one (9%) found higher levels of dissociation reduced the chance of dropout. No patterns were found which might explain the mixed findings in relation to the type of intervention or sample diagnosis/characteristic. However, most of the studies had small sample sizes, leading to underpowered analysis and increased possibility of type I or type II errors, which is one plausible explanation for these inconclusive results.

Overall, the current findings do not provide robust support for proposals that dissociation might moderate treatment outcomes; a claim that is based, amongst other examples, on models which claim dissociation could prevent corrective learning throughout treatment (Ebner-priemer et al, 2009) or that dissociation could result in the type of cognitive deficits that might prevent general processing of information in therapy (Giesbrecht et al, 2008). To reiterate, the treatments within these RCTs may have targeted dissociation either directly or indirectly, and this precludes the option of examining the validity of these theoretical models in a naturalistic way. In this respect, these findings suggest that certain intervention techniques can actively reduce dissociation.

Another explanation for the mixed findings for both therapy dropout and treatment efficacy could be therapist experience (Cloitre et al, 2012). For example, more experienced clinicians may have increased understanding of dissociation, perhaps welcoming discussion and disclosure during sessions, which may subsequently increase engagement and reduce dropout. In addition, they may also have increased awareness of dissociative symptoms, which could feasibly assist in identifying these early in treatment as well apply intervention protocols more flexibly in order to meet individual client need. In support of this, Caldeira et al (2004) found that certain therapists were more effective at reducing dissociation. However, there is limited evidence to support this explanation, and it is something that further research could usefully explore. Another possible explanation for the mixed findings may be differences in therapy duration, as some RCT used only three sessions, in comparison to others which engaged participants for two years. It is also important to note that dissociation is a varied phenomenon with different subtypes, and it is possible that certain subtypes may moderate different treatment outcomes (Bryant, 2007).

Strengths and limitations of studies

The studies included for review comprised a range of clinical and non-clinical populations. All used an RCT methodology, which is considered the most robust test of efficacy for psychological interventions (although are generally underpowered to detect treatment effect moderators). Overall, most studies used similar measures of dissociation, although more variation was apparent for the assessment of treatment outcomes. However, the quality of the studies was poor, with all of them scoring high risk of bias. The majority had small sample sizes and employed secondary analyses of RCT data, making them more prone for type I error and/or reporting bias. The way studies addressed their research questions was heterogeneous and 50% used correlation or regression instead of a more

robust moderator analysis. Likewise, a meta-analysis could not be undertaken, making it difficult to draw firm conclusions. Due to these limitations the study results should be interpreted with caution.

Strengths and limitations of the review

This review included a range of populations, from different mental health diagnosis to non-clinical populations. MESH terms and forward and backward searching were also employed to ensure a comprehensive literature search. The review focused on RCTs, which are considered the most accepted method to evaluate efficacy, although at the same time this could have missed articles that could have enhanced interpretations of the mixed findings. The review only retained articles written in English, perhaps leading to language bias, and the risk of publication bias was not ascertained statistically. In view of these issues, the review's conclusions must be considered with caution and highlight the need for future corroborative research.

Theoretical implications

This is the first systematic review exploring whether dissociation influences psychological treatment for mental health conditions. In contrast with existing theoretical models that suggest dissociation interferes with treatment efficacy (Foa & Kozak, 1986; van Minnen et al., 2012; Ebner-Priemer et al., 2009; Giesbrecht et al., 2008), the overall findings suggest that dissociation did not moderate treatment outcomes. However, there was also some indication that dissociation only failed to moderate in cases where the interventions targeted dissociative symptoms. In such cases, it is intuitive that this could prevent dissociation from influencing treatment outcomes and underscores the importance of trauma treatments for helping to reduce dissociation in this client group (Dalenberg et al., 2012).

Future research

An important avenue for future research is to clarify these provisional conclusions by undertaking larger, more rigorous RCTs in this area. For example, RCTs could be conducted to specifically examine whether or not dissociation impacts treatment efficacy for interventions using emotional regulation skills or other components that could conceivably reduce dissociation (e.g. grounding), compared to interventions which do not include such strategies. Likewise, as one RCT found in-session dissociation predicted worse treatment outcomes (Arntz et al, 2015), future trials could usefully assess dissociation session-by-session in order to increase understandings of how dissociation changes throughout therapy and how this might influence treatment efficacy.

More robust trials also could enhance this research effort by recruiting larger samples and using more sophisticated analytic techniques, such as treatment by moderator interaction. Given the expense of larger trials, a more pragmatic approach (at such times that sufficient data is available) would be an individual patient data meta-analysis (IPD). An IPD is a promising method involving reanalysing all the data from each trial into a specific dataset, to analyse and synthesise the data. IPD is the only approach that could to detect treatment effect moderators in a statistically robust way when the trials themselves are underpowered (Riley, Lambert & Abo-Zaid, 2010).

Clinical Implications

An important implication of the current review is that patients with dissociative symptoms can still improve with therapy and should not be excluded from psychological interventions. However, the findings also highlight that a failure to appropriately identify and manage dissociation within psychological therapies could adversely impact treatment efficacy. It is therefore advisable for clinicians to be mindful of these issues and to gain

competence both in recognising dissociation as well as facilitating suitable interventions that help reduce the effects of dissociative within sessions (e.g. emotional regulation, grounding techniques, or narrative approaches). For example, clinicians could work collaboratively with clients to incorporate their dissociative experiences into existing formulations. This may aid understanding of the maintenance of dissociation to select the most appropriate intervention to ameliorate dissociation-related difficulties within treatment plans.

Conclusion

This review synthesised findings from 17 RCTs to suggest that dissociation is not a consistent moderator of the efficacy of psychological interventions, especially when strategies to target dissociation are employed. These findings were more consistent amongst patients with a PTSD diagnosis compared to more general mental health diagnoses and should be interpreted with caution owing to the low-quality methodology and high risk of bias in the majority of reviewed studies. The findings were additionally ambiguous as to whether dissociation could influence therapy dropout. Further corroborative evidence is needed before firmer conclusions can be drawn.

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Paper 2

Development and initial evaluation of a measure of Positive Beliefs about Dissociative Experiences

Word Count: (7613) (excluding figures, tables, and references)

This paper has been formatted according to the publication guidance of European Journal of Trauma and Dissociation (See Appendix C for author guidelines), and will be submitted for publication as Marsden, L., Longden, E., & Morrison, A., & Parry, S., & Varese, F.

Development and initial evaluation of a measure of Positive Beliefs about Dissociative Experiences

Abstract

Objective: This is the first study to explore if people can have positive beliefs about dissociation, through development of a novel self-report questionnaire; the positive beliefs about dissociation questionnaire (PBD-Q). The study also explored if these beliefs influence frequency and dissociation-related distress. **Method:** This study developed and assessed the psychometric properties of PBD-Q. Development of items was based on lived experience expertise within the research team, previous qualitative interviews and refined through cognitive interviewing approaches. A sample of 228 participants from the general population who scored >10 on the dissociative experiences scale (DES-II) completed a battery of online measures comprising of a demographic questionnaire, a modified version of the DES-II, and a previously developed measure of negative beliefs of dissociation - the beliefs about dissociation scale (BAD). **Results:** Exploratory factor analysis revealed three factors: positive beliefs about emotion management, positive beliefs about self-expression, and positive beliefs about maintaining social image. The PBD-Q showed excellent internal consistency, face validity and convergent validity. The scale had good test-retest reliability and the factor structure remained stable when a sensitivity analysis was conducted with a more stringent cut-off on the DES of >30. A correlational analysis revealed that higher frequencies of dissociative experiences were significantly positively correlated to higher scores on the PBD-Q. **Conclusions:** A novel measure of positive beliefs of dissociation has been developed. Findings provide preliminary support for the notion that people can have PBD and that these beliefs could maintain dissociative experiences. Clinical and research implications are discussed.

Key words: dissociative experiences, positive beliefs, dimensions, novel measure

Highlights

- A novel measure of positive beliefs about dissociation has been developed
- Findings suggest the meta-cognitive model could generalise to dissociation
- Positive beliefs about dissociation may maintain dissociative experiences
- Findings challenge the dominant negative discourse about dissociation
- A more open minded, balanced approach to dissociation is needed

Introduction

Dissociation is a complex phenomenon that is frequently conceptualised in a wide range of ways. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, [APA], 2013) defines dissociation in the context of dissociative disorders as: "A disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behaviour" (APA, 2013, p.291). However, debates exist as to whether dissociation should be conceptualised as a unitary construct (Bernstein & Putnam, 1986), or multiple distinct phenomenological subtypes (e.g. detachment and compartmentalisation; Holmes et al 2005; Brown 2006). As the majority of empirical studies in this area have conceptualised dissociation as a unitary construct, the modal model has been applied in the current research.

Dissociative disorders, such as dissociative identity disorder (DID) or depersonalisation disorder, can be disabling and cause functional impairments, including relationship difficulties, barriers to employment, and potential risk to oneself (Parry, Lloyd., & Simpson, 2017). Dissociation is not only a feature of these discrete conditions; it is a universal psychological process which is found to be a key feature in numerous psychiatric diagnoses, including post-traumatic stress disorder (PTSD) (Belvins, Weathers, & White, 2014), anxiety and mood disorders (Mulder, Beautrais, Joyce, & Fergusson, 1998), borderline personality disorder (BPD) (Ross, 2007), eating disorders (La Mela, Maglietta, Gastellini, Amoroso, & Lucarelli, 2010), and substance abuse (Seedat, Stein, & Forde, 2003). In turn, Nobakht and Yngvar (2017) found that 200 participants who regularly engage in self-harm behaviours (SHB) reported more dissociative features than participants without SHB. The importance of dissociative symptoms in somatoform disorder (Nijenhuis et al 2003) and schizophrenia (Justo, Riso, Moskowitz, & Gonzalez,

2018) has been recognised. Clearly, dissociation is associated with significant distress, which may manifest with a variety of clinical presentations.

Dissociation is also common in non-clinical populations, with links reported between heightened levels of dissociation and sleep loss (Barton, Kyle, Varese, Jones & Gillian, 2018), psychosis-like experiences (Humpston et al, 2006), obsessive-compulsive symptoms (Murat 2014), and eating disorder symptoms (Berardis et al, 2009) in assorted non-patient groups. Such literature shows that dissociative experiences are relatively common outside of those with a diagnosed mental health condition and can still cause distressing symptoms, highlighting the importance of understanding how dissociation is maintained in both clinical and non-clinical populations.

In turn, evidence from randomised controlled trials suggest dissociation can result in poorer responses to psychological treatment (Price & Kearns, 2014; Kleindienst et al, 2016). Two proposed reasons for this are: (1) dissociation is hypothesised to prevent access to traumatic memories, which can disrupt information processing, which may impair corrective learning and prevent clients reappraising and integrating traumatic material within autobiographical memory (Ebner-priemer et al, 2009; Ehlers and Clark, 2000); (2) the emotional processing theory (Foa and Kozak, 1986) purports that the fear network linked to the traumatic memory must be frequently activated, to reduce PTSD symptoms. Dissociation is assumed to prevent the activation of the fear network, disrupting the processing of emotions (van Minnen, Harned, Zoellner, & Mills, 2012).

Numerous empirical studies, systematic reviews and meta-analyses have suggested dissociation may be a mediating factor between trauma and mental health difficulties, such as psychosis (Williams, Bucci, Berry, and Varese, 2018), complex PTSD symptoms (Van Dijke, Ford, Frank & Van der Hart, 2015) and non-suicidal self-injury (Franzke, Wabnitz, & Catani, 2015). In turn, a large body of literature suggests a direct link exists between

trauma and dissociation (Dalenberg et al, 2012), wherein dissociation has been identified as a central psychological response to trauma exposure.

In summary, dissociation is a phenomenon that can occur amongst diverse clinical and non-clinical populations, potentially affecting treatment outcomes and causing significant psychosocial impairment. Despite this, little empirical research has been undertaken to understand the potential mechanisms which might either maintain dissociation and/or influence dissociation-related distress; both important areas of enquiry in terms of clinical implications as well as the reduction of emotional distress.

Several theoretical models have been proposed to explain the factors that may contribute to the development and maintenance of dissociation. Historically, Freud (1894) argued that it was a defence process, whereby any unpleasant memories, images or thoughts that caused anxiety, were suppressed into the unconscious to reduce these feelings of anxiety. Alternatively, Janet (1907) proposed that traumatic life events contributed towards fragmentation of the personality, where the self would split into different self or ego states, to lessen the impact of the trauma. For instance, one self-state may suppress rage, or compartmentalise a traumatic memory, to protect a more vulnerable part of themselves.

Towards the 1970's information-processing models started to influence the conceptualisation of many psychological phenomena, including dissociation. Spiegel and Cardena (1990) proposed that when a traumatic experience occurs, dissociation acts as a control strategy to reduce the emotional impact or lower emotional processing. The authors suggest that while this can be beneficial in the short term; in the long-term prevention of habituation to emotions associated with the trauma may increase the likelihood of developing PTSD.

An alternate viewpoint by Kennerley (1996) proposes that cognitive behavioural approaches could help understand dissociative reactions in respect to classical and operant conditioning; for instance, a dissociative reaction could be triggered by a conditioned stimulus, or dissociative state could provide an escape from overwhelming emotions. The construct of schema avoidance (Young, 1999) likewise closely resembles dissociation. A schema is a pattern of thoughts, feelings and beliefs that contribute to significant challenges, for instance, individuals learn, for instance, “people always abandon me”. Often these schemas cause intolerable emotions that individuals automatically attempt to suppress in order to re-orient attention from threatening stimuli. Therefore, dissociation is viewed as a functional but less constructive coping strategy via avoidance.

Despite the negative impact’s dissociation can have, these above theoretical models appear to conceptualise it as a response to managing overwhelming affect and could therefore be seen as a somewhat ‘functional’ strategy. In support of this position, qualitative research studies found that people with lived experiences of dissociation commonly have positive appraisals of it. Parry et al (2017) interviewed 5 participants diagnosed with DID and reported numerous descriptions that could be interpreted as dissociation providing a positive function: for example, “*It’s a way to protect myself from feeling that emotion*” or “*it’s a way to get through the day to the next thing*”.

Similarly, Parry, Lloyd and Simpson (2016) used interpretative phenomenological analysis to explore how seven women with moderate to high levels of dissociation experienced relationships with hospital staff. Within these interviews, participants appeared to report beneficial aspects of their dissociative experiences such as, “*I go into survival mode... all you have to do is get through your time there by switching into perfect mode*”. Likewise, Rabeyron and Caussie (2016) interviewed 16 people with depersonalisation and found that these experiences enabled them to distance themselves

from traumatic events. While such literature is limited, it supports the suggestion that some people may have positive perceptions of their dissociative experiences. Hence, perhaps the dominant negative discourse surrounding dissociation is arguably what leads people to assume dissociation is always dysfunctional, and these emerging findings challenge this view, suggesting a more balanced and open-minded view is needed.

Given this viewpoint, an alternative theoretical perspective which could be applied to understand the formation and maintenance of dissociation is the meta-cognitive model (Wells, 1995), which emphasises that an individual's beliefs about their mental processes can increase the frequency and distress of particular symptoms. For instance, Wells (1995) theorises that individuals with generalized anxiety disorder (GAD) can have positive (e.g., "my worry keeps me safe",) and negative (e.g., "worrying is uncontrollable") metacognitive beliefs about worry, which ultimately serve to maintain it. Further, worry is a 'normal universal' process, and it is the occurrence of positive and negative beliefs, which make it distressing. Similar meta-cognitive processes have been demonstrated within depression (Papageorgiou & Wells, 2001), OCD (Wells and Matthews, 1994), panic disorder (Clark, 1986) and psychosis (Morrison et al, 2007).

In light of this literature, it may be hypothesised that the meta-cognitive model could be generalised to dissociation, whereby positive beliefs are assumed to increase the frequency of dissociative experiences, and negative beliefs predict associated distress. Using a meta-cognitive approach, Welford (1999) specifically investigated relationships between the presence of dissociative experiences and negative beliefs amongst an adult non-clinical sample using a purposely developed measure; The Beliefs about Dissociation questionnaire (BAD). In this study, negative beliefs about dissociation were significantly related to higher frequency and dissociation-related distress.

No research to date has replicated Welford's (1999) findings. In addition, Welford (1999) only assessed negative beliefs about dissociation and no measure of positive beliefs currently exists. In order to test the meta-cognitive model derived predictions, as to how positive and negative beliefs about dissociative experiences could increase vulnerability for and maintain dissociation, it is therefore necessary to develop and validate a self-report measure to accurately capture PBD. This could perhaps create a more open-minded approach to dissociation, guiding practitioners away from assumed pathology. Implications of this could help clients understand the functions of dissociation, and the creativity/resilience of the mind; whereby offering hope to develop non-dissociative coping strategies. As such, the research aims were to develop and examine the underlying dimensional structure of the positive Belief about dissociation questionnaire (PBD-Q) amongst participants who scored ≥ 10 for symptom frequency on the dissociative experiences scale (DES-II; Bernstein and Putnam, 1986). More specifically the research aims to examine:

- 1) underlying dimensional factor structure using principal axis factoring
- 2) face validity by conducting cognitive interviewing
- 3) internal consistency by assessing the Cronbach alpha of the scale
- 4) test-retest reliability by using intra class correlation coefficients (ICC) between baseline PBD-Q scores and two-week follow up scores on the PBD-Q.
- 5) convergent validity by investigating its association with dissociation frequency.
- 6) discriminant validity by investigating the association between the BAD and dissociation-related distress.
- 7) whether hypothesised associations are identified between positive and negative beliefs about dissociation, and distress and frequency of dissociation itself.

