



School of Psychology

Ysgol Seicoleg

# **Childhood Trauma: Impact and Interventions**

Thesis submitted in partial fulfilment of the requirement for

the degree of:

**Doctorate of Clinical Psychology (DClinPsy)**

South Wales Doctoral Programme in Clinical Psychology

Cardiff University

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**Supervised by: Marc Williams**

May 2019

## Declaration

This work has not been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or other award.

Signed .....AWilliams ..... (candidate) Date .....19<sup>th</sup> May 2019.....

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This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by explicit references. The views expressed are my own.

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## Thesis Summary

Maltreatment in childhood has been linked to a range of physical and mental health difficulties. It is recognised as a major human rights and public health concern that has significant personal, familial, societal and economic consequences. Numerous systematic reviews and meta-analyses have focused on the effects of childhood emotional abuse (CEA). Healthcare providers make important decisions based on systematic reviews, however the quality is often unknown.

The first paper is a systematic review of systematic reviews and meta-analyses on the link between CEA and later mental health difficulties. This includes a narrative synthesis of results and a quality assessment using the Assessment of Multiple Systematic Reviews 2 (AMSTAR 2; Shea et al., 2017) with the aim of providing clarity for service providers' decision making. Results from high-quality reviews show a link between CEA and a range of later mental health problems. The implications of these findings are discussed.

The second paper is an evaluation of a new psychology service, which was commissioned to meet the mental health needs of children and young people (CYP) with complex trauma histories. The service is providing attachment and trauma informed training for front line staff. Results showed that staff knowledge and confidence increased over the course of training and their worries decreased. Staff perception of how supported they felt also increased, but their wellbeing did not. The service used a variety of measures, two of which were bespoke to the service, so principal component analyses were run to help the service create the most parsimonious measures possible.

The final paper is a critical reflection on paper 1 and 2. Decision-making processes are outlined, along with strengths and weakness of the research and clinical implications. The research is situated within national and local policy and context, and plans for dissemination are discussed.

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**1.0 Paper 1: A Systematic Review of Systematic Reviews on the Link Between Childhood Emotional Abuse and Later Mental Health Problems**

*Prepared in accordance with The Clinical Psychology Review Guidelines for submission*



## 1.1 Abstract

Over the past decade, a large number of systematic reviews and meta-analyses have been published on the effects of childhood emotional abuse (CEA). Many health care providers and other bodies look to this literature to provide a coherent overview and make important decisions on this basis. However, many reviews are not good quality and may therefore, be misleading. To clarify any confusion, a systematic review of 18 systematic reviews and/ or meta-analyses was conducted on the association between CEA and later mental health problems. To ensure a transparent and systematic approach, this paper adhered to the PRISMA statement (Moher, Liberati Tetzlaff & Altman 2009) and preregistered a protocol with PROSPERO. A narrative synthesis was employed to describe the methodology and conclusions of the included reviews. The Assessment of Multiple Systematic Reviews 2 (AMSTAR 2; Shea et al., 2017) was used to assess quality. Results from high-quality reviews demonstrated that CEA is linked to later mental health problems including bipolar disorder, depression, anxiety, eating disorders, suicide and being at ‘ultra-high risk’ for psychosis. Based on these findings, it is recommended that clinicians provide a routine assessment for CEA. Further investment in trauma informed interventions is warranted.

## 1.2 Introduction

Child maltreatment (CM) refers to the neglect and/ or physical, emotional and sexual abuse of people younger than 18 (World Health Organisation; WHO, 2016). Annually, it is estimated that 150 million, or 1 in 15 children, are maltreated worldwide (Svenvo-Cianci, Hart & Rubinson, 2010). In high-income countries, approximately 4-16% of children experience physical violence, 10% are emotionally abused, 15% neglected, and between 5 and 30% per cent experience sexual abuse (Gilbert et al., 2009).

It is thought that prevalence rates may be an underestimate due to children being too scared or ashamed to disclose and adults around them not recognising the abuse (NSPCC, 2019). Furthermore, obtaining accurate statistics is problematic, as countries differ in their legal systems and methods of reporting (Ferrara, 2015). Even within countries, there is a large variation in prevalence estimates and a lack of consensus among researchers (Radford, Corral, Bradley, & Fisher, 2013) due to differences in definitions, methodology, and samples selected (Oaksford & Frude, 2001).

Despite differences in prevalence estimates, CM is widely recognised as a major human rights and public health concern (Hammond, 2003), in part due to significant social and economic costs. Approximately 4% of Europe's Gross Domestic Product is spent on the consequences of child maltreatment which equates to billions spent on health care, social welfare, justice systems, and loss of productivity (WHO, 2013).

Around 80% of child maltreatment is thought to be perpetrated by parents or guardians (Gilbert, 2009) and risk factors include social isolation, poverty, poor parenting skills, violence between adult family members, and parents who were abused as children (Bae, Solomon & Gelles, 2007). Research suggests the impacts of CM are pervasive, including poorer educational attainment, higher incidence of violence and criminal behaviour and physical and mental health problems (Gilbert, 2009).

The consequences of CM are now thought to extend into adulthood. The landmark study on Adverse Childhood Experiences (ACEs; Felitti et al., 1998) showed that a range of adverse experiences in childhood, including CM, were associated with detrimental health and mental health outcomes in adulthood. The relationship was cumulative; the greater the number of ACEs, the higher the risk of adverse outcomes in adulthood. This study has been replicated in the UK (Ashton et al., 2016; Bellis, Lowey, Leckenby, Hughes & Harrison, 2013). A plethora of research has followed, demonstrating the association between ACE's and adulthood mental health outcomes and the dose response nature of this relationship (Chapman et al, 2004, Arnow, 2004). This research has had a powerful impact, influencing UK government policy and attracting investment into preventing ACE's and tackling their impact (Welsh Government, 2017).

A criticism of the ACE's literature is its reliance on self-report, retrospective accounts of child maltreatment. Self-reported ACEs may be subject to recall bias, confounding or overstating the relationship between ACEs and mental health difficulties in adulthood, which calls into question the validity of findings (Johnson, 2018) and generates uncertainty about whether outcomes are related to the abuse experience (Gilbert et al., 2009). However, prospective research that uses professional reports of CM has similarly demonstrated a link

between ACE's and adult mental health problems (Varese, 2012), although these studies have attracted their own criticism for capturing only a small proportion of individuals known to services who may not be representative of the population as a whole (Gilbert, 2009).

A further criticism of the ACE's literature is that it is an oversimplification of a "complex and nuanced mechanism" (Johnson, 2018; p. 52). The effects of specific types of adversity are not disentangled, and terms like 'adversity' and 'trauma' are used interchangeably (Johnson, 2018). Some of the literature, however, has focused on the effects of specific types of early experience. The most extensive evidence base demonstrates the association between adulthood mental health problems and childhood sexual abuse (Maniglio, 2009). Studies have similarly found a relationship between childhood physical abuse (Spinger, Sheridan, Kuo & Carenes, 2007), and neglect (Nikulina, Widom & Czaja, 2011) with adult mental health difficulties.

According to a recent white paper (White Paper Steering Committee, 2013, p.19) childhood emotional abuse (CEA) is likely to be underreported. This is because, for a case of CM to be confirmed, services must have investigated and found enough evidence to verify that the CM occurred, which often includes physical marks. However, if abuse was not physical, the child is frequently coerced into retracting their report, or it is judged that there is not sufficient evidence.

There has been extensive literature examining the link between CEA and adulthood mental health (MH) problems, including numerous systematic reviews (SR) and meta-analyses (MA) (Angelakis, Gillespie & Panagioti, 2019). However, this literature suffers from a diversity of terminology referring to overlapping concepts. CEA (Castellvi et al, 2017) is also named

psychological abuse (Infurna et al. 2016), and emotional trauma (Fernandes & Osorio, 2015). Differing definitions are used varying in their level of specificity. Some authors distinguish between childhood emotional neglect (CEN) and CEA (Kimber et al., 2017), the former being defined as an act of omission and the latter as an act of commission. Others combine CEA and CEN into one category (Bonoldi, 2013). Some do not provide a definition (dos Santos, Basto-Pereira & da Costa Maia, 2017).

Inconsistency in terminology and definitions leads to difficulties in comparison and collation of evidence and questions about whether the same concept is being measured. This may create confusion among professionals who look to this literature for guidance. It seems that the issue needs further consideration, and an assessment of the quality of evidence available, to inform research and policy. It is hoped that this will aid researchers and clinicians to form conclusions and develop new research based on the most accurate interpretation of the literature. The definitions of CM used in this paper are from Berstein et al. (1994) and are provided in Table 1. This paper differentiates between CEA and CEN.

The present study is a review of the systematic reviews that have investigated the link between CEA and adult mental health problems. It has four main aims: a) to provide a clear definition of CEA b) to provide an overview of systematic reviews on the link between CEA and adulthood mental health problems c) to assess the quality of this literature, including limitations; and d) to suggest clinical implications of the most reliable findings and future research.

