YOUNG PEOPLE WITH POST-TRAUMATIC STRESS DISORDER: THE ROLE OF SOCIAL SUPPORT AND THEIR EXPERIENCE OF PARTICIPATING IN TRAUMA-FOCUSED THERAPY AND RESEARCH

by
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Thesis Overview

This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Clinical Psychology at the University of Birmingham. The thesis comprises of two volumes. All identifying information has been anonymised for confidentiality.

Volume I

This volume comprises of three chapters. Chapter 1 is a meta-analysis on the correlation between Post-traumatic Stress Disorder (PTSD) and social support in children and young people. Chapter 2 is a qualitative study exploring young people's experience of talking about trauma within the context of a randomised controlled trial exploring the effectiveness of Cognitive therapy for PTSD. Chapter 3 is a press release document for both the meta-analysis and qualitative study.

Volume II

This volume contains four clinical practice reports (CPR) and the abstract of a fifth which was presented orally. The first CPR presents the case of John*, a 44-year old male with a mild learning disability and Asperger's syndrome, formulated from a cognitive behavioural and systemic approach. The second CPR is a clinical audit on pre-diagnostic counselling delivery and documentation in a Learning Disability Older Adults Service. The third CPR is an integrated case study of Amina*, a 25-year-old Muslim female with Bipolar Disorder: referred to Psychology CMHT for religious-based obsessive-compulsive disorder (OCD). The fourth CPR is a single case experimental design of a cognitive-behavioural therapy intervention with Penny*, a 15-year old female inpatient with depression and suicidal thoughts and behaviour. The fifth is the abstract of an orally presented case study of Tianna*, a 7-year-old girl referred to a Child and Adolescent Mental Health Service due to emotional and behavioural difficulties, using a systemic approach.

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Literature Review: The Correlation Between Social Support And Post-Traumatic Stress Disorder In Children And Adolescents: A Meta-analysis

Abstract

There is currently a drive to explore the mechanisms underlying the link between trauma and development of Post-traumatic Stress Disorder (PTSD) and one risk factor which has been extensively explored in the adult literature is lack of social support (Brewin et al., 2000; Ozer et al., 2003). The current meta-analysis aimed to systematically evaluate and summarise the existing child literature to estimate the strength of the relationship between social support and PTSD symptoms following traumatic events, including examining the relationship between different sources of social support (family, peer and teacher) with PTSD symptoms.

Fifty primary studies met inclusion criteria, reporting an effect size of the correlation between total social support scale or a source of social support with PTSD, and were subject to a random effects meta-analysis. After omitting one study influencing the results by 14% (Freh, 2016), a small effect size was found for the relationship between social support and PTSD (r=-0.12, 95% CI -0.16 – -0.07, n=41), with large heterogeneity (I^2 = 90.3%). In studies reporting sources of social support, the effect sizes between peer support (r=-0.18), family support (r=-.16) and teacher support (r=-0.20) and PTSD were also small. Moderator analyses indicated that studies reporting on participants exposed to abuse (r=-0.25) and correlations based on univariate data (r=-0.14) had higher correlations and medium heterogeneity. The main effect size was robust to publication bias and study quality.

The cross-sectional design of the included studies limits the findings and future research using prospective and longitudinal design would help to explain the relationship between social support and PTSD further.

Keywords: PTSD, social support, meta-analysis

Introduction

Background

There has been an increasing amount of research suggesting that children and young people experience high rates of trauma. In a recent epidemiological study, it was found that 31.1% of 2064 children and young people reported trauma exposure, of which 7.8% had experienced Post-Traumatic Stress Disorder (PTSD) by age 18 years (Lewis et al., 2019). The impact of trauma on children and young people can be detrimental, with the potential to negatively impact social, emotional, physical development and well-being (Fairbank & Fairbank, 2009; Pynoos et al., 2009).

Many children and young people do not develop PTSD following trauma and consequently there is a need to explore mechanisms underlying the link between trauma and psychopathology and understanding vulnerability factors. One risk factor which has been extensively explored in the adult literature is lack of social support (Brewin et al., 2000; Ozer et al., 2003). Social support often refers to the perceived emotional support provided by significant others such as caregivers or peers (Malecki & Demaray, 2002). There are two main explanatory models of the association between social support and PTSD, which include the 'social causation' models, such as the 'stress buffering hypothesis' (Cohen & Wills, 1985), and the 'social erosion' models (Kaniasty & Norris, 2008).

The 'stress buffering hypothesis' postulates that lack of social support may precede and contribute to increased psychological distress following trauma (Cohen & Wills, 1985). It is suggested that emotional support may help with the psychological processing of trauma and may play a role in making sense of the event(s), consequently helping to manage distress and pain caused as a result of the trauma (Lepore, 2001), and buffer the effects of stress (Cohen, 2004). This is linked to the cognitive model of PTSD that suggests that other people's reactions

following a traumatic event can impact how victims interpret the event and may lead to further symptoms of PTSD such as social isolation (Ehlers & Clark, 2000). They suggest that both positive and negative responses from significant others can induce negative appraisals, potentially mediating the association of social support to PTSD (Guay et al., 2006; Joseph et al.,1997).

The 'social erosion' model suggests that an individual's social support reduces due to psychological distress following trauma resulting in interpersonal difficulties and social withdrawal. Whilst research is limited into these models, due to the literature base comprising of largely cross-sectional data, these theoretical models can help to explain the link between PTSD symptoms and social support. Individuals with high levels of social support are likely to have increased opportunities to re-engage with their lives following trauma, which may inhibit patterns of behaviour related to avoidance and withdrawal from previously enjoyed activities (Stice et al., 2004). Individuals may also be supported to safely yet spontaneously be exposed to trauma reminders, potentially leading to fewer re-experiencing symptoms and reduced vigilance (Foa et al., 2007). Finally, social support may also provide an outlet for individuals to express their concerns and problems, which has been shown to be associated with reduced intrusive thoughts (Cohen et al., 2000; Lepore et al.,1996).

Current research

Two meta-analyses, based on adult populations, found that social support was one of the largest predictors of PTSD, suggesting that lower levels of social support were associated with increased PTSD symptoms or rates of current PTSD (Brewin et al., 2000; Ozer et al., 2003). In Ozer's meta-analysis a small-to-medium effect size (r=-.28) was found between social support and PTSD, and medium effect sizes (r=0.30) were also found in Brewin's meta-

analysis. This finding was also supported in a recent meta-analysis exploring risk factors of PTSD in children and young people, where social support was found to have a large effect size (Trickey et al., 2012). However, these meta-analyses have been based on a small number of studies. A larger recent meta-analysis exploring the association between social support and depression in youth found a significant and moderate effect size (r=0.26), highlighting the importance of exploring this further within children and adolescent literature (Rueger et al., 2016).

Moderators of social support

There are a number of moderators that have been identified in the literature which impact the correlation between social support and PTSD and will be important to consider for this current review. These can be categorised into three groups: methodological factors, trauma-related factors and child characteristics.

Methodological factors. One of the difficulties with investigating the link between social support and PTSD is the multi-modal construct of social support which means it is assessed using a variety of measures (Guay et al., 2006). In an attempt to overcome this problem, Barrera (1986) categorised social support instruments into three categories: social network (referring to the size and density of support), enacted support (frequency of support) and perceived support (perception of how much support is available), and these will be used for the current review. The most widely used measure of social support explores people's perception of the support they have received and research from adult literature suggests that perceived support is the type that is most related to well-being (Cohen & Willis, 1985).

There are a number of validated, widely used measures of social support for use with children and adolescents, such as the Multi-dimensional Scale of Perceived Social Support

(MSPSS; Zimet et al., 1988) and the Child and Adolescent Social Support Scale (CASSS; Malecki et al., 2000). These measures provide an overall global sum of social support scores, whilst also providing sub-scale data on sources of support (i.e. parent, teacher, and friend support). Research has shown mixed findings across sources of support, some studies suggesting that teacher support had the strongest association with well-being (Chu et al. 2010), whilst other finding larger associations for support from family members and peers (Rueger et al., 2010). Therefore, differences amongst sources of social support will be explored in the current review to investigate whether different providers of support impact on PTSD symptomology.

It has been suggested that future research should explore whether the time elapsed between trauma exposure and measure of PTSD has an impact on the relationship between social support and PTSD (Guay et al., 2006). It has been found that social support strongly predicted PTSD (r=-0.42) where three years had elapsed between trauma exposure and measure of PTSD, compared to studies where less time had elapsed (Ozer et al., 2003). The authors suggested that this may mean that social support acts a secondary prevention for more chronic PTSD or that the effects of social support may be cumulative over time. Whilst in both Brewin and Ozer's reviews, measures of PTSD using either a self-report questionnaire or interview did not have an impact on the effect size, this will still be explored within this current review.

Trauma-related factors. It is also important to explore the impact of trauma-related factors on the association between social support and PTSD. It is well documented that the type of trauma, i.e. interpersonal violence (IPV) such as sexual abuse, or non-interpersonal violence (non-IPV) such as natural disasters, has an important role in explaining the development of psychopathology (Alisic et al., 2014). More specifically, IPV has been found to be more likely

to result in the development of PTSD and depression in children and young people than in non-IPV samples (Pinto et al., 2017; Vibhakar et al., 2019). It is largely assumed that non-IPV events are typically a one-off event, whereas IPV may be more chronic in nature and have been found to corrode social support (Pinto et al., 2017). Given that childhood sexual abuse has been found to be one of the most significant risk factors for the development of psychopathology, in both adults and children (Hillberg et al., 2011), the current review will explore whether type of trauma impacts the association between social support and PTSD.

Child characteristics. There are a number of child characteristics that have been explored throughout the child PTSD-literature, with a particular focus on age and gender as potential moderators. It has been found that girls exposed to interpersonal trauma show the highest rates of PTSD (32.9%, 95% CI –19.8- 49.3), compared to males exposed to non-interpersonal trauma (8.4%, 95% CI 4.7-14.5; Alisic et al., 2014). With regards to social support, studies have found that women tend to rely more on interdependent relationships for well-being; whereas men are reported to generally seek less social support than women, and experience lower levels of psychological benefit from social support (Caselman et al. 2006; Turner, 1994).

Research has also shown that an individual's need for social support varies during changes in developmental stages, for instance increased age was shown to strengthen the association between social support and well-being indicating older young people may benefit more from social support (Chu et al., 2010). It has been shown that peers become increasingly more important sources of support during early adolescence (Buhrmester, 1996; Rueger et al., 2010), whereas it is argued that support from parents and teachers is maintained throughout adolescence (Colarossi & Eccles, 2003).

The question of whether the outlined potential moderators impact the effect between social support and PTSD will be important to address to allow for a thorough evaluation of the methodological robustness within the current review.

Purpose of the current review

The primary aim of this meta-analysis was to systematically evaluate and summarise the existing child literature to estimate the strength of the relationship between social support and PTSD symptoms following traumatic events, including examining the relationship between different sources of social support (family, peer and teacher) with PTSD symptoms. The secondary aim was to examine whether effect sizes are homogeneous or whether they are explained by characteristics of the study or the sample population. It was hypothesised that lower levels of social support would be related to higher levels of PTSD symptoms. It is hoped that by exploring the association between social support and PTSD it will help to understand whether post-trauma interventions should bolster social support as part of clinical treatments for children and young people.

Method

Search strategy

The review was prospectively registered on the PROSPERO register of systematic reviews (16th September 2019, CRD42019145710). An initial systematic search for relevant papers was conducted on 18th July 2019 using three electronic databases: MEDLINE, PsycINFO and the Published International Literature on Traumatic Stress (PILOTS). The searches dated from 1980 (the year in which PTSD was first added to the Diagnostic and Statistical Manual of Mental Disorders, 3rd Edition (DSM-III); American Psychiatric Association, 1980). The aim of the search was to obtain a comprehensive overview of the literature into the relationship between social support and PTSD in children and young people. To reduce the potential confounding effect of publication bias, searches for unpublished data were also conducted using electronic databases for dissertations/theses: ProQuest and Open Grey. Furthermore, the references of key papers and existing meta-analyses were reviewed to identify any further relevant papers (Furr et al., 2010; Gordon-Hollingsworth et al., 2018; Tol et al., 2010). The search terms used to identify the relationship between social support and PTSD, which were then combined, are outlined in Table 1 below.

Table 1

Search strategy

Construct	Free Text Search Terms	Method of Search	Limits
Post-traumatic stress disorder	"Post-traumatic stress disorder" "PTSD" "post-traumatic stress disorder"	Free search terms All search terms combined with *OR* Map Term to Subject Heading – Variants for different databases.	1980 – July 2019.
Children and/or adolescents	"child*" "teen*" "adolescen*" "young person" "youth" "young people"		
Social support	"social support"		

Inclusion criteria

The full inclusion and exclusion criteria are described in Table 2. The main criteria for inclusion in the meta-analysis included quantitative studies with children and/or adolescents reporting an effect size between measures of social support and PTSD.

Table 2

Inclusion criteria

Inclusion criteria	Justification
Study design	
Studies that are quantitative and observational in design (e.g. cross-sectional, between group studies) will be included.	The restriction on the study design (i.e. exclusion of prospective studies) was to ensure consistency between effect size data. Available Time 1 effect size data in longitudinal studies was extracted, and intervention studies were included if baseline data was available.
Participant focus	
The mean age of the study sample was 18 years old or below.	Existing research investigating the relationship between social support and PTSD in adults has been explored (Brewin et al., 2000), and therefore it was hoped that this would be the first meta-analysis to investigate the correlation in the child literature. A cut-off age of 18 was decided as the majority of studies above this age included a large age range or reflected university/student groups which are an idiosyncratic population in itself and are therefore potentially less representative of the child and young person population and were excluded to reduce this bias.
Studies included a group where participants had experienced trauma, as defined by A Criterion for PTSD in either DSM-IV or DSM-V (American Psychiatric Association, 2013).	Participants had been exposed to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: - Directly experiencing the traumatic event - Witnessing, in person, the event as it occurred to others - Learning that the traumatic event(s) occurred to a close family member or close friend, where the event must have been violent or accidental. Where refugee samples were reported, studies would need to report traumatic events sample exposed to. This was to ensure consistency between trauma exposure.

Inclusion criteria	Justification
Outcome data	
Studies measured social support using a self-reported, validated measure.	To reduce heterogeneity of reporting bias, the outcome data needed to be reported by children or young people. Parent or teacher reported social support or PTSD measures were excluded. Studies reporting either total social support scale data or sources of support as sub-scale data (e.g. peer, family and/or teacher) were included.
PTSD symptoms are measured either by a quantitative questionnaire measure or diagnostic clinical interview. This questionnaire must demonstrate adequate reliability and validity with such psychometric properties documented in peer-reviewed journals.	To ensure that questionnaires are measuring PTSD symptoms appropriately the measure must consider intrusions, avoidance and hyperarousal. Measures which only assess avoidance and intrusion (e.g. Impact of Event-Scale; Wolfe, 2002) will be excluded. Where studies used both a self-report measure and a clinical interview, data pertaining to the self-report questionnaire was extracted to reduce heterogeneity.
PTSD measure must have been administered at least four weeks after trauma.	To ensure that the measure was assessing PTSD, rather than acute stress disorder and to avoid natural and transient distress responses in the first four weeks after trauma exposure.
Studies report information required to calculate effect size: - Pearson *r* - Means and Standard Deviations - Odds Ratio - Cohen's d effect size - F-Test Statistics - Regression (e.g. Beta coefficients)	To ensure that outcomes can be transformed into an effect size.
Type of article	
Studies were reported in English	Due to limited resources translation services were unavailable.

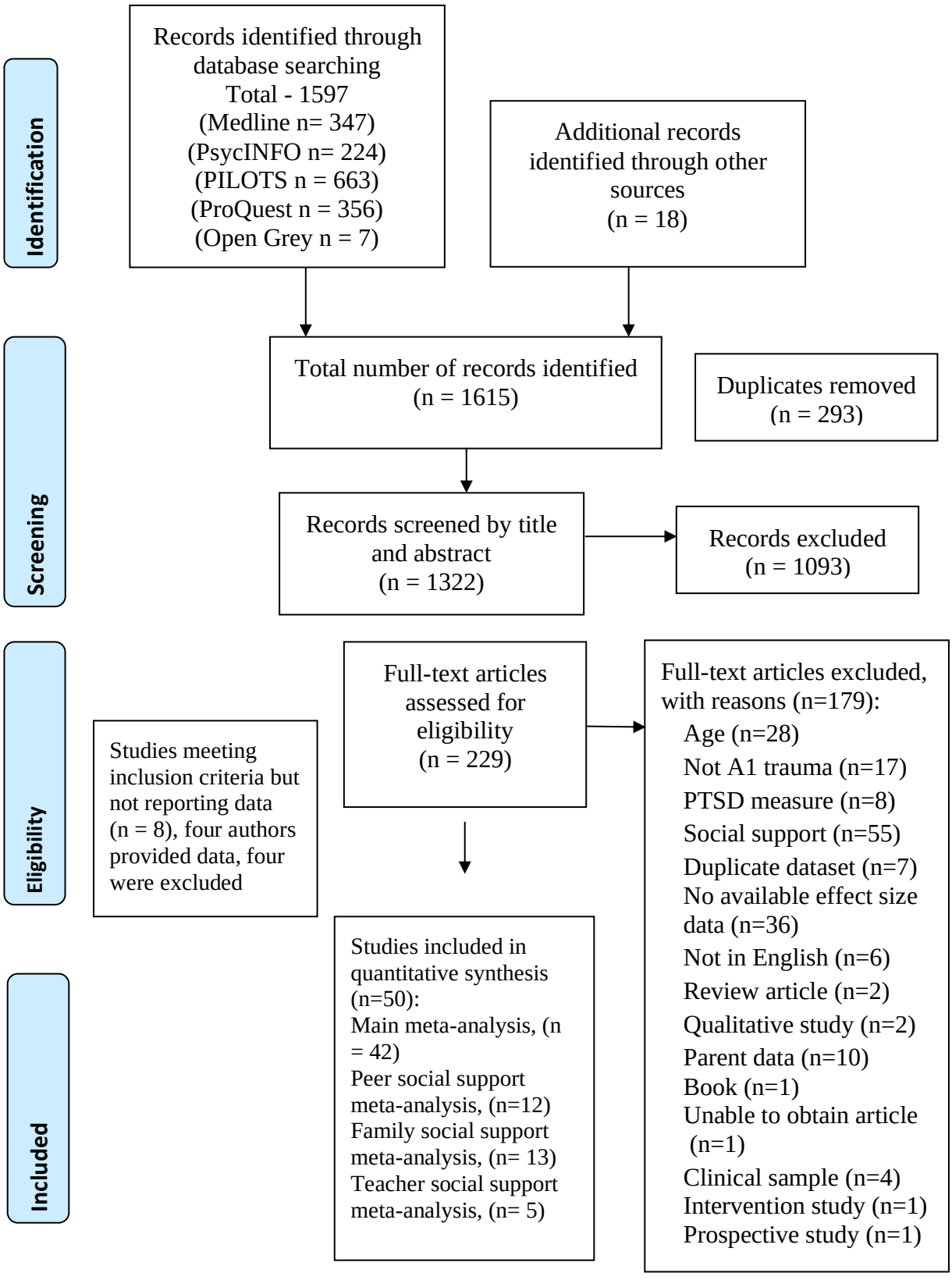
Inclusion criteria	Justification
The following article types were excluded: qualitative/ validation of psychometric scales/ reviews/ commentaries	These articles do not provide the outcome data needed for this meta-analysis.

Selection of studies

A PRISMA flow-chart of the search and selection process is shown in Figure 1. Initial searches yielded 1615 articles and 1322 after removing duplicates. Titles and abstracts were screened for suitability, leading to the exclusion of 1093 studies. The main reason for exclusion at this stage was absence of social support and PTSD measures. The full text of 229 studies were reviewed against the inclusion and exclusion criteria, reasons for exclusion are listed in Figure 1. The main reasons for exclusion were absence of social support measure or a measure which was not validated, and the age of participants. Eight studies met the inclusion criteria but did not report effect size data, authors were contacted for raw data and four provided effect size data and the other four were excluded from further analysis. Thus, 50 articles (48 published, two unpublished studies) satisfied criteria for the meta-analysis and reported the effect size between total social support and PTSD (n=42), or the effect size between a source of social support and PTSD; peer (n=12), family (n=13) and or/ teacher (n=5).

Figure 1

PRISMA Flow Diagram outlining results from the study selection process



Data extraction

All data was extracted by the author. Data was extracted related to the effect sizes, methods, participants, type of trauma, outcomes and any data relating to the planned contrasts. If this data could not be extracted, then the authors of the studies were contacted where possible to clarify or obtain relevant information for the analysis.

Quality assessment and risk of bias

A quality assessment framework was developed to assess the quality and risk of bias within each study, Table 3. The framework was informed by The National Institute for Health and Care Excellence Quality Assessment Checklist for Studies reporting Correlations and Associations (NICE, 2012), the National Heart Lung and Blood Institute Quality Assessment Tool for Observational Cohort and Cross-section Studies (NIH, 2014) and the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement (Von Elm et al., 2007).

The author completed the quality rating for all studies and a second rater, a fellow colleague, used the quality assessment framework to score a randomly seleted sub-set of the studies (10%). Percentage agreement for the individual items in the quality assessment was 87%. The weighted Kappa was 0.70 ('substantial agreement') for overall quality rating.

Table 3

Quality assessment criteria

Domain	Details	Low Risk **(study designed or conducted in a way to minimise the risk of bias)**	Unclear Risk **(not clear from the way the study reported)**	High Risk **(aspects of study in which significant sources of bias may persist)**
Selection Bias	Aim: to assess how well the population was described. Selection bias in epidemiological studies occurs when there is a systematic difference between the characteristics of those selected for the study and those who are not. For example: Is trauma (exposure) clearly described? Do they explain why certain schools were selected?	Non-response rate is reported and of an acceptable level (set at 50%). The characteristics of the study population are clearly described and without evidence of bias. The study reports the characteristics of the sample e.g. the study details subgroups. The recruitment method is clearly reported and well defined (e.g. school, hospitals)	Non-response rate is not reported. The characteristics of the study population are not clearly reported. For example, the country, setting, location, population demographics were not adequately reported. Further to this, details related to trauma were not adequately reported. The recruitment process/ sampling method of individuals are unclear or has not been reported.	Includes an unacceptable (reporting 30% or less data) level of non-response rate. The characteristics of the study population are not reported. Target sampling was used i.e. population-based surveys.
Performance Bias	Performance bias in correlation studies refers to exposure to factors that may influence their responses. Information is provided in a way that does not create a Hawthorne effect (altering their behaviour to influence results).	Study reports level of confidentiality and anonymity. Participants were not rewarded for their participation in the study, or small gift of appreciation was offered. Informed consent is obtained and described. Participants were provided with support to complete the questionnaires, if needed.	The study does not report levels of confidentiality and anonymity. It is not clear if participants were rewarded for their participation (e.g. motivation to respond in a certain way). It is unclear how much information was provided to the participant prior to taking part in the study	Responses are not confidential or anonymous. As entry to services participants were rewarded for their participation in the study, for example were provided with large monetary gifts. Less relevant - Participants were told which condition/ what questionnaires they were completing and why and any proposed hypotheses.
Detection Bias	Aim: to assess the quality of the PTSD and social support measures and the design of the study Detection bias refers to whether the design of the	The outcome measures are clearly defined, valid and reliable, and are implemented	Information regarding the outcome measures are either not reported or not clearly reported e.g.	The outcome measures were implemented differently across participants.

Domain	Details	Low Risk **(study designed or conducted in a way to minimise the risk of bias)**	Unclear Risk **(not clear from the way the study reported)**	High Risk **(aspects of study in which significant sources of bias may persist)**
	study is optimised to detect the effect in question. Ratings of design bias shown therefore reflect the position of the study design within the hierarchy of possible designs, with less optimal designs receiving some penalty.	consistently across all participants. Validated measures of PTSD such as PTSD Checklist, Reaction Index, CPSS. Study reports Cronbach alpha 0.7 and above. Validated measures of Social support such as social support scale, MDPSS, PSS. Study reports Cronbach alpha 0.7 and above. Reports category boundaries when continuous measures used. Describes how the measures were translated or validated for participants i.e. addresses cultural bias.	definition, validity, reliability. It is not clear if the measure was implemented consistently across all participants. Cronbach's Alpha is between 0.6 and 0.7. Unclear how measures are translated.	The outcome measures used had poor reliability and validity reported e.g. Cronbach's Alpha below 0.6. Only using one dimension/ subscale of the scale or separating the subscales/ dimensions in the analysis. Discrepancies with how the measures were administered between participants i.e. translated for some participants, not others. States that it has been translated but does not detail how this was conducted or address problems in translation.
Statistical Bias	Aim: to assess the quality of the correlation Bias resulting from the (inappropriate) statistical treatment of the data. Indicate if appropriate statistical methods used, including complex methods for correlated data.	Appropriate statistical testing was used. The study has reported a Pearson's value or the statistic can be transformed into a statistical equivalent. (E.g. Cohens d, OR, M&SD). Authors report raw data and descriptive statistics, and/or univariate data available.	Unclear what statistical test was used. Appropriate statistical test was used but the statistic cannot be transformed into a Pearson's value.	Statistics were not reported. Regression coefficient reported where a number of variables are included in the analysis and/or authors only report significant findings. Data needs reversing due to social support scale measuring social support differently.
Reporting Bias	Aim: to assess the 'within-study publication bias' Reporting bias refers to systematic differences between reported and unreported findings. Within a published report those analyses with statistically significant correlations are more likely to be reported.	Reported all results of measures as outlined in the method.	Not all descriptive and/or summary statistics are presented. There is a description (narrative) in the results but do not record statistics.	Not reported full outcome measures that are stated in the method section/ reported only a subsample of results/only significant results/ not reported the

Domain	Details	Low Risk **(study designed or conducted in a way to minimise the risk of bias)**	Unclear Risk **(not clear from the way the study reported)**	High Risk **(aspects of study in which significant sources of bias may persist)**
	This sort of 'within-study publication bias' is usually known as outcome reporting bias or selective reporting bias and may be one of the most substantial biases affecting results from individual studies (Chan 2005).			measure as it should be. Authors only report significant findings. Authors report analysis of subgroups only (i.e. not total social support score)
Generalisability	Generalisability describes the extent to which research findings can be applied to settings other than that in which they were originally tested. This includes any differences between the study participants and those persons to whom the review is applicable. **Note: IPV trauma (e.g. sexual abuse) is likely to be based on smaller sample sizes, non IPV (e.g. earthquakes) will be larger sample sizes. Shouldn't penalise for this.**	Sufficient sample for generalisation and representative of target population. A sample size justification, estimate and power analysis was provided. The sample size is adequate to detect an effect. **External validity – generalisable to the population they are measuring.**	Sufficient sample for generalisation but with some idiosyncratic features. A sample size justification, estimate and power analysis were not provided	Small sample with or without idiosyncratic feature. The sample size is not adequate to detect an effect.

Studies were rated as low risk, high risk or unclear in six domains assessing risk of bias and an overall quality rating index for each study was calculated (Table 4).

Table 4

Quality criteria for each primary study

Author	*Selection Bias*	*Performance Bias*	*Detection Bias*	*Statistical Bias*	*Reporting Bias*	*Generalisability*	*Quality Index*
Al-Krenawi et al							29%
Alix et al (2017)							50%
Aydin et al (2016)							57%
Banks et al (2014)							86%
Ben-Zur et al (2013)							64%
Berman et al (1996)							50%
Bernard-Bonnin (2008)							14%
Bokszczanin (2008)							86%
Bountress et al (2017)							57%
Boyraz et al (2015)							36%
Brown et al (2003)							50%
Cohen et al (2016)							92%
Dawson et al (2014)							29%
Derivois et al (2014)							58%
Dorinson (2012)							58%
Durakovic-Belko et al (2003)							42%
Freh (2016)							100%
Guerra et al (2018)							33%
Jia et al (2015)							100%
Jones (2007)							50%
Kasler et al (2008)							67%
Khamis (2008)							75%
La Greca (2010)							42%
Lai et al (2018)							50%
Llabre & Hadi (1997)							64%

Author	*Selection Bias*	*Performance Bias*	*Detection Bias*	*Statistical Bias*	*Reporting Bias*	*Generalisability*	*Quality Index*
Ma et al (2011)							100%
McQuaid (2005)							43%
Meiser-Stedman (2019)							67%
Moore & Varela (2009)							42%
Morley & Kohrt (2013)							33%
Munzer (2017)							75%
Paul et al (2015)							50%
Paxton et al (2004)							50%
Pinto et al (2017)							92%
Ponnamperuma & Nicolson (2016)							100%
Qin et al (2016)							67%
Rosario et al (2008)							42%
Schiff (2010)							75%
Sleijpen et al (2016)							58%
Stansfeld et al (2017)							83%
Stuber et al (1997)							33%
Tang et al (2010)							43%
Thabet et al (2009)							58%
Thompson (1999)							36%
Tian et al (2014)							67%
Vernberg et al (1996)							83%
Wang et al (2018)							58%
Xiao et al (2016)							83%
Yuan et al (2018)							75%
Zhou et al (2018)							67%

= High Risk = Unclear Risk = Low Risk

Selection bias

Overall, selection bias varied across the studies. Fifteen studies were rated as high risk and 11 were rated as unclear risk. Risk of bias was largely related to low response rates (less than 30%), or not reporting the response rates within the methodology. Studies were also rated as high risk when the recruitment procedures were not reported or when participants' trauma was not described in detail (Guerra et al., 2018; Rosario et al., 2008). Twenty-four studies were rated as low risk as they had higher response rates and had made attempts to gain representative samples, i.e. described why certain schools had been selected (e.g. Stansfeld et al., 2017).