Method

Participants

Two hundred and forty-seven participants consented to take part in the online study, of which 228 completed the PBD-Q. The participants we aimed to recruit were adults, who were older than 18, who had experienced dissociative experiences to a mild extent and above. Participants were deemed eligible if they scored ≥ 10 on the DES-II and were older than 18. No restrictions were placed in relation to participants' psychiatric history, socio-economic status or gender. Therefore, participants could be within a clinical and non-clinical population. Participants were excluded if they could not read English as validated versions of the BPD-Q were not available in other languages. They were additionally excluded if they had a known moderate/severe learning disability or an organic disorder - where someone had a decreased mental function due to a physical or medical condition - for example dementia. Participant ages ranged from 18 to 71 years ($M = 28.28$, $SD = 12.16$). Demographic characteristics are displayed in Table 2 below. Participants were predominantly White-British (62.9%) female (77.4%), had achieved degree-level education (43%) and were either employed (32.1%) or in full time education (54.4%). See appendix O. for poster used to advertise the study which includes the wording used to advertise the study.

Table 2: Summary of demographic characteristics

Demographic characteristics	Demographic subcategory	Number of participants (n)	Percentage of participants (%)
Sex	Female	192	77.4
	Male	44	17.7
	Other	11	4.4
Ethnicity	White Caucasian	149	60.1
	Other	99	39.9
Employment	Unemployed	26	10.4
	Working	76	30.6
	Studying	129	52.0
	Other	17	7

Education	General Certificate of Secondary Education (GCSEs) or less	15	6
	A Levels	92	37.1
	Degree or above	102	41.1
	Other	35	14.2
	No Qualification	4	1.6

Measures

All measures can be found in Appendix D.

Demographic questionnaire.

A customised 18-item self-report measure was used to collect relevant demographic information, including: age, gender, education level, ethnicity and psychiatric service contact.

Modified version of the Dissociative Experience Scale (DES-II; Carlson and Putnam, 1993).

The DES-II is a 28-item self-report measure for assessing the frequency of dissociative experience. Participants were asked to indicate the frequency they experienced each item by circling a percentage from 0 – 100%. Scores range from 0-100, with higher scores indicating greater frequency of dissociation. The DES-II has three subscales: amnesic dissociation including 10 items, absorption or imaginative involvement, including 11 items, and depersonalisation and derealisation, including 7 items. The DES-II has shown to have excellent reliability and validity, with a high internal consistency ($\alpha=0.94$) (Carlson and Putnam, 1993). The research team modified the DES-II by adding two scoring columns to specifically measure dissociation-related distress and controllability. Participants indicated the level of distress and how much control they felt they had over each experience, by circling a percentage from 0 – 100% for each item.

The positive belief about dissociation questionnaire (PBD-Q).

The PBD-Q was developed by the authors to assess PBD. An initial pool of items was devised (See Appendix E) by extracting themes from seven semi-structured interviews of women with lived experience of dissociation (Parry et al 2016) and additional qualitative interviews provided by the same author from an unpublished study (Parry et al 2017). Item generation also drew on meta-cognitive theory (Wells, 1994) and the existing Meta-cognition Questionnaire (MCQ; Cartwright-Hatton and Wells, 1997). Additional items were drawn from qualitative research relating to lived experience of dissociation (Anketell et al, 2011; Hirakata, 2009). Further, two members of the research team had lived experience of dissociation, and used their experiences to develop and refine new items. Therefore, the item generation was rooted in lived experience from qualitative interviews and from within the research team. The research team edited and reduced the initial pool of items in order to prevent the likelihood of items cross loading (loading onto multiple factors) (Tabachnick & Fidell, 2013).

To refine the PBD-Q and assess face validity, cognitive interviewing with seven individuals with lived experience of dissociation was undertaken to explore individual thinking processes that occurred during questionnaire completion (e.g., ease of recall, item comprehension, memory retrieval, and decision and response process: Willis, 1994). This further demonstrates how the questionnaire development was rooted in lived experience. All interviewees scored ≥ 20 on the DES-II to ascertain that they experienced clinically significant levels of dissociation. Interviewees were recruited through various mental health charities with a focus on dissociation and were compensated with £20 for their input. Think-aloud probing was used, where the interviewee discussed their thinking process for each response out loud while the PBD-Q was administered. Retrospective probing was also employed, in which the interviewer asked specific questions about how the respondents interpreted each item (Willis, 1994). See appendix F for the cognitive

interviewing schedule. As a result of this feedback, 16 items were revised, 3 items were added, 9 items were removed, and the anchors of the Likert scale and wording of the introductory paragraph were both revised (see appendix G for specific revisions). Following this process, the research team were satisfied that all the items had high content and face validity.

An unpublished face validity questionnaire designed by a clinical psychologist at the University of Manchester was used to further refine the items. Three professionals working with clients who experience dissociation completed the questionnaire and two provided general feedback (see appendix H for face validity questionnaire). Additionally, feedback about the PBD-Q was provided by a staff member from the mental health charity 'First Person Plural'. Following this feedback, an additional item was added (item 21), the introductory paragraph was simplified, and technical language removed, and an item with an 'other' option was added to capture any beliefs missed in the main questionnaire.

Before the measure was finalised the items were checked by all members of the research team. Prior to factor analysis, the final version of the PBD-Q was a 21-item self-report questionnaire, assessing the frequency whether participants had PBD on a five point Likert scale, using the following anchors: (0) "Never", (1) "occasionally", (2) "half the time", (3) "frequently", and (4) "always". Total scores ranged from 0-84, with higher scores indicating more positive beliefs.

To note, discussions were made about whether to include a negative beliefs subscale. A negative belief subscale may have allowed people to weigh up the positive and negatives at the same time, to see if they are in 'two minds'. However, the rationale for only including positive beliefs were that there is already a negative beliefs about dissociation questionnaire developed, (Welford, 1999) which could be used simultaneously alongside the measure. In addition we felt the positives of mental health is generally

neglected, and by just focusing on positive beliefs this may break away from the dominant negative discourse around dissociation, to encourage critical reflection.

Negative Beliefs About Dissociation questionnaire (BAD; Welford, 1999).

The BAD is a 12 item self-report questionnaire assessing agreement level of respondents' negative beliefs about dissociative experience. It is scored on a 4-point Likert scale, using the following anchors: (1) 'Do not agree', (2) 'agree slightly', (3) 'agree moderately' and (4) 'strongly agree'. The scores range from 12-48, with higher scores indicating more negative beliefs. The BAD contains two subscales, one contained 7 items themed 'immediate threats to the individual's state of awareness' and showed high internal consistency, $\alpha=0.86$. Subscale two contains 5 items themed 'interpretation of the event as a long-term physical/mental health problem', and likewise had high internal consistency, $\alpha=0.81$ (Welford, 1999). Levels of validity or reliability were not explored.

Brief Betrayal Trauma Scale (BBTS; Goldberg and Freyd, 2006).

The BBTS is a 12 item self-report scale used to assess childhood trauma exposure. For each item participants report trauma exposure before and after the age of 18. The scale assesses the frequency of exposure on a 3-point Likert scale, with the following anchors: (1) 'Never', (2) 'one or two times' and (3) 'more than that'. Scores are calculated by adding all items for the two age categories and range from 1-12 for the category prior to age 18 and 13-24 for age 18 or above, with higher scores indicating higher exposures. The BBTS has been found to have good test-retest reliability and internal consistency, $\alpha=0.83$ (Goldberg and Freyd, 2006). For this study the BBTS was used in case the contingency plan needed to be employed.

Procedure

Recruitment

Recruitment took place from October 2018 until December 2018. Participants were recruited by placing posters around the University and sending invitation emails to mental health charities, non-NHS organisations and support groups for people with mental health difficulties such as ‘First-Person Plural’, hearing voices network groups and the complex trauma and dissociation clinic. Advertisements were also placed on social media.

Online Study

Participants read an online participant information sheet (see appendix K) and provided informed consent (see appendix L for consent form) if they wished to take part. Participants were then invited to complete the modified DES-II. Individuals scoring <10 for frequency on the DES-II were directed to the debrief sheet (see appendix M) and asked to take part in the prize draw, while those scoring ≥ 10 were invited to complete the battery of questionnaire in the measures section. For consenting participants, a link to the second part of the study was sent via an automated email two weeks later asking them to repeat the PBD-Q to check for test-retest reliability. All participants could enter a prize draw to win one of five £20 Amazon vouchers if they consented to provide their email address. Participants then read the debrief sheet.

Ethical Approval

All procedures were approved by The University of Manchester Research Ethics Committee (see appendix N). With the exception of entering their email address for the prize draw and the two weeks follow up, all participant data were anonymised. Following the prize draw and second part of the study these email addresses were all destroyed.

Data Analysis

Exploring the underlying dimensional structure of the PBD-Q

To explore the dimensional structure of the PBD-Q, an exploratory factor analysis (EFA), with extraction through principal axis factoring was used. The assumptions for EFA were checked using the Kaiser-Meyer-Olkin (KMO; Kaiser, 1974) and Bartlett's test of sphericity (Hubbard & Allen, 1987). To check for extreme multicollinearity and singularity, items were retained in the factor analysis if they had inter-item correlations of >0.30 and <0.90 (Tabachnick & Fidell, 2013). Factors were extracted using scree plots and if their Eigen values were above 1. However, because the Kaiser criterion and the scree test may retain too many factors, parallel analysis (PA; Horn, 1965) was additionally used to determine and clarify the number of factors to be extracted (Hubbard & Allen, 1987; Zwick & Velicer, 1986). PA compares eigenvalues in a random dataset with equivalent sample size/variable numbers to observed eigenvalues, which are subsequently retained if they are greater than the corresponding values in the random dataset. Items that loaded <0.4 onto any factor were removed (Garson, 2013; Hair, Black, Anderson & Tatham et al, 1995).

On the basis that the PBD-Q measures the same underlying dimension, it was hypothesised that factors would be correlated. Therefore, oblique factor rotation was employed. To confirm whether this was the most appropriate method, we first examined bivariate correlations between the extracted factors.

Exploring the psychometric properties of the PBD-Q

Cronbach's alpha (α) was used to measure internal consistency for each BPD-Q subscale. To test for test-retest reliability, the ICC was used between PBD-Q scores at baseline and the two-week follow-up assessments.

To explore the construct validity of the PBD-Q, correlational analyses were carried out between participants' factor scores on the PBD-Q and the DES-II frequency scores. It was hypothesised that for participants to have PBD they would need to experience

dissociation; therefore, a positive correlation between PBD-Q and dissociation frequency was expected.

To assess for discriminant validity, correlational analyses were conducted between participants' factor scores on the PBD-Q and the BAD questionnaire. It was hypothesised that there would be a negative association between the positive and negative beliefs about dissociation, but not a strong perfect correlation as this would suggest they were measuring the same construct. A further correlational analysis was carried out between participants' subscale scores and total score on the PBD-Q and dissociation-related distress to assess for discriminant validity. It was hypothesised that there would be a negative correlation between PBD-Q scores and dissociation-related distress, as measured by the BAD. As all analysis were exploratory, Bonferroni corrections were not used as this was considered to be too conservative (Perneger, 1998).

To evaluate if the factor structure remained stable and consistent amongst people presenting with clinically significant levels of dissociative experience, a sensitivity analysis was conducted on the new measure employing a more stringent DES-II cut off of 30 (Carlson & Putman, 1993).

Results

Two hundred and forty-seven participants completed the DES-II of which 228 were eligible to complete the PBD-Q. Of these individuals, 227 completed the BAD, and 104 completed the PBD-Q at the two-week follow-up. One participant had one item of data missing and one participant had two items missing for the PBD-Q. One participant additionally had one item of data missing for the follow up PBD-Q. Using procedures proposed by Hoaglin, Iglewicz and Tukey (1987), no outliers were identified in the data set. As this missing data only constituted 1% it was classed as inconsequential and individual items were therefore excluded from the analysis (Bennett, 2009).

Exploratory Factor Analysis

The overall KMO was considered 'superb' at 0.891, indicating both an adequate sample size and that EFA was appropriate for this data (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was highly significant ($p < 0.001$), also supporting the appropriateness of the analysis (Hubbard & Allen, 1987). No inter-item correlations above 0.90 were found; all inter-item correlations were between > 0.30 and < 0.90 . In addition, the whole range of the five-point response scale was used by participants for all items, suggesting that the scale was suitable for the target sample.

Initially, four factors were extracted using principal axis factoring extraction. However, after suppressing 7 items with factor loadings < 0.4 , a three-factor structure emerged. It was therefore decided that a more robust approach was to re-run the analysis excluding the 7 suppressed items in order to confirm the three-factor structure.

Principal axis factoring extracted three factors, with a cumulative percentage of explained variance of 63.89% (factor 1, 44.33%; factor 2, 10.50% and factor 3, 9.05%). The parallel analysis indicated that three factors occurred above chance based on the 95th

percentile criteria from the parallel analysis Monte Carlo simulation. Additionally, the scree plot supported the three-factor structure (see appendix I).

Oblique rotation revealed that factors were correlated; for factor 1, 2 and 3 as all $r > .30$ (See Table 3 below for factor correlation matrix), indicating that was 10% minimum overlap in variance among factors (Tabachnick and Fidell 2013). Therefore, confirmed oblique rotation was considered an appropriate rotation to use.

Table 3: Factor Correlation Matrix

Factor	1	2	3
1	1.000	.419	.664
2	.419	1.000	.356
3	.664	.356	1.000

The three-factor structure resulted in 6 items associated with factor 1; these items reflected dissociation as a way of coping with emotions and was therefore labelled “positive beliefs about managing overwhelming affect”. Three items were associated with factor 2; these items reflected dissociation as an experience that helped people to communicate effectively, (e.g., to express suppressed emotions, or to ‘feel heard and understood’). Consequently, this factor was termed ‘positive beliefs about self-expression and acceptance’. Five items were associated with factor 3, which contained themes around appearing more positive, putting on a mask, or allowing respondents to be the person they needed to be in different situations. Therefore, this factor was termed ‘positive beliefs about maintaining social image’. Table 4 presents the results of the rotated, recalled factor matrix. Appendix J presents the results of all the factor loadings of the EFA.

Table 4: Item loadings and factor structure of the PBD-Q

Factor	Item	Loading
Factor One Managing Overwhelming Affect	5. Get through the day when I am overwhelmed	.856
	18. Prevent my emotions becoming overwhelming	.792
	4. Make day to day life stress feel more manageable	.725
	1. Cope with extreme emotions	.687
	20. Feel safer in difficult situations	.590
	15. Cope with any negative thoughts	.546
Factor Two Self-Expression and acceptance	14. Feel heard and understood	.718
	12. Communicate to others what I am really thinking	.651
	13. Feel more able to do things I would struggle to do otherwise	.544
Factor Three Maintaining Social Image	16. Appear more positive than I actually am	.876
	17. Show on the outside I am coping when I am not on the inside	.777
	9. Appear stronger so others are less likely to hurt me	.696
	8. Be the person I feel I need to be in different situations	.601
	6. Hide my vulnerabilities so I stay safe	.451

Internal Consistency

The ‘ α ’ for all factors showed good internally consistency: (factor 1, $\alpha = 0.863$; factor 2, $\alpha = 0.730$; factor 3, $\alpha = 0.855$, total score, $\alpha = 0.901$). In addition, the iterative removal of single items did not increase the ‘ α ’ of all subscale or the total score. Within each factor all item totals presented correlations > 0.3 with the relevant subscale and total score. Overall, these analyses indicated that the PBD-Q had excellent internal consistency (Kilne, 1994).

Reliability

One hundred and four participants completed the PBD-Q (45.56% of the total sample) at the two weeks follow up assessment. The ICC was used to calculate test-retest reliability between the subscales scores and total score of PBD-Q at baseline and follow-up. The ICC for all PBD-Q subscales and the total score showed optimal test-retest

reliability (factor one, ICC=0.849; factor two, ICC=0.713; factor three, ICC=0.738; total score PBD-Q ICC=0.811) (Shuttleworth, 2009).

Validity

Spearman's rho correlations were used to test for convergent and discriminant validity. The guidelines by Cohen (1988) were used to evaluate the size of these correlations. Bivariate correlations between each subscale of the PBD-Q and scores on additional measures are presented in Table 5.

Correlations for DES-II frequency revealed significant moderate positive associations with all three subscales and total score. This indicates good convergent validity, as it was hypothesised that people who have more positive beliefs would experience higher levels of dissociation.

Correlations for dissociation-related distress revealed significant positive weak correlation with positive beliefs about emotion management and positive beliefs about self-expression. Significant moderate positive correlation were also found between dissociation-related distress and: (1) positive belief about maintaining social image, (2) dissociation-related distress and total PBD-Q scores.

Correlations for total BAD scores revealed non-significant zero correlations with positive beliefs about emotion management, positive beliefs about self-expression, and the total score on the PBD-Q. However, there was a significant positive weak association with BAD and positive beliefs about maintaining social image. This suggests the PBD-Q has good discriminant validity in that it is assessing a different construct to that assessed by the BAD.