Table 1 *CM definitions (Carr, Martins, Stingel, Lemgruber & Juruena, 2013, p.1008)*

Type of child maltreatment	Definition
Childhood emotional abuse	<i>“Verbal abuse that affects the welfare or the morals of the child or any conduct that demeans, embarrasses, frightens, or insults, for example, blaming, ridiculing, belittling, threatening, frightening, discriminating, harassing, provoking, or rejecting.”</i>
Childhood emotional neglect	<i>“A pattern of failure of the caregiver to provide the basic emotional and psychological needs, such as love, attention, motivation, encouragement, and emotional support, intentionally or not, for example, does not hold or comfort the baby, does not interact with the child, ignoring the child’s needs for affection, or not appreciating the achievements of children”</i>

## 1.3 Method

### 1.3.1 Protocol and registration

This systematic review of systematic reviews was conducted using the Preferred Reporting Items of Systematic Reviews and Meta-analysis (PRISMA) statement (Moher, Liberati Tetzlaff & Altman 2009). A pre-written protocol was registered on the international prospective register of systematic reviews (PROSPERO, 2019 CRD42019128092).

### 1.3.2 Eligibility criteria

Papers were eligible if they met the following criteria:

- i) Systematic reviews (either stand-alone or including a meta-analysis)
- ii) Included studies focused on adults (but there may have also been adolescent samples, according to the WHO classification of adolescence as between 10 and 19 years of age)
- iii) Reported results and or conclusions regarding the relationship between CEA and later mental health problems

- iv) Provided separate results/ commentary specifically for CEA, as distinct from CEN
- v) Written in the English Language
- vi) None of the exclusion criteria were met

Papers were excluded when they were:

- i) Not systematic reviews or meta-analysis
- ii) Books or book chapters
- iii) Written in languages other than English
- iv) Samples included children (under 10 years old), or adolescents only (10 – 19 years of age)
- v) Papers that focused on physical health or somatic outcomes, such as non-epileptic seizures, fibromyalgia and chronic pain
- vi) Papers with a genetic, or neuropsychological focus

The primary outcome for the present systematic review was the association between CEA and adulthood mental health problems.

### **1.3.3 Search information sources**

A systematic literature search was conducted in three databases including PsycInfo, Web of Science and Scopus. Reference lists of included reviews were searched. In order to investigate the association between CEA and adulthood mental health problems the following keywords and subject headings were used:

(Emotional abuse, psychological abuse, emotional trauma, psychological trauma) AND (systematic review, meta-analy\*, meta analy\*, metaanalys\*, OR meta-review, literature review\*). Search strategy and filters were informed by the Cochrane handbook, The Scottish Intercollegiate Network and a specialist librarian. The search strategy was adapted for the different databases.

#### **1.3.4 Study selection**

Identified records from each database were downloaded to Zotero, a reference manager. Duplicates were excluded. Titles and abstracts of articles identified from the search strategies were screened to determine whether they were relevant and met the inclusion criteria. Papers were excluded as soon as one of the criteria was not met. When the title and or abstract did not provide enough information to judge whether the paper should be included or not, the full paper was examined.

#### **1.3.5 Data extraction**

A data extraction template was created to systematically extract information from each review. The following information was extracted:

1. Author, title, year
2. Method
3. Number of studies included that are relevant to the link between CEA and adult mental health problems
4. Mental health difficulty/ diagnosis of interest
5. Mental health outcome measure
6. CEA outcome measure



7. CEA definition if provided
8. Key finding for the association of interest.

### **1.3.6 Quality assessment**

Final papers were quality reviewed using the Assessment of Multiple Systematic Reviews 2 (AMSTAR 2; Shea et al., 2017). This is one of the few tools available for assessing the quality of systematic reviews and to have had its psychometric properties documented (Shea et al, 2017). The AMSTAR 2 guidance recommends a scheme for assessing whether domains should be considered ‘critical’ or ‘non-critical’. Critical domains are where bias or omissions would seriously impact the validity of the conclusion drawn by the authors. This is considered by the authors to be an improvement upon merely giving a total score, which may mask these differences. The critical domains for the present review were as follows:

- 1) Presence of a pre-written protocol
- 2) A comprehensive systematic literature search
- 3) Justification for excluding individual studies
- 4) Assessment of risk of bias and discussion of implications of bias

The AMSTAR 2 was designed for appraising reviews of health care interventions, and many of the items in the tool were deemed either completely irrelevant or irrelevant in their original wording. It was decided on consultation with the research supervisory team that it would be appropriate to modify the tool to be more applicable to the papers under review. This was because the psychometric properties of the questionnaire would likely be compromised in its application to healthcare research, particularly that which is quasi-experimental. In total, three questions were modified in their wording, two were collated to form one question, and

five were omitted (see Appendix A, table 2 for details regarding the final items and which ones were modified, collapsed or omitted).

The reviewer performed the quality appraisal for all of the included papers. A second rater was recruited to independently rate a quarter of the papers. Agreement between the raters was 100% for these papers, providing some support for the measure's inter-rater reliability despite the modifications.

The overall quality of the included reviews were rated using the suggested criteria (Shea et al., 2017 p. 6):

- 1) 'High' methodological quality: the paper contained no or one non-critical weakness. This means the review provides an 'accurate and comprehensive summary of the results of available studies'
- 2) 'Moderate': the paper has more than one non-critical weakness, but no critical weaknesses. The review may provide an accurate summary of the results of available studies included in the paper
- 3) 'Low': One critical weakness with or without non-critical weaknesses. The review has a "critical flaw and may not provide an accurate and comprehensive summary of the available studies"
- 4) 'Critically low': More than one critical weakness with or without non critical weaknesses. The review should not be relied upon the provide an accurate and comprehensive summary of the available studies

## 1.4 Results

### 1.4.1 Search and inclusion results

After duplicates were removed, the searches in the three databases resulted in 742 results. Initial filtering based on abstract and title reduced this number to 31. After sifting based on full text articles, 59 reviews remained. Reference lists were searched for relevant articles and another review was found, which led to a total of 18 papers to be included in this review. Thirteen of these included meta-analysis in addition to the systematic review. The flow diagram of this process, and reasons for exclusion are depicted in Figure 1.