Performance bias

Overall, performance bias was mixed across the studies. Seventeen studies were rated as high risk and 12 were rated as unclear risk. Studies rated as high risk was due to participants being compensated for their completion of the measures, with some offering substantial monetary value for their participation (Brown et al., 2003; McQuad, 2005; Rosario et al., 2008,). Those studies who did not report whether participants were rewarded or whether participants were informed about confidentiality and consent were rated as unclear risk (Thabet et al., 2009). Approximately half of the studies were rated as low risk as they ensured that participants were informed about confidentiality of their responses and provided support to participants to help complete their measures if needed, for example questionnaires were administered by psychotherapists (Guerra et al., 2018).

Detection bias

Overall, most studies were rated as low risk (n=41) and had described the reliability of the measures used and how they had been administered, for example they had described how measures were translated and back-translated (Dawson et al., 2014; Duraković-Belko et al.

2003;). Six studies were rated as high risk and three studies were rated as unclear, this was largely related to the measures being inadequately described or the Cronbach's alpha coefficient being less than 0.7 (Moore & Varela, 2009).

Statistical bias

Thirty-three studies were rated as low risk and most studies reported univariate data or correlations that could be transformed into an effect size. Eleven studies were rated as high risk due to the use of multivariate analysis where a number of other variables were included as covariates in the analysis (Schiff et al., 2010), or when the correlation data needed transforming to reflect the direction of the correlation (Al Krenawi et al. 2009; Dorinson, 2012).

Reporting bias

Overall, the majority of studies were rated as low risk (n=35) and reported all results of the social support and PTSD measures. However, a few studies did not report the social support measure data as they had stated in the method section or had not reported the total social support scale data, and therefore subscale data had to be combined to obtain a total correlation coefficient (Durakovic-Belko et al., 2003).

Generalisability

The generalisability of approximately half of the studies was rated as high risk (n=27) and this was recognised by most of the authors in their limitations. This was due to idiosyncratic features within the samples, for example bereaved families after a terrorist attack (McQuaid, 2005). Only two studies reported power calculations (Dorinson, 2012; Stansfeld et al., 2017). Studies were rated as lower risk when they had large sample sizes and had made attempts to gain a representative sample of the target population, in particular earthquake studies where

schools had been selected to be representative of the areas effected by trauma (Stansfeld et al., 2017).

Summary of quality bias

Overall, there was a mixed level of bias across the studies included in the meta-analysis. Four studies did not show any high risk of bias in any of the quality criteria (Freh, 2016; Jia et al., 2015; Ma et al., 2011; Ponnamperuma & Nicolson, 2016). The most problematic area of risk across the studies was generalisability which is related to the cross-sectional design of the studies.

Meta-analytic method

Calculating effect sizes

Available correlational data pertaining to the relationship between total social support scale score and PTSD severity was extracted from each primary study. Subscale data related to sources of social support (i.e. peer, family and/or teacher) and PTSD severity was also extracted. If the measure reported all available sub-scale data individually, but not overall total social support scale, it was combined and transformed into an overall correlation for use in the main analysis. If the measure reported peer and classmate subscale data, they were combined together (for example, social support scale for children, Lai et al., 2018).

If zero-order Pearson's R correlation coefficients were reported, no transformations were necessary, and this coefficient was used. Where two separate *r* correlation coefficients were available (e.g. two different ethnicities) correlations were combined for total *r,* using the procedures described in Borenstein et al., (2011). Effect sizes were reported as negative when social support is inversely related to PTSD and therefore social support is protective. If the primary study reported a positive correlation but were concluding that social support was a

protective factor, or a negative correlation but were concluding that social support was not a protective factor, then the sign of *r* was changed accordingly. This was the case for two studies (Al Krenawi et al., 2009; Dorinson, 2012).

If treatment outcomes were reported using non-parametric measures of association (e.g. Spearman's Rho), then the Pearson coefficient was approximated using the transformations reported by Rupinski and Dunlap (1996). Alternatively, if other effect size data was reported (i.e. means and standard deviations, d, or odds ratios) then these were transformed into correlation coefficient r value using formulas provided by Rosnow & Rosenthal (1991).

Finally, standardised regression coefficients were substituted when zero-order correlations coefficients were not reported. Peterson and Brown (2005) report that using beta coefficients to impute missing correlations generally produces relatively accurate and precise population effect-size estimates with a meta-analysis. The difference between data reported as a raw univariate statistic and data that had to be derived from a transformation was explored.

Data Analysis Strategy

The data analysis strategy follows the guidelines for the Centre for Applied Psychology, University of Birmingham and is paraphrased below.

The omnibus test was calculated using the random effects model due to likelihood of uncontrolled factors such as methodological heterogeneity across the studies. The random effects model was calculated using the DerSimonian and Laird method, which is the most commonly used method for calculating the between studies variation (tau) in meta-analysis and is used for effects that are considered to be normally distributed in the population (DerSimonion & Laird, 1986). R values were transformed into a Fisher's Z score for use in the analysis and then back- transformed to r for interpretation.

Handling problematic variance

Estimates of heterogeneity which can result from methodological variation in the studies were calculating using the Q statistic and I^2 statistic. The degree of heterogeneity was classified as 'low' (25%), 'medium' (50%) or 'large' (75%; Higgins et al., 2003).

To examine whether any particular primary studies were exerting a disproportionate influential effect on the meta-analytic synthesis, a leave-one-out analysis was conducted to identify primary studies displaying problematic heterogeneity. If omitting a study influences the overall meta-analytic effect by greater than 10% of the original estimate, it was considered as disproportionately influential and examined for risk of bias and removed from the omnibus test.

The quality effects model

The quality effects model (Doi & Thalib, 2008) was used to explore variation due to methodological factors. The quality effects model weights study precision by consideration of sample size and heterogeneity (as does the random effects model) and also an explicit rating of methodological quality. The quality effects model was calculated using the total score from the risk of bias ratings reported in Table 4. The quality effects model can be interpreted as the meta-analytic effect that would have been obtained had all of the studies been of the same methodological quality as the highest quality in the review.

Identifying Publication Bias and Small Study Effects

A funnel plot depicts effect sizes against a measure of study precision and are often used to graphically explore publication bias. Where publication bias is not present, it is assumed that studies with high precision will be plotted near the meta analytic synthesis, and studies with lower precision will be spread more widely but evenly on both sides of the average. This would

result in a roughly funnel-shaped distribution where the distance from the average is inversely proportionate to the precision of the study. The absence of primary studies in the areas associated with small sample sizes and non-significant effects is indicative of publication bias. If publication bias is suspected, then a trim and fill procedure (Duval & Tweedle, 2000a; Duval & Tweedle, 2000b) can be undertaken which estimates the number of missing studies due to publication bias.

Planned Contrasts

Sub-group analysis was conducted on the following categorical moderators:

1. Methodological moderator variables – measure of PTSD (self-report or interview), time PTSD measure taken after trauma, type of social support measure (perceived – perception of how much social support they have received, enacted support – frequency of support and social network – size and density of support, (see Chu et al., 2010 for further discussion), type of analysis (raw data or derived).
2. Population moderator variables – age of sample (categorised as up to 13 years old when the mean or 80% of the sample fell below 13, and 14 years old and above when the mean or 80% of the sample were over 14), gender (categorised as 'female' when 75% of sample or more was female, 'male' when 75% of the sample were male or 'combined')
3. Trauma moderator variables – trauma type (interpersonal violence trauma such as sexual abuse, community violence, or non-interpersonal violence such as natural disasters), and frequency of trauma (single event, multiple events or mixed trauma).

Summary effects and associated heterogeneity measures was calculated for each of the sub-groups. The significance of the difference between the sub-groups was evaluated by comparison of their 95% confidence intervals.

Results

Study characteristics

The effect sizes reported in the primary studies are described in Table 5. There were 72 effect sizes from 50 primary studies reporting an effect size of the correlation between either total social support scale, or a source of social support subgroup (peer, family and/or teacher) and Post-traumatic Stress Disorder (PTSD). Social support and PTSD measures that had been used in more than five studies are presented in Table 6 and 7, respectively. The total number of participants included in the meta-analysis was 27,073, ranging from 6-23 years old and approximately 54% of the overall sample were female (not reported in three studies).

The participants were recruited from schools (62%), specialist centres (e.g. child protection clinics, government agencies; 22%), hospitals (8%), and from community samples (8%). Participants had mixed trauma experiences, which included interpersonal trauma (e.g. sexual abuse, community violence) and non-interpersonal trauma (e.g. natural disasters, war trauma). Half of the sample originated from either USA (18 studies) or China (7 studies). Based on 32 studies, the PTSD measure was administered approximately 20.5 months after trauma.

Table 5

Overview of included studies

Authors	N	Age range	Gender (%Female)	Country of origin	Trauma type	Single or multiple trauma	IPV, non IPV, mixed	PTSD measure	Time PTSD measure taken after trauma	Social support measure	Social support correlation included
Al-Krenawi et al (2009)	892	14-18years old	NR	Israel and Palestine	War	Unknown	Mixed	PSS (Foa et al., 1993)	NR	Index of Peer Relations (Hudson, 1982)	Peer subscale only
Alix et al (2017)	147	14-18years old	100%	Canada	Abuse	Mixed	IPV	Children's Impact of Traumatic Events Scale II (Wolfe, 2002)	NR	Ways of Coping questionnaire - SS subscale (Folkman & Lazarus, 1980)	Total social support
Aydin et al (2016)	182	6-18 years old	87.40%	Turkey	Abuse	Mixed	IPV	Child Post-traumatic Stress Reaction Index (PTSD-RI, Pynoos et al)	9.5 months	Perceived Social support scale-Revised (Yilidirim, 1997)	All subscales
Banks et al (2014)	1098	7-18 years old	53%	USA	Hurricane	Single	Non IPV	PTSD-RI (Frederick, Pynoos & Nadar, 1992)	36-65 months	SOCSS (Dubow & Ullman, 1989)	Total, Peer, Family
Ben-Zur et al (2013)	204	13-19	59%	Israel	War	Unknown	Non IPV	PSS-SR (Foa et al, 1993)	NR	MSPSS (Dahlem, Zimet & Walker, 1991)	Total social support
Berman et al (1996)	96	14-18	42%	USA	Community violence	Unknown	IPV	PTSD-RI (Frederick, 1985)	NR	ASSIST (Barone, Leone & Trickett, 1987)	Total social support
Bernard-Bonnin (2008)	67	7-12 years old	100%	Canada	Sexual abuse	Mixed	IPV	CRIES-R (Wolfe, 1996)	3 months	Social support Scale (Harter, 1985)	Total social support

Authors	N	Age range	Gender (%Female)	Country of origin	Trauma type	Single or multiple trauma	IPV, non IPV, mixed	PTSD measure	Time PTSD measure taken after trauma	Social support measure	Social support correlation included
Bokszczanin (2008)	503	NR	60%	Poland	Flood	Single	Non IPV	Revised Version Missipipi PTSD Scale (Norris & Perilla, 1996)	28 months	Parental Support Scale (Czapinski, 1998)	Family subscale only
Bountress et al (2017)	332	12-17 years old	51%	USA	Tornado	Single	Non IPV	PTSD Module - National Survey on Adolescents (NSA-R, Kilpatrick et al, 2000)	1 year	SOCSS (Dubow & Ullman, 1989)	Total social support
Boyraz et al (2015)	673	Not reported		USA	Mixed	Mixed	Mixed	PTSD Checklist (PCL-C, Weathers et al, 1993)	NR	Social Provisions Scale (SPS, Cutrona & Russell, 1987)	Total social support
Brown et al (2003)	52	12-23 years old	55.70%	USA	Cancer	Single	Non IPV	PTSD-RI (Pynoos et al., 1987)	1 year +	Perceived Social support scale (Procidano & Heller, 1983)	Total, Peer, Family
Cohen et al (2016)	352	12-17 years old	55.40%	USA	Tornado	Single	Non IPV	NSA-R (Resnick et al., 1993)	8 months	Social Support for Adolescents Scale (SSAS, Seidman et al., 1995)	Total social support
Dawson et al (2014)	110	7-13 years old	59.00%	Indonesia	Tsunami	Single	Non IPV	CRIES-13 (Smith 2003)	5 years	Social Support scale for children (SSSC, Harter, 1985)	Total social support
Derivois et al (2014)	917	10-23 years old	58.23%	Caribbean	Earthquake	Multiple	Non IPV	PCL-C (Weathers et al., 1993)	12 months	Social support questionnaire-6 (SSQ-6, Sarason et al., 1987)	Total social support
Dorinson (2012)	82	17-19 years old	62.65%	USA	Terrorist attack	Single	Non IPV	PSS-SR (Foa et al, 1993)	4 years	Social Adjustment Scale (SAS-SR, Weissman & Bothwell, 1976)	Total social support
Durakovic-Belko et al (2003)	393	Not reported	48.60%	Bosnia	War	Unknown	Mixed	PTSRQ (Kuterovac et al., 1993)	1 year	SOCSS (Dubow & Ullman, 1989)	All subscales

Authors	N	Age range	Gender (%Female)	Country of origin	Trauma type	Single or multiple trauma	IPV, non IPV, mixed	PTSD measure	Time PTSD measure taken after trauma	Social support measure	Social support correlation included
Freh (2016)	245	12-23 years old	46.40%	Iraq	War	Unknown	Mixed	PSS (Foa, 1995)	NR	Crisis Social Support Scale (Andrews & Brown, 1988)	Total social support
Guerra et al (2018)	106	12-17 years old	100.00%	Chile	Sexual abuse	Mixed	IPV	PSS (Foa et al., 2001)	Mixed	MSPSS (Zimet et al., 1988)	Family subscale only
Jia et al (2015)	631	Not reported	61.80%	China	Hurricane	Single	Non IPV	CPSS (Foa et al, 2001)	NR	SS Based on Network of Relationships Inventory (Furman & Burrmester, 1985)	Total social support
Jones (2007)	71	9-11 years old	56%	USA	Community violence	Multiple	IPV	Angie/Andy Cartoon Trauma Scales (Praver, 1996)	NR	Kinship Social Support Measure (Taylor et al., 1993)	Total social support
Kasler et al (2008)	331	9-11years old	51%	Israel	War	Unknown	Non IPV	PTSD-RI (Nader, 1997)	7 months	MSPSS (Zimet et al., 1988)	Total social support
Khamis (2008)	179	12-18 years old	0%	Palestine	War	Single	Non IPV	Clinical interview	1-27 months	Parental Support Scale (Khamis, 2000)	Total social support
La Greca (2010)	384	7-10 years old	54%	USA	Hurricane	Single	Non IPV	PTSD-RI (Pynoos et al., 1998)	9 months	Survey of Children's Social Support (SOCSS, Dubow & Ullman, 1989)	Total social support
Lai et al (2018)	426	8-16 years olds	55%	USA	Hurricane	Single	Non IPV	PTSD-RI (Pynoos et al., 1998)	3-7 months	Social Support scale for children (SSSC, Harter, 1985)	All subscales
Llabre & Hadi (1997)	151	9-13 years old	NR	Israel	War	Unknown	IPV	PTSDI (Davidson et al., 1990)	2 years	Social support measure - created for study	Total social support
Ma et al (2011)	3208	12-18 years old	52.10%	China	Earthquake	Single	Non IPV	CRIES-13 (Smith 2003)	6 months	Social Support Rating Scale (SSRS)	Total social support
McQuaid (2005)	79	8-18 years old	43%	USA	Terrorist attack	Single	Non IPV	CPSS-PTSD (Foa et al., 2001)	6 months	Survey of Children's Social Support (SOCSS, Dubow & Ullman, 1989)	Peer subscale only

Authors	N	Age range	Gender (%Female)	Country of origin	Trauma type	Single or multiple trauma	IPV, non IPV, mixed	PTSD measure	Time PTSD measure taken after trauma	Social support measure	Social support correlation included
Meiser-Stedman (2019)	208	8-17 years old	42.50%	UK	Mixed	Single	Mixed	CPSS-PTSD (Foa et al., 2001)	2 months	MDSPSS (Zimet et al., 1988)	Total social support
Moore & Varela (2009)	156	9-14 years old	47%	USA	Hurricane	Single	Non IPV	PTSD-RI	32-33 months	Social Support Scale for Adolescents (SSSCA, Harter, 1985)	All subscales
Morley & Kohrt (2013)	142	11 - 18 years old	52.80%	Nepal	War	Multiple	Mixed	CPSS-1 (Foa et al., 1997)	NR	Reintegration Process Instrument (Kohrt et al., 2010)	Peer subscale only
Munzer (2017)	200	8-17 years old	44.50%	German	Abuse	Mixed	IPV	PTSD-RI (Pynoos et al., 1988)	NR	MSPSS (Zimet et al., 1988)	Total social support
Paul et al (2015)	2000	Not reported	50.90%	USA	Tornado	Single	Non IPV	NSA (Kilpatrick et al., 2003)	8 months	Social Support for Adolescents Scale (SSAS, Seidman et al., 1995)	Total social support
Paxton et al (2004)	77	13-16 years old	0%	USA	Community violence	Unknown	IPV	Checklist of Post-Traumatic Stress Symptoms (Richters & Martinez, 1990)	NR	Social Support Rating Scale (Cauce, 1982)	Total social support
Pinto et al (2017)	183	13-17 years old	51.40%	Portugal	Abuse	Unknown	IPV	Child PTSD Symptom Scale (CPSS-V, Gillihan et al., 2012)	NR	Scale of Satisfaction with Social Support for Children and Adolescents (ESSS-CA, Gaspar et al., 2009)	Total social support
Ponnamperuma & Nicolson (2016)	414	12-16 years	54.30%	Sri Lanka	Tsunami	Mixed	Non IPV	UCLA PTSD-RI (Steinberg et al., 2004)	3 years	MSPSS (Zimet et al., 1988)	Total social support
Qin et al (2016)	1573	7th-10th grade	54.20%	China	Earthquake	Single	Non IPV	PTSD-SS (Liu et al., 1988)	6 months	Social Support Rate Scale (SSRS, Xiao, 1994)	Total social support

Authors	N	Age range	Gender (%Female)	Country of origin	Trauma type	Single or multiple trauma	IPV, non IPV, mixed	PTSD measure	Time PTSD measure taken after trauma	Social support measure	Social support correlation included
Rosario et al (2008)	667	11-14 years old	49.70%	USA	Community violence	Unknown	IPV	Interview - DICA-R	NR	Inventory of Parent and Peer Attachment (Armsden& Greenberg, 1987)	Peer, Family subscales
Schiff (2010)	587	Not reported	37.90%	Israel	Terrorism	Unknown	IPV	UCLA PTSD-RI (Rodriguez, Pynoos &Steinberg, 1999)	4 years	MSPSS (Zimet et al., 1988)	Total social support
Sleijpen et al (2016)	111	12-17years old	51%	Netherlands	Forced flight	Mixed	Mixed	CRIES-13 (Smith 2003)	3 years	MSPSS (Zimet et al., 1990)	Total social support
Stansfeld et al (2017)	1034	13-19 years old	53.90%	South Africa	Violence	Unknown	IPV	Harvard Trauma Questionnaire (Ward et al., 2004)	NR	MSPSS (Zimet et al., 1988)	Total, Peer, Family
Stuber et al (1997)	186	8-20years old	50%	USA	Cancer	Single	Non IPV	PTSD-RI (Pynoos et al., 1987)	5.5 years	Social Support Rating Scale (Cauce, 1982)	Total social support
Tang et al (2010)	271	12-18 years old	54.60%	Taiwan	Typhoon	Singe	Non IPV	Mini-KIDS	3 months	Family APGAR Index (Chau, 1991)	Family subscale only
Thabet et al (2009)	412	12-16 years	51.50%	Israel	War	Mixed	Mixed	Interview - SCID	NR	PPSS (made for this population)	Family subscale only
Thompson (1999)	110	11-13 years old	52.70%	USA	Violence	Unknown	IPV	PTSD-RI (Pynoos et al., 1987)	NR	SOCSS (Dubow & Ullman, 1989)	Total social support
Tian et al (2014)	4604	12-19 years old	43.20%	China	Earthquake	Single	Non IPV	PTSD Checklist (Weathers, 2013)	3 years	SS-A (Vaux et al., 1988)	Total social support
Vernberg et al (1996)	568	8-11 years old	55%	USA	Hurricane	Single	Non IPV	PTSD-RI (Frederick, Pynoos & Nadar, 1992)	3 months	Social Support Scale for Adolescents (SSSCA, Dubos & Ullman)	All subscales

Authors	N	Age range	Gender (%Female)	Country of origin	Trauma type	Single or multiple trauma	IPV, non IPV, mixed	PTSD measure	Time PTSD measure taken after trauma	Social support measure	Social support correlation included
Wang et al (2018)	706	11-18 years old	53.80%	China	Earthquake	Single	Non IPV	PTSD Checklist (Weathers, 2013)	3.5 years	Social Support Questionnaire (Zou, 1999)	Total social support
Xiao et al (2016)	309	12-18 years old	53%	China	Earthquake	Single	Non IPV	Child PTSD Symptom Scale (CPSS-V, Foa et al., 2001)	6 months	Social Support Scale (Zou, 1999)	Total social support
Yuan et al (2018)	247	Not reported	59.50%	China	Tornado	Single	Non IPV	Child PTSD Symptom Scale (CPSS-V, Foa et al., 2001)	3 months	Network of relationships inventory	Total social support
Zhou et al (2018)	397	13-20years old	61%	China	Earthquake	Single	Non IPV	PTSD Checklist (Weathers, 2013)	2.5 years	Social Support Scale (Zou, 1999)	Total social support

Key: ***IPV*** Interpersonal Violence, ***Non IPV*** Non Interpersonal Violence, ***NR*** Not Reported

Table 6

Description of most commonly used measures of Social Support

Scale and Author	Description	Sources of support
Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) n = 9	12 item scale assessing perceived social support 4 items per source subscale	Sources include: • Family • Friend • Significant other • Global
Social Support Scale for Children (SOCSS; Dubow & Ullman, 1989) n = 7	31-item scale assessing perceived social support Short form also used – 15-item scale.	Sources include: • Family • Friend • Teacher • Global

Table 7

Description of most commonly used measures of PTSD

Scale and Author	Description
Post-traumatic Stress Reaction Index for Children (PTSD-RI, Frederick, Pynoos, & Nadar, 1982) n = 12	20-item scale assessing reactions to stress after traumatic experiences in children and adolescents.
The Post-traumatic Symptom Scale (PSS; Foa et al., 1993) OR Children's PTSD symptom scale (CPSS; Foa et al., 2001). n = 11	17-item scale assessing PTSD symptoms: re-experiencing, avoidance and arousal
Children's Revised Impact of Event Scale Children's Revised Impact of Event Scale. (CRIES-13; Smith et al., 2003) n = 5	13-item scale assessing PTSD symptoms: intrusion (four items), avoidance (four items) and arousal (five items)

Omnibus test

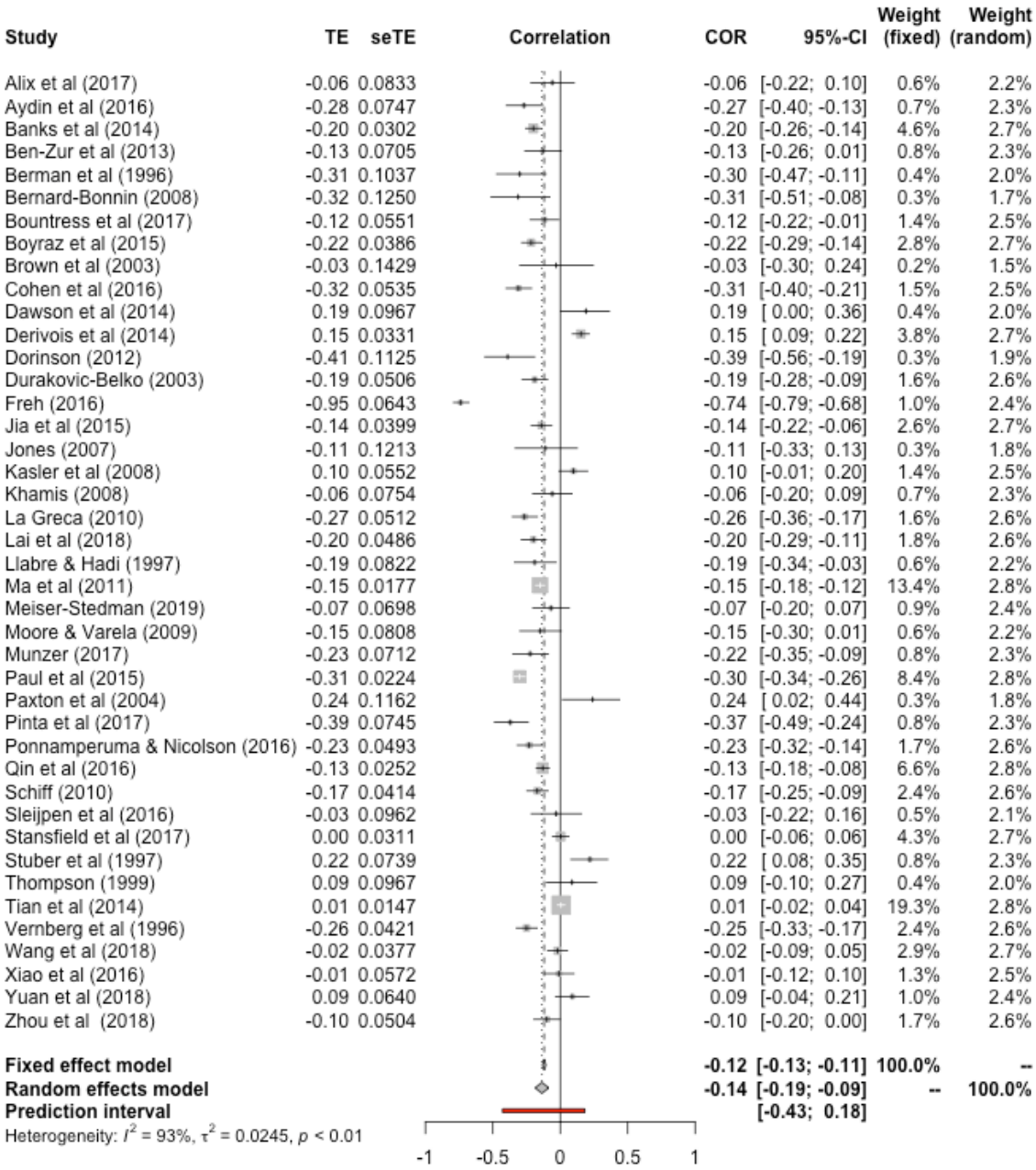
The effect size data reported in the primary studies for correlation between social support and PTSD are presented in Figure 2. Forty-two studies (comprising 24,001 participants) were included in the main analysis calculated from effect size data based on total social support scale data and PTSD. Effect sizes ranged from r=-0.74 (Freh, 2016) to r=0.24 (Paxton et al., 2004).

A random effects model was calculated using the generic inverse variance method and reported a weighted average correlation of r=-0.14 (z = -5.21, p < 0.01) with a 95% confidence interval of between -0.19 to -0.09. Using Cohen's (1992) standards of small (*r*=.10), moderate (*r*=.30) and large (*r*=.50), a treatment effect of this magnitude would be considered small.

Estimates of heterogeneity showed that there was substantial heterogeneity across the studies (tau^2 = 0.0245, Q=579.10, df=41, *p*<0.001; I^2=92.9%). This suggests that the estimates of the primary studies are biased by the presence of uncontrolled or confounding factors and further exploration is required.