Correlations for BAD subscale 1 (negative beliefs about dissociation relating to negative appraisal by others: BAD-1) found non-significant correlations between the total PBD-Q and positive beliefs about emotion management; a weak negative significant

correlation with positive beliefs about self-expression; and a weak positive significant correlation with positive beliefs about maintaining a social image. All correlations for negative beliefs about dissociation relating to long term physical and mental health (BAD-2) were non-significant correlations for all subscales and total score on PBD-Q, further indicating good discriminant validity.

Table 5: Associations identified through bivariate correlations between each subscale of PBD-Q and scores on additional measures.

	Factor 1 (Managing Overwhelming Affect)	Factor 2 (Self Expression)	Factor 3 (Maintaining Social Image)	Total score PBD-Q
Total Score BAD	$r_s = -.046$ p = .248	$r_s = -.076$ p = .128	$r_s = .116$ p = .041	$r_s = .012$ p = .430
BAD (Negative Appraisals by others)	$r_s = -0.82$ p = .109	$r_s = -.118$ p = .039	$r_s = .109$ p = .052	$r_s = -.021$ p = .378
BAD (Long term physical or mental health)	$r_s = .039$ p = .282	$r_s = .029$ p = .334	$r_s = .079$ p = .119	$r_s = .064$ p = .171
DES-II (Frequency)	$r_s = .281$ p = .000	$r_s = .259$ p = .000	$r_s = .411$ p = .000	$r_s = .378$ p = .000
DES-II (Dissociation- related distress)	$r_s = .189$ p = .002	$r_s = .225$ p = .000	$r_s = .361$ p = .000	$r_s = .318$ p = .000

Negative beliefs about dissociation

In an attempt to replicate the findings of Welford (1999), Spearman's Rho correlations were used to explore whether negative beliefs about dissociation were associated with frequency of dissociation and dissociation-related distress. As predicted, all correlations for the subscales of BAD revealed significant, moderate associations between frequency of dissociation and dissociation-related distress, indicating higher negative beliefs about dissociation are associated with higher frequencies of dissociation and higher dissociation-related distress (See Table 6).

Table 6: Associations identified through bivariate correlations between each subscale of BAD and scores on additional measures.

	BAD Factor 1 (Negative Appraisals by others)	BAD Factor 2 (Long term mental or physical health)	Total score BAD
DES-II (Frequency)	$r_s = .281$ p = .000	$r_s = .328$ p = .000	$r_s = .316$ p = .000
DES-II (Dissociation-related distress)	$r_s = .379$ p = .002	$r_s = .278$ p = .000	$r_s = .373$ p = .000

Sensitivity analysis

To explore whether the factor structure of the PBD-Q remained consistent in people presenting clinically significant levels of dissociative experiences, a sensitivity analysis was conducted including only individuals who met a more stringent DES-II cut off of 30 (Carlson & Putman, 1993). In this analysis, data was available from 149 at baseline and 76 at follow up. Principal axis factoring extraction still indicated a three-factor structure and the only exceptions were that item 6 loaded onto factor one instead of factor 3, and item 7 loaded above 0.4 onto factor one. It is unsurprising that item 7 ('distance myself from distressing memories') loaded higher for people with clinical levels of dissociation, as it is feasible that they may have more traumatic memories than people from the non-patient population. The ICC and CA remained the same.

Correlations remained the same with the following exceptions: (1) correlations between DES-II frequency and PBD-Q factor one were no longer significant; (2) DES-II frequency was weak instead of moderate for the total PBD-Q and PBD-Q factor two; (3) DES-II distress was no longer significantly associated with PBD-Q factor one and two and the PBD-Q total was now weak instead of moderate; (4) BAD-S1 was now weak negative and significant for PBD-Q factor one and the total score PBD-Q; BAD-S1 and PBD-Q factor 3 were no longer correlated; (5) total BAD scores were now weak negative and non-

significant for PBD-Q factor one and two; and (6) BAD total score and PBD-Q factor 3 were no longer correlated (See table 7 for correlations).

Table7: Associations identified through bivariate correlations between each subscale of PBD-Q and scores on additional measures in sensitivity analysis.

	Factor 1 (Managing Overwhelming Affect)	Factor 2 (Self Expression)	Factor 3 (Maintaining Social Image)	Total score PBD-Q
BAD	$r_s = -.134$ p = .053	$r_s = -.194$ p = .009	$r_s = .047$ p = .284	$r_s = -.095$ p = .127
BAD-S1	$r_s = -.191$ p = .010	$r_s = -.223$ p = .003	$r_s = .044$ p = .298	$r_s = -.130$ p = .058
BAD-S2	$r_s = .019$ p = .410	$r_s = -.096$ p = .123	$r_s = .024$ p = .386	$r_s = -.008$ p = .464
DES-II (Frequency)	$r_s = .119$ p = .075	$r_s = .177$ p = .015	$r_s = .300$ p = .000	$r_s = .225$ p = .003
DES-II (Dissociation-related distress)	$r_s = .010$ p = .454	$r_s = .057$ p = .244	$r_s = .257$ p = .001	$r_s = .138$ p = .047

Discussion

The aim of this study was to develop and validate a self-report measure of PBD amongst individuals scoring ≥ 10 on the DES-II. A 14-item scale was developed, which yielded three factors following EFA analysis: 1) positive beliefs about managing overwhelming affect, 2) positive beliefs about self-expression and 3) positive beliefs about maintaining social image. The PBD-Q demonstrated good internal consistency, test-retest reliability and good preliminary indices of face, convergent and discriminant validity.

The underlying dimensional structure of the PBD-Q was comprised of three factors; these different beliefs about dissociation might be reminiscent of proposals that dissociation has distinct phenomenological subtypes (Holmes et al 2005; Brown 2006). For instance, positive beliefs about managing overwhelming affect and maintaining social image appear to display features associated with detachment and positive beliefs about self-expression could indicate compartmentalisation.

The Spearman's correlation analysis between all factors on the PBD-Q revealed that higher frequencies of dissociative experiences were significantly correlated with higher scores on the PBD-Q. This provides preliminary evidence that individuals can have PBD, and that these beliefs could subsequently increase the frequency of, and ultimately maintain, their dissociative experiences. This pattern of findings provide preliminary support for the meta-cognitive perspective, in that individual's beliefs about psychological processes can contribute towards the maintenance of difficulties as has been demonstrated in GAD (Wells, 1995), depression (Papageorgiou & Wells, 2001), OCD (Wells and Matthews, 1994), panic disorder (Clark, 1986) and psychotic symptoms (Morrison et al, 2007).

Correlational analysis also revealed that participants with higher levels of negative beliefs about dissociation had higher levels of dissociation-related distress and frequencies

of dissociative experiences. These findings replicate Welford's (1999), providing further support for the proposal that negative beliefs about dissociation could maintain and increase dissociation-related distress.

In particular, these findings are consistent with Welford's (1999) proposal that meta-cognitive beliefs can generalise to dissociation and support how negative beliefs can maintain dissociation. These findings also provide a novel perspective that individuals can have positive beliefs about dissociation. In addition, the findings appear to support existing literature that conceptualises dissociation as a protective response to trauma in terms of distancing oneself from painful emotions (e.g., psychodynamic theory [Freud, 1894], information processing theory [Spiegel & Cardena, 1990], cognitive approaches [Kennerley 1996]) and the construct of schema avoidance (Young, 1999). Further, the findings from this novel lens add to the emerging body of research indicating that individuals commonly describe positive beliefs about their lived experiences of dissociation, recognising that dissociation not only contributes towards protecting aspects of their wellbeing but enhances their ability to manage in certain situations (Parry et al, 2017; Parry et al 2016; Rabeyron and Caussie 2016). In summary, the current findings add further support to existing theories and empirical research that suggests people can appraise dissociation as a 'functional', positive and practically useful experience, which in turn could act as a maintaining factor for dissociation itself but reduce dissociation-related distress.

The Spearman's analysis correlations revealed no associations between the PBD-Q subscales and BAD total score, with the exception of a weak significant positive correlation between BAD total and positive beliefs about maintaining social image. When the correlations were broken down between the two BAD subscales, no correlations were likewise revealed for BAD-S2 – (concern for long-term physical and mental health) and

any PBD-Q subscales. This supports the notion that the constructs assessed in the PBD-Q are distinct from those measured by the BAD-S2, further supporting the PBD-Q has good discriminant validity.

Likewise, a weak significant negative correlation was also found between BAD-S1 (negative beliefs relating to negative appraisals by others) - and, positive beliefs about self-expression on the PBD-Q, which could be tentatively interpreted as individuals being less likely to be concerned about others' negative appraisals if they think dissociation can help self-expression. As an indication of convergent validity, a weak significant positive correlation was also found with maintaining social image, which also would be expected if people concerned with others' negative appraisals might place a higher value on the capacity of dissociation to maintain social image. Taken together, these findings support the validity of the PBD-Q.

It should also be noted that higher scores on all PBD-Q subscales were associated with higher levels of dissociation-related distress, which potentially undermines the PBD-Q's discriminant validity. However, it may also be the case that dissociation-related distress was not appropriate for assessing discriminant validity in this sample, as even if people have stronger PBD, they could still be distressed by dissociation itself. A similar process has been evident in GAD, whereby people who find GAD highly distressing, still had high positive meta cognitive beliefs about worry (Wells, 1995). In support of this contention, there was also a strong significant positive correlation between dissociation frequency and dissociation-related distress, so it is possible that any weak/moderate correlations between dissociation-related distress and PBD-Q scores are artefactual.

One salient strength of this study was its relatively large sample size, which is considered to be highly powered for EFA as it exceeded the upper ratio of 10 participants per item (Kass and Tinsley, 1979). The scale showed good test-retest reliability, internal

consistency and convergent validity. The factor structure also appeared stable as evidenced through no overlapping items. Sensitivity analysis also showed that the structure was very stable, as it did not change when a more stringent DES-II cut-off of 30 was used. However, it is recommended as a robust approach that a further confirmatory factor analysis is carried out in the future to further validate the three-factor structure. The PBD-Q had excellent face validity, evidenced through the development of the measure guided by the lived experience expertise within the research team, public and patient involvement, cognitive interviews with people with lived experience of dissociation, items derived from semi-structured interviews of people with lived experience of dissociation, and feedback from professionals working with this client group.

Several caveats about the present investigation and the approach taken to develop the scale should be considered. The exploratory analyses in the study were correlational, which is a weakness as this does not provide proof of a causal relationship. The study sample was disproportionately females from either a white-British or other white background, who were in full-time education or employment and had high levels of education (likely resulting from the majority of the recruitment targeting students). This potentially limits the ecological validity of the findings and further research is needed with participants who have more diverse demographic characteristics, so the results are more representative of the target population.

One strength of adopting only a positive oriented questionnaire appeared a helpful first step to break away from the dominant negative discourse around dissociation, to encourage critical reflection. Although, for people who find dissociation extremely distressing, only focusing on the perceived positives may feel invalidating and deter them from completing the questionnaire. A combined positive and negative beliefs questionnaire may address this and potentially show if individuals are in ‘two minds’ about dissociation.

Participants were not provided with a particular time frame when completing PBD-Q. Anecdotal evidence, based from clinical experience of professionals working with clients who dissociate, suggests that individuals may retrospectively score differently on self-report measures based on their current experience or feelings (selective abstraction). Future studies could perhaps categorise items into ‘experiences in the past month’ or ‘have you ever in the past’ and assess via EFA whether this impacts on the factor structure.

Participants were asked to complete the PBD-Q in relation to their dissociative experiences in general. However, dissociation is a varied phenomenon, commonly conceptualised as having distinct subtypes such as detachment and compartmentalisation (Brown, 2006). It is unclear if the findings apply to all subtypes of dissociation or specific dissociative disorders, including DID whereby reporting may vary for different alters. Future studies could use the PBD-Q in this way and determine if the factor structure would differ as a result. This could have clinical recommendations for therapy, to determine which specific dissociative-coping subtypes different alters most value, and how this may impact their day to day functioning differently.

In summary, additional research in this area could first undertake a confirmatory factor analysis, to further validate the three-factor structure of the PBD-Q. The study could be replicated in a more diverse demographic sample and a clinical sample of specific dissociative disorders or subtypes of dissociation, to clarify the findings and if the factor structure remains stable. Also, research could further clarify whether PBD could increase vulnerability for, and maintain dissociation, as found in the metacognitive literature for GAD (Wells, 1995), Depression (Papageorgiou & Wells, 2001), Obsessive Compulsive Disorder (Wells and Matthews, 1994), Panic Disorder (Clark, 1986) and Psychotic symptoms (Morrison et al, 2007).

Further exploratory research could also investigate if PBD could mediate the link between trauma and voice hearing or other mental health difficulties. Numerous empirical studies, systematic reviews and meta-analyses suggest that dissociation may be a mediating factor between trauma and symptoms of psychosis, particularly, but not exclusively, auditory hallucinations (Williams et al, 2018). However, little research has been undertaken to understand possible moderators of the relationship between trauma and mental health difficulties. Therefore, the PBD-Q could be used to assess if PBD could mediate this link.

Importantly, this research could be useful to assess if people have positive beliefs about dissociation in clinical settings. Positive experiences and beliefs about dissociation could be incorporated into psychological formulations, to aid understanding of the mechanism and functionality of dissociation for clients. Exploring dissociation in a more neutral way maybe less threatening to clients, in comparison to when practitioners assume pathology. Therefore, may perhaps facilitate clients to, examine accuracy and helpfulness of these beliefs, reflect upon how dissociation is working for them, and when it is a hindrance. From a strength's perspective, this may educate clients as to the creativity and resilience of the mind, offering hope to develop alternate non-dissociative coping strategies where appropriate. For instance, if someone has more positive beliefs about self-expression, they may benefit from assertiveness or social skills training. If someone has positive beliefs about managing overwhelming affect, they may benefit from self-soothing skills or emotional regulation work. If someone has more positive beliefs about maintaining social image, they may benefit from the therapist normalising their emotional experiences and learning that expression of emotions is a normal human process. This may fit well within a positive psychology framework.

Another idea could be to use PBD as a psychoeducation tool, to educate people and normalise how dissociation can be a standard human response to intense stress or trauma, therefore highlighting dissociation is not inherently pathological, but a sign of the mind trying to process and cope with the consequences of what has happened. In support, one of the researchers was involved in a recent unpublished hearing voices trial, which identified how a positive response was shown to a similar psychoeducation tool about voices. For instance, the tool reduced their sense of shame that they were “weak” or “something is wrong with them”.

The findings highlight the importance of considering dissociation in a more holistic way, specifically in terms of whether individuals may have positive beliefs about their experiences as well as negative ones. The findings also provide preliminary evidence that positive beliefs are associated with higher frequencies of dissociative experiences and could therefore contribute towards maintaining them. Furthermore, this study has provided the initial stages for the development of a valid and reliable self-report questionnaire measuring PBD, that is currently considered usable for clinical purposes.

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Paper three

Critical reflection

Word count: (4691) (Excluding references)

Paper Overview

A reflective discussion of the researcher's personal and professional experience of conducting this research will be presented within this paper. Firstly, a rationale for the chosen topic will be provided for both papers. Then a critical evaluation will be provided in relation to the development of the PBD-Q, the recruitment phase, and data analysis for the empirical paper. Challenges experienced by the researcher will be discussed, alongside how these were overcome and potential ideas for future research. Following this, will be a personal reflection of the researcher's lived experience on the interpretation of findings, and how this research has influenced the researcher's clinical practice and development as a Clinical Psychologist. A more detailed description of the searching, screening process, data extraction and synthesis within the review will be presented, followed by a critical evaluation of the quality assessment used. The researcher has presented the empirical paper first as this led to the rationale of the review. Finally, there will be a section about how the two papers have informed the researcher's clinical practice in general and future directions are provided.

Empirical Paper

Rationale for chosen topic for empirical paper

The lead researcher has lived experience of posttraumatic stress (PTS) and dissociation stemming from multiple traumatic events occurring throughout adolescence. From this lived experience, the researcher noticed dissociation was a powerful coping strategy which enabled her to disconnect from the overwhelming emotions and intrusive memories that come along with PTS. It was not until ten years after experiencing traumatic events that the researcher developed signs of PTS, and the researcher wonders if dissociation was one factor that contributed to its development. The researcher believes

dissociation was one way she could continue functioning in life following trauma, which may have enabled her to achieve her university degrees and successfully get on to the clinical doctorate training programme. Therefore, the researcher identified that although dissociative experiences can be very distressing and disabling, they could also represent a functional and powerful coping response. Hence, the researcher was very passionate to explore if other people identified positive aspects of their dissociative experiences also. Further, all the research team members have worked in settings which support clients who experience dissociation. The researchers identified that some people described positive or 'functional' aspects of their dissociative experiences as well. The research presented in paper 2 was chosen based on multiple observations from lived experience and aimed to develop a novel measure to explore if people endorse positive beliefs/functions about dissociation.