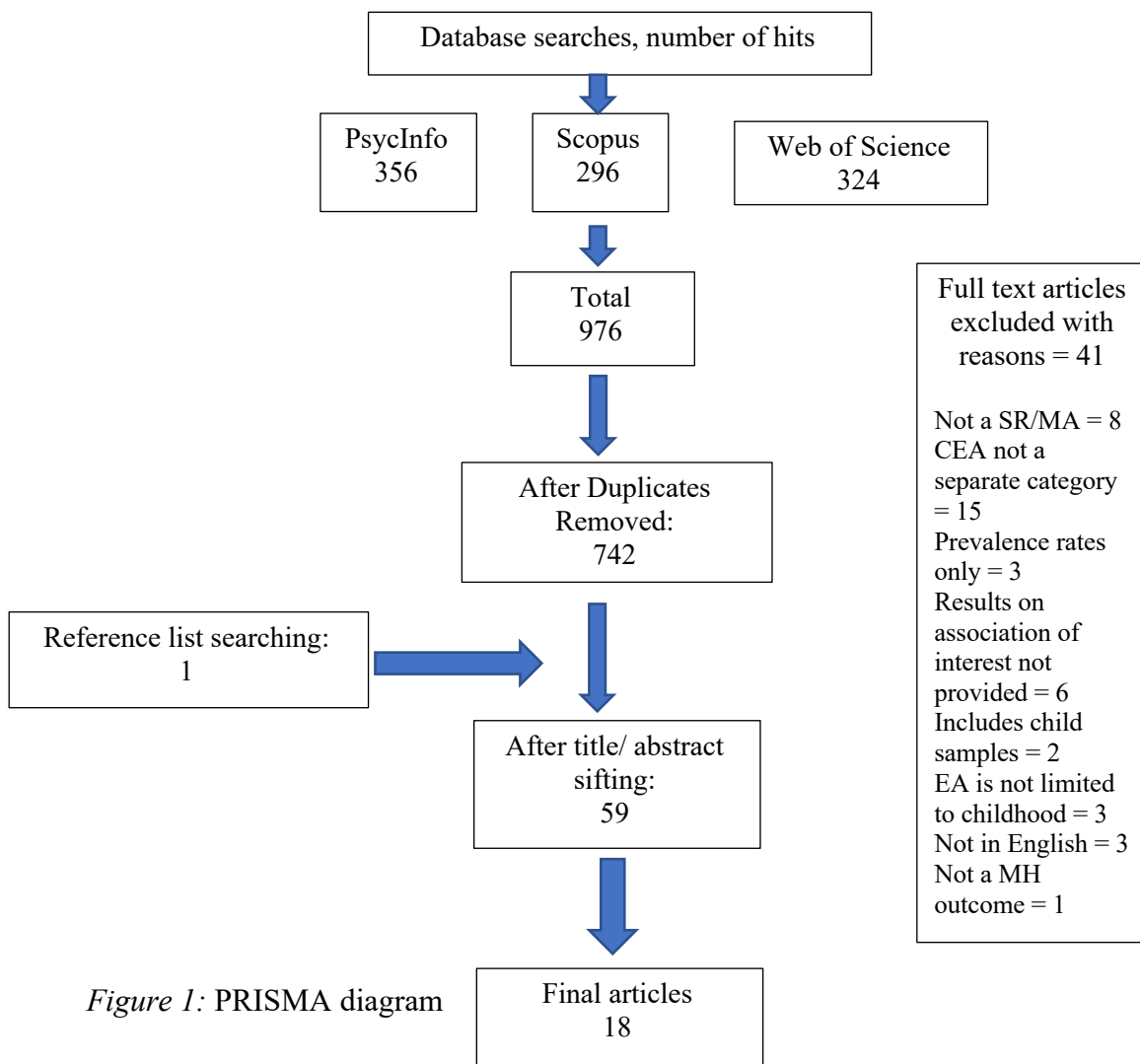


Figure 1: PRISMA diagram

### **1.4.2 Characteristics of the final 18 reviews**

Table 3 (below) depicts the characteristics of the final 18 papers. Eight papers included adult only samples, whilst 10 included a mix of adolescent and adult samples.

**Table 3***Data extraction information*

Author and year	Method	Population	Design	No. of relevant studies	Mental health Outcome	MH measure	CEA measure
Angelakis, Gillespie, & Panagiotti (2019).	SR and MA	Adults exposed to CM, community and clinical samples (both mild and severe and enduring diagnosis)	One prospective, the rest cross sectional. Comparison groups: those with CEA compared to those without.	SA: 23 studies and 33,857, SI: unclear how many studies, 5.936 participants	Suicidality (suicide attempts, and suicidal ideation)	A mix of self report questionnaires and clinician interviews, asked the number of suicide attempts	Mix of self report questionnaires, clinical interviews and medical records
Goldstein & Gvion, 2019	SR	Adults with bulimia nervosa, who have experienced CM	Cross sectional. Comparison group: presence of absence of suicide attempt	1 study, 204 ppts	'Full' or 'subclinical' bulimia nervosa Suicide attempt	Unclear	CTQ
Peh, Rapisarda & Lee (2018)	SR and MR	Adults and adolescents who are UHR for psychosis, who have experience CM	A mix: Case control, cross sectional, longitudinal, case control	5 studies, 758 UHR, 350 controls (total = 1,108 ppts)	Ultra high risk for psychosis	SIPS or the CAARMS	CTQ, TADS, CATS, ETI, CECA-Q
Liu, Pittman, & Zamora, (2018)	SR and MA	Adults and adolescents exposed to CM, community and clinical, who self harm	Cross sectional and longitudinal, unclear whether comparison groups were used	29 studies, 27,768 ppts	Deliberate self harm	Mix of clinical interview (SITBI) and self report questionnaires i.e. DSI, LHA	A mix of clinical interviews i.e. the CMIS and self report questionnaires (i.e. LYLES, ACEs Tool, CTS, TSI, CANQ, CECA, JVQ, LSC-R, ChYMH, study specific questionnaires)

Rafiq, Campodonico & Varese 2018	SR and MA	Adults with diagnosis of schizophrenia, bipolar and personality disorders who experience dissociation, and who have experience CM	All Cross sectional, between group (with and without CEA) and correlational	34 studies	Schizophrenia spectrum or personality disorder or Bipolar	Only those using DSM or ICD diagnostic interviews. Dissociation measures: The DES (DES-II, the DES-T DES Turkish version, German version Spanish version)	A mix, specifies only validated self report questionnaires. The CTQ, the CTQ-SF (short form), DDIS, TAA, TEQ, CTQ (Turkish version, TAQ
Castellví et al., (2017)	SR and MA	Adolescents and young adults (12-26 years), exposed to CM, who have attempted suicide	Cohort design, 2 year follow up, comparison group: those that did not attempt or complete suicide	One study, 521 at baseline 638 at follow up	Suicide attempt or completion	Two questions asked about suicide unclear what	Not stated
Fusar-Poli et al., (2017)	SR and MA	Adolescents and adults at UHR for psychosis, exposed to CM	Cohort, and matched case controls	2 studies, 66 in UHR group, 99 in control	UHR	A mix but only those using recognised criteria: CAARMS, BPRS, SIPS, BSIP	CTQ and the TADS
Kimber et al., (2017)	SR	Adults with an eating disorder or eating disordered behaviour, exposed to CM	Retrospective, cross sectional, no control group	1). 12 Studies (ppt no. range from 41 to 4377) 2).1 study, 1254 ppts	Diagnosis of Eating disorder and eating disordered behaviour	DSM most used	CTQ most used
Liu et al., (2017)	SR and MA	Adults and adolescents exposed to CM, both community and clinical	A mix of case control and cohort. Control groups: without CEA or without Suicide attempt.	5 studies, doesn't report ppts numbers for all studies	Suicide attempt main outcome. Participants had a range of diagnosis i.e. Major depressive disorder, Bipolar disorder 1, conversion disorder, variety of diagnosis,	Suicide attempt: self report by asking, by questionnaire, clinical interview	Only studies using the CTQ

					chronic schizophrenia		
Nelson, Klumpparendt, Doeblner, & Ehring, (2017)	SR and MA	Adults who have experience CM, and have depression, clinical and population based samples	1). Control group without CEA 2). Within group Lack of info: most studies were cross sectional retrospective	For analysis looking at risk of depression for ppts with CEA – 15 studies, 8002 ppts, for severity of CEA and depression 24 studies and 6758 ppts	Depression	Not given	CTQ most used
Zatti et. al, (2017)	SR and MA	Adults and adolescents who have experienced CM and have attempted suicide	Longitudinal cohort studies, comparator groups not exposed to CEA	3 studies, 6149 ppts	Life time suicide attempt. Included ppts regardless of whether they had MH diagnosis.	Not stated	CTQ used in most (others not stated)
Infurna et al., (2016)	SR and MA	Adults and adolescents who have experienced CM, and meet the criteria for a diagnosis of depression	Only studies with a comparison group of non-depressed participants. No more detail given.	2 studies 259 ppts for psychological abuse, 5 studies 842 ppts for antipathy	Depression	Only studies using a clinical assessment of depression	Only studies using CECA interview
Palmier-Claus, Berry, Bucci, Mansell, & Varese, (2016)	SR and MA	Adults and adolescents with a diagnosis of Bipolar disorder	Mix: studies with a case control group (without BD), epidemiological studies (population based, cross sectional and retrospective	9 studies. Unclear how many participants	Bipolar disorder 1 and 2	ICD-10 or DSM	Mainly CTQ

			cohort, one quasi-prospective)				
Mandelli, Petrelli & Serretti, (2015)	SR and MA	Adults with depression, who have experienced CM	Mix of designs, retrospective clinical population, retrospective cohort, case-control, longitudinal	8 studies, total pts 15527	Depression	A mix of structured clinical interviews (i.e. DSM-III) and self report i.e. BDI	Mix of structured interview and self report questionnaires i.e. this childhood trauma NEMESIS, the CECA
Schneeberger, Dietl, Muenzenmaier, Huber & Lang, (2014)	SR	Adults who identified either as non-heterosexual or transgender	Cross sectional	1 study, 669 pts	PTSD and anxiety symptoms	Not stated	Questionnaire not specified
Carr, Martins, Stingel, Lemgruber & Jurueña, (2013)	SR	Adult clinical population	States some studies had control groups (without Early life stress, or without mental health problems), and some did not have control groups	18	Variety – personality disorders, schizophrenia, anxiety disorders, Major depression.	Mix of diagnostic interviews (i.e. DSM III, DSM-IV, Structured clinical interview: SCID- II Composite international diagnostic interview, clinical interview schedule revised, diagnostic interview schedule revised) and self report questionnaires (psychosis screening questionnaire SADQ, SCOFF, SSCECV)	Mix of clinical interviews (abuse history interview) and self report questionnaires (CTQ, CEQ-R, CMHSR, CSAAS, ETI, FOQ, TSQ, SSCECV)
Norman, Byambaa, Butchart, Scott & Vos (2012)	SR and MA	Adults and adolescents who have experience CM	Mix: retrospective and prospective cohort, cross-sectional, case control	9 studies for depression, 4 for anxiety, 2 for Eating Disorder, 11	Variety (i.e. depression, anxiety, ED, suicide attempt).	Clinical interview and self-report. Variety, some diagnosed (DSM, ICD), some self	Mix, some official records, some self report (CTQ, CTS, ACE, bespoke measure), telephone survey



				for Suicide Attempt.		report i.e. BDI, CES-D)	
Martins, Baes, & Juruena, (2011)	SR	Adults and adolescents with diagnosis of mental health difficulties, who have experienced CM	Majority cross-sectional, reports that some had control groups unclear which. Controls included those without CM, and those without a MH diagnosis	7 relevant studies. Sample sizes across the whole review varied from 26-8,589, unclear for studies of interest	A variety i.e. mood disorder, anxiety disorder, personality disorders, psychotic disorders, eating disorders, dissociative disorders	Reports diagnosis unclear what measure, mention the ICD-10 for PTSD	A mix of self report: i.e. CTQ, CTS, nSSCECV and interview: CTI