Figure 2

Forest Plot of the Omnibus Test for the correlation between social support and PTSD



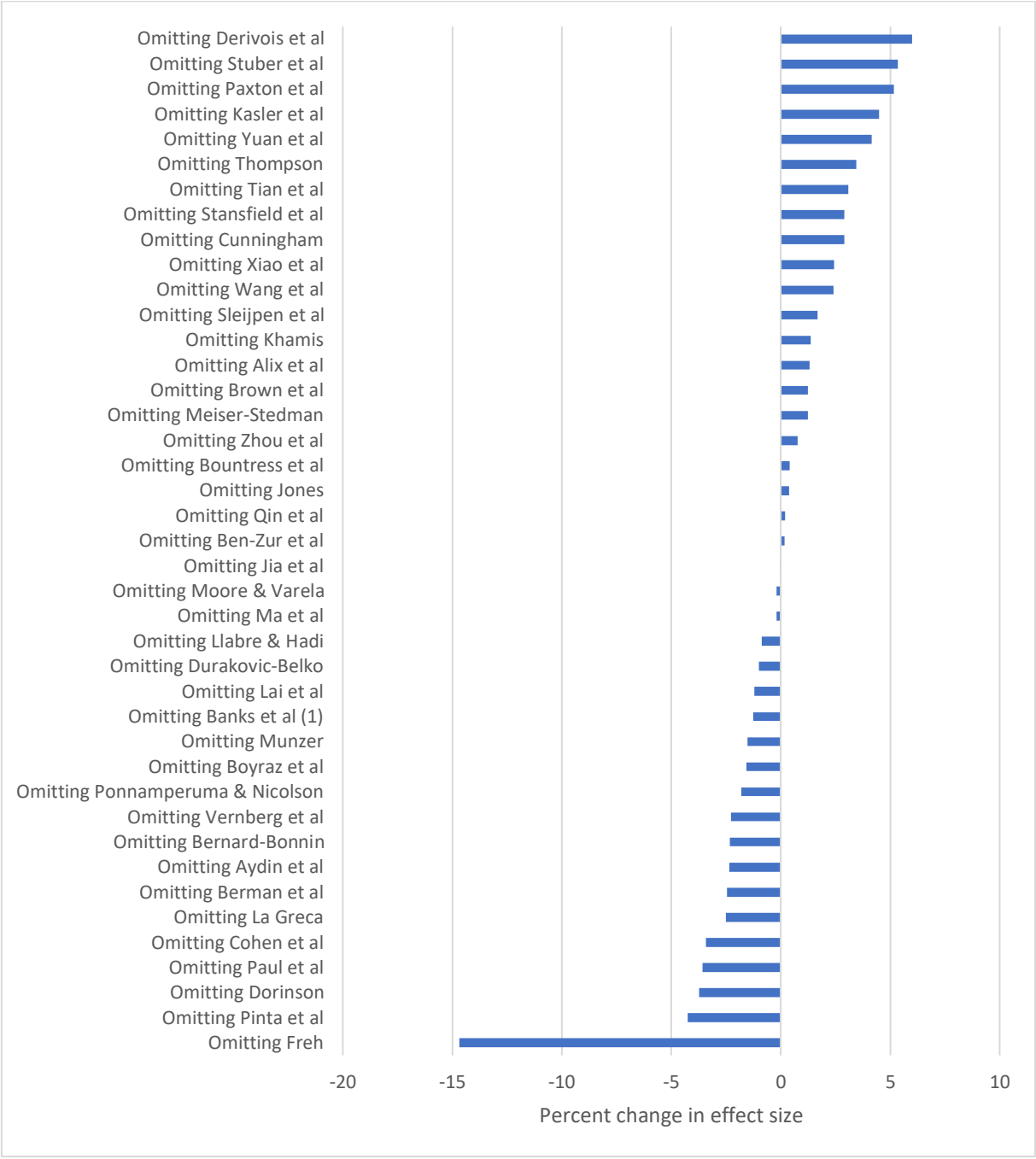
As can be seen on the Forest Plot there is one particular study (Freh, 2016) with a very large effect size (r=-0.74). Further analysis of the studies was conducted to assess problematic heterogeneity and to explore the impact of any influential studies on the overall effect size.

Impact of influential studies

A "leave-one-out" procedure, in which the random effects model is calculated with each of the primary studies in omitted in turn, was conducted. The measure of influence of each primary study is depicted in Figure 3.

Figure 3

Graph representing the percentage change in effect size when each primary study is omitted from analysis



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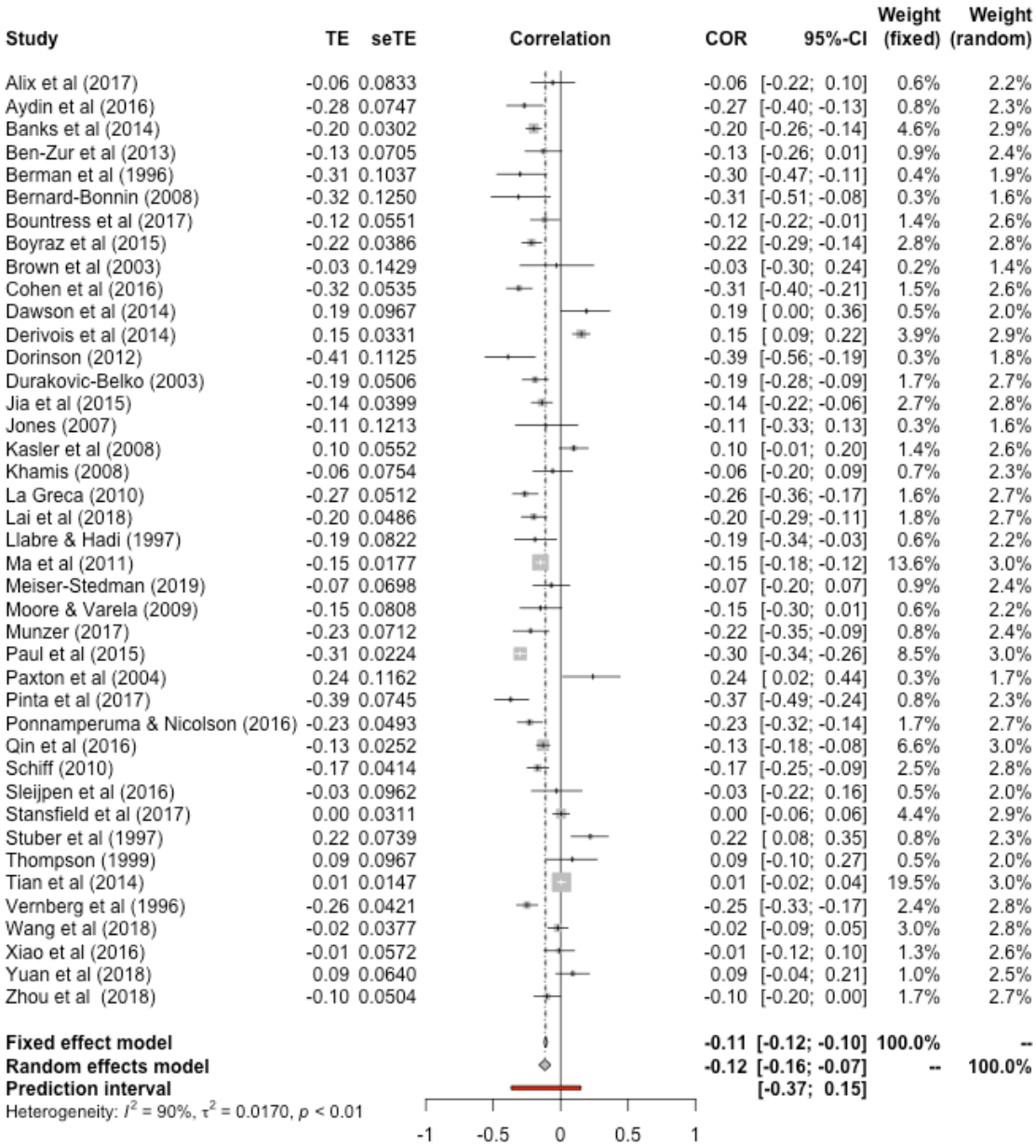
When omitting Freh (2016) study from the analysis, the overall effect size changed by 14% of the original estimate and therefore this primary study is reporting an effect size that is markedly inconsistent with the other literature. The meta-analysis was conducted again without the Freh (2016) study. When this study was omitted from subsequent analysis the weighted average correlation reduced to r=-0.12 (z=5.12, p<0.001) and a 95% confidence interval between -0.16 to -0.07, Figure 4. Estimates of heterogeneity showed that there continued to be substantial variance across the studies (tau^2 = 0.0179, Q=410.42, df=40, *p*<0.001; I^2=90.3%). Subsequent analysis was conducted with the Freh (2016) study omitted.

Figure 4

Omnibus test with Freh (2016) study omitted from analysis



Attenuation due to study quality and risk of bias

The quality effect model reported a synthesis of r = -0.13 (95%CI -0.17 to -0.07). The quality effects model evidences an approximately 0.07% increase relative to the random effects

estimate. Accordingly, when the synthesis includes information about the methodological quality of the studies there was no important change in the effect of the study.

In order to further assess the impact of methodological variation upon heterogeneity, a series of subgroup analysis were conducted on the prevalence rates of low, unclear and high risk of bias for each of the six types of methodological bias, see Table 8.

Table 8

Impact of methodological bias upon heterogeneity

	Low risk			Unclear risk			High risk				
Type of bias	**Number of Studies**	**Effect size**	**Confidence intervals**	**Number of Studies**	**Effect size**	**Confidence intervals**	**Number of Studies**	**Effect size**	**Confidence intervals**	**Q**	**P**
Selection bias	20	-0.13	-0.18; -0.07	9	-0.12	-0.23; 0.006	12	-0.09	-0.2; 0.04	0.28	0.87
Performance bias	18	-0.14	-0.20; - 0.09	11	-0.1	-0.18; -0.02	12	-0.08	-0.21; 0.04	1.08	0.58
Detection bias	35	-0.13	-0.17; -0.07	2	0.04	-0.28; 0.37	4	-0.11	-0.27; 0.04	1.04	0.59
Statistical bias	26	-0.12	-0.17; -0.06	5	-0.06	-0.26; 0.14	10	-0.15	-0.22; -0.06	0.74	0.69
Reporting bias	31	-0.12	-0.17; -0.07	1	-0.31	-0.40; -0.21	9	-0.08	-0.19; 0.03	12.99	0.0015
Generalisability	10	-0.19	-0.25; -0.13	9	-0.12	-0.23; 0.001	22	-0.08	-0.15; - 0.0072	5.59	0.06

Reporting bias had a significant impact on the effect size *(p*=0.0015), with higher levels of reporting bias being associated with lower correlations. This may be related to combining correlations reported for subgroups into an overall measure of association. Those studies with higher risk of generalisability bias also reported lower correlations (which was approaching significance [p=0.06]), indicating that when studies made attempts to gain representative samples this may result in higher correlations. However, in summary when controlling for potential bias the overall effect size remained small.

Attenuation due to other factors

To further explore the impact of uncontrolled covariates upon the correlation of social support and PTSD, a series of subgroup analysis were conducted and are shown in Table 9.

Table 9

Subgroup analysis for total social support scale only

Covariate	Number of Studies	r	Lower confidence level	Upper confidence level	Q	Heterogeneity	P
Age Group							
Up to 13 years old	15	-0.12	-0.19	-0.05	0.06	83.9%	0.80
14 years old and over	26	-0.11	-0.17	-0.06		91.9%	
Gender							
All female sample	3	-0.20	-0.36	-0.04	2.89	59.0%	0.23
All male sample	2	0.07	-0.21	0.36		79.3%	
Combined sample	36	-0.12	-0.16	-0.07		91.1%	
Number of traumatic events							
Single event	22	-0.12	-0.17	-0.06	0.10	91.7%	0.75
Mixed or multiple	17	-0.09	-0.12	-0.06		88.5%	
Type of trauma							
IPV	12	-0.15	-0.24	-0.05	0.61	81.2%	0.4356
Non IPV	25	-0.10	-0.16	-0.04		92.9%	
Specific trauma type							
Abuse	5	-0.25	-0.35	-0.14	7.51	56.8%	0.01
Community Violence	5	-0.02	-0.16	0.13		73.3%	
Type of PTSD measure							
Interview	2	-0.19	-0.41	0.05	0.43	90.1%	0.51
Self-report	39	-0.11	-0.15	-0.07		88.3%	
Time trauma symptoms measured							
1-6 months	4	-0.13	-0.31	0.06	0.83	87.3%	0.6613
6 months – 3 years	14	-0.13	-0.21	-0.06		92.9%	
3 years and over	10	-0.08	-0.17	0.01		90.6%	

Covariate	Number of Studies	r	Lower confidence level	Upper confidence level	Q	Heterogeneity	P
Type of analysis							
Reported (raw data)	35	-0.14	-0.19	-0.10	9.99	87.4%	0.0016
Derived (transformed data)	6	0.012	-0.07	0.09		83.9%	
Type of social support measure							
Perceived	31	-0.12	-0.18	-0.06	0.03	90.6%	0.8526
Social Network/Enacted Support	4	-0.11	-0.26	0.05		78.5%	

Analyses of subgroups showed that studies where the effect size was extracted from raw data (i.e. univariate correlations) showed a significantly larger effect size (r=-0.14) than those where the analysis was derived or transformed, i.e. from beta coefficients, odds ratios, (r=0.012). This suggests the reporting of multivariate measures of association or conversion from other effect sizes may be contributing to heterogeneity. However, effect size data based on reported univariate correlations still found a small effect size between social support and PTSD with a large amount of heterogeneity.

With regards to trauma-related moderators, no significant subgroup differences were found between IPV vs non IPV, or single vs mixed or multiple trauma. However, post-hoc analyses on specific type of trauma (abuse vs community violence) found that abuse yielded significantly higher correlations (r=-0.25) with medium heterogeneity (56.8%), than community violence (r=-0.02) with medium heterogeneity (73.3%), $p = 0.01$.

No significant subgroup differences were observed for the following methodological moderators: type of PTSD measure (self-report or interview), time elapsed between trauma and PTSD measure (1-6 months, 6 months – 3 years, 3 years and over), or type of social support measure (perceived, enacted, social network). In addition, no significant subgroup differences in child characteristics (younger or older children/adolescents or gender) were found, although less heterogeneity was identified in the female only group (58%).

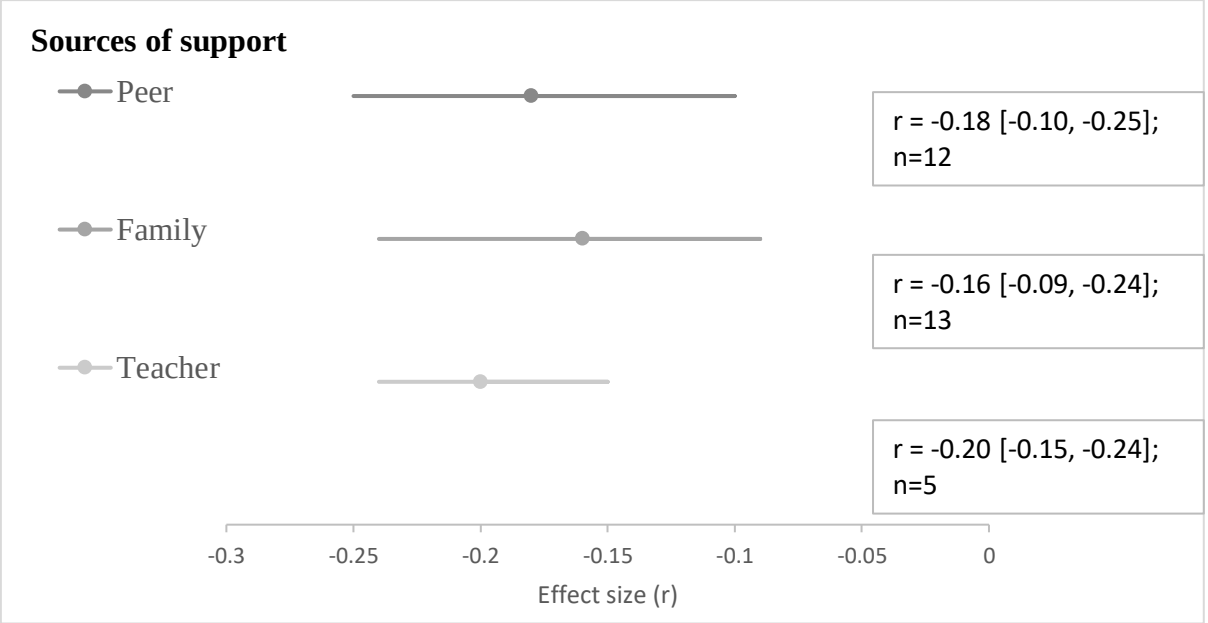
Subgroup Analysis of sources of social support

A subgroup analysis was undertaken to explore the effect size between PTSD and three different sources of social support, peers, family and teachers (see Appendices 2, 3 & 4). The average effects and 95% Confidence Intervals (CI) for each of these sources of social support are shown in Figure 5. The correlation between peer social support and PTSD was small (r=-

0.18, 95% CI, -0.10; -0.25, n=12), and with significant heterogeneity (Q=84.86, *df*=11, *p* = <0.001, I^2 = 87%). The correlation between family social support and PTSD was also small (r=-0.16, 95% CI, -0.09; -0.24, n=13), with significant heterogeneity (Q=90.62, *df*=12, p = <0.001, I^2 = 87%).The correlation between teacher social support and PTSD was the largest effect size but would still be considered small (r=-0.20, 95% CI, -0.15; -0.24, n=5), (Q=4.57, *df*= 4, p= 0.33, I^2 = 12%), with low heterogeneity. There was no significant difference between the three sources of social support.

Figure 5

Forest plot showing the effect size between PTSD and three sources of social support: peer, family and teacher

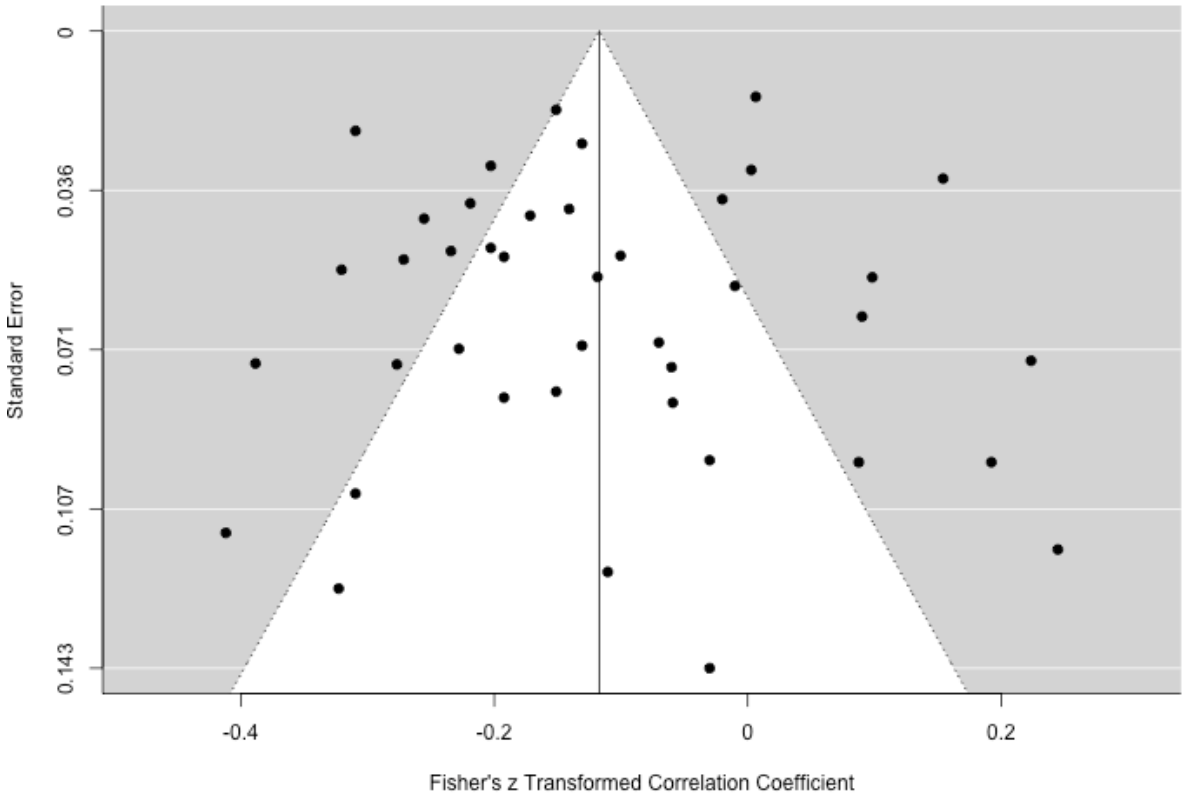


Publication bias

The funnel plot of the correlation between standard error by Fisher's Z for overall effect size (all studies included except Freh, 2016) is presented in Figure 6. The 95% confidence interval of the effect sizes of the studies are shown by the triangular zone on the funnel plot.

Figure 6

Funnel plot showing the standard error by Fisher's Z for overall effect size showing the symmetry of the data in relation to publication bias



As can be seen from Figure 6, the primary studies are shown as dark circles and are spread relatively evenly on both sides of the average. Using the Duval & Tweedie's 'Trim and Fill' method, which estimates the number of missing studies due to publication bias and

calculates an adjusted effect size for the analysis, no imputed studies were added. The uncorrected estimate of the effect size is -0.12 (95% CI -0.16, -0.07).

The Rosenthal method (sometimes referred to as 'file drawer analysis') calculates the number of studies averaging null results that would have to be added to the analysis to reduce the outcome to a non-significant effect (Rosenthal, 1979). Using the Rosenthal algorithm, 3472 unpublished null studies are required to reduce the meta-analytic effect to non-significance (based on the 41 included studies). Overall, with regards to publication bias the effect size value can be seen to be relatively robust and there is little evidence of publication bias, see Appendix 1.

Discussion

Summary of findings

This meta-analysis sought to explore the correlation between measures of social support and Post-traumatic Stress Disorder (PTSD) in children and young people. Fifty primary studies reported an effect size of the correlation between total social support scale, or a source of social support (i.e. peer, family and/or teacher) and PTSD, providing 72 effect size estimates. The results of the 41 primary studies reporting total social support scale, after omitting one paper reporting inconsistent findings (Freh, 2014), demonstrated a small effect size (r=-0.12), with high heterogeneity (90.3%). According to Rosenthal's (1984) formula for binomial effect sizes, a correlation of -0.12 between social support and PTSD indicates that 30% of children and young people benefit from social support following trauma.

The different types of sources of support (i.e. peer, family and teacher) also demonstrated small effect sizes (r=-0.18, r=-0.16 and r=-0.20 respectively). Each of these meta-analyses, except sources of support from teacher, were characterised by a large degree of heterogeneity.

Comparisons to other reviews

Previous literature has consistently found that levels of social support are associated with mental health outcomes for children and adolescents following traumatic events (Pine & Cohen, 2002). The small effect size between social support and PTSD in children and young people found in this meta-analysis may be surprisingly low given previous meta-analyses suggesting small-to-medium effect sizes (Brewin et al., 2000; Ozer et al, 2003; Trickey et al., 2012). However, interestingly the effect size between social support and PTSD in the non-combat, non-interpersonal violence population was r=-0.11 (Brewin et al., 2000) which is in-line with the results found in this meta-analysis. Also, these studies exploring a number of risk

factors for PTSD were based on a small amount of studies, for example Trickey et al (2012) found four studies adequately addressed social support as a construct of which only two had used validated measures of social support.

Although this is the first meta-analysis to explore the correlation between social support and PTSD in children and young people, two meta-analyses exploring the correlation between social support and well-being and depression (Chu et al., 2010; Rueger et al., 2016) found results in line with the current review, r= -0.17; r= -0.26, respectively. Inconsistent with previous meta-analyses, age nor gender significantly impacted the association between social support and PTSD.

Moderator analyses

Analyses of moderators revealed two significant differences in the association between social support and PTSD. Firstly, studies reporting multivariate data showed significantly weaker associations between social support and PTSD, which may be due to standardised regression coefficients and transformed data taking into account additional covariates (for example, gender) resulting in dissimilarity with the other reported effects. However, despite previous meta-analyses excluding multivariate data, the total correlation between social support and PTSD was still small in magnitude in studies that reported univariate data only.

Secondly, although type of trauma (i.e. IPV or non-IPV trauma) was not found to be a significant moderator in this meta-analysis, it was observed that the IPV study class comprised of a broad range of trauma types. For example, the IPV group included five studies based on community violence exposed populations where there were varying degrees of exposure to trauma. It has been well documented that sexually assaulted populations, compared to non-sexual assaults, have been found to have higher levels of PTSD (Valentiner et al, 1996), and therefore further post-hoc analyses of trauma type were conducted. Post-hoc analyses found

significantly stronger correlations between social support and PTSD where participants had been exposed to abuse, albeit the effect size would still be considered small. Interestingly, there was no correlation between social support and PTSD in populations exposed to community violence. It could be hypothesised that social support is not a protective factor in samples where community violence is high, and research has shown that social support can actually be detrimental in these populations as peer support has been found to be associated with increased levels of PTSD severity (Ullman et al., 2007). It may also be hypothesised that in communities with high levels of violence, racial tensions and family and peer conflict, the provision of social support may be more difficult to develop and maintain (Stansfeld et al., 2017).

Sources of social support

Whilst based on a smaller number of studies, the effect size for social support provided by teachers was higher than the other two forms, although still only producing a small effect size. In a meta-analysis by Chu et al (2010), teacher and school personal support was significantly stronger than other sources of social support for well-being in children and adolescents. Whilst this finding needs to be treated with caution and requires further exploration with a larger number of studies, it may provide some indication that school might be an important setting to promote mental health of students. This is supported by emerging research suggesting that teacher-mediated interventions help to improve mental health symptoms in children and adolescents following natural disasters (Berger & Gelkopf, 2009; Wolmer et al., 2005).

Theoretical implications

The key finding of this current review is that social support may only have a small impact on buffering against the development of PTSD. A large number of the included studies

were based on populations exposed to natural disasters, war zones and terrorist acts, and as a result the perceived low levels of social support (i.e. disrupted social networks) may have been caused by the traumatic event itself (Banks & Weems, 2014). It may be perhaps that social support has a limited impact on PTSD as support providers are also victims themselves and are therefore unable to provide further social support to others (Lee et al., 2004). However, due to the cross-sectional design of all included studies, no conclusions can be made until further research explores the impact of pre-disaster levels of social support on psychological sequalae.

Interestingly, emerging research is suggesting that perceived social support is associated with maintenance of PTSD symptom severity through their association with negative post-trauma cognitions (Hitchcock et al., 2015; Robinaugh et al., 2011). Post-trauma cognitions are a well-documented risk factor for development and maintenance of PTSD in children and adolescents (Bryant et al., 2007; Gómez de La Cuesta et al., 2019), however, perceived social support is seemingly playing a role in mediating this relationship. In line with the cognitive models of PTSD, supportive interaction may help traumatised children and young people challenge and reframe their negative beliefs about themselves and the world (Munzer, 2017). Furthermore, when individuals are dominated by extreme negative cognition, social support appears to have little impact on the development of PTSD (Ma et al., 2011).

Strengths and Limitations of current review

This is the first meta-analysis to synthesize correlational data between social support and PTSD in children and young people, with consideration to the source of social support and exploration of methodological and theoretical moderators. A strength of the study includes the exhaustive search of both published and unpublished data and attempts to contact authors to obtain missing data.

There are a number of limitations in this study that are important to note. The cross-sectional design of the studies included in the meta-analysis limits the conclusions that can be drawn as causality is limited. It would have strengthened the study to include prospective and longitudinal studies, however only three studies used these designs and therefore data was not extracted (La Greca, 2010; Lai et al., 2018; Rosario et al., 2008). Secondly, measures of social support and PTSD were self-reported, and parent reported data was excluded, whilst some argue that self-report is preferable when assessing personal experience (Whitcomb & Merrell, 2013), it can also be viewed as subject to self-reporting bias. This is particularly important to consider as measures of social support were predominantly based on perceived levels of support which might be influenced by participant's affect and personality (Pinto et al., 2017).

Further limitations include the large amount of heterogeneity identified in the literature. As discussed in Ozer et al (2003) it is likely that substantial heterogeneity in each construct (e.g. interpersonal violence vs non interpersonal violence) exists, and whilst effort was made to explore methodological and theoretical factors moderating the correlation between social support and PTSD, it is likely that there are additional unexplained factors. A further limitation of this review is the methodological quality of the included studies. There were many studies rated as high risk of generalisability bias and this may have influenced the overall effect size. Similarly, those studies with high risk of reporting bias, in particular those studies reporting multivariate analysis, were associated with lower correlations.

Future research and clinical implications

With the findings of the current study and following consideration of the limitations, a number of recommendations for future research are outlined. Firstly, to assist in future meta-analytic reviews it would be helpful if authors report zero-order correlations for all constructs

measured in the study, and if available provide subscale data such as source of social support correlations. Secondly, to help determine the causal links between social support and PTSD future studies should make attempts to obtain pre-trauma assessment of social support and follow up post-trauma assessment at a number of intervals to examine the association of social support and PTSD over time.

With regards to clinical implications, the negative correlation between social support and PTSD provides support that clinical treatments may benefit from efforts to increase social support (King et al., 2006), and it is documented that treatments aiming to equip people with the skills to access social support are beneficial to those with PTSD (Cloitre et al., 2002). In particular, mental health clinicians may want to focus on working collaboratively with teachers in order to increase their skills and confidence to provide social support to children and adolescents following trauma. However, the effect size noted in this current review suggests that social support may only play a small role in protecting against PTSD and future research may benefit from exploring the link between post-trauma cognitions and social support further.