Development of PBD-Q

Due to word count restrictions, in the empirical paper the researcher could not expand about the importance of the PBD-Q being rooted in lived experience. The development of the PBD-Q has been informed by people with lived experience of dissociation from within the research team (one of the supervisors is also an outspoken trauma survivor with lived experience of dissociation). Secondary analysis of semi structured interviews conducted by a co-author as part of a previous qualitative study with people with lived experience of dissociation, and a series of cognitive interviews (REF) conducted with a range of participants recruited from multiple settings and dissociative charities. Therefore, based on the feedback received through the cognitive interviewing, the PBD-Q appears to have excellent face validity, with a rich understanding of how dissociation can truly enable people to cope with stressful life events. The researcher learnt how valuable cognitive interviewing was, to make sure items made sense to everyone, as

words or phrases can have different meanings for different people. The cognitive interviewing explored individual thinking processes that occurred during questionnaire completion, for instance asking what each item meant to them, or how they came about their answer (Willis, 1994). For instance, the word ‘control’ in the item ‘dissociation enables me to stay in control’ could be interpreted as either in control of relationships, emotions, or out of body experiences. After the first two cognitive interviews, the researcher initially made the error of making items too specific. Following further interviews, it became apparent that it was impossible to capture everyone’s specific interpretation of items. For example, when the item ‘dissociation helps me hide my emotions from others’ was initially changed to ‘dissociation helps me hide my emotions to prevent others judging me’, interviewees were selecting ‘strongly disagree’ as they masked their emotions for a variety of reasons, not just to prevent judgment (i.e. stay safe, appear strong, protect others). Ultimately, when the item was finally changed to ‘dissociation helps me hide my emotions when needed’ interviewees all answered strongly agree.

Using supervision, the researcher learnt to balance all items so they were not too specific, and people could still relate similar meaning. The researcher found it intriguing to hear people talk about the variety of powerful functional experiences dissociation can have, for instance, enabling them to stay alive, and maintain employment. The researcher was also struck by how individuals enjoyed talking about what dissociation enabled them to do. Interviewees described how clinicians predominantly viewed dissociation as a negative process, focusing on how to ameliorate it, which they found invalidating. Interestingly, interviewees mentioned how valuable discussing how dissociation enabled them to cope was, as it normalised the process for them, which helped them to understand why they had dissociative experiences and what might be maintaining them. Therefore, the researcher learnt the importance of discussing both positives and negatives of a variety of

presenting problems in her clinical practice, which may increase understanding for why problems develop and are being maintained.

The cognitive interviews also enabled useful revisions to the Likert scale, for instance, it was changed to a frequency scale rather than agree/disagree. The rationale was that interviewees reflected how their dissociative experiences fluctuated depending on different situations or stress levels, therefore could not answer when the scale was framed around agree/disagree anchors. Interviewees also preferred a response scale of 1-5 instead of 1-10, as they found it very difficult to distinguish between different responses using a 10-point scale. Also, revisions were made to the introduction of the PBD-Q, to simplify language and make it easier to understand (see appendix G for specific changes to the likert scale and introduction of the PBD-Q).

One challenge in the development of the PBD-Q related to how dissociation is such a varied phenomenon with different subtypes and individual differences. In particular, when interviewees were diagnosed with dissociative identity disorder (DID), their different alters had different functions of dissociation, and would change responses according to which alter was present. Therefore, it was hard to capture all the different perspectives of interviewees in one questionnaire. The researcher found she had to take their perspective from the alter they were in at the present time, as she had limited time to repeat cognitive interviews on all alters. This could be an interesting avenue to explore in future research or validation work on this specific clinical group.

Another challenge during the cognitive interviewing was how much awareness interviewees had about their dissociative experiences. One interviewee said her responses would have been completely different when she was first diagnosed, as she had no insight into how dissociation could help her cope. This is suggestive that PBD-Q responses may be influenced by level of insight individuals have in relation to their experiences. In

addition, one interviewee who was recently diagnosed mentioned she found the PBD-Q invalidating, as she felt dissociation had ruined her life. This led to adding validating statements about how dissociation can be distressing into the introductory paragraph on the PBD-Q. This could also be explored further in future research, to see whether level of insight influences responses on the PBD-Q.

The researcher felt it was also important to acknowledge dissociation is a diverse phenomenon, and the cognitive interviewing sample represented more ‘complex’ presentations. For instance, all the interviewees scored above 30 on the DES and three had a diagnosis of DID. Therefore, perhaps the recruitment of individuals with lower DES scores may have been useful, to represent a more varied representative of lived experience for the questionnaire.

Sample selection

The rationale for recruiting participants above 10 on the DES was to make sure participants experienced substantial levels of dissociation. For instance, if a participant scored below 10 on the DES, they may be unlikely to form or have awareness of significant positive or negative beliefs about their experiences. Also, a recent study by the supervisory team showed that only 43% of 219 non-clinical participants scored above 10 on the DES; this highlighted the importance of using a cut off, so the research did not capture 57% of people who do not experience dissociation. In addition, the decision to use a cut off of 10 and above on the DES could be criticised as being too low, and that for this reason a sensitivity analysis was planned to use a more conventional cut off drawn from the literature.

Recruitment

The recruitment for the cognitive interviews posed a challenge as initially mental health charities were either not responding or saying their clients did not experience dissociation. The research team were aware dissociation is a complex process that is not very well understood by the general population, and even clinicians working within mental health. Therefore, the team reflected on how the researcher's explanation of dissociation was too complex and needed simplification to aid understanding and awareness. These changes in communicating dissociation in simpler terms enabled the researcher to quickly recruit seven people with dissociative experiences.

Accordingly, the researcher also simplified the explanation of dissociation within the recruitment posters for the online project, to increase awareness and understanding. For instance, using examples of how people with lived experience describe dissociation (i.e. 'spacey' 'numb' 'zoning out'), resulted in minimum recruitment targets of 125 participants being reached in 3 weeks. The researcher was surprised at the high interest and number of participants completing this project. One explanation might be, as the poster described dissociation in understandable terms, with real life examples, this may have been the first-time participants identified they experienced dissociation. Hence, people may have wanted to undertake the project to find out more about their experiences. Further, this is perhaps suggestive that dissociation is occurring more frequently in non-clinical populations than we are aware of, and education about dissociation needs to be enhanced.

How to conceptualise dissociation and increase awareness

The researcher reflected upon how many people, within both the clinical and non-clinical population, experience dissociation and are completely unaware of what it is, and how it impacts on their life (positively or negatively). This reflection stemmed from the

above observation that one reason for this unawareness is perhaps due to the complicated language that is currently used to explain dissociation. The researcher also reflected that throughout all her clinical placements so far, dissociation has been neglected, or even ignored, by the majority of clinicians. For instance, the researcher observed clinicians frequently discussing presenting problems in relation to, for example, PTSD or psychosis, but dissociative experiences were rarely identified or discussed. Further, the researcher has not noticed dissociative experiences presented throughout assessments, risk assessments, formulations and intervention plans throughout her placements. Furthermore, interestingly throughout her clinical doctorate training, there was only two lectures about dissociation (which were towards the end of her final year) and dissociation was rarely integrated within the trauma or psychosis teaching. Surprisingly, one trainee asked what dissociation looked like within the PTSD teaching, whereby she was told there was insufficient time to discuss it. The researcher is curious as to why this is, considering the University of Manchester doctorate training has a special research interest in understanding psychosis and trauma.

Data Analysis

Within the empirical paper, the researcher could not expand about the removal of one item prior to factor analysis. Item 21 'dissociation enables me to have some time to spend on my own' was added following feedback received about the PBD-Q from experts working with clients who experience dissociation. This item did not go through the cognitive interviews with people with lived experience, therefore face validity was questioned. The research team believed it was an error that item 21 was placed on the questionnaire without face validity checks and lived experience input. Initially, the factor analysis was conducted including item 21, whereby four factors were extracted using principal axis factoring, explaining a cumulative percentage of 49.23% of the total

variance (Factor 1, 36.21%; Factor 2, 5.73%; Factor 3, 4.35%, Factor 4, 2.97%). However, only item 21 loaded onto factor four above .4 and to extract a factor it is considered that a minimum of three items load onto a factor (Osborne & Costello, 2005). Importantly, as item 21 was the only item to not go through the cognitive interviews and it was the only item loading onto factor 4, the final decision was to exclude this item and repeat the factor analysis on the other 20 items. Hence, demonstrated the importance of undertaking cognitive interviews, so each item in the questionnaire has high face validity.

Interpretation of findings

Due to the researchers lived experience of dissociation she was mindful of potential bias when interpreting the findings. Consequently, extraction of factors involved a structured approach grounded on the methodological literature. The rationale for factor loading of an item to be set at 0.4 for it to be considered as belonging to a factor, was that any factor loading <0.4 is considered 'weak' and could increase cross loading (Garson, 2010). All research team members also labelled each factor together. For the 'managing overwhelming affect'- related factor and 'maintaining social image' - related factor, it was clear that these items related to the label chosen to describe these factors/components. However, the self-expression related factor was more difficult to label due to the diversity of the items. Hence, this factor may need future research to clarify its label, as currently it is slightly presumptuous. Perhaps an alternate idea may have been to consult experts by experience for an external perspective of what this factor reflected. The researcher reflected that involvement of service-users is becoming quite common in qualitative research; however, this is not the case for quantitative research studies. Hence, perhaps using service user input for quantitative research is something that could be considered in future research.

Once the factors had been labelled, the researcher reflected on her lived experience of dissociation in relation to the findings. The researcher reflected that her own responses to the PBD-Q would fluctuate depending on different situations. For instance, the researcher identified that before she received psychological therapy for PTS, she would have scored highly on all three factors, however after therapy her answers would reduce to sometimes. Perhaps this was as the researcher had different strategies or processes in place following therapy, that could be used instead of dissociation to achieve similar functions. Although, during stressful periods of life, she noticed her responses would change to strongly agree. Hence, suggesting these responses for the PBD-Q may fluctuate over time and increase during periods of high stress. In support, the researcher found that within the cognitive interviews, interviewees mentioned that when their presenting difficulties were stronger or they were under high stress, this would increase their responses on the PBD-Q. Hence, could guide future research into this topic, whether BPD-Q responses alter in relation to levels of stress.

Another reflection the researcher noticed was that whilst this research is suggesting dissociation has positive functions, the researcher wanted to reiterate that from her lived experience, she could not consciously decide when to dissociate, like an 'on and off switch'. The researcher found her dissociative experience was more like a conditioned response that occurred automatically. The researcher felt this important to mention, as when discussing the outcomes of the research with someone, they assumed you could use dissociation as a proactive coping strategy. For instance, if one was overwhelmed you could use dissociation as you would mindfulness or distress tolerance skills. From the researcher's experience, she did not agree with this perspective and perhaps further research could be done in this area, to explore if other people find dissociation is an unconscious or conscious strategy. Further, perhaps a suggestion might be to refine the

PBD-Q incorporating this information within the introduction i.e. that dissociation can occur automatically for some people. Importantly, this highlights how lived experience involvement across the whole research process is needed, rather than just at the design stage, which is generally the traditional approach taken for ClinpsyD trainees. However, with the time constraints and ambitious deadlines of the ClinpsyD it was difficult to incorporate lived experience throughout the whole process.

How this research has changed the researcher's clinical practice

Following this project, the researcher observed dissociation is perhaps not very well understood, so she is actively trying to increase awareness of dissociation in her clinical practice. The researcher is currently undertaking her final year specialist placement in an early intervention for psychosis service, whereby clients can frequently experience dissociation. The researcher is presenting her research at the psychology meeting and away day, whereby she is aiming to bring dissociation into more clinician's discussions, to increase awareness. Further, since undertaking research on the focus of functional aspects of dissociation, she is constantly seeking to learn how dissociation is experienced for different clients in multiple ways. Hence, perhaps giving the researcher a more nuanced understanding of dissociation. Furthermore, the researcher has found that in psychological therapy she is now asking clients about dissociative experience in the assessment phase, explaining the range of different experiences this may be, increasing education and awareness.

Systematic Review

Rationale for chosen topic for review

Although the researcher observed from her personal experience that dissociation may have a functional aspect, she also identified how disabling dissociation can be, and how it could interfere with therapy effectiveness. The researcher has personally received a range of psychological therapies for PTS, including EMDR and CBT. For many months the therapy was unsuccessful, it was only when the therapist started to identify and target dissociation within the therapy sessions that there was a reduction in PTS symptoms. Therefore, based on personal experience, the researcher started to scope the literature to identify if any therapy trials had investigated whether dissociation could impact on the efficacy of psychological treatment. Trials were identified for PTSD and other mental health conditions, investigating if dissociation impacts treatment outcomes, however mixed results were found. Hence, this led to the importance and rationale to conduct the systematic review presented in paper 1.

Searching and screening process

The selection of databases consulted in this systematic review and the search strategy employed was guided by several considerations. The researcher used PsychINFO as this is an expansive database using behavioural science and mental health, which is very relevant to the topic area. MEDLINE was used as this contained more biomedical articles and CINAHL contained articles within behavioural, paramedical and nursing sciences. Therefore, the researcher felt that these three databases would maximise identification of articles from a range of relevant fields.

The rationale for using a MESH auto explode search was because the key word 'treatment' was too broad and was finding thousands of irrelevant articles. The MESH

search enabled the searches to become more focused to psychological treatment as they match content rather than text, making the search more efficient. The string for randomised controlled trials and dissociation was also based on (MESH) terms modified to all search engines, to ensure all relevant articles were included. The researcher also thoroughly checked what the MESH terms were searching for and confirmed all relevant, psychological treatment were included in the MESH search, for example, EMDR, schema therapy, family therapies, behavioural therapies, cognitive therapies and relational therapies. The researcher also found that the keywords in Medline for 'treatment' had a different definition and therefore returned many irrelevant articles. Therefore, the MESH term enabled the search to focus on psychological treatment, making the search more accurate and focused.

Once the search strings were decided under supervision, further consultation was received from two expert librarians who have specialised knowledge and experience with systematic searches for psychological and medical topics. They checked the searches were comprehensive and would not miss any relevant articles. Also, to identify any additional literature which was not identified through the searches, all reference lists from eligible studies and citing articles were reviewed. All authors from eligible studies were also contacted to see if they knew of any additional relevant papers.

A mental health string was not used as this may have been too restrictive and could have omitted one disorder, therefore missing relevant articles. It was decided to keep search terms broad to maximise the identification of relevant studies.

Data Extraction and Synthesis

As this was the first time the researcher had undertaken a systematic review, she found it challenging to produce a succinct table, especially as there was a diverse range of analysis, interventions, comparators, populations, treatment outcomes, measures for

dissociation, and measures for mental health difficulties to include. The supervisor advised to only include essential details needed to enhance the reader's knowledge, that was not included in the main section of the review. Similarly, due to the variety of variables in the trials described above, the researcher initially struggled to identify any patterns to explain the mixed findings. Through advice from the supervisor, outcomes were broken down into treatment outcomes which made it easier to identify patterns.

Quality Assessment

The researcher chose to use the revised Cochrane Risk-of-Bias tool for randomised trials (ROB-2) to assess quality of all eligible papers. This tool was chosen as it is specifically designed to evaluate randomised controlled trials and is considered one of the highest quality assessments (Higgins et al, 2018). However, after using the ROB-2 the researcher believes it is important to mention that perhaps the ROB-2 is not completely suitable for psychological trials. The researcher identified how most psychological trials automatically scored either 'some concern' or 'high risk' due to the nature of psychological trials. In psychological trials, (1) it is impossible to truly blind the client and clinician from what psychological therapy they are receiving, therefore they have knowledge about the intervention, which the ROB-2 manual suggests could increase protocol deviations or placebo effect (2) they generally have high drop out rates above 10% for uncontrollable reasons, which increases risk of bias that the intervention may not be adhered to (3) they generally contain self-report measures, which further indicates that the assessment of outcome could be influenced by the participants own knowledge of intervention. Hence, perhaps these particular domains need to be re-revised for psychological trials within the ROB-2, as it seems an unfair reflection on these trials to be rated as 'some concern' or 'high risk' for areas that they cannot alter or prevent. Interestingly, there has been some effort made to change the specific standards used to evaluate psychological therapy trials

within quality assessment tools (Grant et al, 2008). However, no adaptations have been made as yet to the quality assessment tools for these trials.

The researcher was surprised by how many trials had not provided either a pre-specified protocol or pre-specified analysis plan. These protocols also did not have enough detail about which analysis or outcome measures would be used. Hence, most trials if not all, received 'some concern' for not providing this information, as it was unclear if based on the results that certain analysis or outcome measures had been selected. Further, the researcher was also surprised about how the majority of trials provided limited or no information regarding certain signalling questions, which automatically raised the quality domain rating to 'some concern' or 'high risk'. Common questions that had little or no information were: (1) some trials just stated randomisation to condition, they did not state how they randomised (2) some trials gave no information about if any deviations were made to the protocol. This led to a higher risk of bias, in relation to the question if the intervention had been adhered to in domain 2. Therefore, highlighting the importance of future RCTs including enough detail and a pre-specific plan.

From using the ROB-2, the researcher found the majority of the signalling questions subjective and ambiguous. As this was the first time the researcher had used the ROB-2, this created confusion and uncertainty. This was resolved by asking an external researcher, who was also conducting a risk of bias assessment using the ROB-2, to check for inter-rater reliability. The Kappa ratings were above 0.7, so provided the researcher with more certainty in her responses.

The researcher has learnt that if she is involved in the development of RCTs in the future, to make sure she has given enough detail about all signalling questions, to prevent the research being rated as 'high risk' which would be perhaps an unfair reflection. Further, the researcher has learnt what makes a trial reliable, and will inform the way she

personally weighs up the balance of evidence when evaluating future studies about interventions she might want to employ in clinical practice. Similarly, the author feels that researchers developing and conducting RCTs in the future should read the ROB-2, or other relevant quality assessments, before developing trials and consider how they can prevent their trials being rated as ‘some concern’ or ‘high risk’ wherever possible. The researcher believes making sure enough detail is provided is a simple task, and this could prevent further money being spent and time wasted replicating RCT’s to rule out risk of bias.