\* ACEs Tool = Adverse Childhood Experiences Tool, BDI = Beck's Depression Inventory, BSIP = Brief Screening Instrument for Psychosis, BPRS = Brief Psychiatric Rating Scale, CANQ = Childhood Abuse and Neglect Questionnaire, ChYMH = the Child and Your Mental Health Instrument, CAARMS = Comprehensive Assessment of At Risk Mental State, CAN-Q, Childhood Abuse and Neglect Questionnaire, CATS = Childhood Trauma and Abuse Scale, CECA-Q = Childhood Experience of Care and Abuse Questionnaire, CMIS = Childhood Maltreatment Interview Schedule, CSAAS = Child Sexual Abuse and Assault Survey, CEQ- R = Revised Childhood Experiences Questionnaire, CTS = The Conflict Tactics Scale, CTI= Childhood Trauma Interview, CTQ = Childhood Trauma Questionnaire, DES = Dissociative Experiences Scale, DSI = Deliberate self-harm inventory, DSM – Diagnostic and Statistical Manual, ETI – Early Trauma Inventory, ICD = International Centre for Diseases, TSI= Trauma Symptom Inventory, CECA = Childhood Experience of Care and Abuse Questionnaire, CES-D = Centre for Epidemiological Studies Depression Scale DDIS = Dissociative Disorders Interview, FOQ = Family of Origin Questionnaire , JVQ = Juvenile Victimization Questionnaire = JVQ, LHA = Lifetime History of Aggression, LSC-R, Life Stressor Checklist Revised, LYLES = Linkoping Youth Questionnaire, LSC-R = Life Stressor Checklist Revised, SITBI = Self-Injurious Thoughts and Behaviour Interview, SIPS = Structured Interview for Psychosis Risk Syndrome, SSCECV = Screening Survey of Children's Exposure to Community Violence, TAA = Trauma Assessment for Adults, TADS = Trauma and Distress Scale, TEQ = Trauma Experiences Questionnaire, TAQ = Trauma Antecedent Questionnaire, TSI = Trauma Symptom Inventory, TSQ = Trauma Screening Questionnaire,

### **1.4.3 Designs of relevant studies**

The reviews included only observational studies. The majority of reviews included studies with comparator groups. Examples include groups of participants who did not have the mental health outcome in question, for example, those who had not attempted suicide (Goldstein & Gvion, 2019; Castellví et al., 2017; Liu et al., 2017), who were not ultra high risk for psychosis (Fusar-Poli et al., 2017; Peh, Rapisarda & Lee, 2018), did not have a diagnosis of bipolar disorder (Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016), or were not depressed (Infurna et al., 2016; Mandelli, Petrelli & Serretti, 2015). Other comparator groups included those who had not experienced childhood maltreatment (Carr, Martins, Stingel, Lemgruber & Juruena, 2013; Nelson, Klumpp, Doebler, & Ehring, 2017; Zatti et al., 2017; Norman, Byambaa, Butchart, Scott & Vos, 2012; Angelakis, Gillespie, & Panagioti, 2019; Rafiq, Campodonico & Varese 2018; Scneeberger, 2014). One paper did not include comparator groups (Kimber et al., 2017) and sometimes it was not clear whether the specific studies of interest had comparator groups (Martins, Baes, & Juruena, 2011; Liu, Pittman, & Zamora, 2018).

The majority of papers included studies with a variety of different designs (Angelakis, Gillespie, & Panagioti, 2019; Peh, Rapisarda & Lee, 2018; Liu, Pittman, & Zamora, 2018; Kimber et al., 2017; Liu et al., 2017; Nelson, Klumpp, Doebler, & Ehring, 2017; Infurna et al., 2016; Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016; Mandelli, Petrelli & Serretti, 2015; Carr, Martins, Stingel, Lemgruber & Juruena, 2013; Norman, Byambaa, Butchart, Scott & Vos, 2012; Martins, Baes, & Juruena, 2011) and this heterogeneity makes comparison and or collation of results more difficult, as it is unclear whether studies are

sufficiently similar for this to be meaningful. Lack of clarity in two reviews (Martins, Baes, & Juruena, 2011; Liu, Pittman, & Zamora, 2018) regarding whether comparator groups had been used in the association of interest, further compounds this problem.

Very few papers focused exclusively on studies with one design, an exception was Zatti et al. (2017), which focused on longitudinal cohort designs, and Fusar-Poli et al. (2017), which focused only on studies with matched case control designs.

#### **1.4.4 How did included studies define CEA?**

There was inconsistency regarding the definition of CEA across the studies. Five of the reviews (Carr Martins, Stingel, Lemgruber & Juruena, 2013; Kimber et al., 2017; Martins, Baes, & Juruena, 2011; Norman, Byambaa, Butchart, Scott & Vos, 2012; Mandelli, Petrelli & Serretti, 2015) provided definitions for CEA, which are listed in Table 4 (Appendix B). Of these, two provided definitions for both CEA and CEN (Carr, Martins, Stingel, Lemgruber & Juruena, 2013; Kimber et al., 2017). However, none use exactly the same definition of CEA. One paper (Infurna et al., 2016), uses the terms psychological abuse (“coercive sadistic control”) and antipathy (“parental criticism and hostility”), instead of CEA.

Three of the papers which provide definitions of CEA do not differentiate a separate ‘emotional neglect’ category, however, it is clear from their definitions that CEN falls under a larger ‘neglect’ category, and therefore by implication they are measuring CEA as a separate phenomenon (Mandelli, Petrelli & Serretti, 2015; Martins, Baes, & Juruena, 2011; Norman, Byambaa, Butchart, Scott & Vos, 2012). Two (Martins, Baes, & Juruena, 2011; Norman, Byambaa, Butchart, Scott & Vos, 2012;) of the aforementioned papers use the same definitions as those used by Butchart (2006).

The remaining nine papers did not provide definitions, but all categorised CEA as distinct from CEN and provide separate results based on these categories (Angelakis, Gillespie, & Panagioti (2019)., Goldstein & Gvion, 2019; Peh, Rapisarda & Lee, 2019, Liu, Pittman, & Zamora, 2018, Rafiq, Campodonico & Varese 2018, Liu et al., 2017, Fusar-Poli et al., 2017; Zatti et. al, 2017; Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016; Scneeberger, 2014; Castellví et al., 2017).

The lack of a consistent definition for CEA and different terms used for what is purportedly the same outcome, poses problems when comparing results across reviews. An absence of any definition further compounds this problem. Therefore this paper tentatively offers a definition of CEA for future researchers to use: “*Verbal abuse that affects the welfare of the morals of the child or any conduct that demeans, embarrasses, frightens or insults, for example, blaming, ridiculing, belittling*” (p. 1007 Carr, Martins, Stingel, Lemgruber & Juruena, 2013) This definition was selected as only two of the papers reviewed provided explicit definitions of both CEA and CEN (see table 4, appendix B). This definition was considered to provide a greater level of precision than the other definition which made this distinction, due to a greater level of detail. By providing a clear definition of CEA it is hoped that consistency across reviews will be achieved.

#### **1.4.5 Outcome measure: CEA**

The most commonly used measure of CEA was the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998 ) which has been shown to be reliable and valid (Bernstein et al., 1994). The frequency with which this was used is likely to be due to the current research question, as papers were selected that separate out CEA and CEN, and the CTQ does so.

Examples of other questionnaires used include The Trauma and Distress Scale (TADS; Patterson et al., 2002), and the Childhood Trauma Screener (CTS; Grabe et al, 2012).

Examples of clinically administered assessments and interviews include the Childhood Experience of Care and Abuse Questionnaire (CECA-Q; Smith, Lam, Bifulco, & Checkley, 2002) and the Early Trauma Inventory (ETI; Bremner, Vermetten & Mazure, 2000).

Two reviews specified their primary outcome measure of interest at the outset, as part of the exclusion criteria. Liu et al., (2017) stated that only those studies using the CTQ would be included, and Infurna et al., (2016) specified only those using the Childhood Experience of Care and Abuse Interview (Bifulco, Brown & Harris,1994). This made it possible for authors to pool results across studies with confidence that the same construct was being measured.