Conclusions

The current review found a small correlation between social support and PTSD in children and young people following trauma, with the strongest effect size for social support provided by teachers. Stronger associations were found for studies reporting univariate data and studies reporting on populations who had experienced abuse.

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Empirical Paper: A Qualitative Study Exploring Children And Young People's Experience Of Discussing Trauma Within The Context Of A Randomised Controlled Trial

Abstract

Background and Aims: This study forms part of a randomised controlled trial 'DECRYPT' (Delivery of Cognitive Therapy for Young People After Trauma) evaluating the effectiveness of Cognitive-Therapy for Post-traumatic Stress Disorder (CT-PTSD). This qualitative study aimed to explore the experience of children and young people presenting with PTSD symptoms, talking about their trauma history, both with researchers and during therapy.

Method: Thirteen participants aged between 12 – 18 years old, who had all experienced multiple trauma and had undertaken CT-PTSD, were interviewed.

Results: Using thematic analysis, four key themes were identified: 'Desire for difference', 'Experience of participating in a research trial, 'Journey of becoming able to talk about trauma', and 'Positive changes and increased ability to cope'. Prior to the study, participants described experiencing difficult emotions and an avoidance of talking about their traumatic experiences. Participants reported wanting to get the right help and valued the opportunity to help others. Talking about trauma was perceived as difficult and emotionally draining, however participants reported a sense of relief and that it became easier over time, helping them to make sense of their traumatic experiences. This was facilitated by the therapeutic relationship, their involvement in decision making and the use of written tasks. All participants reported positive changes, both in themselves and in their ability to talk to others about their traumatic experiences.

Conclusion: Engaging in CT-PTSD and talking about traumatic experiences can be empowering for young people and allows them the opportunity to process their trauma leading to increased ability to cope.

Introduction

Background

Traumatic events, defined as exposure to actual or threatened death, serious injury, or sexual violence, are experienced by nearly a third of children and young people in the United Kingdom (Lewis et al., 2019). These events comprise of single event traumas, such as road traffic accidents, and multiple traumatic experiences, such as abuse. Research suggests abuse and neglect in the UK is not uncommon (Radford et al., 2011), with between 4-16% of children per year experiencing physical abuse, and between 10-25% exposed to domestic violence (Gilbert et al., 2009). It is well documented that multiple traumatic experiences are likely to have a detrimental long-term impact on children and young people's development and well-being (Poole & Greaves, 2012). For some, the impact may be externalised, for example through their behaviour such as anger outbursts, or internalised, resulting in young people withdrawing from their environments and presenting with low mood (Bentovim et al., 2009).

A recent epidemiological study found that of 31% of those children and young people exposed to trauma, one fifth of them went on to develop Post-traumatic stress disorder (PTSD) (Lewis et al., 2019). PTSD comprises of trauma re-experiencing (e.g. flashbacks, nightmares), avoidance (e.g. social withdrawal), and hyperarousal (e.g. anger outbursts) (5th edition.; Diagnostic and Statistical Manual of Mental Disorders [DSM-5]; American Psychiatric Association, 2013). Recently added to the 11th revision to the World Health Organization's International Classification of Diseases (ICD-11, WHO, 2018), Complex PTSD (CPTSD) requires an additional three criteria: difficulties with emotional dysregulation, interpersonal difficulties, and negative self-concept. It is hypothesised that multiple, prolonged exposure to traumatic events may be related to increased symptom complexity (van der Kolk et al., 2005), although multiple trauma is not a requirement for a diagnosis of CPTSD. Currently, very little

is known about CPTSD presentation in children and young people and their response to psychological treatments (Cohen et al., 2012).

Experience of trauma-focused therapies

It has been argued that young people's perspectives are paramount and provide the most reliable source of information regarding their own experiences (Morrow & Richards, 1996). Whilst children's experience of trauma-focused therapies is still limited, there are a number of emerging studies which shed light on how young people perceive therapy and lead to important clinical implications. In a large qualitative study 30 youths between 11 and 17 years old were interviewed about their experience of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT), where it was found that the majority found trauma exposure work was helpful, despite having initial concerns (Dittman & Jensen, 2014). Importantly, they explored what youths considered to be important change processes, such as acquiring new perspectives and learning skills for managing stress, contributing to the literature base about the best way to tailor therapeutic work for trauma-exposed children and young people.

Similarly, in a study with 16 younger children, aged between 8 and 12 years old who had all received TF-CBT, it was found that overall children found the therapy helpful, with 56.3% valuing the trauma narrative activities (Salloum et al., 2015). On the other hand, 18.8% of the children found the trauma narrative component unhelpful and wanted to avoid talking about the trauma. Therefore, it is imperative that further research is conducted to explore youth's perception of trauma focused work to understand the acceptability and feasibility of psychological interventions for PTSD to ensure that children and young people receive the most appropriate and effective treatment.

Experience of participating in trauma-related research

There are long standing debates in the literature regarding the risk–benefit ratio of conducting sensitive research such as trauma-related studies. Many argue that the benefit of participating outweigh the risks, providing benefits such as a sense of relief, the opportunity to feel listened to, all of which forms part of a healing process (Snyder, 2016). There also may be significant societal costs for not asking about trauma, as talking with people about their trauma is reported to be helpful and can help researchers to understand the psychosocial impact of trauma (Becker-Blease & Freyd, 2006). The authors argue that by not asking about trauma, researchers and clinicians impede scientific discovery, help abusers and hurt victims.

Qualitative reviews suggest that participation in trauma-related research does not seem to re-traumatise or overwhelm adult participants, generally concluding that participants may experience some mild and transient distress but that they do not regret participation (Appollis et al., 2015). In a recent study by McClain & Amar (2013), sexual abuse survivors reported valuing the opportunity to help other trauma victims ("something good coming out of something bad"), by being involved in research and therefore contributing to the knowledge base. Research in the field of medicine has also suggested many participants cite altruistic reasons as their motivation for participation (Carroll et al., 2012). Adult research suggests the three most important factors for being involved in psychological intervention studies were to help themselves ("try anything to make me feel better"), help others and because researchers were approachable (Simmonds et al., 2013).

A recent meta-analysis examining adult participant reactions to trauma assessments found some participants report immediate psychological distress following assessments (Jaffe et al., 2015). This distress was greater for those participants with PTSD. It is worth noting that many of the studies in the meta-analysis included self-report questionnaires and the authors

found that studies involving interviews, consequently providing a narrative of one's trauma experience to an unknown researcher, evoked more immediate distress. However, participants largely reported positive experiences, regardless of PTSD or their trauma history.

There is relatively little research exploring children and young people's experience of participating in research, and even less on trauma-focused research. In those limited studies that do exist, trauma-exposed children reported positive benefits in response to research participation (Chu et al. 2008; Dyregov et al., 2000). In a sample of 203 children who had been involved in traffic-related traumatic events and participated in research, 77% of the children reported "feeling good about helping others" by being involved in the study and only 5% of children reported distress from study participation (Kassam-Adams & Newman, 2005).

Cognitive Therapy for PTSD intervention

Over the past 15 years several randomised controlled trials have been conducted that support the efficacy of TF-CBT (using a variety of specific manuals) in children and adolescents (Cohen et al., 2012). However, very little is known about the treatment for children and young people with PTSD in UK Child and Adolescent Mental Health Services (CAMHS). This current qualitative study is a component of a UK randomised controlled trial entitled DECRYPT (Delivery of Cognitive Therapy for Young People After Trauma); see Appendix 5 for further information. The primary objective of DECRYPT is to evaluate whether Cognitive-Therapy for PTSD (CT-PTSD) is an effective treatment for children and young people aged between 8-17 years old presenting with PTSD symptoms who have experienced multiple traumatic experiences, in comparison to treatment-as-usual (TAU) provided by CAMHS.

The intervention CT-PTSD is a structured, fully manualised psychological treatment for children and young people with PTSD (Smith et al., 2010), see Appendix 6 for further

information. The treatment package has been adapted from Ehlers et al (2003) CT-PTSD for adults, to include age appropriate techniques for children and young people and for those who have experienced multiple trauma, for example increasing the amount of therapy sessions. It has been shown to be effective for children and young people experiencing single event trauma (Meiser-Stedman et al., 2017; Smith et al., 2007). The aims of CT-PTSD are to help young people form more coherent, elaborated memories of their trauma, restructure maladaptive appraisals, and discourage the use of maladaptive coping strategies. CT-PTSD was delivered by NHS CAMHS therapists (of any qualified background, i.e. nurse, psychologist) who completed a two-day training in CT-PTSD by a member of the trial team. The therapy took place either in NHS mental health clinics or at the young person's home, according to the clinical team's usual practice. The qualitative component of the current study captures the lived experience of youths participating in DECRYPT, offering important insights into the acceptability and feasibility of CT-PTSD and trauma-focused research.

Justification and Study Aims

As most of the research outlined is based on adult populations, it is hoped that conducting this project will contribute to child and young people trauma-related research, helping to understand young people's view regarding a psychological intervention for PTSD and their experience of being involved in a trauma-related clinical trial. By exploring the perspectives of children and young people with more complex PTSD presentations, given their exposure to multiple traumatic stressors, the qualitative project will gather important insights about how treatment might be optimally delivered to this vulnerable group, as well as informing clinician attitudes to the management of trauma-exposed children and young people. It is also

hoped that this research may help guide the design of future child research and highlight any barriers to involvement in research. Therefore, this qualitative study aims to explore four areas:

1. Children and young people's experience of previously discussing traumatic events (i.e. potential previous involvement with CAMHS).
2. The experience of participants' discussing trauma within the context of the trial (DECRYPT), both with researchers and therapists, and to explore the acceptability and feasibility of receiving CT-PTSD.
3. The experience of participating in a trauma-focused research trial, including reasons for wanting to participate in a psychological intervention trial and their experience of involvement in the stages of research (e.g. randomisation, assessments, follow-ups).
4. The impact of discussing trauma and to consider which factors help to facilitate trauma discussion, in order to inform future trauma-focused interventions.

Method

Participants

Thirteen children and young people who participated in a randomised controlled trial (RCT) (DECRYPT – Delivery of Cognitive Therapy for Young People after Trauma) testing whether CT-PTSD (Cognitive Therapy for Post-Traumatic Stress Disorder) was effective in comparison to treatment-as-usual were interviewed. The participants were recruited from four NHS sites across England. The inclusion and exclusion criteria for the DECRYPT trial are detailed in Table 10. Further inclusion criteria for the current qualitative study are detailed in Table 11.

Table 10

Inclusion and exclusion criteria for main trial DECRYPT

Inclusion criteria	Exclusion criteria
(1) Participants had experienced multiple traumatic events, conceptualised as more than one traumatic event that may have arisen from any combination of trauma types (i.e. repeated instances of a single trauma type or different trauma types). (2) Participants were also experiencing high levels of PTSD symptoms (defined as scoring 17 or above on the Children's Impact of Events Scale [CRIES-8, Horowitz, Wilner, & Alvarez, 1979] and met the criteria of PTSD, as defined by the Diagnostic and Statistical	(1) Change of prescribed psychiatric medication within the past two months; (2) pervasive developmental disorder or neurodevelopmental disorder (e.g. autism, but not Attention Deficit Hyperactivity Disorder); (3) intellectual disability; (4) another primary psychiatric diagnosis that warrants treatment ahead of PTSD (e.g.

Inclusion criteria	Exclusion criteria
Manual of Mental Disorders, Fifth Edition (DSM-5).	psychosis, severe depression, suicidal behaviour, conduct disorder); (5) inability to speak English; (6) on-going exposure to threat (e.g. living with an abuser; regularly placing self in danger) or safeguarding issues; (7) strong likelihood of being unable to complete treatment (e.g. imminent house or foster placement move); or (8) history of organic brain damage.

Table 11

Additional inclusion criteria for Qualitative component of DECRYPT

Inclusion criteria	Rationale
Participants had been randomised to the CT-PTSD arm of the trial	The trauma-focused treatment format of CT-PTSD allowed exploration of the experience of children and young people discussing their traumatic experiences. Whereas, there was anticipated to be a large amount of variation in what the treatment-as-usual arm would comprise of, consequently reducing the

Inclusion criteria	Rationale
	homogeneity of the sample and potentially not addressing the research questions.
Participants were aged between 8 – 18 years old	The main trial inclusion criteria ranged from 8- 17 years old. However, this was broadened to ensure the qualitative study captured the experience of all young people who had undertaken CT-PTSD.
Participants were at least six months post-randomisation	To ensure that all participants had completed both their baseline and follow-up DECRYPT assessment. Unless the participants had withdrawn from the study where it was acceptable to recruit at any time point.

The 13 participants were aged between 12-18 years old (M = 15.7, SD = 2), of which 10 were girls and three were boys (Table 12). All participants had undertaken CT-PTSD, ranging from 2-15 sessions, (M = 9.2, SD = 4.6). Participants were allocated a participant ID number (e.g. F001) which was used to identify participants and maintain anonymity, identifying only their gender as either 'F' for females and 'M' for males. At the time of data collection, 35 eligible participants were offered the opportunity to participate in the qualitative interview, of which 13 agreed to participate (response rate 37%). Two of the eligible participants had dropped out of the research study and were contacted to ask whether they wanted to participate in the qualitative component of the study, however they did not consent to participate. To preserve anonymity further, types of trauma are not detailed for each participant, however, all participants had experienced multiple traumatic events which included the following: sexual abuse (N=3), physical abuse (N=2), emotional abuse (N=2), domestic violence (N=5), bereavements (N=3), severe bullying (N=5) and/or sexual assault (N=2). Three participants

were continuing to receive CT-PTSD and 10 had been discharged from CAMHS.

Table 12

Demographic information about participants

Participant ID	Age	Gender
F001	18	Female
F002	18	Female
F003	16	Female
F004	18	Female
F005	16	Female
F006	15	Female
F007	15	Female
F008	18	Female
F009	17	Female
F010	16	Female
M001	12	Male
M002	14	Male
M003	12	Male

Procedure

Prior to involvement in the qualitative component of the study, participants had undertaken a baseline assessment with the trial team, comprising of a clinical interview based on Child PTSD Symptom Scale for DSM-5, (CPSS-I-5; interview version, Foa et al., 2013) and completion of questionnaires (e.g. CRIES-8, Horowitz, Wilner, & Alvarez, 1979). Participants

had also completed a five-month follow up assessment, with a researcher blind to treatment allocation; in some instances, the baseline and post-treatment may have been completed by the same researcher. In both interviews they were asked details about their traumatic experiences, including the frequency of events (further information is provided in Appendix 5).

Participants were asked whether they wished to participate in the qualitative component of the study either during or following their five-month follow-up assessment, where they were provided with an age-appropriate information sheet and were given 48 hours to consider participation (Appendices 7-10). Participants were then contacted by the trial manager to obtain verbal consent to pass on their contact details to the researcher, who then contacted participants by telephone to arrange a mutually convenient time and location for the interview. In addition to the main trial consent form, a separate consent form was completed at the beginning of the interview to ensure that participants understood and agreed to participate, in particular that they consented to the interview being audio recorded and the use of anonymous quotes in publications (Appendices 11-12). Participants were informed that they could withdraw at any time without any consequence to their care. Parental consent was also obtained for young people under the age of 16 years (Appendix 13). Young people were compensated with a £10 gift voucher for completion of the interview.

Data collection took place from July 2018 to March 2020. Half of the interviews were conducted by the main researcher and half were completed by trial managers, none of whom were involved in the youths' therapy or research assessments. In preparation for the interviews and in order to tailor the questions accordingly, the interviewers had information regarding the traumatic events the young people had experienced, whether there had been any serious adverse events (to establish if there was any clinical risk) and whether they had been discharged or were continuing to receive therapy. To ensure consistency between the interviewers, the main

researcher provided training to the trial managers prior to conducting the interviews, which included reviewing the topic guides and previous audio recordings and explaining the importance of researcher reflexivity. For those interviews not conducted by the main researcher a meeting with the interviewer was arranged shortly after the interview had taken place to discuss any reflections. In addition, once the main researcher had listened to the audio recordings of the interview, feedback regarding the interviewers positioning and approach was offered to ensure consistency in future interviews.

Ethical considerations

The main trial study was approved by The Cambridge South Research Ethics Committee (16/EE/0233 in July 2016, Appendix 14). A substantial amendment was requested to gain permission to use the data from the qualitative study as an educational project and changes made to the information sheets and consent forms to reflect this. The REC committee issued favourable opinion for the amendment in June 2018 (Appendix 15).

All participant personal data was held by the sponsor and audio recordings were uploaded to a secure database managed by the Norwich Clinical Trials Unit. Participant and carer's consent forms were stored in the main trial investigator site file and an electronic copy was stored by the sponsor.

Participants were reminded during the consent process that the interviews would be treated confidentially, unless there were any disclosures of further trauma or any safeguarding concerns during the interview, where it would be discussed with the trial team and appropriate action would be taken (i.e. sharing with participants clinical team or safeguarding teams). With regards to managing possible participant distress, participants were encouraged to take breaks and were reassured that they were not required to talk about their traumatic experiences if they did not feel comfortable doing so. A lone working procedure was also used to reduce risk to the

researchers, which included a 'buddy system' where a member of the trial team was made aware of the date, time, and location of interviews and were informed when the interviews were complete.

Interviews

A semi-structured interview guide was developed with feedback from public and patient involvement representatives. Two interview guides were used, one for children up to 12 years old and one for children and young people over 12 years old to ensure that the language and structure of the interview was age appropriate (Appendices 16 & 17). The interview guides had four main areas of interest which are detailed in Table 13, with examples of key questions provided.

Table 13

Examples of key questions asked during the interview

Area of interest	**Questions**
(1) Youths experience of previously talking about trauma	1. Had you spoken with others about your difficult experiences previously? How did this feel? How was it talking with others about your difficult experiences?
(2) Youths experience of participating in an RCT, including their experience of discussing their trauma history	2. How did you find it talking about your difficult experiences with the researcher?

(3) Youths experience of CT-PTSD, including any possible facilitators and barriers to talking about their traumatic experiences	3. How did you find it talking about your difficult experiences with your therapist? 4. Was there anything you would have liked to have been done differently in your therapy sessions?
(4) Youths experience of how attending CT-PTSD and participating in an RCT impacted their lives	5. Did you notice any changes while you were going to therapy sessions? 6. Do you feel that anything has changed for you or your family since you have finished going to therapy sessions?

The participants were asked open-ended questions with further prompts if needed and the interview guide was used flexibly to allow scope for participants to raise any issues. The interview schedules were reviewed by the study team after completion of two interviews to discuss whether any changes were needed, and the order of the questions were changed to reflect the participants journey through the trial and orientate participants (i.e. the questions about the research interview were moved to come before the questions about the therapy received).

The majority of participants chose to conduct the interviews at their home, whilst one interview was completed at an NHS site. All interviews were completed face-to-face, and efforts were made to ensure that the interview took place in a quiet environment, where interruption was minimised. One 12-year-old participant had their parent present for the interview. The interviews were completed approximately 10 months after the participants had

been randomised (ranged from 6 – 15 months post-randomisation) and the average length of the interviews was 50 minutes (range from 27 – 74 minutes).

Analyses

The interviews were transcribed by the author and analysed according to Reflexive Thematic Analysis (Braun & Clarke, 2019), using NVivo version 12 software. It is argued that thematic analysis is a useful method for examining perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights (King, 2004). As the sample are heterogenous (e.g. range of ages and trauma histories) and there are several research questions to be addressed, thematic analysis provides a flexible method to identify, analyse and report patterns or themes (Braun & Clarke, 2006).

The author took a critical realist epistemological stance to data analysis, recognising that as researchers we assume, although cannot 'know', a fixed reality, but we can understand participant experiences through close examination of their individual perspectives, thus recognising socially determined perspectives of reality. A critical realist epistemological stance was adopted due to the main researcher's previous experience of working on the research team prior to completing the qualitative component of the study, therefore recognising that pre-existing theory and knowledge was present. It was important to consider researcher positioning throughout and reflect on the co-construction of understanding between the researcher and the participants, in particular to focus on whether the researcher positioning was influencing the results or whether the results were grounded in the data. This was particularly important as the main researcher is a Trainee Clinical Psychologist and therefore had existing knowledge of assessment and intervention of PTSD, although had not delivered CT-PTSD. This reflection took place throughout the study through the use of academic meetings and peer supervision,

providing an external point of view to consider alternative realities and understanding of the participants experience. Particular attention was paid to the language used by participants to describe their experiences, and to use this to reflect on how their experiences might differ to that of the researcher and any expectations the researcher may have had prior to data analysis.

The analysis followed an inductive thematic approach focusing on generating analysis from the bottom (data up) and not shaped by existing theory, however, the research questions were used in order to structure and organise the data. After each interview, the interviewers made comments and reflections in a journal, in order to hold in mind researcher reflexivity and reflect on the interviewer's standpoint and epistemology. These reflective journals were also used to aid with analysis, which was particularly important as the interviews had been completed by different interviewers. A summary of the key notes made in the reflective journal are shown in Appendix 18.

Analysis followed a recursive process, guided by Braun & Clarke's (2006) six phases of thematic analysis (Appendix 19). The six phases of Thematic Analysis are described in Table 14, with pictures to illustrate each phase in Appendices 20-24. Throughout each phase the analysis was discussed and reviewed by a member of the trial team and academic supervisors to increase credibility. For example, after the third phase, the codebook and emerging themes were reviewed by a member of the trial team.

Table 14

Phases taken in Thematic Analysis, guided by Braun & Clarke (2006)

Phase	Process
Phase one: Familiarisation with the data	Data was transcribed verbatim, reading and re-reading the transcripts. Initial notes and reflections were detailed in a reflective journal (Appendix 18).
Phase two: Generating initial codes	This phase involved line by line thematic coding, creating memos of interesting findings to review in later stages. Each transcript was coded using the software package NVivo version 12, allowing the author code and collate extracts of text. As an example of coding at this stage, the sentence "it was very useful, I found it really helpful" was coded under 'Thoughts about involvement in DECRYPT'. As advised by Braun & Clarke (2006) data was coded inclusively (i.e. some text surrounding the extract was included in the code) to capture the context of the code. Some extracts were coded multiple times if they captured a number of things, which ensured inclusivity. If the researcher was unsure what to code a particular data extract as, it was coded under 'unsure' and revisited when all other coding had taken place. Finally, all codes were reviewed and merged, when necessary (e.g. 'became easier over time' and 'relaxed over time' were merged to reflect the same code 'easier over time').
Phase three: Searching for themes	This phase involved looking for emerging themes where the codes could be grouped together to capture the most salient patterns in the data. For example, 'feeling angry' and

Phase	Process
	'feeling upset' were merged together to form 'experiencing difficult emotions'.
Phase four: Reviewing themes	The fourth phase involved reviewing the themes and memos, some of the themes were expanded to include more codes, for example the code "more sociable" was gathered under the "positive changes" theme. Relationships between the themes were explored using 'thematic maps' which linked to the codes and were reviewed regularly. Appendices 21-24.
Phase five: Defining and naming themes	The final themes and their structure were reviewed, defined and named. As a result of this process, some themes/subthemes were merged (e.g. 'positive changes in themselves' and 'changes in relationships' were merged to form an overall theme of 'positive changes').
Phase six: Producing the report	Finally, throughout the report a selection of compelling extracts were identified to demonstrate each theme and to illustrate the participants experience.

Results

Thematic analysis revealed four key themes relating to the overarching theme of 'participant experiences of trauma-focused research and therapy'. The themes are presented below with verbatim quotes to illustrate each theme and subtheme, followed by a participant identifier. Thematic maps and a table presenting all themes and how many participants contributed to each theme and subtheme are detailed in Appendices 21-25. The four key themes can be understood to map across different aspects of the participant journey through the trial (see Figure 7 for timeline of participant):

(1) Desire for difference

(2) Experience of participating in a research trial

(3) Journey of becoming able to talk about trauma

(4) Positive changes and increased ability to cope

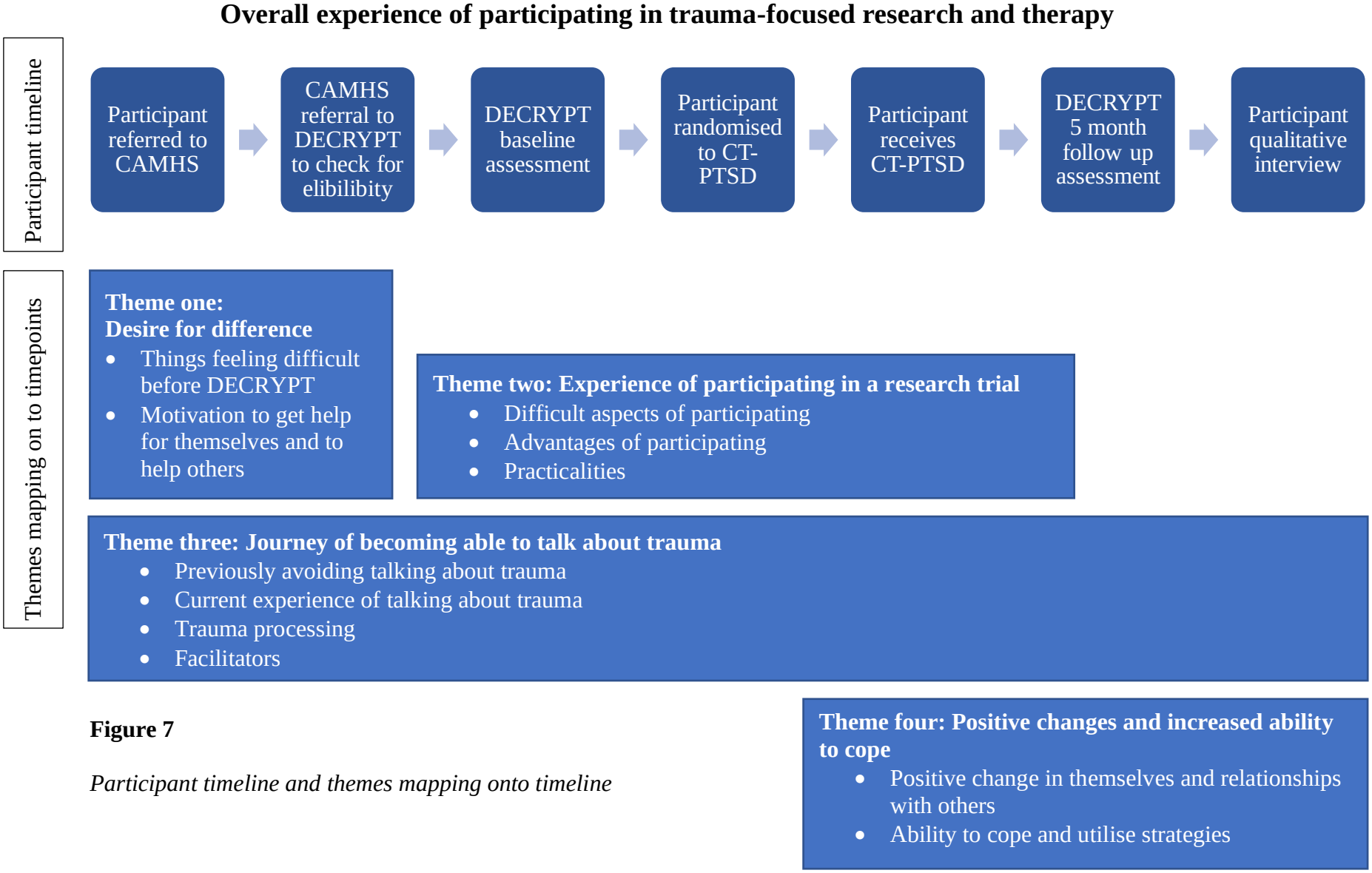

Figure 7

Participant timeline and themes mapping onto timeline

Theme 1: Desire for difference

All of the participants contributed to this theme of 'desire for difference', reporting a narrative of everyday life being difficult prior to involvement in DECRYPT and wanting to get help in order for things to feel better, and to improve the outcome for other young people who had experienced traumatic events.