Challenges of conducting doctorate research with dyslexia

The researcher has a diagnosis of dyslexia and therefore has found conducting a systematic review for the first time very challenging, especially combined with the other demanding pressures and time constraints of doctorate training. The researcher has also found writing for publication a challenge as it is the first time, she has done this, and with dyslexia it is difficult to write concisely and adhere to the high academic standards required for publication. The researcher finds communicating her ideas in writing harder, as it is very frustrating to know what you want to say in your mind, but finds it difficult to write it down professionally, so is proud to have accomplished this task within pressured time constraints.

Results of how the research informed the researcher’s clinical practice

The researcher is also aiming to present the research in a psychology meeting and at her placement away day, to help facilitate staff training about dissociation within her clinical placement. The researcher has found she now includes dissociative experiences within individual formulations, to explore its development and maintenance. The researcher has found she is discussing with more clients about how they may find dissociation may be ‘functional’, but then also discussing how this could be a problem and

perhaps interfere with their therapy effectiveness. The researcher has used more emotional regulation strategies in her interventions, to help teach alternative coping strategies to clients who find dissociation problematic. The rationale for this was to perhaps reduce dissociation interfering with therapy effectiveness.

Conclusions and future directions

Both these papers highlight the diversity of dissociation, and that individuals have different experiences, highlighting the importance to invest time discussing these experiences with clients and explore their personal experience. Both papers also highlighted implications for clinical practice when working therapeutically with clients: (1) that people can value discussing positive functions of dissociation, and that this can be a valuable therapeutic experience; (2) that dissociative experiences should be routinely explored in the assessment phase and included within psychological formulations – discussing with clients what factors could be involved in the development and maintenance of these experiences, and (3) the importance of discussing whether dissociation could potentially interfere with engagement, and tailor intervention to reduce dissociation, to increase treatment outcomes, i.e. using emotional regulation skills.

An important point raised throughout this paper was how dissociation is perhaps a neglected presenting problem throughout mental health services and has been observed by the researcher to be missed from assessments, formulation and intervention plans. This raises implications for future training and education to increase understanding of dissociation, (in simple and easily understandable language) promoting insight and awareness of dissociative experiences. This may also lead to dissociation being included in psychological formulations and using interventions which target dissociation, perhaps preventing it interfering with therapy effectiveness.

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Appendix

Appendix A. Authors guidelines for Clinical Psychology Review

Article structure

Manuscripts should be prepared according to the guidelines set forth in the Publication Manual of the American Psychological Association (6th ed., 2009). Of note, section headings should not be numbered.

Manuscripts should ordinarily not exceed 50 pages, *including* references and tabular material. Exceptions may be made with prior approval of the Editor in Chief. Manuscript length can often be managed through the judicious use of appendices. In general the References section should be limited to citations actually discussed in the text. References to articles solely included in meta-analyses should be included in an appendix, which will appear in the on line version of the paper but not in the print copy. Similarly, extensive Tables describing study characteristics, containing material published elsewhere, or presenting formulas and other technical material should also be included in an appendix. Authors can direct readers to the appendices in appropriate places in the text.

It is authors' responsibility to ensure their reviews are comprehensive and as up to date as possible (at least through the prior calendar year) so the data are still current at the time of publication. Authors are referred to the PRISMA Guidelines (<http://www.prisma-statement.org/statement.htm>) for guidance in conducting reviews and preparing manuscripts. Adherence to the Guidelines is not required but is recommended to enhance quality of submissions and impact of published papers on the field.

Appendices If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly, for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information *Title.* Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. **Note: The title page should be the first page of the manuscript document indicating the author's names and affiliations and the corresponding author's complete contact information.**

Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author within the cover letter.

Corresponding author. Clearly indicate who is willing to handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address.**

Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a "Present address" (or "Permanent address") may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of

the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Graphical abstract Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531×1328 pixels (h \times w) or proportionally more. The image should be readable at a size of 5×13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site. Authors can make use of Elsevier's Illustration Services to ensure the best presentation of their images and in accordance with all technical requirements.

Highlights Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view example Highlights on our information site.

Keywords Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proofreading the article, etc.).

Formatting of funding sources List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Footnotes Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Electronic artwork *General points* • Make sure you use uniform lettering and sizing of your original artwork. • Embed the used fonts if the application provides that option. • Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman,

Symbol, or use fonts that look similar. • Number the illustrations according to their sequence in the text. • Use a logical naming convention for your artwork files. • Provide captions to illustrations separately. • Size the illustrations close to the desired dimensions of the published version. • Submit each illustration as a separate file. A detailed guide on electronic artwork is available. **You are urged to visit this site; some excerpts from the detailed information are given here.** *Formats* If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format. Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below): EPS (or PDF): Vector drawings, embed all used fonts. TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi. TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi. TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi. **Please do not:** • Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors; • Supply files that are too low in resolution; • Submit graphics that are disproportionately large for the content.

Color artwork Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.

Figure captions Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

Citations in the text should follow the referencing style used by the American Psychological Association. You are referred to the Publication Manual of the American Psychological Association, Sixth Edition, ISBN 1-4338-0559-6, copies of which may be ordered from <http://books.apa.org/books.cfm?id=4200067> or APA Order Dept., P.O.B. 2710, Hyattsville, MD 20784, USA or APA, 3 Henrietta Street, London, WC3E 8LU, UK. Details concerning this referencing style can also be found at <http://humanities.byu.edu/linguistics/Henrichsen/APA/APA01.html>

Citation in text Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a

substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web references As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

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References in a special issue Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

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Reference style

References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters "a", "b", "c", etc., placed after the year of publication. **References should be formatted with a hanging indent (i.e., the first line of each reference is flush left while the subsequent lines are indented).** *Examples:* Reference to a journal publication: Van der Geer, J., Hanraads, J. A. J., & Lupton R. A. (2000). The art of writing a scientific article. *Journal of Scientific Communications*, 163, 51-59.

Reference to a book: Strunk, W., Jr., & White, E. B. (1979). *The elements of style*. (3rd ed.). New York: Macmillan, (Chapter 4).

Reference to a chapter in an edited book: Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B.S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281-304). New York: E-Publishing Inc.

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T. (2015). *Mortality data for Japanese oak wilt disease and surrounding forest compositions*. Mendeley Data, v1. <http://dx.doi.org/10.17632/xwj98nb39r.1>

Appendix B. Table containing quality assessment results for ROB-2

Paper	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Overall
Arntz et al (2015)	Low	High	High	Some concern	Some concern	High
Burton et al (2018)	Some concern	Some concern	Low	Some concern	Some concern	High
Caldeira et al (2004)	Some concern	Some concern	High	Some concern	Some concern	High
Cloitre et al (2012)	Low	Some concern	Low	Some concern	Some concern	High
Cloitre et al (2016)	Low	Some concern	Low	Some concern	Some concern	High
Crockett et al (2018)	Low	High	High	Some concern	Some concern	High
Emmerik et al (2008)	Some concern	High	High	Some concern	Some concern	High
Halvorsen et al (2014)	Low	Some concern	Low	Some concern	Some concern	High
Hansen et al (2007)	High	High	Low	Some concern	Some concern	High
Minnen et al (2016)	Low	Some concern	Low	Some concern	Some concern	High
Price and Herting (2013)	Some concern	Some concern	Low	Some concern	Some concern	High
Price et al (2008)	Some concern	Some concern	Low	Some concern	Some concern	High
Price et al (2014)	Low	Some concern	Low	Some concern	Some concern	High
Resick et al (2012)	Some concern	Some concern	Low	Some concern	Some concern	High
Schweden et al (2016)	Low	High	Some concern	Some concern	Some concern	High
Wolf et al (2016)	Some concern	Some concern	High	Some concern	Some concern	High
Zlotnick et al (1997)	Some concern	High	High	Some concern	Some concern	High

Appendix C. Author guidelines for European Journal of Trauma and Dissociation

PREPARATION

Peer review.

This journal operates a double blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.

Double-blind review

This journal uses double-blind review, which means the identities of the authors are concealed from the reviewers, and vice versa. More information is available on our website. To facilitate this, please include the following separately: Title page (with author details): This should include the title, authors' names, affiliations, acknowledgements and any Declaration of Interest statement, and a complete address for the corresponding author including an e-mail address. Blinded manuscript (no author details): The main body of the paper (including the references, figures, tables and any acknowledgements) should not include any identifying information, such as the authors' names or affiliations. Use of word processing software It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork. To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Article structure

Subdivision - numbered sections Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line. **Introduction** State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results. **Material and methods** Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

Theory/calculation A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis. Results Results should be clear and concise. Discussion This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature. Conclusions The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section. Appendices If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information

- Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- Author names and affiliations. Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lowercase superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
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- Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Highlights

Highlights are a short collection of bullet points that convey the core findings of the article. Highlights are optional and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view example Highlights on our information site.

Structured abstract

A structured abstract, by means of appropriate headings, should provide the context or background for the research and should state its purpose, basic procedures (selection of study subjects or laboratory animals, observational and analytical methods), main findings (giving specific effect sizes and their statistical significance, if possible), and principal conclusions. It should emphasize new and important aspects of the study or observations.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using British spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes. Abbreviations Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

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Funding

This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa]. It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding. If no funding has been provided for the research, please include the following sentence: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

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Figure captions

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

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Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

Citation in text Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a

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A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. *Journal of Geophysical Research*, <https://doi.org/10.1029/2001JB000884>. Please note the format of such citations should be in the same style as all other references in the paper. Web references As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list. Data references This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

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reports for the UK. (2003). <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> Accessed 13 March 2003. Reference to a dataset: [dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T. (2015). Mortality data for Japanese oak wilt disease and surrounding forest compositions. Mendeley Data, v1. <https://doi.org/10.17632/xwj98nb39r.1>. Reference to a conference paper or poster presentation: Engle, E.K., Cash, T.F., & Jarry, J.L. (2009, November). The Body Image Behaviours Inventory-3: Development and validation of the Body Image Compulsive Actions and Body Image Avoidance Scales. Poster session presentation at the meeting of the Association for Behavioural and Cognitive Therapies, New York, NY. Journal abbreviations source Journal names should be abbreviated according to the List of Title Word Abbreviations.

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Appendix D. All measures used in the empirical paper

Demographics Questionnaire

About You	
Sex:	Male Female Other
Age	
Nationality:	
Ethnicity:	<p>Which of the options [on this list below] best describes your ethnicity?</p> <p>White:</p> <p><input type="checkbox"/> White – British</p> <p><input type="checkbox"/> White – Irish</p> <p><input type="checkbox"/> Any other white background</p> <p>Mixed:</p> <p><input type="checkbox"/> Mixed - White and Black Caribbean</p> <p><input type="checkbox"/> Mixed - White and Black African</p> <p><input type="checkbox"/> Mixed - White and Asian</p> <p><input type="checkbox"/> Any other mixed background</p> <p>Asian or Asian British:</p> <p><input type="checkbox"/> Asian or Asian British – Indian</p> <p><input type="checkbox"/> Asian or Asian British – Pakistani</p> <p><input type="checkbox"/> Asian or Asian British – Bangladeshi</p> <p><input type="checkbox"/> Any other Asian/Asian British background</p> <p>Black or Black British:</p> <p><input type="checkbox"/> Black or Black British – Caribbean</p> <p><input type="checkbox"/> Black or Black British – African</p> <p><input type="checkbox"/> Any other Black/Black British background</p> <p>Chinese or other ethnic group:</p> <p><input type="checkbox"/> Chinese</p> <p><input type="checkbox"/> Any other (please describe)</p> <p style="text-align: right;">(APMS, 2007)</p>
Sexual orientation	<p>Which of the options [on this card/below] best describes how you think of yourself?</p> <p><input type="checkbox"/> Heterosexual or Straight,</p> <p><input type="checkbox"/> Gay or Lesbian,</p> <p><input type="checkbox"/> Bisexual,</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> Prefer not to say</p> <p style="text-align: right;">(Office for National Statistics, 2009)</p>

First Language:	<input type="checkbox"/> English <input type="checkbox"/> Other
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What is your legal marital or same-sex civil partnership status?	<input type="checkbox"/> Never married and never registered a same sex civil partnership <input type="checkbox"/> Married <input type="checkbox"/> Separated, but still legally married <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed <input type="checkbox"/> In a registered same-sex civil partnership <input type="checkbox"/> Separated, but still legally in a same-sex civil partnership <input type="checkbox"/> Formerly in a same-sex civil partnership which is now legally dissolved <input type="checkbox"/> Surviving partner from a same-sex civil partnership <p style="text-align: right;">(Office for National Statistics, 2011)</p>
--	--

What qualifications do you have?	<input type="checkbox"/> Degree level qualification <input type="checkbox"/> Teaching qualification or HNC/HND, BEC/TEC Higher, BTEC Higher or NVQ level 4 <input type="checkbox"/> 'A' Levels/SCE Higher or ONC/OND/BEC/TEC not higher or City & Guilds Advanced Final Level NVQ level 3 <input type="checkbox"/> 'O' Level passes (Grade A-C if after 1975) or City & Guilds Craft/Ord level or GCSE (Grades A-C) or NVQ level 2 <input type="checkbox"/> CSE Grades 2-5 GCE 'O' Level (Grades D & E if after 1975) GCSE (Grades D, E, F, G) or NVQ level 1 <input type="checkbox"/> CSE ungraded <input type="checkbox"/> Other qualifications (specify) <input type="checkbox"/> No qualifications <p style="text-align: right;">(APMS, 2007)</p>
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How many years did you spend in education all together?	
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<p>Which of these activities best describes what you are doing at present? (please select one only)</p>	<p>Employee Self employed Unemployed Full-time education at school, college or university Looking after family/home Unable to work due to a disability Retired Other Inactive</p> <p style="text-align: right;">(Office for National Statistics, 2015)</p>
<p>Have you ever seen someone for emotional or psychological difficulties?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>When was the first time you saw someone for emotional or psychological difficulties?</p> <p>What was it for?</p>	

Modified Dissociative Experiences Scale-II

This questionnaire consists of 28 questions about experiences you may have had in your daily life. We are interested in how often you have had these experiences, how distressing you find them and how much control you feel you have over each experience. It is important, however, that your answers reflect the times these experiences occur when you are **not** under the influence of alcohol or drugs.

Each question has three parts to it, and to answer each question, please determine to what degree the experience described in the question applies to you and click the appropriate number to show:

- Part A - how often you have this experience, from 0-100 (0% = never, 100% = all the time)
- Part B - how distressing you find this experience, from 0-100 (0% = not distressing at all, 100% = extremely distressing)
- Part C - how much control do you feel you have over this experience, from 0-100 (0% = not in control at all, 100% = complete control)

Some people may find that they select different numbers for different parts to each question. There are no right or wrong answers, so try to go with your immediate response.

If you feel that any question, or certain parts of a question do not apply to you personally, or for any reason you do not want to answer a particular part of a question, **please ensure you select zero for that part instead of not answering at all.** Due to the way the system collects results, If you leave any question unanswered this will prevent the use of your responses and could mean that you unable to proceed to next stage of the study.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

QUESTION ONE: Some people have the experience of driving a car and suddenly realizing that they don't remember what has happened during all or part of the trip. 1A: How often do you experience this?

1B: How distressing do you find this experience?

1C: How much control do you feel you have over this experience?

QUESTION TWO: Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was just said. 2A: How often do you experience this?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2B: How distressing do you find this experience?

2C: How much control do you feel you have over this experience?

QUESTION THREE: Some people have the experience of finding themselves in a place and having no idea how they got there. 3A: How often do you experience this?

3B: How distressing do you find this experience?

3C: How much control do you feel you have over this experience?

QUESTION FOUR: Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. 4A: How often do you experience this?

4B: How distressing do you find this experience?

4C: How much control do you feel you have over this experience?

QUESTION FIVE: Some people have the experience of finding new things among their belongings that they do not remember buying. 5A: How often do you experience this?

5B: How distressing do you find this experience?

5C: How much control do you feel you have over this experience?

QUESTION SIX: Some people sometimes find that they are approached by people that they do not know who call them by another name

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

or insist that they have met them before. 6A: How often do you experience this?

6B: How distressing do you find this experience?

6C: How much control do you feel you have over this experience?

QUESTION SEVEN: Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something, and they actually see themselves as though they were looking at another person. 7A: How often do you experience this?

7B: How distressing do you find this experience?

7C: How much control do you feel you have over this experience?

QUESTION EIGHT: Some people are told that they sometimes do not recognise friends or family members. 8A: How often do you experience this?

8B: How distressing do you find this experience?

8C: How much control do you feel you have over this experience?

QUESTION NINE: Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). 9A: How often do you experience this?

9B: How distressing do you find this experience?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

9C: How much control do you feel you have over this experience?

QUESTION TEN: Some people have the experience of being accused of lying when they do not think that they have lied. 10A: How often do you experience this?

10B: How distressing do you find this experience?

10C: How much control do you feel you have over this experience?

QUESTION ELEVEN: Some people have the experience of looking in a mirror and not recognising themselves. 11A: How often do you experience this?

11B: How distressing do you find this experience?

11C: How much control do you feel you have over this experience?

QUESTION TWELVE: Some people sometimes have the experience of feeling that other people, objects, and the world around them are not real. 12A: How often do you experience this?

12B: How distressing do you find this experience?

12C: How much control do you feel you have over this experience?