However, the majority did not take this approach to their inclusion criteria. Some reviews included both clinical interviews, and self-report measures (Liu, Pittman, & Zamora, 2018; Mandelli, Petrelli & Serretti, 2015; Martins, Baes, & Juruena, 2011; Carr, Martins, Stingel, Lemgruber & Juruena, 2013;). Other reviews included a range of different self report measures (Peh, Rapisarda & Lee, 2019; Rifaq, 2018; Fusar-Poli et al., 2017), and one included measures that have not been validated (Norman, Byambaa, Butchart, Scott & Vos, 2012). Another review included a range of self report measures, clinical interviews and official records (Angelakis, Gillespie & Panagioti, 2019). This heterogenous approach is potentially problematic for gathering and comparing information. For example, it may be that participants are more or less likely to disclose sensitive information depending on the method used. Furthermore, it adds to the uncertainty about whether exactly the same phenomena is being measured, and the use of bespoke measures poses problems for both

validity and replicability. Finally, it may contribute to statistical heterogeneity, which will be discussed in more detail below.

#### **1.4.6 Outcome: What Mental Health outcomes did reviews include?**

The mental health outcomes investigated by the reviews varied. A minority of papers had well described outcome measures defined at the start of the reviews. This includes two reviews which investigated individuals who were at Ultra High Risk for psychosis (UHR); both utilised only internationally recognised outcome measures to assesses this (Fusar-Poli et al., 2017; Peh, Rapisarda & Lee, 2018). Additionally, Rafiq, Campodonico & Varese (2018) measured dissociation as their main outcome in people with a Diagnostic and Statistical Manual (DSM) or International Classification of Diseases (ICD) diagnosis of schizophrenia spectrum, personality disorder or bipolar disorder. Dissociation was measured using different versions of the Dissociative Experiences Scale (DES; Carlson,1993), which is a self-report questionnaire. For these reviews pooling results across studies was less problematic and the author could be more confident they were measuring the same outcome. Finally, three reviews included only studies using formal clinical interviews or diagnostic assessments for eating disorders (Kimber et al., 2017), depression (Infurna et al., 2016) and bipolar disorder 1 and 2 (Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016).

However, the vast majority of reviews included studies with diverse outcome measures.

Articles included both a range of different self-report measures and clinical interviews (Angelakis, Gillespie, & Panagioti, 2019; Liu et al., 2017; Norman, Byambaa, Butchart, Scott & Vos, 2012; Mandelli, Petrelli & Serretti, 2015; Liu, Pittman, & Zamora, 2018), bespoke, unvalidated measures (Angelakis, Gillespie, & Panagioti, 2019; Norman, Byambaa, Butchart, Scott & Vos, 2012) and official records (Angelakis, Gillespie, & Panagioti, 2019). Some

reviews stated that questions were asked but did not say what (Castellví et al., 2017) and in others it was not clear which outcome measures were used (Schneeberger, Dietl, Muenzenmaier, Huber & Lang, 2014; Goldstein & Gvion, 2019; Zatti et. al, 2017).

This heterogenous approach is potentially problematic when gathering information that is sufficiently similar to compare across studies, and ultimately across reviews. Further difficulties include the use of bespoke questionnaires and lack of clarity regarding outcome measures. This affects validity and replicability.

#### **1.4.7 Methodological quality of included papers**

The quality assessment of included papers is presented in Table 5 (below). Overall, five papers were rated as high quality (Norman, Byambaa, Butchart, Scott & Vos, 2012; Peh, Rapisarda & Lee, 2019; Rafiq, Campodonico & Varese 2018; Zatti et. al, 2017; Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016), and one paper was moderate quality (Castellví et al., 2017). Five papers were assessed as low quality (Kimber et al., 2017; Angelakis, Gillespie, & Panagioti, 2019; Fusar-Poli et al., 2017; Liu et al., 2017; Mandelli, Petrelli & Serretti, 2015). Seven papers were critically low quality (Goldstein & Gvion, 2019; Liu, Pittman, & Zamora, 2018; Nelson, Klumparendt, Doebler, & Ehring, 2017; Infurna et al., 2016; Schneeberger, Dietl, Muenzenmaier, Huber & Lang, 2014; Carr, Martins, Stingel, Lemgruber & Juruena, 2013; Martins, Baes, & Juruena, 2011). This means that, according to the AMSTAR 2, five of the papers can be judged to provide an ‘accurate and comprehensive summary of the results of available studies’, (high quality) and another paper ‘may’ do so (moderate quality). Five of the papers may not provide an accurate summary (low quality), and seven should not be relied upon to do so (critically low quality).

**Table 5***Quality assessment*

Paper	PIC O	Protocol	Search Strateg y	Study selection	Data extraction	Excluded studies	Studies described	RoB	Funding source/ conflict of interest	H	PB	Quality
Angelakis, Gillespie, & Panagioti (2019)	Yes	No	Partial Yes	Yes	Yes	Yes	Yes	Partial Yes	Yes	Yes	Yes	Low
Goldstein & Gvion, (2019)	Yes	No	No	Yes	No	No	Yes	No	Yes	Yes	N/A	Critically low
Peh, Rapisarda & Lee, (2019)	Yes	Yes	Partial Yes	Yes	No	Yes	Partial Yes	Yes	Yes	Yes	N/A	High
Liu, Pittman, & Zamora (2018)	Yes	No	Yes	Yes	No	Yes	Partial Yes	No	Yes	Yes	Yes	Critically low
Rafiq, Campodonico & Varese (2018)	Yes	Yes	Yes	Yes	No	Yes	Partial Yes	Partial Yes	Yes	Yes	Yes	High
Castellví et al., (2017)	Yes	Yes	Partial Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Moderate
Fusar-Poli et al., (2017)	Yes	No	Partial Yes	Yes	Yes	Yes	Partial Yes	Partial yes	Yes	Partial Yes	Yes	Low
Kimber et al., (2017)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Low
Liu et al., (2017)	Yes	No	Partial Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Nelson, Klumparendt,	Yes	No	Partial Yes	No	Yes	Yes	Partial Yes	No	Yes	Yes	Yes	Critically low



Doebler, & Ehring, (2017)													
Zatti et. al, (2017)	Yes	<b>Partial Yes</b>	<b>Partial Yes</b>	Yes	No	<b>Yes</b>	Partial Yes	<b>Partial Yes</b>	Yes	Yes	Yes	Yes	High
Infurna et al., (2016)	Yes	<b>No</b>	<b>Partial Yes</b>	No	Yes	<b>Yes</b>	No	<b>No</b>	No	Yes	Yes	Yes	Critically low
Palmier-Claus, Berry, Bucci, Mansell, & Varese, (2016)	Yes	<b>Yes</b>	<b>Partial Yes</b>	Yes	Yes	<b>Yes</b>	Yes	<b>Yes</b>	Yes	Yes	Yes	Yes	High
Mandelli, Petrelli & Serretti, (2015)	Yes	<b>No</b>	<b>Yes</b>	No	No	<b>Yes</b>	Yes	<b>Partial Yes</b>	Yes	Yes	Yes	Yes	Low
Schneeberger, Dietl, Muenzenmaier, Huber & Lang, (2014)	Yes	<b>Yes</b>	<b>No</b>	No	No	<b>No</b>	Partial Yes	<b>No</b>	Yes	No	N/A	N/A	Critically low
Carr, Martins, Stingel, Lemgruber & Juruena, (2013)	Yes	<b>No</b>	<b>Partial Yes</b>	No	No	<b>Yes</b>	No	<b>No</b>	Yes	No	N/A	N/A	Critically low
Norman, Byambaa, Butchart, Scott & Vos, (2012)	Yes	<b>Yes</b>	<b>Partial Yes</b>	Yes	Yes	<b>Yes</b>	Partial Yes	<b>Partial Yes</b>	Yes	Yes	Yes	Yes	High
Martins, Baes, & Juruena, (2011)	Yes	<b>No</b>	<b>Partial Yes</b>	No	No	<b>Yes</b>	No	<b>No</b>	No	No	N/A	N/A	Critically low

\*RoB = Risk of Bias, PICO = Population, Intervention, Comparator, Outcome, PB = Publication Bias, H = Heterogeneity tested for.  
**BOLD** = Critical Domain

#### **1.4.8 Critical domains**

The majority of papers conducted a comprehensive search of the literature (item 3) and provided justification for excluded studies (item 6). Six papers did not complete a risk of bias assessment and discussed the implications of results (item 8), and the majority of papers did not provide an explicit statement of a predetermined protocol nor register the protocol (item 2).