Subtheme 1.1: Things felt difficult before involvement in DECRYPT

Nearly all of the young people spoke about experiencing difficult emotions prior to involvement in DECRYPT, in particular feelings of anger and upset. Ten of the participants, including all three males, described feeling angry and some alluded to this being the only way to express their emotions:

> *"I would get angry a lot because that's the only emotion I knew"* – F006

> *"I think, cas I was so emotional like, that sort of sadness was taken over by anger I guess"* – F009

The young people reported that they were experiencing difficulties in everyday life, with the most reported difficulty related to the experience of panic attacks (n=7), *"erm, I had a lot of panic attacks from the trauma"* – F005, which were often related to experiences of reliving the trauma and increased hypervigilance. Participants also described experiencing regular flashbacks and nightmares (n=6), "*I kept on having, I was having nightmares a lot, of things that had happened"*- F002, and many of the participants described how they were isolating themselves from others (n=8) illustrated by F007 "*"...I didn't want to be around people at all".*

Some of the young people were able to use the PTSD diagnosis to make sense of these difficult experiences that were intruding on their daily lives, and helpfully use this to explain their needs to others:

> *"I know what that [PTSD] is and if someone asks me what's wrong, instead of explaining everything, and then getting really upset, I can just say "just not feeling good today, erm, I'm having some bad memories because of PTSD", I feel like it's a lot easier to deal with, and I think especially to explain to people, because if, I don't know if someone said to me "oh, why don't you do this? Or why do you do this?" so like checking the doors or looking out the window, even to my friends, I didn't like explaining it, I just felt really stupid whereas now I can just, I can put a label to it and have an explanation, which I find really, really helpful"* – F002

Unsurprisingly, most of the participants (n=9) described experiencing difficulties at school, which included finding it difficult to concentrate, getting into trouble and underperforming. Participants described how difficult emotions and experiences were negatively impacting their attendance and two participants described how they did not want to go to school:

> *"yeah, like in the morning I would say to mum "I feel really sick" and I wouldn't go to school, but I didn't actually feel sick, I just said that because I didn't want to go to school"* – F007

Overall, there was a sense that the participants felt things were "*bad*" and they were in a "*bad place mentally"*- F009, and that these difficulties had persisted over a long period of time.

Subtheme 1.2: Motivated to get help for themselves and to help others

When discussing reasons for being involved in DECRYPT, the majority of participants described being motivated to get help for themselves (n=10), in order help with the difficulties they were experiencing. Whilst most participants had engaged with previous therapy or support, many of them reported it as unhelpful and only one participant had undertaken previous trauma-focused intervention, which she described as a positive experience. Participants described having been on a journey to get help and a sense of eagerness to now get, and engage with, the right help:

> *"...so it's kind of like now I can get the help that I need"* – F006

> *"I said yes, because I was game for anything at that point to try and help ... I was kinda at the point where I was, where no-one was helping so the one opportunity I had to get better, I leaped"*- F005

> *"..well yeah, I'd been on a journey to find some help for like 6 years or so, willing to take anything I could get really"* – F001

Half of the participants described altruistic reasons for being involved in trauma-focused research for young people (i.e. wanting to help other young people who had experienced traumatic events). They described wanting to be involved in research in order for

other children and young people who had experienced traumatic events to be able to access psychological therapies:

> *"…just I'm glad that this could help, "something positive coming out of my negative experience" which is really good"* – F004

> *"I found it really interesting and I want to help improve problems for people like me, you know"* – F001

Other reasons for participating in the research were to do with financial gains as participants were paid at each assessment timepoint (n=2), and because they were interested in research (n=3).

Overall, participants described a difficult journey prior to involvement with DECRYPT, a few participants described the study as *'coming at a good time'* and appeared to express a desire for something to be different, both with regards to how they felt in themselves and what they wanted from psychological therapy. There appeared to be a 'readiness to engage' in trauma-focused therapy.

Theme 2: Experience of participating in a psychological research trial

Whilst overall participants described finding participating in trauma-focused research helpful, there were also aspects that participants felt were more challenging or confusing. The following sub-themes provide an overview of the young people's views of the more difficult aspects of participation, and the advantages of participating in an RCT. Alongside, the practical considerations the young people identified as important.

Subtheme 2.1: Difficult aspects of participating in an RCT

When asking about initial thoughts and expectations about DECRYPT, a number of participants described feeling uncertain and worried about what being involved would entail (n=5):

> *"I was more worried about what to say and what to talk about and what was going to be suggested to talk about"* – M001

> *"I think, I got kinda worried at that time, I was like "what if I don't meet the criteria, will it be good counselling or bad counselling?" but then even with the counselling in general I was sat there thinking "is it going to be good? Is it going to be bad? Is it going to fix all my problems?"* – F005

> *"Yeah I was like, do I really want to do this? Like randomise? I don't really know what is going to happen"* – F003

With regards to understanding research processes, six participants described feeling confused about randomisation, "*I didn't really understand it at first to be honest*" F008, and one participant asked during the interview why the researcher who completed the 5-month follow up assessment had to be 'blind' to the therapy they had received, suggesting they had not understand the blinding process. The young people also spoke about coming to understand the study better through the use of the information sheets and discussing the study with their parents:

> *"bit confused every now and again"* Interviewer: *"so confused about what?"* M003*:*
> *"I didn't really understand what they was on about and stuff"*

" erm, I don't know, at first I definitely understood what was going on but I did, I wanted to read more into it and you know, they gave me this sheet about it and stuff and it made more sense once I'd read it" – F001

Seven of the participants described how the questionnaires from baseline and follow-up assessment felt long and repetitive, "*some of them were a bit long and the questions were repeated*" – F006. The younger participants and the parent of the 12-year old male also described how some of the questionnaires were complicated and difficult to understand.

Subtheme 2.2: Advantages of participating in an RCT

Overall, many of the young people described a positive experience of participating in research. There appeared to be a sense that the young people felt like their difficulties were being taken seriously and that the research was another way of getting the right help: *"I've realised a lot, like you lot are there to help, kinda thing."*, F008. A number of participants showed a clear understanding of the trial processes and described how they felt more informed about their care due to being involved in a research trial:

"*just that, it was interesting because you hear more, I dunno, you get told more, because you're part of the research they inform you of a lot more about what going on*" – F004

A number of participants alluded to being part of a research trial as helping to open up about their experiences, illustrated by participant F010 who reported that being part of the research trial and the friendly and understanding approach of the researchers had helped her to open up about her traumatic experiences:

"I'm so happy I got to be a part of this, and I'm so happy that I got to meet so many incredible people, who are so understanding and who are so genuinely passionate about this, and I think that's one of the main things that drew me to this. Just seeing that genuine passion and love for helping other people, it really helped me open up" – F010

Whilst as previously reported some young people found the questionnaires long and repetitive, three of the participants reflected that the questionnaires were helpful and that they valued the detail, alluding to the questionnaires helping to build up trust with the researchers:

"I can see they had the different paperwork so I feel like that made me trust them instantly when I saw that because I knew they were following something to do with the study anyway"- F002

Subtheme 2.3: Practicalities

Half of the participants appeared to value the flexibility of the assessments, describing how the research assessments were arranged at convenient times and locations (mostly at their home environments), *"it was very flexible"* – F009, and all participants had opted to complete the assessments face-to-face:

"no, I don't really like over the phone stuff cas generally it always catches me off guard [laughter], so yeah, I definitely prefer face-to-face" – F001

Lastly, participants provided suggestions of how they would have preferred the research to be conducted differently, which included shorter questionnaires (n=1), having more

preparation for what the assessments would look like (n=1), and smaller gaps between the assessments (n=1):

> *"I think the time spaces between were a bit too long because often the first one, you kind of forget what the first one was like, and then, do you know what I mean? So maybe a little bit less time in between them, a bit more regular"- F008.*

Overall, despite some participants initially feeling uncertain, the young people described their participation in the research trial as positive. It appeared that the researcher's approach and the context of participating in an RCT helped the young people to feel more able to talk about their traumatic experiences.

Theme 3: Journey of becoming able to talk about trauma

The young people described a narrative of becoming more able to talk about their traumatic experiences over time. The subthemes reflect the participant's journey of becoming able to talk about their trauma, including what this experience was like and how this was facilitated.

Subtheme 3.1: Previously avoiding talking about trauma

There appeared to be a dominant narrative of young people describing how prior to the study, they had found it difficult to talk to others about their traumatic experiences, including their family and professionals:

> *"it was horrible because like I didn't want to speak to anybody, like even people I did know kinda thing I didn't want to speak to"* – F008

Linked to this, a few participants described how when they had opened up about their traumatic experiences with professionals in the past, they felt they had not been given further help and there appeared to be a sense of mistrusting professionals and avoiding talking about trauma again:

> *"...because I think I felt I had spoken to so many different people, I don't like talking about it with too many different people because I have before, and they never really helped so I feel like, I think it's the fear of, me saying it then, them not really doing anything with that but feeling sorry for me there. I think that's what I don't like because when, sometimes when, they're like I'm really sorry that happened to you, that's awful, but then I don't get the help I feel like I need, I feel like that doesn't make me want to talk to them"* – F002

Furthermore, another potential reason for not talking to others about their traumatic experiences related to young people feeling scared:

> *"...because I was scared of opening up to them and I was scared of making them feel like they were doing something wrong"*- F010

When asking participants about their experience of previous therapy or counselling, seven of the participants perceived previous support as unhelpful, four perceived previous support as helpful, one participant was ambivalent, and one had not received any prior support. Of those who found previous support unhelpful, four participants experienced therapists/counsellors as "*out of their comfort zone*" or "*not handling the situation*". There appeared to be a consistent narrative in which therapists and counsellors avoided talking about

the traumatic experiences and focused on general anxiety, depression, self-esteem and/or eating disorder:

> *"Yeah I don't like when obviously, when before, they completely – not shut me off, but then I'd be talking about it, get really, really upset and then they'd kind of okay we'll put that to one side for now, we'll talk about it another day but then don't actually talk about it another day. I feel like, I just opened up to someone, for not really any reason, just because I felt like I needed, you wanted me to get what happened out, for me to get upset to not really talk about it again"* – F002

> *"…she was like "you need to boost your self-esteem" and she didn't help with the flashbacks at all, and she just focused on my self-esteem and I was like that's not really important to me."*- F006

> *"they didn't know what they was doing, it was just, they just gave you a sheet and you tick whether you're fine or not, and then that was it, they never asked anything like that, like you know actually spoke to them about it if you know what I mean"*- F008

One participant described feeling let-down by professionals and that her traumatic experiences had been dismissed and avoided by others.

On the other hand, those participants who described previous support as helpful, even though the focus was not on their traumatic experiences, some reported short-term benefit *"we learned to punch like take on like soft things like pillows, rather than like real people" – M003.*

To summarise, there appeared to be a mixture of previous experiences although overall the young people alluded to the fact that they were "*ready for something different"* and that

difficulties were continuing to persist despite most of them having engaged in previous therapy or counselling.

Subtheme 3.2: Current experience of talking about trauma

Although the participants recognised that talking about their experiences was difficult, they alluded to finding the trauma-focused nature of CT-PTSD helpful. The young people spoke about the differences between CT-PTSD and previous therapy, suggesting they felt that their current therapy targeted their difficulties, *"you know like really going over my issues and things like that, I've never really had to do that before, and I definitely feel like it made an impact"* – F001. In addition, one participant discussed how her therapist was able to help her tolerate difficult emotions, rather than avoiding them:

> *"because previously if I thought I was getting upset, I didn't like getting upset but now I've more- I've learned more just to deal with them feelings, instead of just pushing them away so it's just a completely different technique to what people used to do before, like kinda, distracting and putting away because I was getting upset"* – F002

When asked about what it had been like talking about their traumatic experiences, both with the therapist and the researchers, it appeared that this initial reluctance to talk about their experiences reduced over time. Six participants gave an account of initially feeling like it was difficult to talk about traumatic experiences, but that it became easier over time to open up:

> *"At the beginning I didn't really like it, because I didn't, like having to speak to someone I didn't know kind of thing, and then after a few sessions I started feeling a bit better and started opening up a bit more"* – F008

"Erm, so I was hesitant about talking about it because I was getting used to actually vocalizing it, which I mean, is one of the most difficult things I've ever done, and I think a lot of people who have gone through trauma can agree. Erm, so it was difficult, but I eased into it very, very quickly because she [therapist] *was very, very understanding and very, very kind and very, very patient"* – F010

Interestingly, three participants alluded to *"not feeling phased"* by talking about their traumatic experiences, which was particularly evident when participants were describing what it was like talking about their trauma in the 5-month follow-up assessments. These young people describe how *"by that point I was talking about it and I was fine, nothing was bothering me"* F005. However, other young people described feeling like talking about trauma was emotionally draining (n=4), with one participant describing how she would have to sleep after therapy sessions:

"yeah, it was just very emotionally draining, once I, even if was only an hour sleep afterwards then I'd be okay" – F004

"I think a lot of the time, I felt quite drained leaving but I also know that is very normal, because obviously if I'm getting upset and talking about things that are draining anyway, then that is how I'm feeling so I kind of, definitely accept that more. I don't think it's- I don't feel like I shouldn't be feeling that" – F002

When describing what it had been like talking about trauma, seven participants alluded to a sense of relief, illustrated by F003 "*in that way it was like a weight lifted off my chest*". Furthermore, participants recognised it was difficult but consequently felt relieved:

> *"…like every single session, no matter how difficult it was for me to talk, no matter how heavy the subject was, I always came out just that little bit happier, like relieved"* – F010

When reflecting about the experience of therapy, three participants described feeling proud of themselves for talking about their traumatic experiences and alluded to this being an achievement, discussing how they felt they had taken ownership over their thoughts:

> *"I feel very, very accomplished because by the time we ended the therapy I had processed everything that had happened, and I understood how things happened which has helped me so much when, thoughts of the trauma come back, and erm, kind of get me down because then I could (…) knowing all of the facts, I can just, kind of, battle those thoughts out of my brain, and then I am okay again"* – F010

Overall, the participants were very positive about their experience of CT-PTSD, the majority of participants identified that initially it felt difficult to talk about their traumatic experiences, however it became easier over time and resulted in feeling relief and a sense of achievement. This increased ability to talk about their traumatic experiences was evidenced during the qualitative interviews, as participants chose to talk about their trauma suggesting increased openness, although this was not required of them.

Subtheme 3.3: Trauma processing

An important part of CT-PTSD is helping the young people to update their trauma memories through the use of reliving work and narrative writing, with the aim of helping young people to process what happened, correct cognitive distortions, and help to contextualise their traumatic experiences within their life (Smith et al., 2010). It is anticipated that the participants will have been 'socialised to the treatment model', which often includes the use of a cupboard analogy, although only one participant discussed this during the qualitative interview, later reporting that she found this helpful:

> *"He taught me the analogy of the airing cupboard, and all of your things are packed into the airing cupboard but not folded, so you want to fold them and put them in the airing cupboard instead of shoving them in because you can only shove so much into the airing cupboard before the doors pop open"* – F005

Participants described talking about their difficult experiences, both with therapists and researchers, as difficult but important and necessary in order to be able to process it and move forward (n=6):

> *"That was, it was difficult, but at the same time it was, erm, kind of enlightening, I guess. It kind of made me realise, the dictatorship that was held over me for such a long time, and it kind of helped me to move on from it"* – F009

> *"sometimes it's hard to do like- stuff I've been pushing away because I don't want to do but I know I need to do it to get over it"* – F003

Linked to this subtheme, three participants described how encouragement from their therapist helped them to move forwards:

> *"and it came from [therapist name] in the sense of that, it wasn't like a kick, it was sort of like a nudge, like "you're going to feel better someday" like if even if you don't feel like that's going to be now, like it will happen one day and you've just go to wait"* – F006

> *"some of them were very difficult, very challenging, erm, [therapist name] definitely pushed me but not in a bad way (...)"* – F001

Despite the reliving work feeling difficult, eight participants described how the reliving work helped them to make sense of their traumatic experiences and that it helped them to accept what happened:

> *"I feel like, before I was not really making sense of the whole situation, erm, cas I had like multiple traumas I guess you could say, but I hadn't actually thought about them (...) ever, so going over them so many times, it sort of made more sense in my head*"– F001

> *"It was more like helpful in a way, because everything, different things were talked about and sorted and erm, not just really with her, but also myself, I kind of figured out like, um, like that things need to be moved on from and I can't let them kind of like take over my life and stuff"* – F009

Further evidence of trauma processing was provided by six participants who all described how talking about the trauma in detail with their therapist had reduced the time they were now thinking about their traumatic memories:

> *"talking about it is getting it out of your body so like, you can be thinking about it in your mind, but if you talk about it, it won't be just sitting there"* – F007

> *""I feel happier, being able to talk about your feelings, like I got it all out and then I was happy because I wasn't thinking about it too much"* – F005

Lastly, ten of the participants described a reduction in symptoms such as flashbacks and nightmares, suggesting that the trauma-focused work had helped to process the traumatic memories. Importantly, whilst some described that their flashbacks or nightmares had completely stopped, some of the participants reflected that these still occurred, but that they understood them better, their frequency and intensity had reduced, and they felt more able to manage them when they did happen:

> *"I'd always be looking out my window straight away, whereas now I don't do that which I think is a big thing because I'd always be on high alert all the time, even if I was at home in bed. So, I feel like that, that is really helpful that has kind of stopped"* – F002

> *"Yeah, I would definitely say I'm handling my symptoms a lot easier, erm, getting less of them, less what's the word? Not frequent, but like intense"* – F001

Another vital part of CT-PTSD is helping the young people to identify and update unhelpful trauma-related cognitions (Smith et al., 2010). It was evident from three participants that there was reduction in self-blame as they described blaming themselves less for their traumatic experiences:

> *"those sessions with [therapist name], really helped me realise that the trauma wasn't my fault, that I – I didn't have anything to be ashamed about, and that I can talk about it, and that I should talk about it if I want to, which I do want to now"* – F010

> [when asked what he had learnt in the sessions] *"erm, that what happened wasn't my fault"* – M003

The findings in this subtheme, such as the reduction in PTSD symptoms and self-blame described by the participants, provide preliminary evidence that the young people were either processing, or had already processed, their traumatic experiences during CT-PTSD therapy sessions. The participants made reference to their therapists' encouragement and guidance forming part of the process of being able to talk more openly about their experiences and helping to think of the future.

Subtheme 3.4: Facilitators to talking about trauma

There was a strong sense that participants valued therapist flexibility and encouragement to take ownership and control over the therapy sessions (n=8). It appeared that the participants found being in control of the pace of how they spoke about their traumatic experiences very helpful, for example choosing which traumatic memories to focus on and being given the option to take breaks if they felt they needed to, *"she's like you can have breaks*

in between, and like, breaking it down and we can do it when you're ready, yeah" – F003. This was also evident when participants discussed completing the research interviews and appreciated being provided with reassurance about not having to talk about anything that they did not feel comfortable talking about:

> *"They made me incredibly comfortable with everything and comfortable with needing to take a break, if an answer or a question was a little too heavy. Yeah. So yeah, that was great".* – F010

> *"They made sure that I didn't have to say anything I didn't want to say and stuff like that" – F009*

One participant who described at times feeling dismissed during therapy made reference to not controlling the pace:

> *"She kind of just said, like, I think today we're going to do this, and I kind of went along with it"* – F009

Participants also expressed that it was important to be involved in the decision-making, for example having choice over completion of homework tasks, the gender of their therapist and the setting where they spoke about their traumatic experiences. When discussing homework, whilst some reported finding homework tasks helpful, several participants described not feeling like they had time to complete it due to schoolwork and one participant reported she hated homework and made it clear she did not want to do this. Notably, it appeared that participants felt it was important to be given a preference about whether to complete homework or not:

"I think it's also mainly because she's given me a choice to do them [homework tasks], like I've never felt forced to do them because I think when you feel like you have to do something, you don't really want to do it, especially because they're related to the sessions as well it's like I want to do them, so things like, when she said to me looking at things, I think I had a list and I could choose what I wanted to, that one was particularly helpful". – F002

With regards to the setting, some participants described feeling more comfortable talking about trauma in their home environment, describing how home felt like a *"safe place"* which helped them to open up. On the other hand, some young people described having a strong preference for therapy taking place in a clinic setting, making reference to the therapy room being a good place to leave what had been spoken about behind. This highlights the importance of individual preference on how and where trauma-focused work takes place.

"…like when I leave that room it feels that that was all left in that room and I can kind of, carry on with things more" – F002

"And you being here really, really helped just because I knew I was in a safe place. I mean, it's my house, you know, so no worries concerning that" – F010

Another facilitator to talking about trauma was the use of written tasks, which were highly valued by participants. Several participants made reference to finding the timeline of their traumatic events being a particularly helpful task (n=6), reflecting that it helped to make sense of what happened and facilitated the processing of their trauma. The use of the timeline

appeared to also provide another opportunity for the young people to control the pace of the therapy sessions, participants describing how they could choose to focus on the 'lighter memories' before building up to working on the more challenging 'heavier memories'.

> *"Yeah, it felt good to be able to see it all like written down because when it is in your head, it's just all jumbled up, and there's like little bits from everything that's happened and at different times, but all coming together kind of thing. When you see it down on paper and in a timeline you see like this happened and then this happened and with all the details, it just feels like you don't have it messed up in your head"* – F008

In addition, one of the youngest participants provided another example of creative expression regarding his traumatic experiences saying *"because I didn't know how to describe it, so I did it through like showing her what happened, drawing it"* – M001. Another young person described finding constructing a letter to someone involved in the trauma a helpful aspect of the therapy: *"I kind of liked, erm, doing like the meditation and letter writing cas I'd never done that before and it did kind of help, yeah",* F009.

There was a strong sense that the positive relationship with both their therapist and/or the researcher helped young people feel able to talk about their traumatic experiences openly and honestly. The therapist approach was described as non-judgmental, understanding and easy-going by the young people. Similarly, the researcher's approach was described as "*friendly"* and "*nice*" by the young people, which helped to put them at ease and make them feel more comfortable sharing their experiences. Two participants reported that the therapist showing a sense of humour also helped to ease any awkwardness and helped them to feel more comfortable:

"erm, we had lots of fun jokes which was quite nice, being able to have that work, get through the therapy and then going on to talking about jokes, and life, and laundry and fun stuff, it was very much like a good therapist relationship" – F005

One participant did describe some negative aspects of working with her therapist, saying she felt her therapist was "*harsh"*, reflecting that this led to her feeling at times dismissed, that her therapist *"was not on her side"* and this resulted in her feeling less able to talk about her experiences:

"I did kind of feel at times, there were times she was being a bit harsh on some of the things I've said, that kind of jeopardised what I was saying, only because I would say something, and she'd like "oh, well it might because of this reason or it might be because of this or you're not really like taking it in the right way". Yeah that was the only thing really." – F009

Overall, the findings suggest that participants valued being involved in the decision making about the pace, location, completion of homework tasks and the gender of their therapist. Whilst the relationship with their therapist and researcher appeared to facilitate the ability to talk about their traumatic experiences, one young person did report that she found it easier to talk about her difficult experiences with a stranger (i.e. the researcher):

"you're only going to see those people a few times so it's easier to just tell them everything then rather than keeping it to yourself, because you're probably never going to see this person again" – F007

These findings suggest that being involved in a research trial and having several opportunities to talk about their experiences possibly facilitated how able young people felt to talk to others about what had happened.

Theme 4: Positive changes and increased ability to cope

All of the participants described positive changes following therapy, the following subthemes describe the young people experiencing more positive emotions and improved self-esteem. In addition, a narrative that the young people felt more able to cope with their difficulties, through talking with others and utilising strategies.

Subtheme 4.1: Changes in themselves and relationships

Many of the participants experienced positive changes in their emotions *("a lot more happier",* M001) and how they felt about themselves, which included feeling like a stronger person and a sense of acceptance of their identity:

> *"I think I'm finally more myself now, it's like it's helped with me come to realise who I am and that's not going to change, so I'm just going to learn to be me"* F003

One of the dominant narratives described by the participants was that participants had noticed that their relationships with others (i.e. family, friends and/or partners) had improved, which included less arguments, feeling closer to others, people being more understanding and supportive and new friendships emerging. Nine of the participants described feeling more open with others and felt that they could now talk to other people about their traumatic experiences, in contrast to before involvement in the research study where many described avoiding talking about their experiences with others:

"because I after I realised I could open up, like, it was alright kinda thing, I didn't mind speaking about it, before I found it hard to talk about it" – F008

"yeah, where I've been used to talking about it with another person I'm not bothered about talking about it now, because where, before I wasn't talking to anyone about what had happened so it was just, like playing on my mind and things" – F007

Subtheme 4.2: Increased ability to cope

Linked to the changes that the young people had noticed, a number of participants described strategies which had increased their ability to cope with difficult emotions and symptoms. These strategies included grounding techniques, relaxation exercises (e.g. *"peaceful place",* M003), breathing techniques, looking back over timeline work and self-encouragement (labelled as "*tough love"* and *"pep talks"* by one participant, F005). Those participants who had initially described feeling anger reflected that this had reduced, *"helped keep me calmer and stuff"* M001, and felt more relaxed and able to understand and manage their emotions. It appeared that strategies for controlling anger formed an important part of the therapy for the male participants, who were also younger (aged between 12-14 years old), *"we tried to find ways of controlling my anger, and – that was pretty much it",* M002. Whereas, the older females appeared to reflect more about the impact of the trauma processing work, as described above in subtheme 3.3 'Trauma Processing'.

When asked about ending therapy sessions, many of the participants described how the sessions were phased out, reducing from weekly to fortnightly. There was a sense that the participants felt ready to finish (n=8), *"I could say I was sad but I was also satisfied in the sense*

that it's like there's nothing more now", F006, suggesting they were more able to cope without therapeutic input.

To summarise, all participants described positive changes in their emotions, and how they viewed themselves. There was a sense that the young people felt more open within their key relationships and an increased ability to cope, which included utilising strategies they had learned during therapy.

Discussion

Summary of findings

This qualitative study aimed to explore young people's experience of talking about their traumatic experiences both prior to, and within the context of, a randomised controlled trial (RCT) exploring the effectiveness of Cognitive-Therapy for Post-traumatic Stress Disorder (CT-PTSD). Using thematic analysis, four key themes were identified, firstly, 'desire for difference' where young people wanted to get the 'right help' for their trauma-related difficulties and to help other young people with similar difficulties. The second theme 'experience of participating in a research trial' indicates that whilst some participants felt uncertain about participation, some felt informed and overall found participation positive. Thirdly, the theme 'journey of becoming able to talk about trauma', illustrates how previous avoidance of talking about their trauma progressed to becoming more open and being able to make sense of their trauma. It appeared that this journey was facilitated by a positive therapeutic relationship, the use of written tasks and opportunities to be involved in decision-making regarding their therapy. Lastly, the theme 'positive changes and increased ability to cope', details how participants felt more positive about themselves and their relationships with others, and utilised coping strategies.

Research findings in context

Many of the young people reported that prior to the RCT there was a strong sense of avoiding talking about trauma, which reflects key symptoms of PTSD related to avoidance, highlighted in the cognitive model of PTSD (Ehlers & Clark, 2000). However, the young people also reported previous therapists avoiding talking about their traumatic experiences, suggesting perhaps a collusion of avoidance and explaining why previous therapies focused on other

symptoms such as anxiety, rather than trauma-focused therapy. It has been previously reported that many therapists find working with trauma-exposed youth difficult and demanding (Allen & Johnson, 2012), and that therapists are concerned that talking about trauma may increase the young people's distress leading to re-traumatisation (Finch et al., 2020). However, participants in the current study report that this avoidance of trauma-focused work led to them feeling let down and that their difficulties persisted, even after engaging in other psychological therapies. This concern that talking about trauma can increase distress shows some similarities with the literature regarding suicidal tendencies, where commonly held perceptions that asking about suicide will increase suicidal ideation are noted. However, a review found that acknowledging and talking about suicide actually reduces suicidal ideation and can result in improved psychological support (Dazzi et al., 2014). Similarly, the findings from the current study suggest that young people find it beneficial talking about trauma and report finding psychological trauma-focused support helpful. In fact, the young people experienced trauma-focused therapy as helping to reduce their difficulties, and whilst they reported it is difficult and emotionally draining, over time it became easier and resulted in them feeling accomplished and relieved, providing a sense of empowerment over their traumatic experiences. This finding of 'time-related diffusion of negative affect' has been reported a number of times in the literature, highlighting the robustness of this effect (Carter-Visscher et al., 2007; Dittman & Jensen, 2014)

Overall, young people in the current study described a positive experience of participating in a psychological research trial. Despite initially feeling worried and confused about participation, young people appeared to demonstrate a 'readiness to engage' in trauma-focused work, reporting that they wanted to get the right help and valued the opportunity to help others by being involved in research. Supporting this finding, a qualitative study found

that participants described a desire for change as the motivation to continue with trauma treatment (Tong et al., 2019). Interestingly, the context of participating in an RCT appeared to facilitate the young people opening up about their traumatic experiences. 'Readiness to engage' may have been facilitated by participants feeling informed by both the researchers and the therapists about what their treatment would comprise of, and the appreciation of the structured research assessments. This suggests 'socialisation to the model', a key part of CT-PTSD, is a vital component (Smith et al., 2010), in order to increase transparency and collaboration during therapy.