QUESTION THIRTEEN: Some people sometimes have the experience of feeling that their body does not seem to belong to them. 13A: How often do you experience this?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

13B: How distressing do you find this experience?

13C: How much control do you feel you have over this experience?

QUESTION FOURTEEN: Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. 14A: How often do you experience this?

14B: How distressing do you find this experience?

14C: How much control do you feel you have over this experience?

QUESTION FIFTEEN: Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. 15A: How often do you experience this?

15B: How distressing do you find this experience?

15C: How much control do you feel you have over this experience?

QUESTION SIXTEEN: Some people have the experience of being in a familiar place but finding it strange and unfamiliar. 16A: How often do you experience this?

16B: How distressing do you find this experience?

16C: How much control do you feel you have over this experience?

QUESTION SEVENTEEN: Some people find that when they are

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. 17A: How often do you experience this?

17B: How distressing do you find this experience?

17C: How much control do you feel you have over this experience?

QUESTION EIGHTEEN: Some people sometimes find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. 18A: How often do you experience this?

18B: How distressing do you find this experience?

18C: How much control do you feel you have over this experience?

QUESTION NINETEEN: Some people find that they sometimes are able to ignore pain. 19A: How often do you experience this?

19B: How distressing do you find this experience?

19C: How much control do you feel you have over this experience?

QUESTION TWENTY: Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. 20A: How often do you experience this?

20B: How distressing do you find this experience?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

20C: How much control do you feel you have over this experience?

QUESTION TWENTY-ONE: Some people sometimes find that when they are alone they talk out loud to themselves. 21A: How often do you experience this?

21B: How distressing do you find this experience?

21C: How much control do you feel you have over this experience?

QUESTION TWENTY-TWO: Some people find that in one situation they may act so differently compared to another situation that they feel almost as if they were two different people. 22A: How often do you experience this?

22B: How distressing do you find this experience?

22C: How much control do you feel you have over this experience?

QUESTION TWENTY-THREE: Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social interactions, etc.). 23A: How often do you experience this?

23B: How distressing do you find this experience?

23C: How much control do you feel you have over this experience?

QUESTION TWENTY FOUR: Some people sometimes find that they cannot remember whether they have done

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). Q24A: How often do you experience this?

24B: How distressing do you find this experience?

24C: How much control do you feel you have over this experience?

QUESTION TWENTY-FIVE: Some people sometimes find evidence that they have done things that they do not remember doing. Q25A: How often do you experience this?

25B: How distressing do you find this experience?

25C: How much control do you feel you have over this experience?

QUESTION TWENTY-SIX: Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. 26A: How often do you experience this?

26B: How distressing do you find this experience?

26C: How much control do you feel you have over this experience?

QUESTION TWENTY-SEVEN: Some people sometimes find that they hear voices inside their head which tell them to do things or comment on things that they are doing. 27A: How often do you experience this?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

27B: How distressing do you find this experience?

27C: How much control do you feel you have over this experience?

QUESTION TWENTY-EIGHT: Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. 28A: How often do you experience this?

28B: How distressing do you find this experience?

28C: How much control do you feel you have over this experience?

Positive Beliefs about Dissociation Questionnaire (PBD-Q) before factor analysis

Dissociation is when people feel like they have disconnected from either their emotions, memories, other people, personal identity or the world around them. People have described these experiences as feeling: ‘spacey’ ‘numb’ ‘zoning out’ ‘daydreaming’ ‘mind wandering’ or ‘feeling like they have a different identify at different times’. Other people describe dissociation as an ‘out of body experience’, where they can see themselves from a distance. In addition, some people may forget who they are or what they have been doing over a period of time.

We recognise that some people find these experience difficult and they may not be helpful at all, other people describe these experiences as somewhat helpful. Below are a series of statements that some people have referred to in the past as positive effects from their dissociation related experiences. Please read the statements below and tick the most relevant category which describes if you may have any positive effects from dissociation. Some people may find dissociation fluctuates over time and might only be helpful for a certain period in their life or might be more helpful during times of high distress. If this is the case, please provide your immediate response and try not to overthink your answer, as there are no right or wrong answers.

Dissociation enables me to	Never	Occasionally	Half of the time	Frequently	Always
1 <i>cope with extreme emotions</i>					
2 <i>focus on what I need to get done</i>					
3 <i>hide my emotions when needed</i>					
4 <i>make day to day life stress feel more manageable</i>					
5 <i>get through the day when I am overwhelmed</i>					
6 <i>hide my vulnerabilities so I stay safe</i>					
7 <i>distance myself from distressing memories</i>					
8 <i>be the person I feel I need to be in different situations</i>					
9 <i>appear stronger so others are less likely to hurt me</i>					
10 <i>manage physical pain</i>					
11 <i>gain some distance from problems in order to find new solutions</i>					
12 <i>communicate to others what I am really thinking</i>					
13 <i>feel more able to do things I would struggle to do otherwise</i>					
14 <i>feel heard and understood</i>					
15 <i>cope with any negative thoughts</i>					
16 <i>appear more positive than I actually am</i>					
17 <i>show on the outside I am coping when I am not on the inside</i>					
18 <i>prevent my emotions becoming overwhelming</i>					
19 <i>address my physical needs (self-care)</i>					
20 <i>feel safer in difficult situations</i>					
21 <i>have some time to spend on my own</i>					
22 <i>Any other ways dissociation could help you (please write below)</i>					

Negative Beliefs about dissociation Questionnaire (BAD)

Instructions: A number of statements are given below which people have used to describe their beliefs and interpretations of dissociative experiences when they occur. Please read each statement and place a circle around the appropriate number to indicate how strongly you agree with the statement.

Please respond to all of the items. There are no right and wrong answers. Do not spend too much time on each statement. The first response is often the most accurate.

<i>When I dissociate I think.....</i>	Do not Agree	Agree Slightly	Agree Moderately	Strongly Agree
<i>1. I am going crazy</i>				
<i>2. I am having a stroke</i>				
<i>3. I may have a brain tumour</i>				
<i>4. This is not normal</i>				
<i>5. I am losing control</i>				
<i>6. I am losing my mind</i>				
<i>7. I am entering a state of consciousness that I will never get out of</i>				
<i>8. I am developing schizophrenia</i>				
<i>9. I must try to stop this happening</i>				
<i>10. I will lose out in life if this continues</i>				
<i>11. I am being punished</i>				
<i>12. Other people will notice and think I am odd or peculiar</i>				

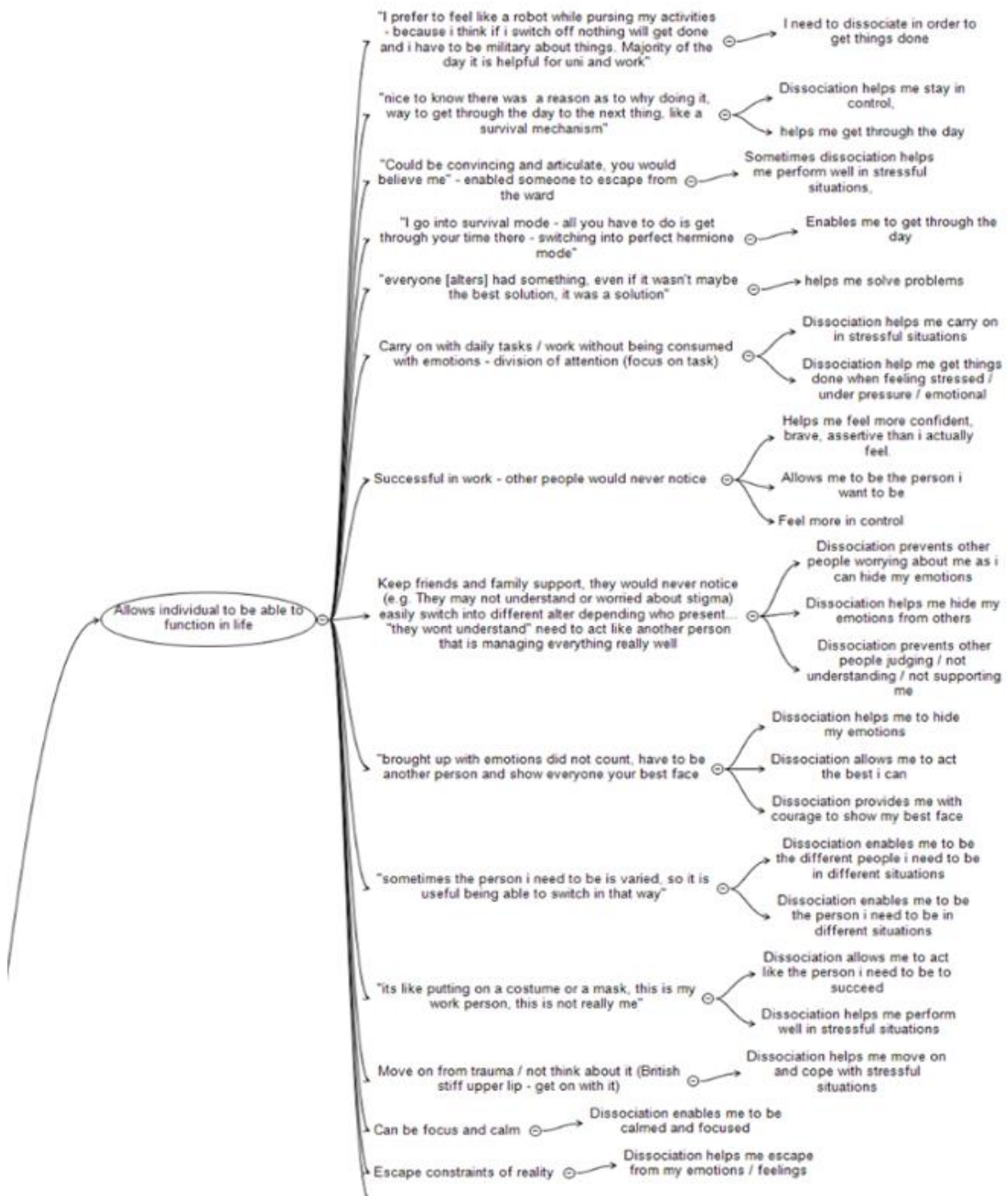
Brief Betrayal Questionnaire

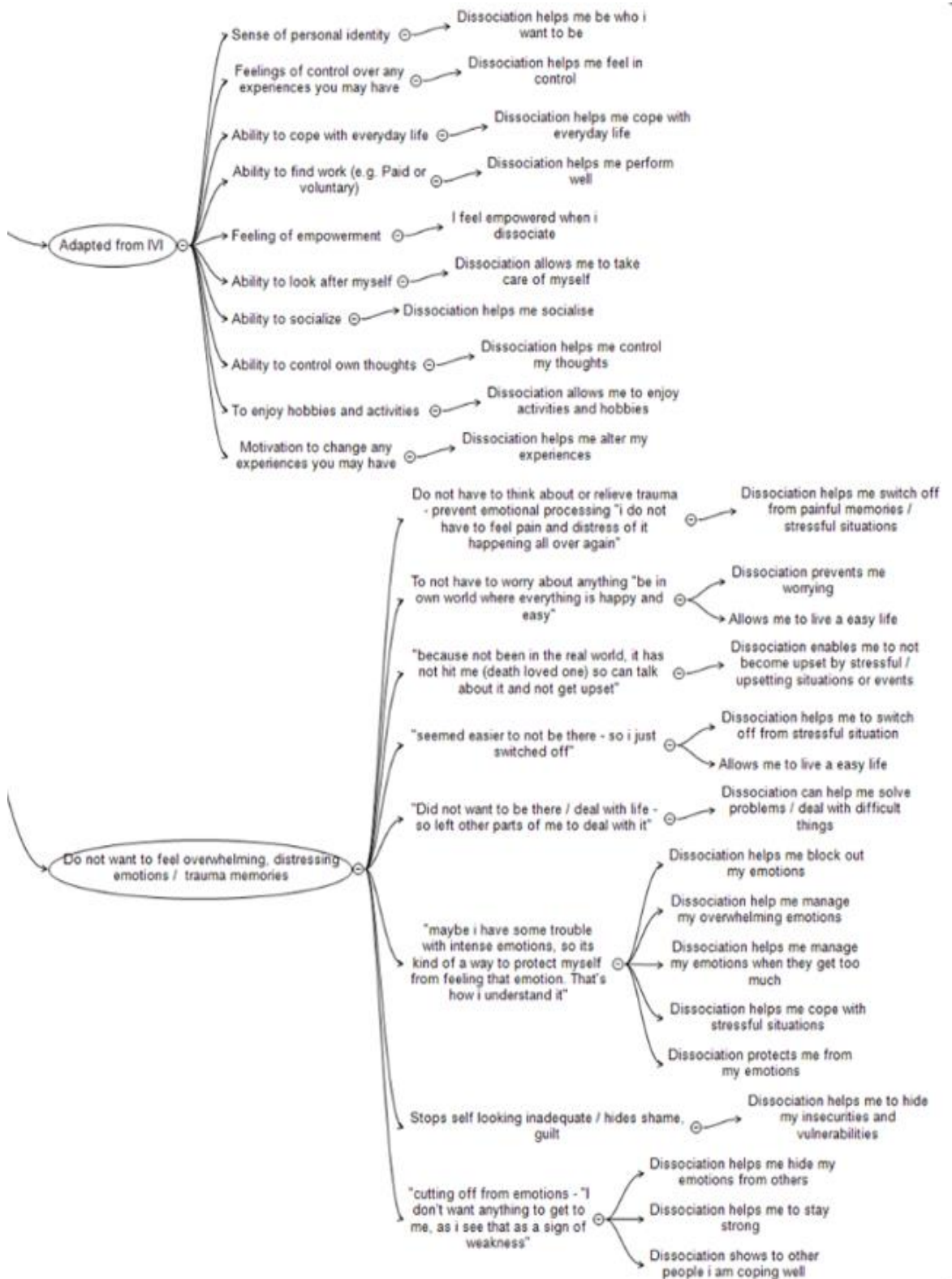
Personal Experiences

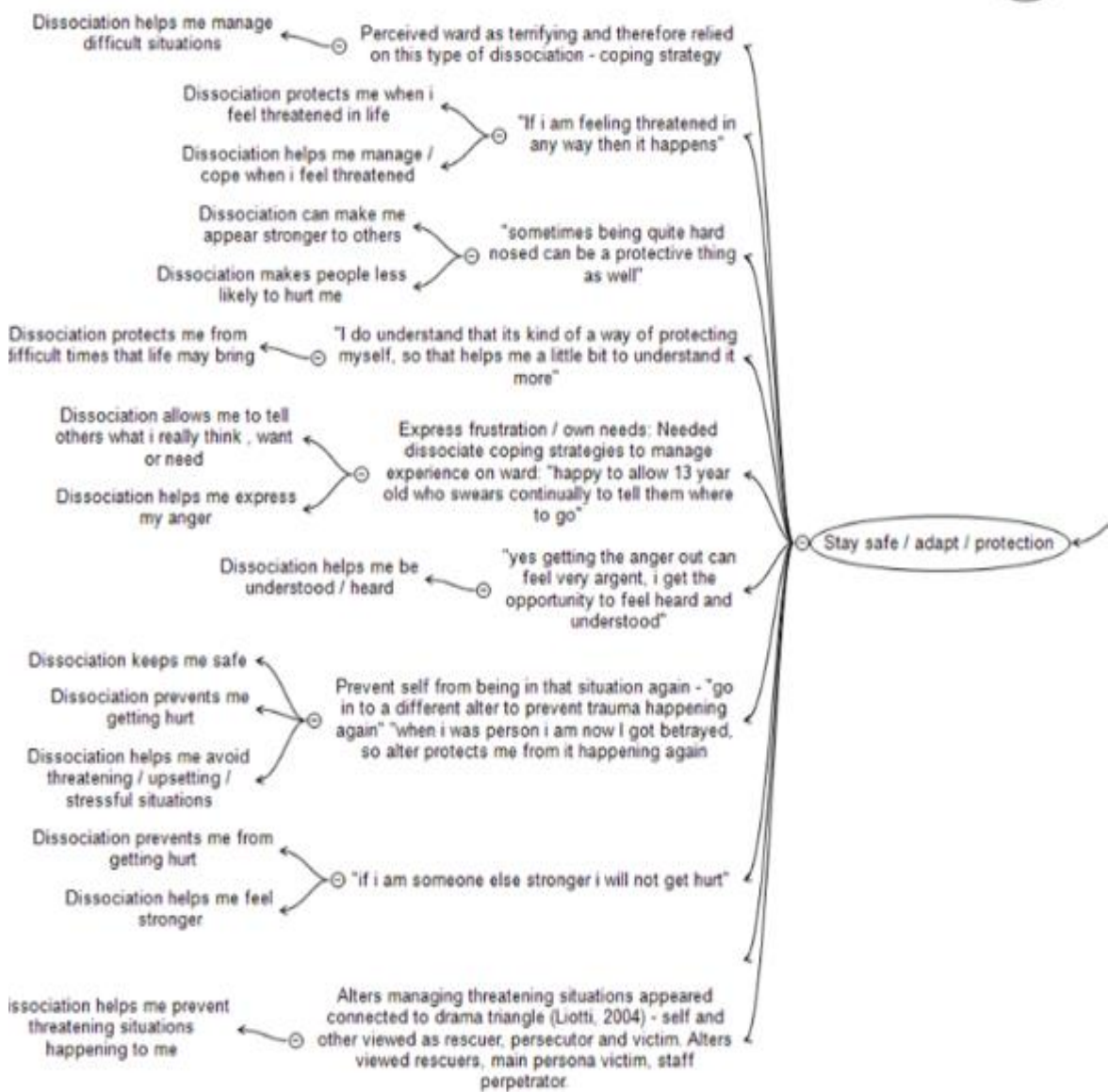
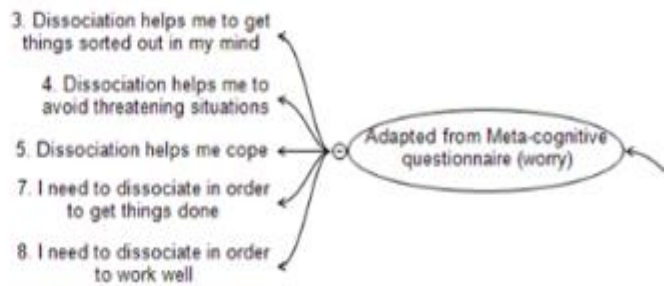
We hope that you trust us to keep your responses in complete confidence and privacy; this is the reason that we ask you not to include your name on any of our questionnaires. Nonetheless, if you feel uncomfortable answering any of the more intimate questions in this section, just skip them, and go on to the next section. **For each item below, please mark one response in the columns labeled "Before Age 18" AND one response in the columns labeled "Age 18 or Older."**