#### **1.4.9 Non Critical Domains**

All papers described the required elements of the PICO (Population, Intervention, Comparison, Outcome) (item 1) and tested for publication bias if applicable, that is if a quantitative synthesis was conducted (item 15). All but two papers declared their source of funding and or no conflict of interest (item 10). Four papers did not meet the heterogeneity criteria and four did not describe elements of PICO in sufficient detail (items 14 and 8). The majority of papers did not perform data extraction in duplicate (item 6).

#### **1.4.10 Risk of bias**

Seven papers (Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016; Norman, Byambaa, Butchart, Scott & Vos, 2012; Zatti et. al, 2017; Castellví et al., 2017; Fusar-Poli et al., 2017, Mandelli, Petrelli & Serretti, 2015; Liu et al., 2017) assessed risk of bias using the Newcastle Ottawa Scale (Wells et al., 2010). Kimber et al., (2017) used the Quality in Prognosis Studies (QUIPS; Hayden, van der Windt, Cartwright, Cote & Bombardier, 2013). Angelakis, Gillespie, & Panagioti (2019) used the Quality Qssessment Tool for Quantitative Studies

(Thomas et al, 2004), Peh, Rapisarda & Lee (2019) used a tool developed by Hoy (2012), and Rafiq, Campodonico & Varese (2018) used the Effective Public Health Practice Project tool (EPHPP; Thomas & Ciliska, 2004). All have had their psychometric properties tested.

Of the studies that assessed risk of bias, four papers (Liu et al., 2017; Peh, Rapisarda & Lee, 2019; Zatti et. al, 2017; Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016) did not find any low quality studies. However, Zatti et. al, (2017) included two studies that did not give sufficient information to rate two of the quality assessment domains so, it is unknown whether these studies are of adequate quality.

Seven papers found low quality studies. One (Castellví et al., 2017) did not include them in the MA, but the remaining six did (Norman, Byambaa, Butchart, Scott & Vos, 2012; Rafiq, Campodonico & Varese, 2018; Angelakis, Gillespie, & Panagioti, 2019; Fusar-Poli et al., 2017; Mandelli, Petrelli & Serretti, 2015). Of these, two papers (Fusar-Poli et al., 2017; Madnelli, 2015) conducted a sensitivity analysis removing one study at a time and found that this did not alter the results of the MA. Angelakis, Gillespie, & Panagioti (2019), included quality as a moderator in the MA, and so similarly checked what effect the low quality studies had on outcome. Norman, Byambaa, Butchart, Scott & Vos (2012) included a quality effects model statistic that assigned greater weight to studies of high quality versus studies of lesser quality. Finally, Kimber et al., (2017) found low quality studies but did not conduct a meta-analysis, and the authors commented on the implications. The remaining papers (Liu, Pittman, & Zamora, 2018; Martins, Baes, & Juruena, 2011; Goldstein & Gvion, 2019; Nelson, Klumppendt, Doebler, & Ehring, 2017; Infurna et al., 2016, Schneeberger, Dietl, Muenzenmaier, Huber & Lang, 2014; Carr, Martins, Stingel, Lemgruber & Juruena, 2013), did not assess risk of bias.

#### **1.4.11 Publication bias**

All papers that performed a quantitative synthesis included an assessment of publication bias. Angelakis, Gillespie, & Panagioti (2019) and Norman, Byambaa, Butchart, Scott & Vos (2012) found risk of bias in the association of interest. The latter delineated that because of this, the reported statistics may be overstated, and the former did not discuss implications.

#### **1.4.12 Heterogeneity**

Statistical heterogeneity was tested for and detected across most studies (Nelson, Klumparendt, Doebler, & Ehring, 2017; Lui 2018; Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016; Goldstein & Gvion, 2019; Mandelli, Petrelli & Serretti, 2015; Angelakis, Gillespie, & Panagioti, 2019; Fusar-Poli et al., 2017; Infurna et al., 2016; Liu et al., 2017; Norman, Byambaa, Butchart, Scott & Vos, 2012; Rafiq, Campodonico & Varese, 2018; Kimber et al., 2017; Peh, Rapisarda & Lee 2018; Castellví et al., 2017). The exception was the study by Zatti et al.(2017), which tested for, but did not detect heterogeneity in the association of interest. Three papers (Martins, Baes, & Juruena, 2011; Carr, Martins, Stingel, Lemgruber & Juruena, 2013; Schneeberger, Dietl, Muenzenmaier, Huber & Lang, 2014), did not test for heterogeneity.

High levels of statistical heterogeneity is potentially problematic and, it may be that in cases of high statistical heterogeneity, combining results across studies is not appropriate. Indeed, two reviews (Kimber et al., 2017; Goldstein & Gvion, 2019) decided not to conduct a MA for this reason. Potential sources of heterogeneity were tested for in the reviews. One article (Lui, 2018) found that use of different outcome measures across the different studies affected

statistical heterogeneity, and one (Mandelli, Petrelli & Serretti, 2015) found that the type of sample affected statistical heterogeneity.

Two articles (Rafiq, Campodonico & Varese 2018; Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016) tested for study design and found that this was not a cause of statistical heterogeneity and one, (Peh, Rapisarda & Lee, 2019), found that the choice of instrument did not affect statistical heterogeneity.

In sum, statistical heterogeneity was detected across the majority of reviews. As one author comments this is unsurprising given the differences in methodology across studies, including diverse outcome measures used for CEA and MH difficulties (Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016), and the wide variety of different variables that cannot be controlled for using observational designs.

## **1.5 Results of reviews**

The results of the reviewed papers are synthesised in table 6 (Appendix C).

### **1.5.1 Suicide attempt**

One high quality meta-analysis (Zatti et. al, 2017; Norman, Byambaa, Butchart, Scott & Vos, 2012), found experiencing CEA was associated with subsequent suicide attempts in adolescence/ adulthood (OR = 3.98, 95% CI 2.89-5.64; OR=3.08, 95% CI 2.42-3.93 respectively).

Two low quality meta-analyses (Liu et al., 2017; Angelakis, Gillespie, & Panagioti, 2019) replicated this association (OR = 2.33, SMD = 0.660; OR 2.49, 95% CI 1.64-3.77 respectively). However, the latter reported potential for publication bias so it could be that the reported relationship is inflated. Angelakis, Gillespie, & Panagioti (2019) further reported that CEA was associated with a two-fold increased risk for suicidal ideation in adults (OR 2.10, 95% CI 1.51-2.94).

Goldstein & Gvion (2019), another critically low quality paper, found CEA was significantly associated with lifetime suicide attempt among women with bulimia nervosa (BN). Finally, a moderate quality review (Castellví et al., 2017) reported the results of only one study of interest, which found that those exposed to CEA had a higher mean number of suicide attempts than those not exposed. However, the authors commented that the study in question did not report whether this association was significant.

### **1.5.2 Ultra-High Risk for Psychosis**

Ultra-High Risk for Psychosis (UHR) is a state defined using three internationally recognised criteria: genetic risk, brief and limited intermittent psychotic symptoms (onset of transient psychotic symptoms), and attenuated psychotic symptoms (the onset or worsening of subthreshold psychotic symptoms within 3 months) (Fusar-Poli et al., 2017; Peh, Rapisarda & Lee, 2019).

One high quality MA (Peh, Rapisarda & Lee, 2019 2019) found that UHR individuals were 5.06 times more likely to report CEA (OR=5.06, 95% CI = 1.55-16.58), than non-UHR controls. Compared with other types of childhood abuse, CEA had the strongest association with UHR. Another MA (Fusar-Poli et al., 2017) replicated the association between CEA and

UHR (OR= 5.84, 95% CI, 1.79-19.03) compared to matched controls. However, this MA was low quality.

In sum, there is evidence from one high quality MA (Peh, Rapisarda & Lee, 2019) that CEA is associated with the UHR state. The cross sectional nature of this study does not remove the possibility that individuals may become more susceptible to CEA after onset of UHR ‘symptoms’. Longitudinal designs would be required in order to establish causality between CEA and the UHR state and the direction of causality.

### **1.5.3 Non-suicidal self-injury**

One critically low quality MA found that CEA was associated with non-suicidal self-injury, in adolescents and adults (Liu, Pittman, & Zamora, 2018; OR 3.03, 95% CI, 2.56-3.54). The authors further reported that four studies demonstrated that negative cognitive tendencies including self-criticism, pessimism and academic self-efficacy were mediators for the link between CEA and non-suicidal self-injury. While suggesting an avenue for higher quality papers to explore, on the basis of this paper’s quality, it would be prudent not to draw any conclusions at this point regarding the link between CEA and later non-suicidal self-injury.

### **1.5.4 Eating disorders and disordered eating**

A high quality meta- analysis (Norman, Byambaa, Butchart, Scott & Vos, 2012) found that CEA was associated with an almost three-fold increased risk for developing an eating disorder (ED) in adolescence/adulthood (OR = 2.56; CI: 1.14-4.65).