Another critical component of CT-PTSD involves constructing a trauma narrative, where often young people are encouraged to use a variety of creative expressions to tell the story of their trauma (Smith et al., 2010). This component of the therapy, in particular the development of a timeline and the use of drawing, was held in high regard by the participants in the current study, where it was described how this helped to make sense of their traumatic experiences. The usefulness of the timelines adds to the emerging literature that constructing written narratives, in particular for those who have experienced multiple traumatic events and are experiencing complex traumatisation, is likely to be a vital part of trauma-focused therapies (Ruf et al., 2010; Smith et al., 2010). It is likely that constructing written narratives helps to provide structure to the therapy sessions and helps young people disentangle traumatic memories and establish a sense of empowerment over their experiences (Schauer et al., 2011)

An encouraging finding in the present study is that all of the participants reported positive changes after engaging in trauma-focused research and CT-PTSD. Some participants reported an absence of PTSD symptoms, others felt whilst symptoms were still present, they were able to understand and cope with them more effectively. Despite relaxation training not being routinely required in CT-PTSD (Smith et al., 2010), a few participants described finding

the use of strategies, such as safe place exercises, helpful in managing their difficulties. It appeared that the younger participants in particular utilised these strategies, potentially suggesting that younger children may benefit from skills training to help them tolerate higher levels of anxiety and more difficult emotions during therapy. However, it is difficult to determine whether this is a feature of age or gender, as all three males were also younger, and therefore this limits the conclusions that can be made.

An important finding was that participants reported that following CT-PTSD they felt more open to talking about their traumatic experiences with others, outside of the therapeutic relationship. Helping to establish positive, trusting relationships is an important part of trauma-focused psychological interventions, especially for young people experiencing complex trauma where relationships have often been disrupted (Cohen et al., 2012). It is likely that the young people learnt during CT-PTSD that they are able to talk about their traumatic experiences, becoming easier over time, and without anything bad happening, in line with gradual exposure outlined in the Cognitive model of PTSD (Ehlers & Clark, 2000).

It was also found that participants expressed a desire to help other young people who have experienced traumatic events. The involvement in research may also provide another opportunity for the young people to feel empowerment, (as illustrated by one of the participants *"something good coming out of my negative"*), over their traumatic experiences. This idea of empowerment has been previously documented, suggesting that restoring a sense of community and helping people to find their voice is key to healing from trauma (Malekoff, 2008; Wise, 2005). In addition, the sense of empowerment and positive changes noted by the young people could be understood as post-traumatic growth (PTG), an area where literature regarding children and young people is emerging (Cryder et al., 2006). Furthermore, trauma-exposed young people are likely to benefit from opportunities to help others who have experienced

trauma, for example by engaging in peer support groups, which may facilitate opportunities for PTG (McElheran et al., 2012), and is suggested in NICE guidance for supporting individuals with PTSD (NICE, 2018).

Strengths and limitations

There are a number of strengths and limitations of this study which are important to consider. Firstly, the convenience sampling approach adopted limits the conclusions that can be drawn from this study. Whilst attempts were made to contact two participants who had dropped out of the trial, both did not agree to participate in an interview. It is likely that the views presented in this study do not reflect those of the participants who may have had more negative experiences. Furthermore, the interviewers were either former or current trial managers which introduces possible bias into the facilitation of the interviews and analysis. To overcome this, it was ensured that the interviewers had not been involved in participants research assessments and researcher diaries and audio recordings were reviewed in order to consider researcher positioning throughout. However, it is worth considering the findings in light of the fact that the researcher's own experiences and biases may have influenced interpretation of the data. In addition, there may have been participant performance bias, despite being given reassurance and encouragement to provide honest answers, participants may have perceived the qualitative component as part of the wider trial and therefore may have been reluctant to share more negative opinions.

Interestingly, a number of participants reported that they had found the qualitative interview therapeutic and felt that it had provided an opportunity to reflect on their journey and "*how far they had come*". Similarly, in a mixed method study, adult participants who had received cognitive-behavioural therapy (CBT) for depression, found that follow-up assessments

had been helpful to allow them to reflect on their experience and increase their sense of personal accomplishment, and that 93% of participants were glad to have taken part in the trial (Simmonds et al., 2013). It may have strengthened the current study to use a mixed method design, gathering quantitative information about their views (e.g. "would you recommend this therapy to other young people who have experienced traumatic events?") and possibly asking about their views of participating in the qualitative study.

A strength of the study is that, to the authors knowledge, this is the first UK qualitative study exploring young people's experience of participating in a trauma-focused research and therapy. To increase validity and credibility of the research, a reflective diary, and validity checks on both the generation of codes and themes were completed with fellow colleagues and academic supervisors. The completion of face-to-face interviews, with participants from Child and Adolescent Mental Health Services across the UK, has provided rich and meaningful information about young people's perspectives which will help guide future researchers and clinicians when working with young people who have experienced traumatic experiences.

Clinical implications and future research

The findings suggest that some young people found the structure and predictability of being involved in an RCT facilitated their ability to open up about their traumatic experiences. It is likely that the thorough consent process and the use of information sheets helped some young people feel informed about their care, highlighting further the beneficial impact that written resources can have when working with children and young people. However, it is worth noting that a number of participants also found elements of the RCT confusing, in particular understanding the randomisation process. Therefore, it will be helpful for future researchers to ensure that children and young people fully understand components of participating in research,

and they address and attempt to reduce young people's potential anxieties. This increased sense of safety and predictability is particularly important for traumatised children and young people, where often safety and security have been threatened when traumatic events have occurred (Bassuk et al., 2006).

All of the participants opted to complete both the qualitative interview and their research interviews face-to-face, despite having the option to complete these over the phone and/or complete the questionnaires online. There is a national surge in conducting computer-based and online therapies (Stasiak et al., 2016), however, the young people in this study suggested they preferred face-to-face contact, with one participant explicitly acknowledging that there is a drive to conduct therapy remotely but felt strongly that she preferred face-to-face contact with her therapist in order to build up a relationship. This finding is supported by a study where it was found that young people preferred to see a therapist when offered the opportunity (Stallard et al., 2011). The implementation of online therapies for children and adolescent is lagging behind adult populations, however, a very recent NHS initiative to enhance the delivery of online services for children and young people has been launched in the UK (NHS, 2019). In addition, there has been an increase in the use of platforms such as Healios, an entirely online delivery of therapies covering a large number of mental health conditions (Healios, 2019). Therefore, future research will benefit from exploring the experience of children and young people participating in online therapies, in particular for trauma-focused interventions when the therapeutic relationship is key for improving outcomes.

It was clear from the young people in this study that they initially felt unable to talk about their experiences with their families or friends. Interestingly, the young people discussed that their traumatic experiences had also been previously avoided by professionals. This study contributes to the finding that young people find it helpful to talk about their traumatic

experiences, and therefore highlights the need for therapists to address trauma, both within assessments and interventions. It is worth noting that therapists involved in delivering CT-PTSD were offered additional training and supervision as part of involvement in the RCT, which is likely to have increased their knowledge and confidence to deliver trauma-informed therapy. It will be key for services to provide appropriate training and supervision to ensure the provision of effective trauma focused interventions, with careful consideration to providing emotional support to alleviate anxieties and emotional burden, and to increase the confidence of therapists (Finch et al., 2020). Future research would benefit from investigating current therapist's views of the training and supervision in CAMHS to identify potential training-practice gaps.

Leading on from this, the young people valued therapist and researcher flexibility, which included involvement in the decision-making, such as providing opportunities for them to make decisions about which traumatic memories to discuss. This has also been found in previous studies where participants were most satisfied when they felt they were not being pressured by therapists to talk about traumatic incidents (Dittman & Jensen, 2014). It appeared that this collaborative and transparent way of working, alongside the supportive, non-judgmental attitude of the therapists and researchers, helped to facilitate a positive and trusting therapeutic relationship, well documented as key to improving client outcomes (Lambert & Barley, 2001). These decision-making opportunities are likely to provide much needed control and a sense of empowerment for children and young people who may have experienced traumatic events where they have felt out of control and unsafe. It will be important for clinicians delivering CT-PTSD as a treatment manual to allow scope for flexibility and adaptability, providing opportunities for the young people to control components of the therapy, in order to meet the individual needs and preferences of their clients.

Conclusions

To conclude, this qualitative study comprising of young people with PTSD, some of whom had complex trauma presentations, provides some preliminary evidence that talking about trauma can be empowering and allows them the opportunity to process their traumatic experiences. The young people discuss a journey of becoming able to talk about their traumatic experiences, and an increased ability to cope and talk about their experiences more openly with others outside of the therapeutic relationship. Findings suggest that young people feel more able to open up about their traumatic experiences when trauma-focused interventions are delivered when a positive therapeutic relationship has been developed and they are involved in the decision making.

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Meta-analysis Press Release

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This thesis was submitted to fulfil part of the requirements of a Doctorate in Clinical Psychology. This press release document summarises both sections of Volume I, which includes a meta-analysis and an empirical qualitative paper.

Social support may only play a small role in buffering against Post-Traumatic Stress Disorder in children and young people

Social support only has a small association with Post-Traumatic Stress Disorder (PTSD) in children and young people, a meta-analysis from the University of Birmingham shows.

Over the last decade there been a rapid increase in research into PTSD in children and young people. In a recent study, it was found that nearly a third of 2064 children and young people reported experiencing traumatic events, of which 7.8% experienced PTSD by age 18 years (Lewis et al., 2019).

It is important to try and understand why some children and young people develop PTSD following trauma, and why some do not. Past research with adults has highlighted the importance of social support as a risk factor for PTSD (Brewin et al., 2000), with less social support linked with an increase in PTSD symptoms or current rates of PTSD (Ozer et al., 2003). Social support often refers to the perceived emotional support provided by significant others, such as caregivers or peers. There appears to be a gap in research about what we know about the relationship between social support and PTSD for children and young people, and therefore it is was decided to systematically explore this relationship to understand risk factors for developing PTSD further.

Lead researcher, Leila Allen and colleagues from The School of Psychology, University of Birmingham, conducted a meta-analysis aiming to systematically evaluate and summarise

the existing child literature to estimate the association between social support and PTSD symptoms following traumatic events. In addition, analysis was conducted to examine the relationship between different sources of social support (family, peer and teacher) with PTSD symptoms.

After completing a systematic search, 50 studies reporting a suitable correlation between total social support scale or a source of social support with PTSD were found. The total number of participants included was 27,073, ranging from 6-23 years old. The identified studies were statistically analysed using a set of statistical techniques called "random effects meta-analysis". Following this, a small association between social support and PTSD was found in children and young people. In studies reporting sources of social support, the association between peer support, family support and teacher support and PTSD were also small, with teacher support being the highest. Those studies reporting on participants exposed to abuse had higher associations between social support and PTSD, although this was still a small association.

The small association between social support and PTSD suggests that whilst clinical treatments may benefit from efforts to increase social support, it is likely that social support may only play a small role in protecting children and young people against PTSD. A large number of the included studies were based on populations exposed to natural disasters, war zones and terrorist acts, and as a result the perceived low levels of social support (i.e. disrupted social networks) may have been caused by the traumatic event itself (Banks & Weems, 2014). It may be perhaps that social support has a limited impact on PTSD as support providers are also victims themselves and are therefore unable to provide further social support to others (Lee, 2004).

It is worth noting that all of the studies used a cross-sectional design, meaning they only provide a ‘snapshot’ of the association between social support and PTSD at one time point. Therefore, future research using prospective and longitudinal design, which would capture the association at different time points, would help to explain the relationship between social support and PTSD further.

Empirical Paper Press Release

Empirical Paper Press Release

Talking about trauma can be empowering for young people

Young people with Post-traumatic Stress Disorder (PTSD) who have experienced trauma find talking about their experiences can be empowering and allows them the opportunity to process their trauma, according to a new study.

There are long-standing debates in the literature regarding the benefits of asking about trauma. Whilst some argue that asking about trauma can re-traumatise and cause psychological distress (Jaffe et al., 2015), others argue that there are significant societal costs for not asking about trauma, arguing that it helps abusers, hurts victims and impedes scientific discovery (Becker-Blease & Freyd, 2006). In a recent qualitative study children and young people who had undertaken trauma-focused cognitive behavioural therapy found that the trauma exposure work was helpful, despite having initial concerns (Dittman & Jensen, 2014).

Researchers at the Universities of Birmingham and East Anglia investigated the experiences of 13 children and young people, aged between 12- 18 years old, who had all undergone cognitive therapy for PTSD (CT-PTSD) following multiple traumatic experiences (e.g. physical and/or sexual abuse). The young people had all participated in a UK randomised controlled trial (RCT) to evaluate whether CT-PTSD is better than usual NHS treatment. Using semi-structured interviews, the young people were asked about their experience of talking about their trauma history, both with researchers and clinicians delivering CT-PTSD, and invited to reflect on the experience and the impact of undertaking trauma-focused research and therapy.

Using thematic analysis, guided by Braun & Clark (2006) six phases of analysis, four themes were identified: ‘Desire for difference’, ‘Experience of participating in a research trial’, ‘Journey of becoming able to talk about trauma’, and ‘Positive changes and increased ability to cope’. Young people spoke about how, prior to the RCT, both they and their previous clinicians

had often avoided talking about their traumatic experiences. Overall, the young people valued the opportunity to talk about their trauma with non-judgmental, supportive clinicians and describe feeling like "*a weight had been lifted off their shoulders*". Reflecting that whilst it was difficult and emotionally draining to talk about their trauma, it became easier over time and led to them to being able to talk to others about their experiences. Despite some uncertainty about participating in a research trial, young people reported that they had found it helpful being involved in an RCT and that it had helped them to open up about their traumatic experiences.

The findings indicate a number of facilitators which help young people feel more able to talk about trauma. Firstly, a positive relationship with their therapist was very important, including supportive and non-judgmental care, and providing encouragement to take ownership over the traumatic experiences. Secondly, being involved in the decision-making about therapy, including being in control of the pace, was highly valued by the young people. Lastly, the use of written tasks such as development of a timeline, helped the young people to talk openly and to process the trauma.

This qualitative study provides important insights into how young people view being involved in trauma-focused psychological interventions and research. It also provides details about the ways young people find most helpful for making sense of their traumatic experiences, to cope more effectively, and talk more openly with others about their trauma.

References for Press Releases

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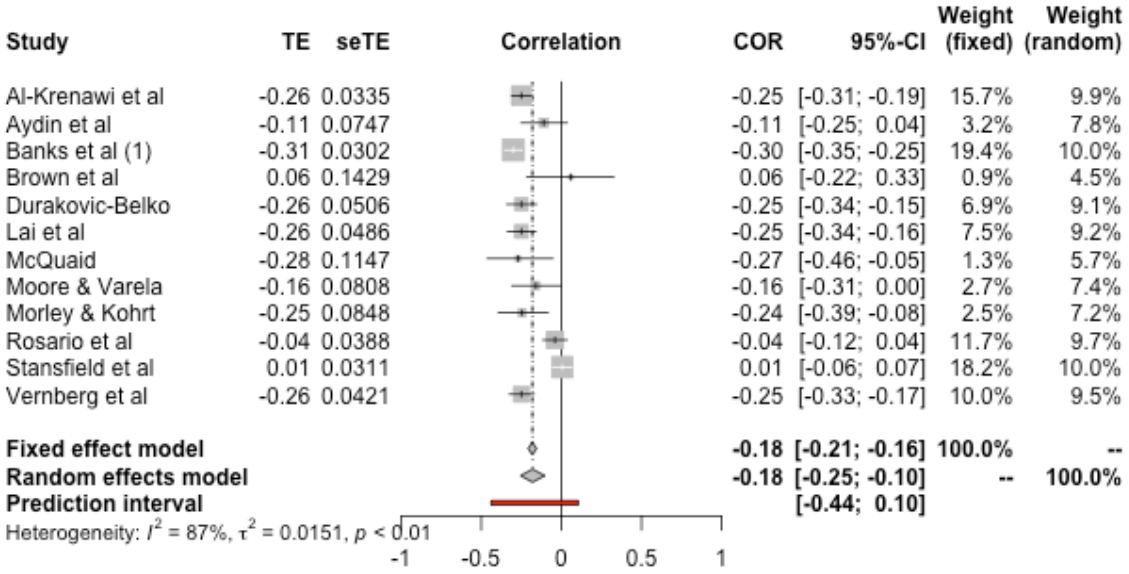
Appendices for Volume One: Meta-analysis

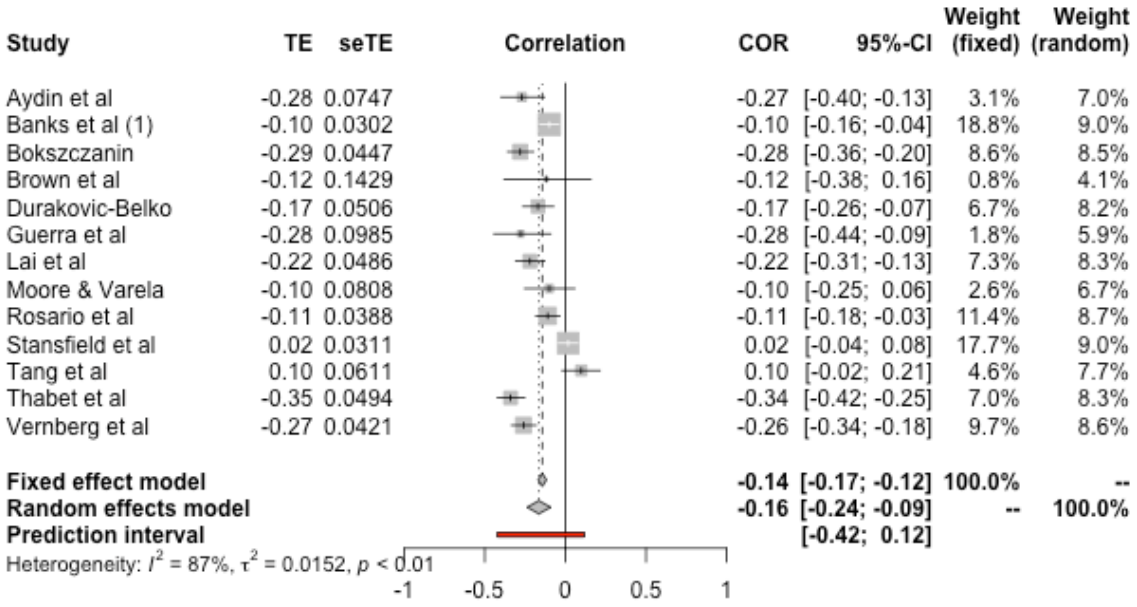
Appendix 1. Table showing estimates of publication bias

Meta-analysis	Fail Safe N	Duval & Tweedie's Trim and Fill
Total social support and PTSD	3472	0 missing studies to the left of the mean; Adjusted r = -0.12 (95% CI -0.16, -0.07), Q = 410.42

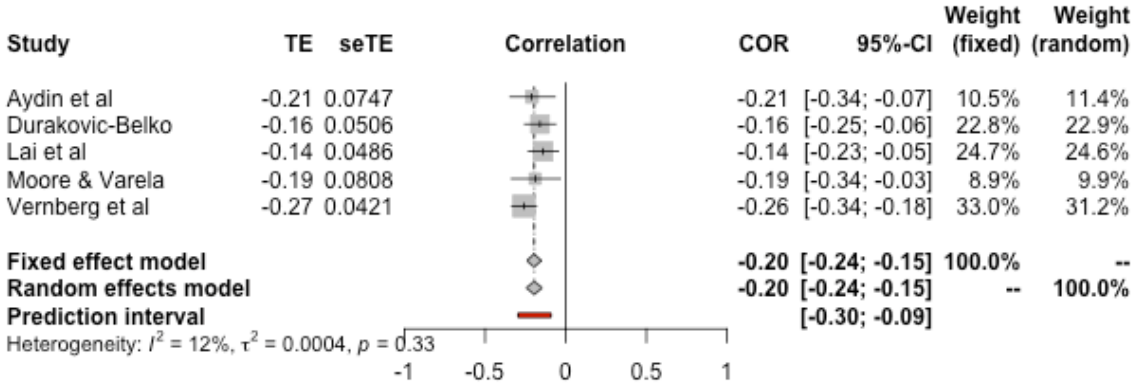
Appendix 2. Forest Plot of the Omnibus Test for the correlation between peer social support and PTSD



Appendix 3. Forest Plot of the Omnibus Test for the correlation between family social support and PTSD



Appendix 4. Forest Plot of the Omnibus Test for the correlation between teacher social support and PTSD



Appendices for Volume One: Empirical Paper

Appendix 5: Further information about trial processes

The Delivery of Cognitive Therapy for Young People after Trauma (DECRYPT) randomised controlled trial (RCT) will examine the effectiveness of Cognitive Therapy for PTSD for treating PTSD in children and young people in comparison to treatment as usual. The trial is a two-arm, single blind, superiority RCT comparing CT-PTSD (n=60) to treatment-as-usual (TAU, N=60) in children and young people aged 8-17 years with a diagnosis of PTSD following multiple trauma exposure. The primary outcome is PTSD severity assessed using the Child Revised Impact of Event Scale (8-item version) at post-treatment (i.e. approximately five months post-randomisation). Secondary outcomes include using the Child PTSD Symptom Scale for DSM-5, interviewer version (CPSS-I-5; structured interview, psychometric properties made available by authors Foa et al., 2013) to assess PTSD diagnosis and symptoms, with additional items for measuring dissociation and complex PTSD. Further questionnaires are completed assessing depression, anxiety, overall functioning and parent-related mental health.

Participants will be assessed five times during the study: baseline, mid-treatment (approximately 2.5 months post-randomisation), post-treatment (approximately five months post-randomisation) and at 11- and 29-month post-randomisation follow up assessments. Trained assessors collecting post-treatment and follow-up data are blinded to group allocation. These assessments are undertaken by trained assessors with no other role in the trial. Following allocation to CT-PTSD or TAU, all participants in the study, their care coordinator/ referrer and clinical team (if applicable) are asked not to reveal the group to which the participants were randomised to the trained assessor.

Participants are given the choice whether they wish to complete the questionnaires online or face-to-face with a researcher. It is likely they will have seen different researchers for their assessment points. Participants recruited to the qualitative study will have only been assessed at baseline and five-month follow-up due to the timing of when data collection took place.

Appendix 6: Further information about Cognitive-Therapy for Post-traumatic Stress Disorder

The intervention CT-PTSD is a structured, fully manualised psychological treatment for children and young people with PTSD (Smith, Perrin, Yule & Clark, 2010). The treatment package has been adapted from Ehlers et al (2003) CT-PTSD for adults, to include age appropriate techniques for children and young people. It has been shown to be effective for children and young people experiencing single event trauma (Meiser-Stedman et al., 2017; Smith et al., 2007). Following this a number of adaptations for multiple traumatic experiences were made, which included increasing number of treatment sessions from 10-12, to approximately 15 therapy sessions, in order to allow for more time for trauma processing and stabilising other comorbid conditions such as depression.

The targets of CT-PTSD are to form more coherent, elaborated memories of traumatic experiences, restructure maladaptive appraisals relating to the trauma and its consequences, and discourage the use of maladaptive coping strategies (as used by the child or young person, and where appropriate their family also).

CT-PTSD involves several core elements: psychoeducation, with an emphasis on the role of cognitive processes in the onset and maintenance of PTSD; narrative work and imaginal reliving to help develop a coherent trauma narrative; cognitive restructuring (to reframe the meanings and interpretations associated with trauma and its aftermath), and coping management (e.g. addressing maladaptive strategies such as thought suppression, rumination and safety-seeking behaviours). In working with youth exposed to multiple traumatic stressors, more time is spent on producing a timeline of the child's experiences (to help identify the most significant experiences but also to clarify autobiographical memory and address meanings around the onset and resolution of repeated trauma such as abuse or domestic violence) and where necessary, stabilization strategies (e.g. techniques for lifting mood, reducing self-harm, anxiety management, anger control)

The intervention was delivered by NHS CAMHS therapists (of any qualified background, i.e. nurse, psychologist) who completed a two-day training in CT-PTSD by a member of the trial team. The therapy took place either in NHS mental health clinics or at the young person's home. Following completion of CT-PTSD, participants were either discharged from CAMHS or continued with care as usual in CAMHS setting.

Appendix 7: Participant information sheet for children aged 8-11 years old

-LOCAL TRUST LOGO-

Helping Children after Very Scary or Upsetting Events Study

Thank you for taking part in this study! We would like you to do an **extra interview**.
An interview is talking about something with another person.

Why have I been asked to do this research study?

You are taking part in this study. The study is about the best way of helping children who have been in very scary or upsetting things.

Why do you want me to do another interview?

We would really like to know what it was like for you being in this study. This interview will let you explain to us what it was like. You can say *whatever you like* – we want to hear about the *good and the bad* things about being in the study.

What you tell us will help us find the best way of helping children who have been through something very scary or upsetting.

Do we have to take part?

No, it is up to you and your family!

You can decide to come out of the study at any point, and *you do not have to tell us why*. You will not be treated any differently by any hospital or doctor if you decide you do not want to take part in this study.

What happens in the study?

We want to talk with you about being in the study. This talking is called an "interview". The interview will be all about what you did in the study. It will take 15-30 minutes to do – it depends on how much you say!

We will record the interview so that we can listen to it listen and think carefully about everything you said.

Who is running this study?

The study is a project run by scientists at the University of East Anglia. It is funded by the National Institute of Health Research (part of the government).

The interview will be with a member of the study team, but they will not be with anyone person who worked with you at the clinic.

Who is taking part?
We are asking some of the 120 children and teenagers who have been taking part in the study to also have an interview.

Who will know I am taking part in this study?
No one else will know about you taking part in this study. We won't tell anything about you to anyone else, unless we think that you or someone else is at risk of being hurt.

We will write some reports about these interviews, so that other people can learn from everything people tell us. We might use some of your words in these reports, but **no one** will be able to tell it was *you* who said those words.

Has this research study been checked by an ethics committee?
Yes, this study has been checked by several people. The group of people who checked this study is called an "ethics committee". The Cambridge South Research Ethics Committee (16/EE/0233) checked this study and they are happy for the study to take place.

I have some questions about this study, who do I contact?
You can speak to the person who told you about this study. You can also contact [redacted] at the University of East Anglia who is in charge of the study. His contact details are:

Direct line: [redacted]
Email:

***REMEMBER*:**
You don't have to take part in this study
You can leave the study any time you like

Thank you very much for reading this information sheet!

Appendix 8: Participant information sheet for young people aged between 12-15 years old

Helping children and young people after very scary and upsetting experiences (the DECRYPT study)

We are carrying out the DECRYPT study to find the best way of helping children and young people who have been through very scary or upsetting experiences and have post-traumatic stress.

We invited you to take part in the DECRYPT study. The main part of your involvement with the study is over. We would really appreciate it if you would participate in an extra **interview** to tell us about your experiences and how we can improve the care we offer children and young people affected by trauma.

Please read this information sheet if you are interesting in doing this extra interview. Your participation is *entirely voluntary* – it's completely up to you.

You do not have to make your mind up right away. You are welcome to ask questions about the project and to talk about it with other people.

What is the purpose of the study?
Children and young people who have post-traumatic stress might receive help from Child and Adolescent Mental Health Services (CAMHS) and other NHS services. We are trying to see if we can improve the care that services offer to young people with post-traumatic stress.

The DECRYPT study is looking at whether a talking therapy called "cognitive therapy" might be a good treatment for post-traumatic stress in children and young people. We think it is important to allow children and young people to explain *in their own words* what it was like to take part in the study and receive care or support. This will help us to learn more about helping children and young people in the future.

We would like to know what you think about all parts of the DECRYPT study and the help you received. We really want to know what you think, ***good or bad***.

Do we have to take part?
No! It is up to you and your family.

You are free to stop taking part in the study any time you like.

If you don't want to take part in the study or decide to stop taking part in the study you will not be treated any differently by NHS staff or your doctor now or any time in the future.

What will the interview involve?
We would like to interview you to discuss your experiences of the DECRYPT study. This interview will allow you to describe in your own words what it was like being in the study and receiving support.

The interview will probably take about 30 minutes to complete, although it may be a little shorter or longer than this depending on how much we have to discuss.

We would like to audio record the interview, so that we can properly think about all of your answers and comments.

Who are conducting these interviews?
The study is run by our team at the University of East Anglia. It is funded by the National Institute of Health Research (the part of the NHS that does research into how best to help people).

The interviews will be conducted by a member of the DECRYPT team, but they will not be your therapist or anyone who has done the assessment interviews with you recently.

Who is taking part in these interviews?
We are inviting some of the 120 families taking part in the DECRYPT study to also complete these interviews.

Will we receive any payment?
Yes, we will be able to make a small payment for each interview assessment to cover travel costs and as a thank you for your time and support of this study.

Confidentiality – who will know we are taking part in this study?
All information collected about you during the research will be kept strictly confidential – that means we will not tell anything about you to anyone else – unless we believe that you or someone else is in danger of being hurt.

The information we get from these interviews may be published and used as part of an educational project in order to help other people working with children who have been in very scary or upsetting events. The results may include *quotes* from your comments during the interview – however, we would never share any information that would allow you to be identified (e.g. your name, your date of birth, where you live).

Has this study been checked?
Yes, this study has been checked by several people; the group of people who checked this study is called an "ethics committee". The Cambridge South Research Ethics Committee (16/EE/0233) checked this study and they are happy for the research to take place.