	BEFORE AGE 18			AGE 18 or OLDER		
	NEVER	ONE or TWO TIMES	MORE THAN THAT	NEVER	ONE or TWO TIMES	MORE THAN THAT
Have each of the following events happened to you, and if so, how often?						
Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Witnessed someone with whom <u>you were very close</u> (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Witnessed someone with whom you were <u>not</u> so close undergoing a similar kind of traumatic event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Witnessed someone with whom <u>you were very close</u> deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You were deliberately attacked that severely by someone with whom <u>you were very close</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You were deliberately attacked that severely by someone with whom you were <u>not</u> close	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom <u>you were very close</u> (such as a parent or lover)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You were made to have such sexual contact by someone with whom you were <u>not</u> close	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You were emotionally or psychologically mistreated over a significant period of time by someone with whom <u>you were very close</u> (such as a parent or lover)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experienced the death of one of your own children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experienced a seriously traumatic event not already covered in any of these questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix E. Initial pool of items devised for PBD-Q







Appendix F. Cognitive interviewing schedule

- *Thank you for agreeing to help us with the development of our new questionnaire. We are particularly interested in how you arrive at your answers and any problems you encounter with answering questions, rather than your particular answers. Do not worry about hurting my feelings if you criticise the questions, my job is to find out what is wrong with them so that we can improve them.*
- *fill in DES to ascertain dissociative experiences*
- *Please could you complete the following questionnaire. As you go through the questionnaire could you let me know if any items are particularly difficult to complete, confusing, or if you have suggestions about how they could be improved.*
- *Thank you for completing the questionnaire.*

A few general questions:

- How easy was it to put your answers on the 10-point scale?
 - Would you prefer if it said 0 (not at all), 5 (sometimes), 10 (very much)
 - Would you prefer options instead of a scale e.g. ticking boxes not at all/a little bit/some of the time/quite a bit/very much
 - would you prefer a scale from 0-7?
 - Too many choices or not enough?
- Do you think the scale captures your positive experience of dissociation? If not, what you think is missing?
- are there any aspects missing from the questionnaire in the likert scale? / does it need a neutral?
- Are there any elements of the questionnaire that you change?

I would now like to go through the questionnaire again with you and ask you a few specific questions.

- Introduction section - what do you think the wording? With any bits that were unclear or that you would change?

1. **Comprehension/ Interpretation probe:** What does the term "....." mean to you? - what do you think this is asking?
2. **Paraphrasing2 :** Can you repeat the question I just asked in your own words? - Can you repeat the question in your own words? / Is there any other way this question could be phrased which would be clearer? - *Any other word that we could use instead of*?
3. **Confidence judgment:** How sure are you that your health insurance covers drug and alcohol treatment?
4. **Recall probe:** How do you remember that you went to the doctor five times in the past 12 months?
5. **Specific probe:** Why do you think that cancer is the most serious health problem?
6. **General probes:** How did you arrive at that answer? Was that easy or hard to answer? I noticed that you hesitated - tell me what you were thinking.....-*How sure are you of this answer? - How hard was this to answer? - How did you decide on that particular answer?*

Appendix G. Development and revisions to PBD-Q

Revisions to items

Item revised by research team	After first two interviewees	After five interviews	Revision by research team	Final Interviewees	Final revision research Team
1 I need to dissociate in order to get things done	feel calm and focus on what needs to get done under stress	learn how to feel calm when stressed, so I can focus on what needs to get done	focus on what needs to get done	NA	Focus on what I need to get done
2 Dissociation helps me stay in control	Feel in control of my emotions to stop then feeling overwhelming	Regulate my emotions so they do not become overwhelming	manage my emotions so they do not become overwhelming	NA	Prevent my emotions becoming overwhelming'
3 Dissociation helps me get through the day	No change	Get through the day and carry on without being consumed by emotions	Get through the day and carry on when overwhelmed	Get through the day when I am overwhelmed	No change
4 Dissociation helps me perform well in stressful situations	Feel confident to be the person I need to be to perform well in stressful situations	No change	Feel confident to be the person I need to be ? or Feel confident to be the person I need to be to perform well?	be the person I feel I need to be	be the person I feel I need to be in different situations
5 Dissociation helps me solve problems	Take a step back and find solutions to any problems, to deal with life	take a step back and find solutions to problems	Gain some distance from problems in order to find new solutions	NA	gain some distance from problems in order to find new solutions
6 Dissociation helps me carry on in stressful situations	Deleted item - similar to three so combined with item 3	Deleted item - similar to three so combined with item 3	Deleted item - similar to three so combined with item 3	Deleted item - similar to three so combined with item 3	Deleted item - similar to three so combined with item 3
7 Dissociation helps me feel more confident than I actually am	Feel more confident than I actually am when doing things	No change	Feel more confident to do things I could not before	Feel more able to do things I maybe could not do otherwise	No change
8 Dissociation helps me hide my emotions from others	Hide my emotions to prevent other judging me	No change	Hide my emotions	Hide my emotions when needed	No change
9 Dissociation prevents other people judging me	Deleted item - similar to item eight so combine with item 8	Deleted item - similar to item eight so combine with item 8	Deleted item - similar to item eight so combine with item 8	Deleted item - similar to item eight so combine with item 8	Deleted item - similar to item eight so combine with item 8
10 Dissociation enables me to be calm and focused	Deleted item - similar to item one so combined with item 1	Deleted item - similar to item one so combined with item 1	Deleted item - similar to item one so combined with item 1	Deleted item - similar to item one so combined with item 1	Deleted item - similar to item one so combined with item 1
11 Dissociation allows me to be the person I	Deleted Item - similar to item four so	Deleted Item - similar to item four so	Deleted Item - similar to item four so	Deleted Item - similar to item four so	Deleted Item - similar to item four so

	need to be to succeed	combined with item 4	combined with item 4	combined with item 4	combined with item 4	combined with item 4
1 2	Dissociation provides me with courage to show my best face	Feel empowered to show my happy face	No change	No change	show my happy face	appear more positive than I actually am
1 3	Dissociation helps me switch off from stressful situations	Switch off from current day to day life stress	Makes day to day life more manageable	No change	No change	No change
1 4	Dissociation helps me switch off from distressing memories or past experiences	Distance myself from previous distressing memories or experiences	No change	Distance myself from distressing memories	No change	No change
1 5	Dissociation helps me manage or reduce physical pain	No change	No change	manage physical pain	No change	No change
1 6	Dissociation helps me to stay strong	Deleted item - similar to item 22 so combined with item 22	Deleted item - similar to item 22 so combined with item 22	Deleted item - similar to item 22 so combined with item 22	Deleted item - similar to item 22 so combined with item 22	Deleted item - similar to item 22 so combined with item 22
1 7	Dissociation helps me manage my emotions when they get too much	No change	manage my emotions when they get too much	No change	manage overwhelming emotions	cope with extreme emotions
1 8	Dissociation helps me hide my insecurities / vulnerabilities	Hide my vulnerabilities so I do not show weakness to others	No change	Hide my vulnerabilities so I stay safe	No change	No change
1 9	Dissociation protects me when I feel threatened	Delete - too similar to item 20 and 23	Delete - too similar to item 20 and 23	Delete - too similar to item 20 and 23	Delete - too similar to item 20 and 23	Delete - too similar to item 20 and 23
2 0	Dissociation keeps me safe	Feel more safe and protected in difficult situations	No change	Feel more safe in difficult situations	Feel safer in difficult situations	No change
2 1	Dissociation allows me to tell others what I really think	Be honest and tell others what I am thinking or need when I felt I could not before	be honest so I can tell others what I am thinking	Communicate to others what I am really thinking	No change	No change
2 2	Dissociation helps me appear stronger to others	Appear stronger to others so they are less likely to hurt me or take advantage	No change	Appear stronger to others so they are less likely to hurt me	No change	appear stronger so others are less likely to hurt me
2 3	Dissociation makes people less likely to hurt me	Delete - similar to item 25	Delete - similar to item 25	Delete - similar to item 25	Delete - similar to item 25	Delete - similar to item 25

2 4	Dissociation helps me express anger	Delete - similar to item 25	Delete - similar to item 25	Delete - similar to item 25	Delete - similar to item 25	Delete - similar to item 25
2 5	Dissociation helps me feel heard and understood	Express my emotions so I feel heard and understood	Express my emotions so I feel heard and understood	feel heard and understood	No change	No change
2 6	Dissociation helps me distance myself from bad things that have happened to me	Delete - similar to item 14	Delete - similar to item 14	Delete - similar to item 14	Delete - similar to item 14	Delete - similar to item 14
N e w I t e m	outwardly show I am coping to others when I am not inside	New Item developed here	Show I am coping when I am not inside	Outwardly show I am coping even when I am not inside	Outwardly show I am coping when I am not inside	No change
N e w I t e m	take care of myself physically	New Item developed here	No change	Take care of myself physically	Look after my physical help needs (self-care)	No change
N e w I t e m	feel in control of my thoughts/worries	New Item developed here	manage my thoughts/worries	NA	NA	cope any negative thoughts

Revisions to the introductory paragraph

1st Introduction

Below are a series of statements relating to what you may think is positive about your dissociative experiences. Dissociative experiences are experiences that cover a range of sensations of feeling disconnected from oneself, others or the world. These can include the feeling of being outside, or separated from, you own body, personality, or functions, or forgetting who you are or what you have been doing over a period of time. In particular, these will be related to the dissociative experiences you just filled out in the previous questionnaire the ‘Dissociative experiences scale’.

Introduction after cognitive interviewing

Dissociation is when people feel like they have disconnected from either their emotions, memories, other people, personal identity or the world around them. People have described these experiences as feeling: ‘spacey’ ‘numb’ ‘zoning out’ ‘daydreaming’ ‘mind wandering’ or ‘feeling like they have a different identify at different times’. Other people describe dissociation as an ‘out of body experience’, where they can see themselves from a distance. In addition, some people may forget who they are or what they have been doing over a period of time.

We recognise that some people find these experience difficult and they may not be helpful at all, other people describe these experiences as somewhat helpful. Below are a series of statements that some people have referred to in the past as positive effects from their dissociation related experiences. Please read the statements below and tick the most relevant category which describes if you may have any positive effects from dissociation. Some people may find dissociation fluctuates over time and might only be helpful for a

certain period in their life or might be more helpful during times of high distress. If this is the case, please provide your immediate response and try not to overthink your answer, as there are no right or wrong answers.

Revisions to the likert scale

1st likert scale

Do not agree	Agree slightly	Agree moderately	Strongly Agree
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2nd likert scale

Never	very rarely	rarely	occasionally	half of the time	to a considerable degree	frequently	very frequently	almost always	Always
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Never	Occasionally	Half of the time	Frequently	Always
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Final likert scale after cognitive interviewing

Appendix H. Face validity questionnaire



The University of Manchester

FEEDBACK QUESTIONNAIRE

Study Title: Development and validation of a new measure for Positive experiences of Dissociation

Chief Investigator: Lena Marsden

Supervisors: Dr Filippo Varese, Dr Eleanor Longden and Prof Tony Morrison

Thank you for taking the time to complete the feedback questionnaire about the Positive Experiences of Dissociation Questionnaire.

To validate the questionnaire we are asking experts/professionals who work with clients who experience dissociation to fill in a quick questionnaire about the new measure, to ensure we have captured what is important to people who dissociate.

1. When thinking about how you found the Positive experiences of dissociation questionnaire, please let us know which of the which of following statements you agree with by placing a tick in the most relevant box

	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
The questionnaire was easy to complete					
The questions were easy to understand					
The questions were relevant to dissociative experience					
The time taken to complete the measure was about right (10 – 15 minutes)					
The questionnaire asked questions which may be capture peoples positive experience of dissociation					
The questionnaire asked questions which people may find distressing/upsetting					
I found the wording of the questions on the measure appropriate					
I think that the measure may be a good way for the people or others around them to understand their experiences better					
I found it easy to understand how to record my answers					

2. Please write your answers in the spaces below

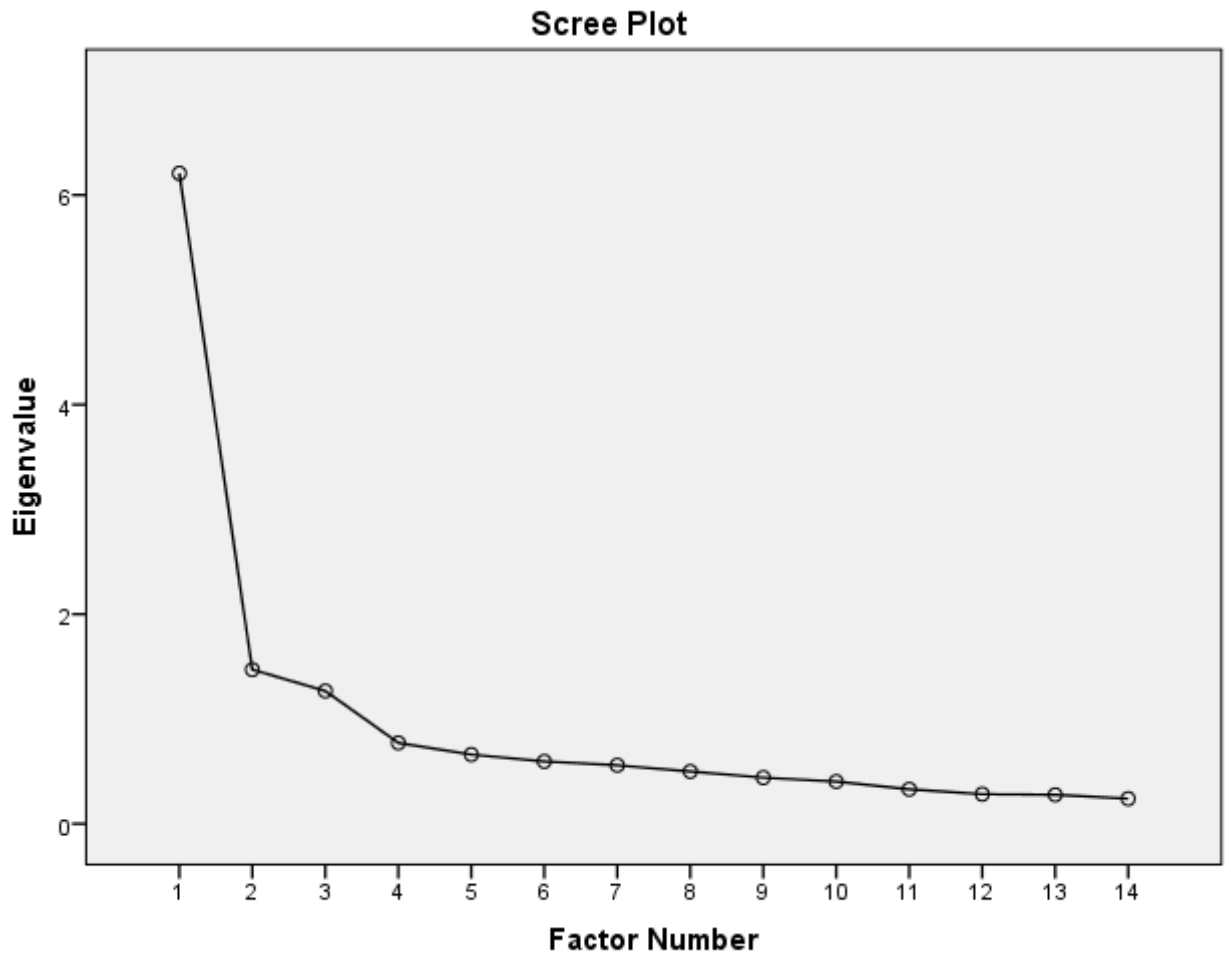
A. What (if anything) did you like about the questionnaire?

B) What (if anything) did you dislike about the questionnaire?

C) Was there anything that was missing from the questionnaire which you feel should be included? To fully capture peoples positive experiences of dissociation?

D) Are there any questions that you feel should be removed from the RE-QUEST questionnaire? Or are unclear / do not make sense?