A low quality systematic review (Kimber et al., 2017) reported similar findings, of an association between CEA and a diagnosed ED ranging from weak ( $r=0.16$ ) to exceptionally

strong ( $r=0.89$ ), and an association between CEA and eating disordered behaviour ranging from very weak ( $r=0.003$ ) to moderately strong ( $r=0.47$ ). The authors further reported that three of their included studies demonstrated that emotion regulation difficulties mediated the association between CEA and adult ED behaviour. This included one study which found that anger and self-criticism mediate the relationship and another which found depression and anxiety did. A final, critically low quality review reported results from one cross sectional study, which similarly found that CEA is associated with ED in adulthood (Martins, Baes, & Juruena, 2011).

The results from one high quality MA provide evidence for a link between CEA and ED in adolescence/ adulthood. While this was corroborated by other reviews, their findings cannot be relied upon to the same degree due to lower quality. All reviews included studies that were cross sectional in nature, so causality or the direction of causality between CEA and later ED or disordered eating cannot be commented upon until future research investigates this aspect.

### **1.5.5 Depression**

One high quality MA (Norman, Byambaa, Butchart, Scott & Vos, 2012) found that compared to non-abused controls, those exposed to CEA were at greater risk of becoming depressed (OR=3.06, 95% CI 2.43-3.85) and this relationship was dose responsive, that is, the more severe the abuse, the more severe the mental health problem. However, this paper did report on the potentiality of publication bias and the possibility that this association was therefore inflated.

One low quality, and one critically low quality, MA (Mandelli, Petrelli & Serretti, 2015; Nelson, Klumpp, Doebler, & Ehring, 2017) replicated the finding that people who had



been exposed to CEA were at higher risk for becoming depressed than controls who were not abused (OR=3.06, 95% CI 2.43-3.85; OR=3.73, 95% CI 2.88-4.83 respectively) and, the latter paper also reported that severity of CEA was associated with depression severity, in a dose response manner ( $r = 0.29$ , 95% CI 0.25-0.33).

Similarly, another critically low quality MA (Infurna et al., 2016) reported a significant association between psychological abuse and depression across studies ( $d=0.932$ , 95%CI=0.930-0.934) stronger than any other maltreatment subtype and a significant association between antipathy and depression ( $d=0.513$ , 95%CI, .201-.829). Finally, Carr, Martins, Stingel, Lemgruber & Juruena (2013) in a critically low quality review found that CEA was associated with a diagnosis of Major Depressive Disorder.

Based on one high quality MA, there is evidence to suggest a dose response relationship between CEA and a diagnosis of depression in adolescence/ adulthood. This association has been replicated in low quality reviews.

### **1.5.6 Diagnosis of bipolar disorder**

One high quality MA (Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016), which focused on studies that included those with an ICD or DSM diagnosis of BPD 1 and 2, found that CEA was associated with bipolar disorder (OR=4.04, 95% CI 3.12-5.22) and, was four times more likely to occur in bipolar disorder groups than in non-clinical controls. CEA showed the strongest effect out of all of the trauma subtypes. The authors commented that, due to the absence of long-term prospective research, it is not possible to reach a firm conclusion regarding the causal link between CM and bipolar disorder.

In sum, there is evidence from a high quality MA that CEA is associated with a diagnosis of bipolar disorder, and CEA was the most robust of all the trauma subtypes. However, no conclusions regarding causality can be drawn.

### **1.5.7 Anxiety**

One high quality MA, (Norman, Byambaa, Butchart, Scott & Vos, 2012) found that CEA was associated with a significantly increased risk of anxiety disorders (OR=3.21; 95% CI 2.05-5.03); however, no dose response relationship was found.

A critically low quality review reported on just one study which demonstrated that CEA was a strong predictor for current Post Traumatic Stress Disorder (PTSD) and anxiety symptoms (Schneeberger, Dietl, Muenzenmaier, Huber & Lang, 2014). Similarly, another critically low SR found that across two studies CEA was associated with anxiety and PTSD (Carr, Martins, Stingel, Lemgruber & Juruena, 2013)

Based on the conclusions of one high quality MA (Norman, Byambaa, Butchart, Scott & Vos, 2012) there does indeed seem to be a relationship between CEA and anxiety in adolescence/adulthood. However, none of the reviews included any prospective studies for the association of interest so, conclusions regarding causality cannot be made.

### **1.5.8 Dissociation**

A high quality MA (Rafiq, Campodonico & Varese, 2018) found that CEA was associated with dissociation ( $r=0.34$ , 95% CI 0.23 - 0.44) in the overall clinical sample. CEA was also associated with dissociation in people with diagnosis of schizophrenia-spectrum disorder ( $r=0.41$ , 95% CI 0.27, 0.54) and diagnosis of personality disorders ( $r=0.25$ , 95% CI 0.14, 0.36). The authors commented that across all diagnostic categories the relationship between CEA and

dissociation was “particularly robust” (p.519). However, the results of this MA should be interpreted with caution. Although this paper was high quality, the authors rated all but one study included in their review as ‘weak’ quality and included them in their MA. However, the authors comment that some studies were marked down due to methodological clarity which may be an effect of word count restrictions in published papers, rather than reflecting quality. Finally, the studies included were all cross sectional and between group, so issues of causality and directionally cannot be ascertained.

Martins, Baes, & Juruena, (2011) in a critically low SR, reported on a study which purportedly found that CEA was important in the “etiology of dissociation schizophrenia” (p.222). However, no further details were given. The poor quality of this review and the lack of detail make it difficult to draw any firm conclusions about the association of interest.

In sum, there is evidence from a high quality review to suggest that CEA is associated with dissociation in people with diagnoses of schizophrenia and personality disorders. However, results should be interpreted with caution due to the low quality of included studies.

Furthermore, no conclusions can be made with regards to causality and directionality.

### **1.5.9 Other diagnoses**

One critically low SR (Carr, Martins, Stingel, Lemgruber & Juruena, 2013) found that CEA was associated with either self-reported or diagnosed personality disorder (especially borderline narcissistic, passive-aggressive) and schizophrenia, including severity of hallucinations. CEA was found to be associated with ‘psychotic disorder’, in a dose response manner, mediated by frequency of abuse. A further critically low quality review reported that two studies found that CEA was associated with severity of ‘psychiatric symptoms’ (Martins,

Baes, & Juruena, 2011). In sum, no high quality reviews were found that investigated the association between CEA and ‘other’ diagnoses.

## **1.6 Discussion**

This systematic review of systematic reviews and meta-analysis provided a narrative synthesis and quality appraisal of 18 articles. The purpose was to describe and critically evaluate evidence on the association between CEA and later mental health difficulties.

High quality MAs provide evidence that CEA is associated with a range of later MH outcomes. This includes depression (Norman, Byambaa, Butchart, Scott & Vos, 2012), bipolar disorder (Palmier-Claus, Berry, Bucci, Mansell, & Varese, 2016), anxiety (Norman, Byambaa, Butchart, Scott & Vos, 2012) UHR for psychosis (Peh, Rapisarda & Lee, 2018) eating disorders (Norman, Byambaa, Butchart, Scott & Vos, 2012) dissociation in people with MH diagnosis (Rafiq, Campodonico & Varese 2018) and suicide attempts (Zatti et. al, 2017).

### **1.6.1 Moderators and mediators**

Very few reviews reported on moderators in the relationship between CEA and MH outcomes. Two high quality reviews provide evidence of a dose response relationship between CEA and MH. Peh, Rapisarda & Lee, ( 2019) found that severity of CEA was related to severity of UHR symptoms. Whilst Nelson, Klumppendt, Doebler, & Ehring, (2017) found that the severity of CEA was related to severity of depressive symptoms and that this was a stronger relationship than for any other type of childhood maltreatment, including sexual abuse, physical abuse and neglect and emotional neglect (Nelson,

Klumparendt, Doebler, & Ehring, 2017). These findings suggest that although there CEA may be harder to assess for than other types of maltreatment, it may be particularly important to do so, for early interventions and preventative strategies to be put in place.

Another, high quality review (Rafiq, Campodonico & Varese, 2018) noted that there was some evidence to suggest that frequency, timing, and relationship to the abuser were associated with MH outcome. For example, those abused by a parent, (compared to those abused by another relative, friend or stranger) experienced more severe dissociation. It could be argued that there is a greater sense of inescapability when the perpetrator is the primary care giver, as the child is dependent on them for survival. A tentative hypothesis suggested is that the greater the sense of inescapability, the more adept the child becomes as dissociation, for example numbing out emotions and bodily sensations, as they have no hope of either running away or fighting (REF body keeps the score). However, further research is needed in this area, including primary studies directly testing this hypothesis.