I have some questions about this study, who do I contact?
You can speak to the person who told you about this study. You can also contact [redacted] at the University of East Anglia who is over-seeing this project. His contact details are:
Direct line: [redacted] Email: [redacted]

What if I am not happy about the study or wish to make a complaint?
If you are not happy about this research study or wish to make a complaint about it, then please contact the NHS Patient Advisory Liaison Service at [redacted]

REMEMBER:

You don't have to take part in this study
You can leave the study any time you like

Thank you very much for reading this information sheet

Appendix 9: Participant information sheet for young people aged between 16-18 years old

The DECRYPT Study:
Delivery of Cognitive therapy for Young People after Trauma

We are carrying out the DECRYPT study to find the best way of helping children and young people who have been through very scary or upsetting experiences and have post-traumatic stress.

We invited you to take part in the DECRYPT study. The main part of your involvement with the study is over. We would really appreciate it if you would participate in an extra **interview** to tell us about your experiences and how we can improve the care we offer children and young people affected by very scary or upsetting events.

Please read this information sheet if you are interesting in doing this extra interview. Your participation is *entirely voluntary* – it's completely up to you.

What is the purpose of the study?
Children and young people who have post-traumatic stress might receive help from Child and Adolescent Mental Health Services (CAMHS) and other NHS services. We are trying to see if we can improve the care that services offer to young people with post-traumatic stress.

The DECRYPT study is looking at whether a talking therapy called "cognitive therapy" might be a good treatment for post-traumatic stress in children and young people. In order to understand how well it works, we think it's important to allow children and young people to explain *in their own words* what it was like to take part in the study and receive care or support.

We would like to know what you thought about all parts of the DECRYPT study and the help you received. This will enable us to improve the way in which support is given to children and young people in the future. We really want to know what you think, ***good or bad***.

Do we have to take part?
No! It is completely up to you and your family.

You are free to stop taking part in the study any time you like. If you don't want to take part in the study or decide to stop taking part in the study you will not be treated any differently by any NHS service or your doctor.

What will the interview involve?
We would like to interview you to discuss your experiences of the DECRYPT study. This interview will allow you to describe **in your own words** what it was like being in the study and receiving support.

The interview will probably take about 30 minutes to complete, although it may be a little shorter or longer than this depending on how much we have to discuss.

We would like to audio record the interview, so that we can properly think about all of your answers and comments.

Who are conducting these interviews?
The study is run by our team at the University of East Anglia. It is funded by the National Institute of Health Research (the part of the NHS that does research into how best to help people).

The interviews will be conducted by a member of the DECRYPT team, but they will not be your therapist or anyone who has done the assessment interviews with you recently.

Who is taking part in these interviews?
We are inviting some of the 120 families taking part in the DECRYPT study to also complete these interviews.

Will we receive any payment?
Yes, we will be able to make a small payment for each interview assessment to cover travel costs and as a thank you for your time and support of this study.

Confidentiality – who will know we are taking part in this study?
All information collected about you during the research will be kept strictly confidential – that means we will not tell anything about you to anyone else – unless we believe that you or someone else is in danger of being hurt. Information collected will be securely stored for 10 years following the end of the study.

The information we get from these interviews may be published in order to help other people working with children who have been in very scary or upsetting events. The information may also be used for research conducted for educational purposes. The results may include *quotes* from your comments during the interview – however, we would never share any information that would allow you to be identified (e.g. your name, your date of birth, where you live).

Has this study been checked?
Yes, this study has been checked by several people; the group of people who checked this study is called an "ethics committee". The Cambridge South Research Ethics Committee (16/EE/0233) checked this study and they are happy for the research to take place.

I have some questions about this study, who do I contact?
You can speak to the person who told you about this study. You can also contact [redacted] at the University of East Anglia who is over-seeing this project. His contact details are:
Direct line: [redacted] Email: [redacted]

What if I am not happy about the study or wish to make a complaint?
If you are not happy about this research study or wish to make a complaint about it, then please contact the NHS Patient Advisory Liaison Service at [redacted]

REMEMBER:
You don't have to take part in this study
You can leave the study any time you like

Thank you very much for reading this information sheet

Appendix 10: Information sheet for parents

The DECRYPT Study:
Delivery of Cognitive therapy for Young People after Trauma

We are carrying out the DECRYPT study to improve our treatment of post-traumatic stress disorder (PTSD) for children and teenagers who have been through several very scary or upsetting experiences.

We invited you and your child to participate in the DECRYPT study. Now that the main part of your involvement with the study is over, we would really appreciate it if you would participate in an **interview** to tell us about your experiences and how we can improve the care we offer children and young people affected by trauma.

Please read this information sheet if you wish for you and your child to participate. Your participation is *entirely voluntary*.

What is the purpose of the study?
Children and young people who have PTSD might receive help from Child and Adolescent Mental Health Services (CAMHS) and other NHS services. We are trying to see if we can improve the care that services offer to youth with PTSD.

The DECRYPT study is looking at whether a talking therapy called "cognitive therapy" might be a good treatment for PTSD in children and young people. In order to understand how well it works, it is also important to allow children/young people and their parents/caregivers to explain *in their own words* what it was like to participate in the study and receive care.

It is very important that we find out what you thought about all aspects of the DECRYPT study. This will enable us to improve the way in which treatment is delivered in the future. We would really value your opinions, ***positive or negative***.

Do we have to take part?
No! It is up to you and your child to decide. If you do want to join in we'll ask you to sign a consent form, a copy of which you can keep with this information sheet.

You and your child are free to withdraw from the study any time you like. You do not have to give us a reason if you choose to withdraw, but if you can give us any information that would help us to improve the study and think about how we offer care to young people with PTSD.

If you don't want to take part in the study or decide to withdraw from the study you will not be treated any differently by any NHS service or your doctor.

What will the interview involve?
We would like to interview you to discuss your experiences of the DECRYPT study. Your interview would be tailored to you and what involvement you had in this study. We will ask about your opinions on the care your child received during the DECRYPT study.

The interview will probably take about 30 minutes to complete, although it may be a little shorter or longer than this depending on how much we have to discuss.

We would like to audio record the interview, for analysis. All recordings will be stored securely and then transcribed, at which point all information relating to the identity of you or your child will be removed.

Who are conducting these interviews?
The interviews are being conducted by members of our team at the University of East Anglia, as part of the DECRYPT study. The DECRYPT study is funded by the National Institute of Health Research (the part of the NHS that does research into how best to help people).

The interviews will be conducted by a member of the DECRYPT team, but they will not be your child's therapist or anyone who has done the assessment interviews with you or your child recently.

Who is taking part in these interviews?
We are inviting some of the 120 families taking part in the DECRYPT study to also complete these interviews. Interviews will be conducted with parents/caregivers and their children.

Will we receive any payment?
Yes, we will be able to make a small payment for each interview assessment to cover travel costs and as a thank you for your time and support of this study.

Confidentiality – who will know we are taking part in this study?
All information collected about you during the research will be kept strictly confidential and will be stored securely for 10 years after the end of the study. The only exception to this is if we believe that someone is in danger or at risk of being harmed, when we might need to seek other help. Information will only be analysed by members of our research team.

The results we obtain may be published in order to help other people working with children who have been in very scary or upsetting events. The information may also be used for research conducted for educational purposes. The results may include ***quotes*** from your comments during the interview – however, you or your child will ***not*** be named and you will not be identifiable in these publications. We will ***not*** publish your names, where you live, or any other information that might identify you.

Has this research study been approved by an ethics committee?
Yes, this study has been checked by The Cambridge South Research Ethics Committee (16/EE/0233) and they have approved the research, i.e. they are satisfied that the study is safe and will be useful.

I have some questions about this study, who do I contact?
You can speak to the person who told you about this study. You can also contact [redacted] at the University of East Anglia who is over-seeing this project. His contact details are:
Direct line: [redacted] Email: [redacted]

What if I am not happy about the research study or wish to make a complaint?
If you are not happy about this research study or wish to make a complaint about it, then please contact the NHS Patient Advisory Liaison Service at [redacted]

REMEMBER:

You and your child don't have to take part in this study

You and your child can leave the study any time you like

Thank you very much for reading this information sheet

Appendix 11: Participant assent forms for children aged between 8-15 years old

-LOCAL TRUST LOGO-

Site number: _____

Participant ID number: _____

CHILD/YOUNG PERSON ASSENT FORM – QUALITATIVE STUDY

Title of project: **DECRYPT – Delivery of Cognitive Therapy for Young People after Trauma**

		Please *TICK* box if YES
1.	I have read an information sheet (v3.0, dated 14/5/2018) about this study (or someone read the information sheet to me). I have had the chance to ask questions about this study.	☐
2.	I understand that I don't have to take part in this study unless I want to. I understand that I can stop taking part in the study any time I want.	☐
3.	I agree to my interview being audio recorded.	☐
4.	I agree to take part in the study.	☐

If you do want to take part, please sign below:

Name of child/young person	Name of Parent/caregiver	Date	Signature

Name of person taking consent	Date	Signature

Appendix 12: Participant consent form for young people who are over 16 years old

Site number: _____

Participant ID number: _____

CHILD/YOUNG PERSON CONSENT FORM – QUALITATIVE STUDY

Title of project: **DECRYPT – Delivery of Cognitive Therapy for Young People after Trauma**

		Please *INITAL* box if YES
1.	I have read an information sheet (v3.0, dated 14/5/2018) about this study (or someone read the information sheet to me). I have had the chance to ask questions about this study, and my questions were properly answered.	☐
2.	I understand that I don't have to take part in this study unless I want to. I understand that I can stop taking part in the study any time I want.	☐
3.	I consent to my interview being audio recorded.	☐
4.	I consent to take part in the study.	☐

Name of child/young person	Name of Parent/caregiver	Date	Signature

Name of person taking consent	Date	Signature

Appendix 13: Parent/carer consent form

-LOCAL TRUST LOGO-

Site number: _____

Participant ID number: _____

PARENT or CAREGIVER CONSENT FORM – QUALITATIVE STUDY

Title of project: DECRYPT – Delivery of Cognitive Therapy for Young People after Trauma

Name of Researcher: _____

		Please *INITIAL* box
1.	I confirm that I have read an information sheet (v3.0, dated 14/5/2018) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2.	I understand that my child's participation is voluntary and that we are free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.	☐
3.	I consent to audio recordings being made of interview involving myself and my child.	☐
4.	I consent to my child and I taking part in the above study.	☐

Name of child/young person	Name of Parent/caregiver	Date	Signature

Name of person taking consent	Date	Signature

Appendix 14: Original ethics approval for main study DECRYPT

Re issue letter 21.10.2016

NHS
Health Research Authority

East of England - Cambridge South Research Ethics Committee
The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

18 July 2016

Dr [redacted]
Reader in Clinical Psychology
University of East Anglia
Department of Clinical Psychology,
Elizabeth Fry Building
UEA, Norwich
NR4 7TJ

Dear [redacted]

Study title:	**Cognitive Therapy for the treatment of post-traumatic stress disorder (PTSD) in youth exposed to multiple traumatic stressors: a phase II randomised controlled trial.**
REC reference:	**16/EE/0233**
Protocol number:	**1.0**
IRAS project ID:	**188916**

Thank you for your letter of 5 July 2016, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair and Dr Richard Aldridge.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require

further information, or wish to make a request to postpone publication, please contact the REC Manager, Ellen Swainston, nrescommittee.eastofengland-cambridgesouth@nhs.net.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for NHS permission for research is available in the Integrated Research Application System, www.hra.nhs.uk or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

Re issue letter 21.10.2016

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett [redacted], the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

The Committee has not yet completed any site-specific assessment (SSA) for the non-NHS research site(s) taking part in this study. The favourable opinion does not therefore apply to any non-NHS site at present. We will write to you again as soon as an SSA application(s) has been reviewed. In the meantime no study procedures should be initiated at non-NHS sites.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Covering letter on headed paper [Response to REC, 5th July 2016]		05 July 2016
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Sponsor letter - Insurance & Indemnity]	1	06 May 2016
GP/consultant information sheets or letters [GP notification letter]	1	30 April 2016
IRAS Application Form [IRAS_Form_09052016]		09 May 2016
IRAS Checklist XML [Checklist_05072016]		05 July 2016
Letter from funder [NIHR funding contract]	Final contract	01 April 2016
Other [Statement of Activities]	3	30 April 2016
Other [Schedule of Events]	3	
Participant consent form [Trial, child assent (8-15 years)]	1.1	22 June 2016
Participant consent form [Trial, child/YP consent (16-17 yrs)]	1.1	22 June 2016
Participant consent form [Trial, parent consent (child 8-15 yrs)]	1.1	22 June 2016
Participant consent form [Trial, parent assent (YP 16-17 yrs)]	1.1	22 June 2016
Participant consent form [Qual, staff/commissioner/researcher consent form]	1.1	21 June 2016
Participant consent form [Qualitative sub-study, child assent (8-15 yrs)]	1.1	22 June 2016
Participant consent form [Qual sub-study, 8-15 yrs assent form, WITHDRAWN]	1.0	22 June 2016
Participant consent form [Qualitative sub-study, child/YP consent (16-17 yrs)]	1.1	04 July 2016
Participant consent form [Qual sub-study, child/YP consent (16-17	1.0	22 June 2016

Re issue letter 21.10.2016

yrs), WITHDRAWN]		
Participant consent form [Qualitative sub-study, parent consent]	1.1	04 July 2016
Participant consent form [Qual sub-study, parent consent, WITHDRAWN]	1.0	22 June 2016
Participant information sheet (PIS) [Qualitative sub-study, child PIS, 8-11 years]	1.0	04 May 2016
Participant information sheet (PIS) [Qualitative sub-study, child PIS, 12-15 years]	1.0	04 May 2016
Participant information sheet (PIS) [Trial, child PIS, 8-11 years]	1.1	22 June 2016
Participant information sheet (PIS) [Trial, child PIS, 12-15 years]	1.1	21 June 2016
Participant information sheet (PIS) [Trial, child/YP PIS, 16-17 years]	1.1	21 June 2016
Participant information sheet (PIS) [Trial, parent/carer PIS]	1.1	21 June 2016
Participant information sheet (PIS) [Qual, staff/commissioner/researcher PIS]	1.1	21 June 2016
Participant information sheet (PIS) [Qual, child PIS, 8-11 WITHDRAWN]	1.0	22 June 2016
Participant information sheet (PIS) [Qual, child PIS, 12-15 WITHDRAWN]	1.0	22 June 2016
Participant information sheet (PIS) [Qualitative sub-study, child/YP PIS, 16-17 years]	1.1	04 July 2016
Participant information sheet (PIS) [Qual, child PIS, 16-17yrs WITHDRAWN]	1.0	22 June 2016
Participant information sheet (PIS) [Qualitative sub-study, parent PIS]	1.1	04 July 2016
Participant information sheet (PIS) [Qual sub-study, parent PIS, WITHDRAWN]	1.0	22 June 2016
Referee's report or other scientific critique report [NIHR Fellowship application reviews]		30 July 2015
Research protocol or project proposal [DECRYPT trial protocol]	1	04 May 2016
Summary CV for Chief Investigator (CI) [Richard Meiser-Stedman CV]	04/2016	30 April 2016
Validated questionnaire [Child baseline interview]	1	
Validated questionnaire [Child baseline questionnaires]	1	04 May 2016
Validated questionnaire [Child 2.5 month questionnaires]	1	04 May 2016
Validated questionnaire [Parent baseline questionnaires]	1	04 May 2016
Validated questionnaire [Parent baseline interview]	1.1	20 June 2016
Validated questionnaire [Baseline Child & Adolescent Service Use Schedule (CA-SUS)]	1.1	20 June 2016

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed

Re issue letter 21.10.2016

guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

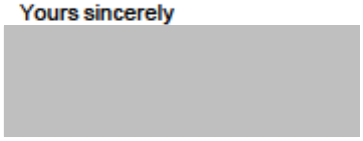
HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

16/EE/0233	Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely



Dr Leslie Gelling
Chair

Email: nrescommittee.eastofengland-cambridgesouth@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: [redacted]

Appendix 15: Approval of substantial amendment requesting qualitative project use as an education project

NHS
Health Research Authority

East of England - Cambridge South Research Ethics Committee

The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Please note: This is the favourable opinion of the REC only and does not allow the amendment to be implemented at NHS sites in England until the outcome of the HRA assessment has been confirmed.

07 June 2018

Ms Leila Allen
School of Psychology
University of Birmingham
Birmingham
B15 2TT

Dear Ms Allen,

Study title:	**Cognitive Therapy for the treatment of post-traumatic stress disorder (PTSD) in youth exposed to multiple traumatic stressors: a phase II randomised controlled trial.**
REC reference:	**16/EE/0233**
Protocol number:	**1.0**
Amendment number:	**SA3**
Amendment date:	**27 April 2018**
IRAS project ID:	**188916**

The above amendment was reviewed on 18 May 2018 by the Sub-Committee in correspondence.

Ethical opinion

The researchers were contacted via email to reply to queries and provided the following clarifications.

The Sub-Committee noted that as CT-PTSD involves extensive, focused discussion of trauma, it may be that this intervention will involve greater potential for distress (at an early stage) than "treatment as usual", and that while the therapist delivering the CT-PTSD sessions will be trained in how to manage any distress that arises, the student will be conducting the interviews. The Sub-Committee requested to know whether there will be adequate support from the research team should the student require it, i.e., a participant becomes distressed during interview.

The applicant responded with the following:

"In many ways a trainee clinical psychologist will be a better person for undertaking these interviews than a typical research associate. They will have received extensive training in assessing and managing risk, and will have undertaken months of supervised clinical practice in working with complex mental health problems in multiple NHS settings (e.g. child and adolescent, adult, learning disabilities). They will be well acquainted with handling situations that evoke strong emotion for themselves as well as their clients/participants. The selection and training for trainee clinical psychologists involves close attention to reflection on handling the stress associated with clinical work in mental health settings.

In addition to being more confident in managing any distress that arises, the chief investigator will provide additional training for any trainee clinical psychologists on how to handle difficult interviews. This training will address how to work with distressed young people and their caregivers. Moreover, the chief investigator will be available at all times to discuss a case with the trainee clinical psychologist, both in terms of considering how to handle any risk issues that arise (e.g. a deterioration in mental health, a child protection concern) and the impact on the trainee clinical psychologist themselves. The chief investigator's mobile phone number will be available for the trainee to contact them.

I think it is important to add that the content of these qualitative interviews will pertain to the participant's experience of undergoing CT-PTSD, and will not directly address the content of these sessions, e.g. what trauma was actually addressed in the sessions will not be the focus of these interviews."

The members of the Sub-Committee were satisfied with the response provided by the applicant and were content to issue a Favourable Opinion for the Amendment.

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Covering letter on headed paper		15 May 2018
Notice of Substantial Amendment (non-CTIMP)	SA3	27 April 2018
Other [Re-submitted IRAS Form]		
Participant consent form [DECRYPT (qual withdrawn) child assent (8-15 yrs) form - Tracked Changes]	3.0	14 May 2018
Participant consent form [DECRYPT (qual withdrawn) child consent (16+ yrs) form - Tracked Changes]	3.0	14 May 2018
Participant consent form [DECRYPT (qual withdrawn) parent consent form - Tracked Changes]	3.0	14 May 2018
Participant consent form [DECRYPT (qual) child assent (8-15 yrs) form - Tracked Changes]	3.0	14 May 2018
Participant consent form [DECRYPT (qual) child consent (16+ yrs) form - Tracked Changes]	3.0	14 May 2018
Participant consent form [DECRYPT (qual) parent consent form - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual withdrawn) child info sheet 8-11 - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual withdrawn) child info sheet 12-15 - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual withdrawn) child info sheet 16-17 - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual withdrawn) parent info sheet - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual) child info sheet 8-11 - Tracked Changes]	3.0	14 May 2018

Participant information sheet (PIS) [DECRYPT (qual) child info sheet 12-15 - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual) child info sheet 16-17 - Tracked Changes]	3.0	14 May 2018
Participant information sheet (PIS) [DECRYPT (qual) parent info sheet - Tracked Changes]	3.0	14 May 2018
Summary CV for student		
Summary CV for supervisor (student research)		
Summary CV for supervisor (student research)		
Summary CV for supervisor (student research)		

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

Working with NHS Care Organisations

Sponsors should ensure that they notify the R&D office for the relevant NHS care organisation of this amendment in line with the terms detailed in the categorisation email issued by the lead nation for the study.

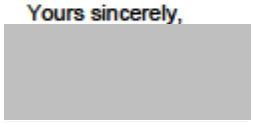
Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

We are pleased to welcome researchers and R & D staff at our Research Ethics Committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

16/EE/0233:	**Please quote this number on all correspondence**

Yours sincerely,



Dr Leslie Gelling
Chair

E-mail: nrescommittee.eastofengland-cambridgesouth@nhs.net

Enclosures: *List of names and professions of members who took part in the review*

Copy to: [redacted]

Appendix 16: Topic guide for Qualitative Interview for children aged between 8-12 years old

Thank you for agreeing to talk to me today – [introduce yourself]

We'd like to have a chat with you today about what it's been like visiting [insert service name] and also about being involved in our study. You can tell us the good and the bad things, that way we will know what things we can change to make it better for children and young people in the future.

It would be helpful if I could record our chat today using this recorder. This will make it easier for us when we write up what you tell us. When we do this, we will remove your name so that people will not know that it about you. Is it okay if I record our chat today?

If you don't want to answer any of the questions or you would like to take a break at any time, that is absolutely fine, just let me know. Any questions for me at this point?

[**May need to draw out timeline]**

Background

1. Let's think back to before you were seen by anyone from the DECRYPT study. [If helpful, identify time period] could you tell me a bit about how things were for you then?

   Prompts:

   How were things at school? At home?

   Had you seen anybody, either at school or at CAMHS, about how you were feeling? What was this like?

   What was it like talking to people about your difficult experiences?

The next part of the interview we will think about what it was like being involved in the DECRYPT Study.

Research involvement

1. Do you remember when you first heard about DECRYPT?

   Prompts:

   Who explained the study to you?

   What did you think about the study? How did you feel about being in a research study?

2. Someone will have come and spoken to you right at the beginning about the study and about [your difficult experiences]. And then a few months later to talk again and complete some questionnaires. What did you think of these questionnaires?

Prompts:
Did you do these online or face-to-face?
Were they easy to answer? Did you need any support from parents or [researchers name]?
How did you feel completing the questionnaires?

3. As well as the questionnaires, there will have been an interview with [researcher name] who would have asked questions about your difficult experiences. When you met with X to talk about your experiences, how did **you** find it?

Prompts:
Were they completed at your home or at CAMHS?
Had you talked to anyone about this before? How did you feel?
How was it talking about difficult experiences with someone you hadn't met before?
Anything help to make it easier? Or anything that made it difficult?

I'm now going to ask you about the treatment you received at [insert service] and whether or not you felt this was helpful.

Treatment sessions

7. Who did you see at [insert service name]?

Follow up questions:
How many times did you meet with X?
How long were the sessions?

8. What did you think of going to the sessions with [clinician name]?

   Prompts:
   What sort of things did you do in the therapy sessions?
   Was there anything you liked about the sessions with X?
   Was there anything that you disliked about the sessions with X?

9. How did you find it talking with [clinician name] about some of the scary or upsetting things you have experienced?

   Prompts:
   Was there anything that X did to make it easier?

4. What was the ending of therapy sessions like?

5. Is there anything that would have made the sessions any better or easier?

<u>Impact of intervention overall</u>

1. Since you have been seeing [clinician name], do you feel that anything has changed **for you?**

   Prompts:
   Have there been any changes in how you feel?
   Have you noticed any differences in how you are at school or with friends or family?
   Have there been times when things have felt better or when things have felt more difficult?

2. Do you think anyone in your family or any of your friends have noticed any differences since you have finished therapy?

   Prompts: Have your teachers noticed any changes since you have been going to therapy?

<u>Practical issues – most of these can be incorporated into questions above</u>

10. Missing school

a) Did you have to miss any school to attend sessions? OR the research assessments. *If so…*

b) Did you worry about this?

11. Travel

a) *(If they travelled to therapist):* What was travelling to sessions like?

Prompts: home, clinic? Would it have been better at different location?

Homework tasks

1. Did you have to complete any homework tasks?

   If so, how did you find these?

2. How easy or difficult did you find it to fit in the homework tasks?

3. Were there any tasks or activities that you found worked particularly well?

4. Were there any tasks or activities that you found particularly unhelpful or difficult?

5. How do you think the homework tasks could have been improved?

General reflections and summary

Is there anything more that you would like to add about your experiences? This could be about the things we've talked about today, or about anything else that you think might be helpful for other children/young people who have also had difficult experiences to know about?

Have you got any questions for me? Thank you!

Appendix 17: Topic guide for Qualitative Interview for young people aged between 13-18 years old

Thank you for agreeing to talk to me today – [introduce yourself]

In this part of DECRYPT we are interested in finding out what it was like to take part in the study and what your thoughts are about the care you received. We want to capture your experiences in your own words which is why we are completing this interview.

I would be interested to hear your views (positive or negative) about your experiences. Please do be honest about your experiences - it's important for us to know which parts were more helpful or more difficult so that we can improve the way we do things for future families.

It would be very helpful if I could record this interview, for analysis. The recording will be stored securely and then transcribed, at which point all identifying features will be removed. Would this be okay?

There will be three parts to our discussion – for the first part we will talk a bit about how things were prior to being seen at CAMHS, second part we will talk about your involvement in the study, and third part we will talk about your experience of the therapy you received at [insert service]. If there any questions you would prefer not to answer or you would like to take a break at any time then that is absolutely fine, just let me know. Any questions at this point?

General checking in questions: Ask demographics: age, education what year at School, how are you feeling about completing the interview today?

<u>Background</u>

1. Could you tell me a bit about how things were before you were seen by anyone from DECRYPT?

Prompts (if necessary):

May need to decipher timeframe – when was it that you were contacted about DECRYPT?

What was going on for you then?

What was it that prompted the referral to CAMHS?

Any PTSD symptoms or triggering events?

Explore previous experience of therapy – have you been seen by CAMHS previously? Or school counsellors?

Had you spoken with others about your difficult experiences previously? How did this feel? How was it talking with others about your difficult experiences?

Research involvement

We're interested in finding out what people think of being involved in research, this may help researchers in the future to understand what is acceptable for participants and what things may be important to consider.

1. So first of all, how did you first find out about the study?

   Prompts (if necessary): how was the study explained? by whom?
   Who was the study explained to? (i.e. was it explained to you or to your parents/carers). If explained to your parent/carers would you have liked to be spoken to directly about it too?

2. So, after the study had been explained to you, what did you think about the study?

Prompts (if necessary):
How did you feel about the study?
Were there any particular reasons for deciding to participate in the study?
Did you feel like the explanation made sense? (i.e. understanding randomisation, blinding, expectations about assessments /interviews, payments, interventions)

3. When you met with X to talk about your experiences, what was it like? [How did **you** find the interviews?]

Prompts (if necessary):
Were they completed on the phone/face-to-face? Flexibility? Length? Where?
Had you talked to anyone about this before? How did you feel? What helped? What made things more difficult?

4. What was it like completing the questionnaires?

Prompts (if necessary):

Did you do these online or face-to-face/on the phone with X?

Any technical difficulties?

Were they easy to answer? Did you need any support?

How did you feel completing the questionnaires?

‘Pause for thought’ - general reflections and summary of discussion about research involvement

Before we go onto talking about your experience of being involved in therapy, is there anything more you would like to say about being involved in the research part of the study? Or anything we haven’t covered?

Is there anything you would like us to know about what it was like to be involved in the research?

I’m now going to ask you about the therapy you received at [insert service] and whether or not you felt this was helpful.

Treatment sessions

12. What sorts of things did you do in the therapy sessions? What were the therapy sessions like?

    Prompts (if necessary):

    May need to ask more practical questions initially – how many times did you meet with X?

    Roughly how long were the sessions? Did you have any initial expectations about therapy?

    Was there anything you liked? Was there anything you disliked?

13. What did you think of working with [therapist name]?

    Prompts (if necessary):

    What was your relationship like with [insert name?]

Were there things that he/she did or spoke about that were helpful? (trying to find out about communication, skills, approach)

14. How did you find it talking about your difficult experiences with [x therapist name]?

**** Key question****

Prompts:

How did it feel talking about those experiences? Did you complete any reliving work?

Was there anything that the therapist did to make it easier?

Can you think of anything else that might have made it easier to talk about?

15. Is there anything that you would prefer to have done differently in the therapy sessions?

<u>Impact of intervention overall</u>

3. Did you notice any changes while you were going to therapy sessions?

   Prompts (if necessary):

   Any changes in how you felt? Were there any changes in your PTSD symptoms?

   Did anything change at school or outside of school?

4. Do you feel that anything has changed **for you** since you have finished going to therapy sessions?

   Prompts (if necessary):

   Exploring the impact of therapy – positive or negative. Changes in symptoms?

   Can you think of any specific examples of something that has changed since you have finished therapy?