Appendix I: Scree Plot supporting three factor structure



Appendix J. Results of all EFA individual item loadings

Items	Factor one	Factor Two	Factor Three
5. Get through the day when I am overwhelmed	.856	-.095	.010
18. Prevent my emotions becoming overwhelming	.792	-.054	.017
4. Make day to day life stress feel more manageable	.725	.112	-.017
1. Cope with extreme emotions	.687	-.082	.026
20. Feel safer in difficult situations	.590	.188	-.008
15. cope with any negative thoughts	.546	.107	.023
14. feel heard and understood	.016	.718	0.33
12. communicate to others what I am really thinking	-0.21	.651	-0.17
13. feel more able to do things I would struggle to do otherwise	.228	.544	.161
16. appear more positive than I actually am	-.050	-.029	.867
17. show on the outside I am coping when I am not on the inside	.045	-.119	.777
9. appear stronger so others are less likely to hurt me	-.024	.087	.696
8. be the person I feel I need to be in different situations	.041	.184	.601
6. hide my vulnerabilities so I stay safe	.361	-.002	.451

Appendix K. Participant Information Sheet

Helping make sense of positive aspects of dissociation

Participant Information Sheet

You are being invited to take part in a research study as part of a Clinical Psychology research project. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Feel free to email the researchers if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Who will conduct the research?

Investigators:

Lena Marsden (lena.marsden@postgrad.manchester.ac.uk)

Project Supervisors:

Dr. Filippo Varese (filippo.varese@manchester.ac.uk)

Prof. Tony Morrison (anthony.p.morrison@manchester.ac.uk)

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Brunswick Street
Manchester, M13 9PL

What is the purpose of the research?

The current study aims to see how useful a new questionnaire is, to measure how people make sense of positive experiences of dissociation.

What are dissociative experiences?

Dissociation is when people feel like they have disconnected from either their emotions, memories, other people, personal identity or the world around them. People have described these experiences as feeling: 'spacey', 'numb', 'zoning out', 'daydreaming', 'mind wandering' or 'feeling like they have a different identity at different times'. Other people describe dissociation as an 'out of body experience', where they can see themselves from a distance. In addition, some people may forget who they are or what they have been doing over a period of time.

Examples of phrases people have said to describe dissociation:

- Some people describe dissociation as feeling disconnected from their thoughts, emotions or previous memories
- Some people have the experience of dissociation feeling like they have zoned out, for example, realizing they did not hear part of a conversation
- Some people have the experience whereby they are standing next to themselves or watching themselves and they can actually see themselves looking at another person

Everyone experiences dissociation at some point in their lives. People find that dissociative experiences can commonly occur when people are under stress or pressure in their lives and this does not mean they are "not normal" or "going mad". These experiences are the body's natural response to stress or pressure. Some people can have these experiences more frequently than others, and can experience discomfort and distress as a result of this. However, dissociation is often not a problem for most people. Also, many people hold positive and negative views about these experiences and this is okay and normal.

Can I take part in this study?

To take part in the study you need to:

- Experience at least mild levels of dissociative experiences: If you are happy to proceed with the study, a questionnaire will determine if you have at least mild levels of dissociative experiences
- Be aged 18 or above
- Speak fluent English

If you are any of the following you will not be able to take part in the study:

- If you are under the age of 18
- If you do not speak English as the questionnaire is currently only available in English
- If you have a known learning disability or organic disorder, for example dementia. This is because the questionnaire is a new questionnaire and has not been adapted for people with memory or a learning disability.

What will I be asked to do if I take part?

- 1.) If you agree to take part in the study, you will be asked to sign a consent form.
- 2.) Then you will fill in a questionnaire about the frequency, distress and controllability of any dissociative experiences you may have. This questionnaire will determine for you if you experience dissociation to a mild or higher level to meet the inclusion criteria to take part in the study. If you do not meet the inclusion criteria you will be sent to step 5 below (the prize draw).
- 3.) If you meet the inclusion criteria you will then fill in four questionnaires:
 - a. The demographic questionnaire will ask some general information about you (your age, gender, ethnicity etc).

- b. Asking if you think positively about your dissociative experiences, for example, “dissociation helps me switch off from stressful situations”
 - c. Asking if you think negatively about your dissociative experiences, for example, “other people will think I am odd”
 - d. Asking about any potential distressing experiences you may have had in childhood or adulthood, for example “have you been in a major earthquake”.
- 4.) After filling in these four questionnaires, we will ask you if you wish to provide an email address, to invite you to fill in one of the above questionnaires (the positive beliefs about dissociative experiences one) two weeks later. This will allow us to see whether people’s responses change over time. This should take about five minutes. The researchers will not be able to see your email address for this purpose and it will be kept confidential. The secure IT system will automatically send you a link to the study then your email address will be deleted immediately from the system.
- 5.) If you wish to, you can take part in a prize draw to win one in five £20 Amazon Vouchers. If you would like to do this the researcher will be able to see your email address (although will not be able to link back to identify your responses gathered from the questionnaires) so they can contact you if you win. Your email address will be stored on an encrypted file on a secure password protected University of Manchester computer which only the researcher has access to. Once the prize draw has been drawn and the winner contacted all email addresses will be deleted immediately.

What happens if I find this study distressing?

Although the questionnaires that you will complete do not usually create distress, if you do feel upset at any point during the study you can stop at any time and you do not have to complete the survey.

If you find you have become upset or distressed as a result of the questions asked in this study please see below for the contact details of sources of advice and support. Please also contact Lena Marsden (Trainee Clinical Psychologist) to let her know that you are feeling distressed so that any necessary adaptations can be made to the study for future participants. Please note that the latter is not to be used for contact in emergencies as the researcher may not always have frequent and regular access to emails.

Will I be paid for participating in the research?

If you complete this study, you will not be paid for taking part but you will be given the opportunity to be included in a prize draw to win one of five £20 Amazon vouchers.

What happens to the data collected?

The information collected from the study will be entered into a database and analysed once the study is completed. The study will be written up in a report (doctoral thesis) and will be submitted to a scientific journal for publication. However, the personal details of any person who has participated in the research will not be given. All information included in the database and the report will be anonymised, this means that other people will not be able to link the data (and your answers) to you. The anonymised data will be stored on University of Manchester computers for 10 years. Your anonymized data will not be used in additional studies. The researchers may want to re-analyse this data as part of a future study. On occasions we might

want to share the anonymised data collected as part of this study with other researchers at the University of Manchester or other Universities. In all cases, only the anonymised answers from your questionnaires will be shared, not your personal details.

How is confidentiality maintained?

All information which is collected from the questionnaires will be kept strictly confidential and will conform to the Data Protection Act of 1998 with respect to data collection, storage and destruction. Any personal details provided will be anonymised and stored separately from your responses to the questionnaires and will be destroyed immediately. Only the researchers will have access to the data.

If you wanted to take part in the prize draw your email address will be stored on an encrypted file, on a secure password protected University of Manchester computer which only the researchers will have access to. This is so the researcher can contact you if you win. Once the prize draw has been drawn and the winner contacted all email addresses will be deleted immediately. The researchers will not be able to link your email address to responses provided in questionnaire, so your responses will still be anonymised.

You will only be able to proceed to the survey if you wish to agree with each statements and click “Yes” for each item on the consent form.

What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. If you decide to take part and then change your mind you can withdraw yourself without giving reasons. However because we do not ask for your name, and the data is anonymized with a code, we regret that your data cannot be destroyed once you enter any data as we will not be able to identify it. Therefore researchers will keep your data up until the point you withdraw.

What is the duration of the research?

Taking part should take around 20 - 30 minutes.

What if something goes wrong?

If you have a concern about any aspect of this study, you should ask to speak to the researchers, Trainee Clinical Psychologist (lena.marsden@postgrad.Manchester.ac.uk) who will do their best to answer your questions,

What if I want to make a complaint?

If you have a complaint, please contact the researcher, Lena Marsden (email address above) first and if you are still unhappy contact the project supervisor, Filippo Varese (filippo.varese@manchester.ac.uk) [Your email addresses will be deleted immediately after the complaint has been resolved.](#)

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, or you wish to make a formal complaint, or if you are not satisfied with the response you have gained from the researcher or project supervisor in the first instance, then please contact the Research Governance and Integrity Team by

either writing to 'The Research Governance and Integrity Manager, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester, M13 9PL', by emailing: research.complaints@manchester.ac.uk, or by telephoning 01613757583 or 2758093

Who has reviewed the research project?

The project has been reviewed and approved by the University of Manchester Research Ethics.

Where can I obtain further information if I need it?

Please feel free to contact the main researcher below. If you email with any queries, your email will be deleted immediately after the query has been answered.

Main Researcher:

Lena Marsden (lena.marsden@postgrad.manchester.ac.uk)

Project Supervisor:

Dr Filippo Varese (filippo.varese@manchester.ac.uk)

Prof. Tony Morrison (anthony.p.morrison@manchester.ac.uk)

Dr. Eleanor Longden (eleanor.longden@gmw.nhs.uk)

If I feel distressed, who should I contact?

[In case of distress, or if you feel you need support because of your experiences, see the useful contacts below:](#)

- Your General Practitioner (GP)
- In an emergency, go to your nearest Accident and Emergency department.
- Samaritans on **08457 90 90 90** or www.samaritans.org.
- Mind – mental health charity on **03001233393** or <https://www.mind.org.uk/> or text 86463
- Your care team if you have one
- Dissociative charities such as:
 - First Personal Plural on **01902 820082** or <http://www.firstpersonplural.org.uk/>
 - Dissociative survivors (PODS - helping people affected by dissociative experiences) on <https://www.pods-online.org.uk/> or **08001814420**

This Project Has Been Approved by the University of Manchester's Research Ethics Committee

Appendix L. Consent Form

1. Have you read the Participant Information Sheet?	YES/NO
2. Have you received enough information about the study?	YES/NO
3. Do you understand that you do not need to take part in the study and if you do enter you are free to withdraw:- * at any time * without having to give a reason for withdrawing * and without detriment to you	YES/NO
4. Do you agree for your anonymous data to be stored and analysed?	YES/NO
5. Are you happy for your anonymous data to possibly be used in future studies?	YES/NO
6. Do you agree for your anonymous data to be shared with researchers who collaborate with our research team?	YES/NO
7. Are you aware that some of the questions may ask about mental health difficulties, some of which may be upsetting?	YES/NO
8. Do you understand that once you start completing the study, your data will be fully anonymized, therefore we cannot identify or delete any of your data?	YES/NO
9. Can you confirm that both of the following are true? (so you do not meet the exclusion criteria) - you are over the age of 18 - <i>you do not have an already known moderate/severe learning disability or organic disorder, for example dementia.</i>	YES/NO
10. Do you agree that if you decide to withdraw from the study your data up until the point you withdraw will be kept by the researchers. (All the data kept will be anonymized with a code, however we regret that you will not be able to ask for your data to be destroyed once you begin to take part as we will not be able to identify it.)	YES/NO

Appendix M. Debrief sheet

Thank you for your participation. The aim of this study is to investigate the development of a new questionnaire for measuring positive beliefs about dissociation. There is little research identifying if people have positive beliefs about dissociation and there is currently no measure to assess this. Therefore this research will help contribute to further understanding and hopefully help people who experience dissociative experiences.

So you are aware, dissociation is a common response when people are under high levels of stress, it does not mean they are "not normal" or "going mad". Also, many people hold positive and negative beliefs and this is okay and normal.

If you feel distressed as a result of reading this or taking part in the study, please see the following useful contacts:

- Your General Practitioner (GP)
- In an emergency, go to your nearest Accident and Emergency department.
- Samaritans on **08457 90 90 90** or www.samaritans.org.
- Mind – mental health charity on **03001233393** or <https://www.mind.org.uk/> or text 86463
- Your care team if you have one
- Dissociative charities such as:
 - First Personal Plural on **01902 820082** or <http://www.firstpersonplural.org.uk/>
 - Dissociative survivors (PODS - helping people affected by dissociative experiences) on <https://www.pods-online.org.uk/> or **08001814420**

Please also contact Lena Marsden, Trainee Clinical Psychologist, (lena.marsden@postgrad.Manchester.ac.uk) to let her know so that any necessary adaptations can be made to the study for future participants. Please note that the latter is not to be used for contact in emergencies as the researcher may not always have frequent and regular access to emails.

Appendix N. Approval letter from University research ethics committee



Research Governance, Ethics and Integrity
2nd Floor Christie Building
The University of Manchester
Oxford Road
Manchester
M13 9PL
Tel: 0161 275 2206/2674
Email: research.ethics@manchester.ac.uk

Ref 2018-3149-6178
22/05/2018

Dear Miss Lena Marsden, Prof Anthony Morrison, Dr Eleanor Longden, Dr Filippo Varese

Study Title: Measuring and understanding dissociative experiences

University Research Ethics Committee 1

I write to thank you for submitting the final version of your documents for your project to the Committee on 21/05/2018 15:29. I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form and supporting documentation as submitted and approved by the Committee.

Please see below for a table of the title, version numbers and dates of all the final approved documents for your project:

Document Type	File Name	Date	Version
Questionnaire	Dissociative Experiences Scale	01/11/1986	2
Questionnaire	Negative Beliefs about dissociation	01/11/1999	1
Questionnaire	Brief Betrayal Questionnaire	01/11/2006	1
Questionnaire	Demographics Questionnaire	01/11/2017	1
Questionnaire	Positive Beliefs about Dissociation	19/11/2017	1
Distress Protocol/Debrief Sheet	Debrief Sheet	02/03/2018	2
Advertisement	Invitation Email and Online Advert	11/05/2018	2
Participant Information Sheet	Participant Information Sheet	11/05/2018	3
Lone Worker Policy/Procedure	SPS Safe Lone Working Policy	11/05/2018	1
Advertisement	Poster	11/05/2018	3
Participant Information Sheet	Consent Form	11/05/2018	3
Additional docs	Letter	11/05/2018	1
Additional docs	Letter with final changes	11/05/2018	1

This approval is effective for a period of five years however please note that it is only valid for the specifications of the research project as outlined in the approved documentation set. If the project continues beyond the 5 year period or if you wish to propose any changes to the methodology or any other specifics within the project, an application to seek an amendment must be submitted for review. Failure to do so could invalidate the insurance and constitute research misconduct.

You are reminded that, in accordance with University policy, any data carrying personal identifiers must be encrypted when not held on a secure university computer or kept securely as a hard copy in a location which is accessible only to those involved with the research.

Reporting Requirements:

You are required to report to us the following:

1. [Amendments](#)
2. [Breaches and adverse events](#)
3. [Notification of progress/end of the study](#)

Feedback

It is our aim to provide a timely and efficient service that ensures transparent, professional and proportionate ethical review of research with consistent outcomes, which is supported by clear, accessible guidance and training for applicants and committees. In order to assist us with our aim, we would be grateful if you would give your view of the service that you have received from us by completing a **UREC Feedback Form**. Instructions for completing this can be found in your approval email.

We wish you every success with the research.

Yours sincerely,

Page 1 of 2

Ms Kate Hennessy

Secretary to University Research Ethics Committee 1

Insert project ID here:

3149

Appendix O. Poster used to recruit participants for online study**Helping make sense of positive aspects of dissociation*****Do you experience any of the below?****Feel **spacey** or **numb** when under stress****Disconnect** from emotions, memories, others or daily life****Zone out** or find your **mind wanders / daydreams****Have an **out of body experience**, where you find you are watching yourself**Feel like sometimes you are a **different person/identity** for different situations*

We are looking for people who may have any of the above experiences, who would like to take part in an online study, to help us understand them.

You must be **over the age of 18** and **speak English**. The study would involve filling out a few questionnaires, which would take on average **20-30 minutes**.

If you take part, you will be entered into a prize draw where you have the chance to win:

One of five Amazon vouchers**amazon**

Please follow the link below for more information, which will take you to the online study.

<https://www.psych-ssl.manchester.ac.uk/survey/lmarsden>

Appendix P. Table containing quality assessment results for moderation analysis

Weak = Did not analyse how interaction terms between therapies impacted outcome

Moderate = Looked at how interaction between therapies impacted outcome, but used a therapy control, not a non-treatment control (i.e. TAU or WLC)

Strong = Looked at how interaction term between therapies impacted outcome, and compared to a non-therapy control (TAU)

Paper	Moderation analysis	Rating	Did dissociation impact treatment
Arntz et al (2015)	Backwards regression	Weak	Negatively
Burton et al (2018)	Blockwise regression analysis adding interaction terms between treatment type	Strong	No
Caldeira et al (2004)	Correlations	Weak	No
Cloitre et al (2012)	Mixed effect model	Moderate	No
Cloitre et al (2016)	Mixed effect model	Moderate	No
Crockett et al (2018)	Moderator regression analysis adding interaction terms between treatment	Strong	No
Emmerik et al (2008)	Chi-squared	Weak	Yes
Halvorsen et al (2014)	Blockwise regression adding interaction terms	Strong	No
Hansen et al (2007)	Classification and regression Tree analysis	Weak	No
Minnen et al (2016)	T-test	weak	No
Price and Herting (2013)	Path analysis	Weak	Negatively
Price et al (2008)	Anova	Weak	Positively
Price et al (2014)	Mixed effect model	Strong	Negatively
Resick et al (2012)	Growth Curve modelling	Moderate	No
Schweden et al (2016)	Linear regression	Weak	No
Wolf et al (2016)	Growth Curve modelling	Moderate	Negatively
Zlotnick et al (1997)	Ancova	Weak	Yes