   Have there been times when things have felt better or when things have felt more difficult?

   Have you noticed any changes in your relationships as a result of going to therapy sessions?

5. Do you feel that anything has changed **for your family** since you have been going to therapy sessions?

Prompts (if necessary):

Do you think your parents/carers have noticed any changes in the last [time period]?

4. What was it like ending therapy?

Prompts: did you have any review sessions? Any work to look back over if things started to feel difficult again?

Practical issues – most of these can be incorporated in to questions above

16. How easy or difficult did you find it to fit therapy sessions into your normal day?

17. Missing school

a) Did you have to miss any school/college to attend DECRYPT therapy sessions? OR the research assessments. *If so…*

b) Did you have any concerns about this?

18. Travel

a) *(If therapist came to them):* Would it have made any difference if you had needed to go to a clinic to have therapy rather than having it at home?

b) *(If they travelled to therapist):* What was travelling to therapy sessions like? How did you feel after leaving the therapy session going back to home / school?

Homework tasks

6. Did you have to complete any homework tasks?

If so, how did you find these?

7. How easy or difficult did you find it to fit in the homework tasks?

8. Were there any tasks or activities that you found worked particularly well?

9. Were there any tasks or activities that you found particularly unhelpful or difficult?

10. How do you think the homework tasks could have been improved?

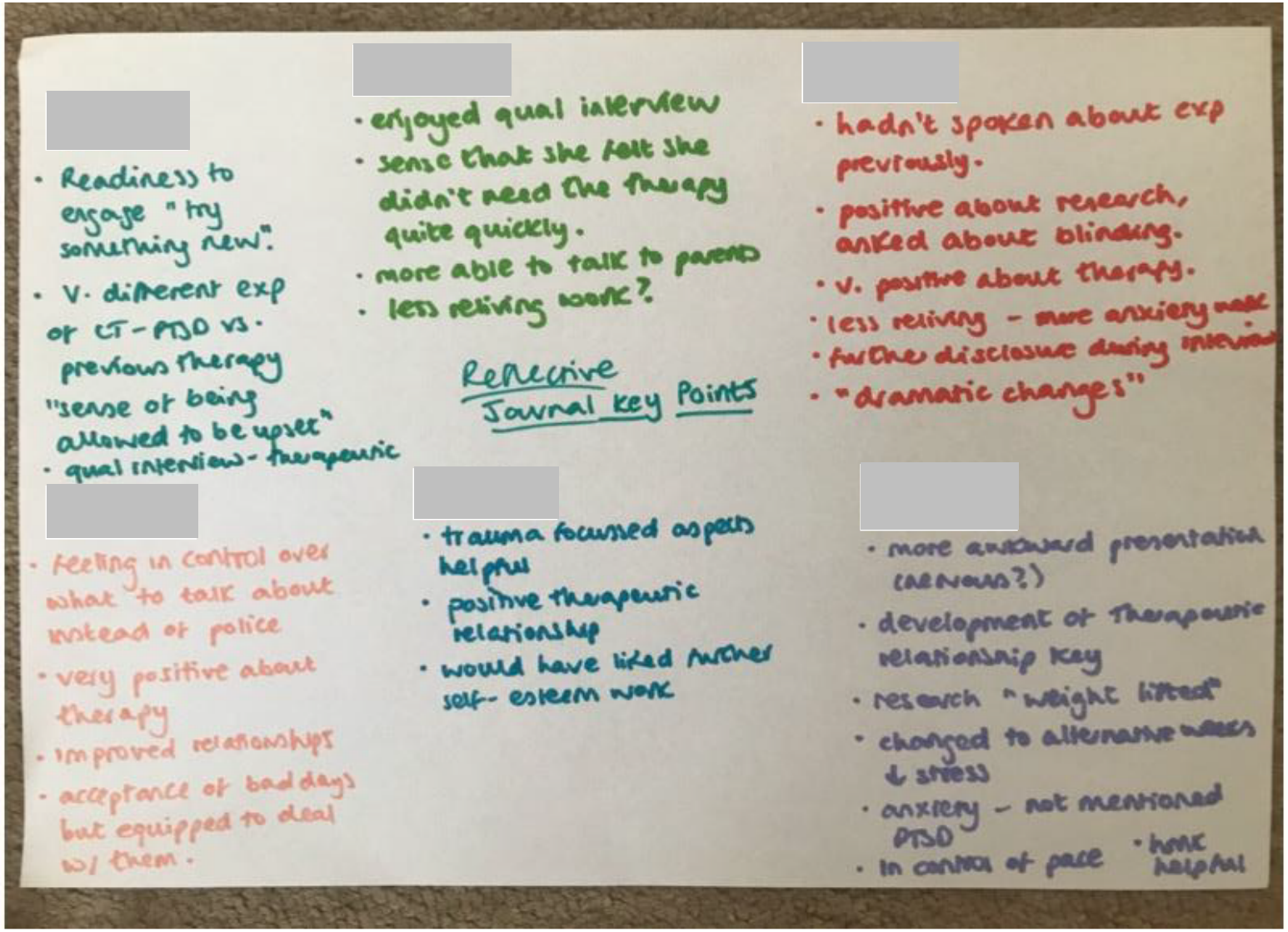
General reflections and summary

Is there anything more that you would like to add about your experiences? This could be about the things we've talked about today, or about anything else that you think is relevant or that could help other children/young people who have also had difficult experiences?

Have you got any questions for me?

Thank you for sharing your views with me today.

Appendix 18: Key notes from researcher reflective journal for a selection of participants

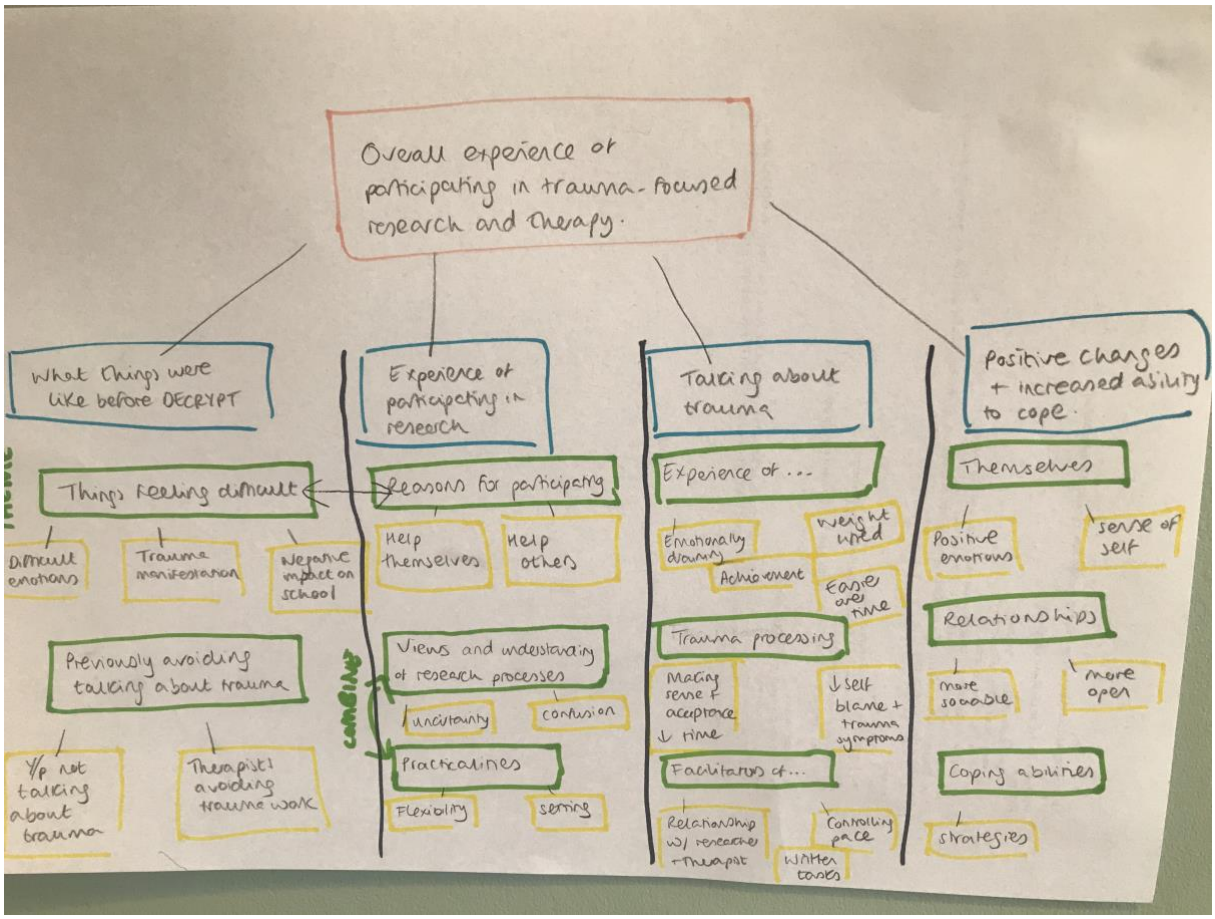


Appendix 19: Braun & Clarke's (2006) six phases of thematic analysis

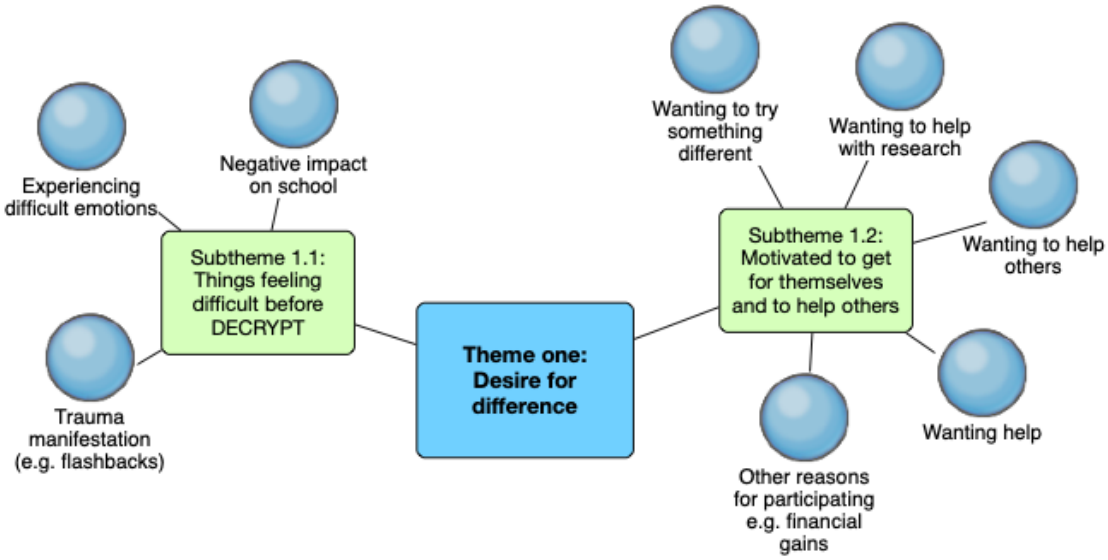
Table 1: Phases of Thematic Analysis

Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

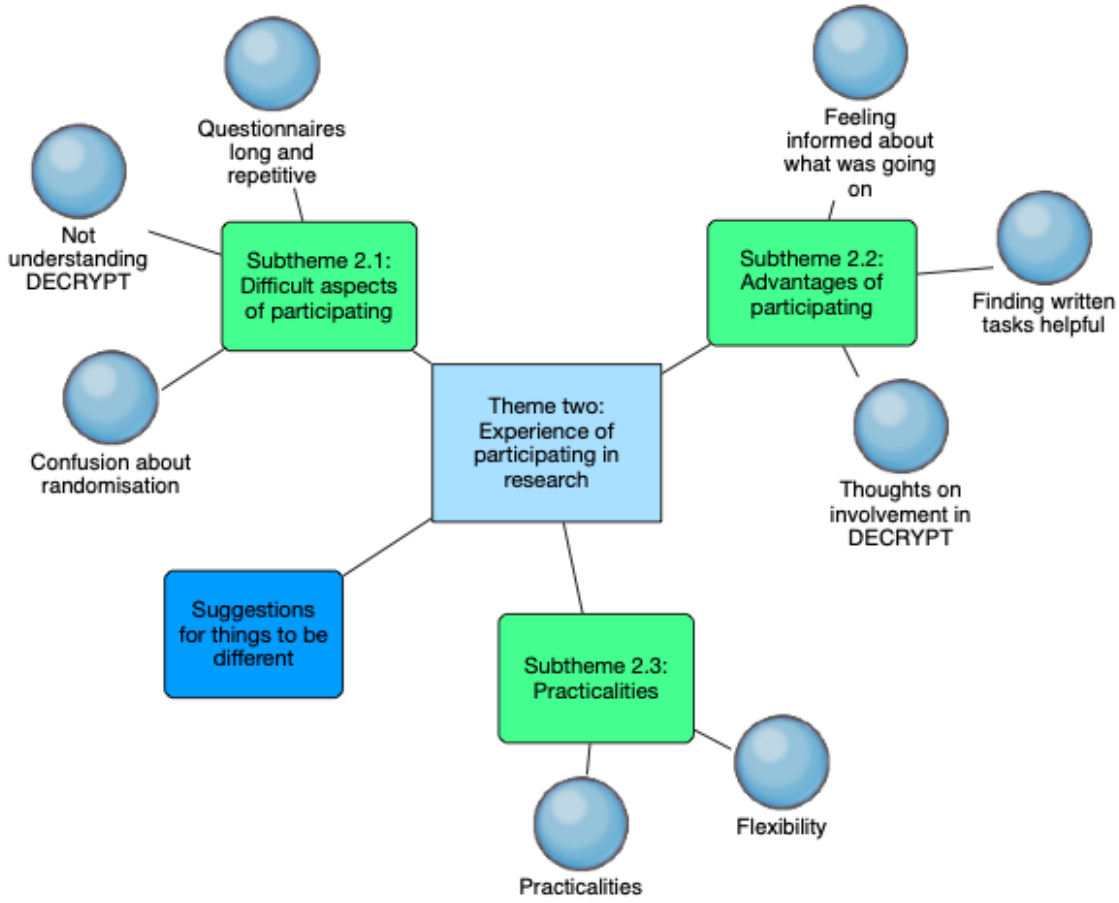
Appendix 20: Thematic map showing development of themes



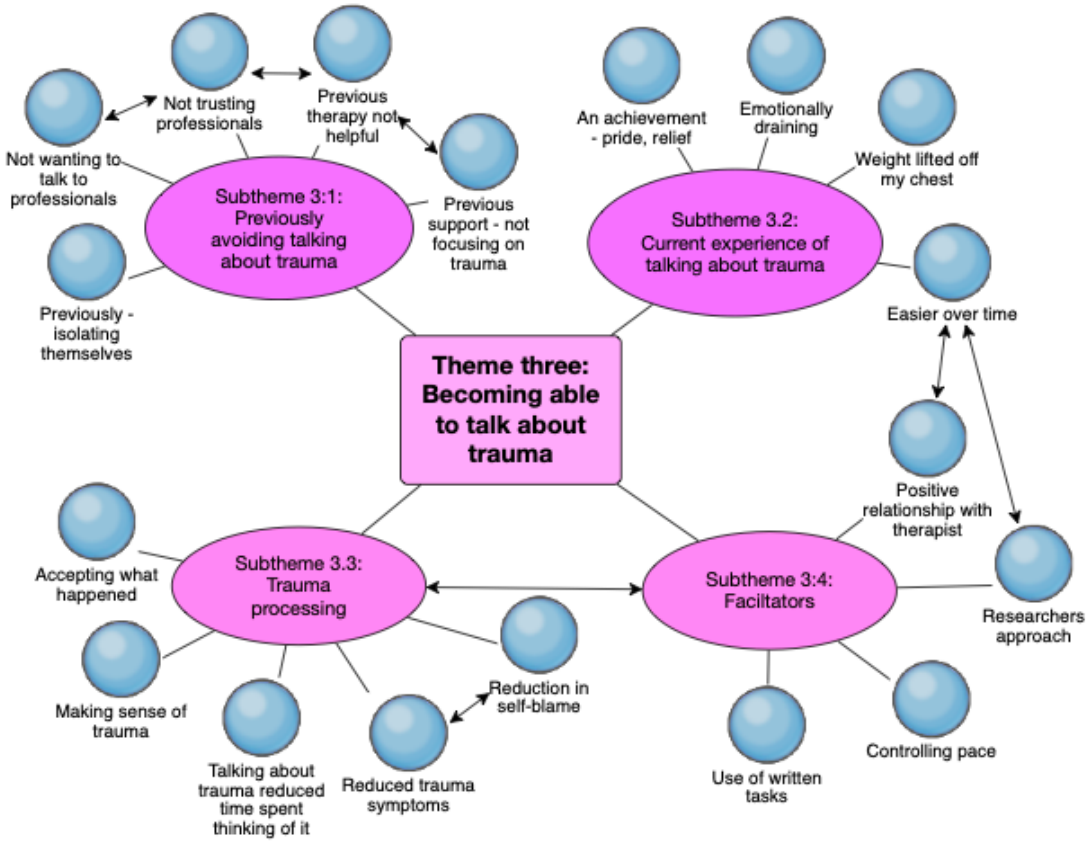
Appendix 21: Thematic map for Theme one: Desire for difference



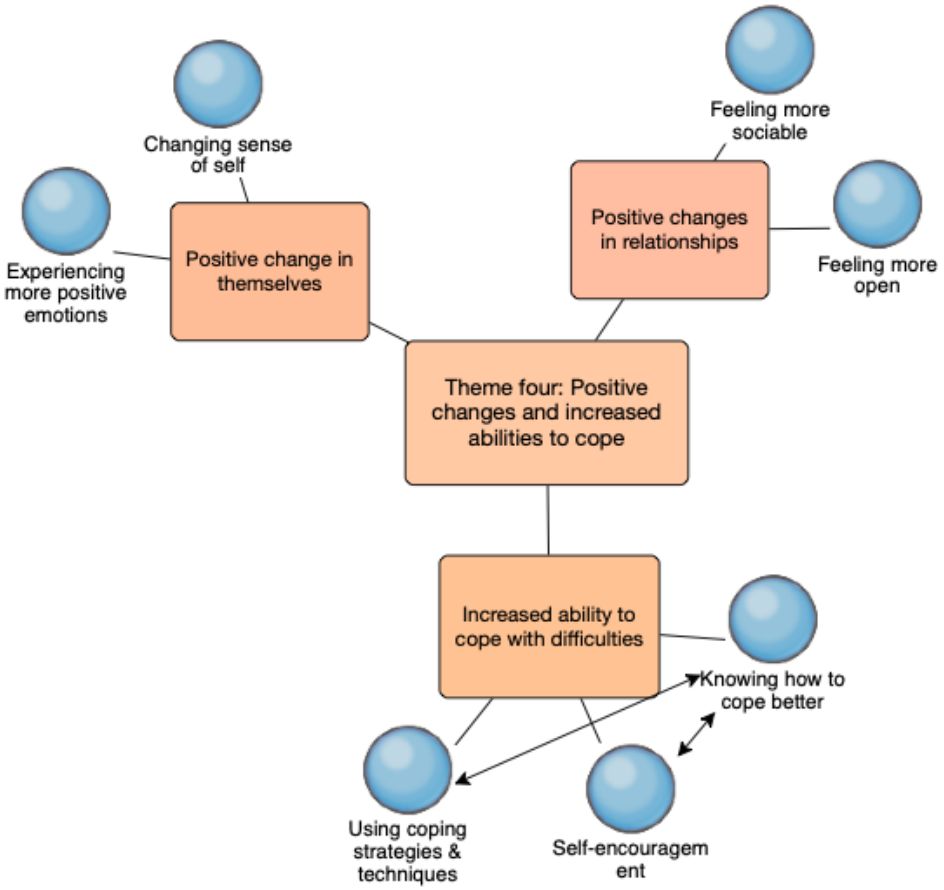
Appendix 22: Thematic map for Theme two: Experience of participating in a research trial



Appendix 23: Thematic map for Theme three: Journey of becoming able to talk about trauma



Appendix 24: Thematic map for Theme four: Positive Changes and increased ability to cope



Appendix 25: Table of themes and subthemes, with number of participants reporting theme and example of codes

Themes	**Number of participants reporting theme**	**Codes/Quotes (one example)**
Theme One: Desire for difference Subtheme 1:1: Things feeling difficult before DECRYPT • *Experiencing difficult emotions, in particular feeling angry and upset* • *Trauma manifestation* • *Negative impact on school*	Overall n = 13 N=10 N= 6 N=9	*"I would get angry a lot because that's the only emotion I knew"* – F006 *"I think, cas I was so emotional like, that sort of sadness was taken over by anger I guess"* – F009 *"bad dreams I've always had since I was younger, erm I've always been really a bad sleeper, always waking up in the night, don't like anything loud noises and quite jumpy as well"* – F010 *"yeah, like in the morning I would say to mum "I feel really sick" and I wouldn't go to school, but I didn't actually feel sick, I just said that because I didn't want to go to school"* – F007
Subtheme 1.2: Motivation to get help for themselves and to help others • *Wanting help for themselves* • *Helping others* • *Other reasons (e.g. financial, interested in research)*	Overall N = 12 N = 10 N = 6 N = 5	*"...well yeah, I'd been on a journey to find some help for like 6 years or so, willing to take anything I could get really"* – F001 *"...just I'm glad that this could help, "something positive coming out of my negative experience" which is really good"* – F004 "*erm, (...), I don't know, like, it was something I'd never done before, erm, and as I said I was a biology student so, experiments, not experiments but studies and stuff, I found it really interesting*" – F001

Themes	Number of participants reporting theme	Codes/Quotes
Theme 2: Experience of participating in research Subtheme 2.1: Difficult aspects of participation • *Feeling worried or uncertain* • *Feeling confused or not understanding parts of the study, in particular randomisation* • *Questionnaires feeling long and repetitive* Subtheme 2.2: Advantages of participating in an RCT • *Overall positive experience of participation* • *Feeling informed* • *Helped to open up* • *Questionnaires helpful*	N=6 N = 7 N=7 N= 9 N = 2 N=1 N=2	"*I didn't really understand it at first to be honest*" – F007 *"I think, I got kinda worried at that time, I was like "what if I don't meet the criteria, will it be good counselling or bad counselling?" but then even with the counselling in general I was sat there thinking "is it going to be good? Is it going to be bad? Is it going to fix all my problems?"* – F005 *"Yeah I was like, do I really want to do this? Like randomise? I don't really know what is going to happen"* – F003 "*some of them were a bit long and the questions were repeated*" – F006. "Interviewer: *is there anything else you'd like to add about being part of the DECRYPT study?"* F004: *"no just that it was very useful, I found it really helpful"* *"I've realised a lot, like you lot are there to help, kinda thing."*, F008. "*just that, it was interesting because you hear more, I dunno, you get told more, because you're part of the research they inform you of a lot more about what going on*" – F004 *"I'm so happy I got to be a part of this, and I'm so happy that I got to meet so many incredible people, who are so understanding and who are so genuinely passionate about this, and I think that's one of the main things that drew me to this. Just seeing that genuine passion and love for helping other people, it really helped me open up"* – F010

Subtheme 2.3: Practicalities • *Flexibility* • *Preferring face-to-face and at home*	N = 5 N=7	*"I can see they had the different paperwork so I feel like that made me trust them instantly when I saw that because I knew they were following something to do with the study anyway"*- F002 *"no, I don't really like over the phone stuff cas generally it always catches me off guard [laughter], so yeah, I definitely prefer face-to-face"* – F001 "*Yeah. Yeah. Yeah. I remember some arrangements, just because life and busyness and stuff so yeah"* – F009 " Yeah. Yeah. Yeah. I remember some arrangements, just because life and busyness and stuff so yeah" – F009 "because I know a lot of places do things online now or over the phone and I definitely feel like the face-to-face works really well" – F002

Themes	**Number of participants reporting theme**	**Codes/quotes**
Theme 3: Journey of becoming able to talk about trauma Subtheme 3:1 Previously avoiding talking about trauma • *Previously isolating themselves from others* • *Young people not wanting to talk about trauma*	Overall N= 10 N=8 N=9	*"it was horrible because like I didn't want to speak to anybody, like even people I did know kinda thing I didn't want to speak to"* – F008 *"Yeah I don't like when obviously, when before, they completely – not shut me off, but then I'd be talking about it, get really, really upset and then they'd kind of okay we'll put that to one side for now, we'll talk about it another day but then don't actually talk about it another day. I feel like, I just opened up to someone, for not really any*

• *Previous support avoiding trauma work*	N=9	*reason, just because I felt like I needed, you wanted me to get what happened out, for me to get upset to not really talk about it again"* – F002
Subtheme 3:2 Current experience of talking about trauma • *Easier over time* • *Emotionally draining* • *Weighted lifted off their chest* • *An achievement*	Overall N = 12 N = 11 N = 4 N = 7 N = 3	*"At the beginning I didn't really like it, because I didn't, like having to speak to someone I didn't know kind of thing, and then after a few sessions I started feeling a bit better and started opening up a bit more"* – F008 *"yeah, it was just very emotionally draining, once I, even if was only an hour sleep afterwards then I'd be okay"* – F004 *"..in that way it was like a weight lifted off my chest"* – F003 *"I feel very, very accomplished because by the time we ended the therapy I had processed everything that had happened, and I understood how things happened which has helped me so much when, thoughts of the trauma come back, and erm, kind of get me down because then I could (...) knowing all of the facts, I can just, kind of, battle those thoughts out of my brain, and then I am okay again"* – F010
Subtheme 3:3 Trauma processing • *Difficult but necessary to move forwards* • *Helped to make sense of trauma and accept what had happened* • *Reduced time spent thinking about trauma* • *Reduced trauma symptoms (e.g. less flashbacks, less self-blame)*	Overall N = 12 N = 6 N = 8 N = 6 N = 10	*"That was, it was difficult, but at the same time it was, erm, kind of enlightening, I guess. It kind of made me realise, the dictatorship that was held over me for such a long time, and it kind of helped me to move on from it"* – F009 *"It was more like helpful in a way, because everything, different things were talked about and sorted and erm, not just really with her, but also myself, I kind of figured out like, um, like that things need to be moved on from and I can't let them kind of like take over my life and stuff"* – F009 *"like I got it all out and then I was happy because I wasn't thinking about it too much"* – F005 *"those sessions with [therapist name], really helped me realise that the trauma wasn't my fault, that I – I didn't have anything to be ashamed about, and that I can talk about it, and that I should talk about it if I want to, which I do want to now"* – F010

		"He taught me the analogy of the airing cupboard, and all of your things are packed into the airing cupboard but not folded, so you want to fold them and put them in the airing cupboard instead of shoving them in because you can only shove so much into the airing cupboard before the doors pop open" – F005
Subtheme 3:4: Facilitators of talking about trauma • Positive relationship with therapist and/or researcher • Controlling pace • Use of written tasks	Overall N = 13 N=13 N = 8 N = 8	*"erm, we had lots of fun jokes which was quite nice, being able to have that work, get through the therapy and then going on to talking about jokes, and life, and laundry and fun stuff, it was very much like a good therapist relationship"* – F005 *"They made me incredibly comfortable with everything and comfortable with needing to take a break, if an answer or a question was a little too heavy. Yeah. So yeah, that was great".* – F010 *"Yeah, it felt good to be able to see it all like written down because when it is in your head, it's just all jumbled up, and there's like little bits from everything that's happened and at different times, but all coming together kind of thing. When you see it down on paper and in a timeline you see like this happened and then this happened and with all the details, it just feels like you don't have it messed up in your head"* – F008

Themes	**Number of participants reporting theme**	**Codes/Quotes**
Theme 4: Positive Changes and increased abilities to cope Positive changes in themselves and relationships and increased ability to cope • *Positive changes in emotions* • *Changed sense of self* • *Improved relationships and feeling more open and sociable*	Overall N = 13 N = 9 N = 7 N= 10	*"I'd say I'm more open and happier, which feels weird to say but I'm like a lot more, energetic than I was" – F003* *"yeah I mean, I think it's cas it's made a stronger person" – F006* *"I'd always be looking out my window straight away, whereas now I don't do that which I think is a big thing because that would always be I'd be on high alert all the*

		time, even if I was at home in bed. So, I feel like that, that is really helpful that has kind of stopped" – F002 *"because I after I realized I could open up, like, it was alright kinda thing, I didn't mind speaking about it, before I found it hard to talk about it" – F008* *"Oh, yeah, definitely more closer with everyone, and more like, erm, I kind of spend more time with them and interact with them. So rather than isolating myself and feeling sad, I'm kind of like, talking to them more and trying to have fun with them and stuff"–* F009
Increased ability to cope and use of strategies • *Utilising strategies and increased ability to cope* • *Feeling ready to finish therapy*	N = 9 N = 8	*"It's like a peaceful placement in my head, and I just like (…) senses and like, and I feel like I'm there" – M003* *"I could say I was sad but I was also satisfied in the sense that it's like there's nothing more now",* F006