Similarly, very few reviews reported on mediators in the relationship between CEA and MH outcome. Kimber et al. (2017) reported on three studies which demonstrated that emotional regulation mediates the relationship between CEA and ED, one study which reported anger and self-criticism mediate this relationship and another which found that depression and anxiety did. Liu, Pittman, & Zamora (2018) reported on four studies which found that negative cognitive tendencies were mediators for the link between CEA and non-suicidal self- injury.

The findings that negative cognitive tendencies act as a mediator in the relationship between CEA and MH difficulties align with attachment theory. Caregivers are thought to be vital for the development of a child's internal working model, which includes beliefs about the self and other people (Bowlby, 1982). Therefore one hypothesis could be that experiences of CEA

where the caregiver is the perpetrator may trigger a negative internal working model of the self and other people (Infurna et al., 2016), which might include negative cognitive tendencies such as self-criticism. Attachment theory also proposes that an unattuned caregiver, including those who are abusive, results in a child having affect regulation difficulties, manifesting in MH problems (O'Mahen, Moberly & Fedock, 2015). This may underpin findings that emotion regulation difficulties act as mediator between CEA and mental health difficulties. However, it should be noted that these hypothesis are tentative, and would only apply in cases where the caregiver is the perpetrator, and not generalisable to the wider population of those who have experiences of CEA from a non-primary attachment figure.

### **1.6.2 Study designs and conclusions about causality**

In the vast majority of reviews there was a reliance on cross sectional design studies, in which participants retrospectively self-report CEA. This is thought to limit the reliability and the validity of the information obtained. It is argued that accuracy of recall may be affected by difficulties in remembering (Halverson, 1988; Feldman-Summers & Pope 1994), intentionally not wanting to disclose adversity (Rogers, 1995) and over or under-reporting due to current level of psychological distress (Teasdale & Russell, 1983; Cohen, Towbes & Flocco, 1988). However, research studies have shown that retrospective recall of CM appear to be reasonably accurate (Bifulco, Brown, Lillie & Jarvis 1997; Brewin, Andrews, Gotlib, 1993), not affected by psychological distress (Pinto, Correia, & Maia, 2014) and consistent with prospective designs (Scott, McLaughlin, Smith & Ellis, 2012). Nonetheless, reliance on cross-sectional designs means that by definition a causal relationship between CEA and later MH problems cannot be established.

In sum, there is little evidence from the included reviews that CEA plays a causal role in later MH problems.

### **1.6.3 Outcome measures**

The most appropriate strategy for assessing both CEA and MH is still under debate. Benefits of clinical interviews include the opportunity to capture greater detail and elicit sensitive information that might not otherwise be disclosed. Alternatively, self-report measures are less time consuming and costly, especially for large scale research projects (Boyle et al., 2017). In sum, authors of reviews were often faced with heterogeneity in outcome measures used, samples, and definitions of CEA.

### **1.6.4 Definition of CEA**

To reduce heterogeneity, and increase consistency, the authors of this paper tentatively offered a definition of CEA for future researchers to use. *“Verbal abuse that affects the welfare of the morals of the child or any conduct that demeans, embarrasses, frightens or insults, for example, blaming, ridiculing, belittling”* (p. 1007 Carr, Martins, Stingel, Lemgruber & Juruena, 2013). By providing a clear definition of CEA it is hoped that consistency across reviews will be achieved.

### **1.6.5 Limitations**

Limitations of this review include the use of the AMSTAR 2. This tool is primarily designed for quality assessing SRs and MA's that include randomised and or non-randomised studies of healthcare interventions, or both. Due to the nature of the research question, included studies are observational, and therefore, some of the items in the AMSTAR 2 had to be modified,

potentially affecting reliability. However, a second rater independently assessed a quarter of the included reviews, with 100% agreement. This increases confidence that the measure retains some of its reliability despite some alterations. The AMSTAR 2 was chosen because to the author's knowledge there are no tools for quality-assessing SRs and MAs, that has had its psychometric qualities tested (Shea et al., 2017) and which gives more a detailed appraisal than a checklist with a total score (a method that may obscure any weaknesses in critical areas). An example of an alternative tool that was considered was the ROBINS (Whiting et al. 2016) However, this only evaluates risk of bias and does not give an overview of methodological quality.

A further limitation of this review is confining the search results to reviews that investigate CEA, as distinct from CEN. This may have led to some good quality evidence being excluded. This distinction was intended to enhance the specificity of the conclusions and there is evidence that these are distinct forms of CM with different psychological consequences (Hibbard, Barlow & MacMillan, 2012; Kimber et al., 2017). However, such a clean distinction is not always made in the literature. Authors used slightly different definitions of CEA, and some did not include a definition and only stated separate categories of CEA and CEN. Furthermore, a range of different outcome measures were used to assess this construct, with slightly different assessment criteria, both within and across reviews. This conceptual inconsistency makes it less clear whether exactly the same construct was being measured across studies. Furthermore, reliability and replicability becomes problematic, as it is not certain that participants would respond in the same way to, for example, a self-report measure or a clinical interview.

A final limitation is including review papers that utilise samples containing both adolescents and adults. The brains of adolescents are still developing (Blakemore, 2012) and it is possible that the mental health difficulties detected are transitory and will not sustain into adulthood.



Furthermore, adolescents will be closer to the age the abuse occurred and may present with more acute mental health problems as a result. Indeed, there was evidence from one review that CM was more strongly related to MH problems in adolescent than adult samples (Infurna, 2016). This does not negate the need for clinical interventions for adolescents, but including them in the same review obfuscates the association between CEA and mental health problems in adulthood.

### **1.6.7 Clinical implications and future research**

It is recommended that clinicians offer a routine assessment of CM (Read, Hammersley & Rudegeair, 2007), given the association between CEA and a range of later mental health difficulties, including suicide attempts. Early identification of trauma history may provide relevant and valuable information for individualised psychological formulation and trauma informed interventions to reduce psychological distress and increase coping skills.

Unfortunately research suggests that clinicians do not routinely assess trauma history (Read, Hammersley & Rudegeair, 2007) which may be due to beliefs regarding the biological causes of mental health problems (Read, Dillon, & Lampshire, 2014), lack of knowledge regarding the impact of trauma, or worries about causing service users further distress (Young, Read, Barker-Collo & Harrison, 2001; Read, & Fraser, 1998). However, research suggests that when asked about prior trauma, services users appreciate the opportunity of talking about their experiences and do not experience an increase in symptoms (Cunningham et al., 2016; Griffin, M. G., Resick, P. A., Waldrop, & Mechanic, 2003). Furthermore, there is now substantial evidence for the use of different psychological interventions to help with trauma (Solomon, Solomon & Heide, 2009).

Where possible, more primary research is needed utilising prospective designs to provide evidence that CEA causes mental health difficulties in adulthood. With regards to retrospective research, it is recommended that researchers decide on a clear, standardised definition of CEA, and the best way to measure it, to increase consistency and make results more comparable across studies. With regards to secondary research, reviewers should aim to make their research of a higher quality by making simple changes, such as registering a pre-determined protocol and utilising risk of bias assessments.

### **1.6.8 Conclusion**

This systematic review of reviews provides evidence from high quality reviews that CEA is associated with later MH outcomes including bipolar disorder, depression, anxiety, eating disorders, suicide attempts and being at UHR for psychosis. Both CM and MH have significant personal, familial, societal and economic costs (WHO, 2013). There is, therefore, an incentive for governments to invest further in preventative programmes for CEA which is in line with current ACE's initiatives (Welsh Government, 2017) and to invest in trauma informed therapies to reduce the impact of associated MH difficulties.

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## **Paper 2: A Large Scale Evaluation of an Attachment and Trauma Informed Psychology Service**

*Prepared in accordance with The Journal of  
Personality and Social Psychology Guidelines*

## 2.1 Abstract

This paper evaluated the effectiveness of training provided by a new psychology service in South Wales, which was commissioned to meet the mental health needs of children and young people (CYP) with complex trauma histories. The service took an indirect approach to this, delivering attachment and trauma training to frontline staff across agencies. This consisted of two consecutive days of theoretical and clinical skills training, followed by six skills development sessions at approximately six-week intervals. Results showed that staff perception of how supported they felt also improved. However staff wellbeing did not improve. These results provide initial evidence that the service is effective. One of the measures utilised was bespoke to the training, so a principal component analyses (PCA) was conducted. Recommendations for improvements were made to ensure that the service had the most parsimonious measure possible.

Key Words/Phases:

- Complex Trauma
- Attachment
- Psychology Service
- Service Evaluation
- Children and Young People

## **2.2 Introduction**

### **2.2.1 Attachment theory and trauma**

Bowlby's (1982) attachment theory delineates the nature of a child's emotional bond to their primary caregiver. He described an innate 'attachment system' which aids survival by maintaining an infant's proximity to their caregiver in threatening or dangerous situations. Bowlby proposed that the nature of this bond is pivotal, and impacts on a child's subsequent relationships and capacity to cope with stress throughout their life.

Bowlby (1982) thought that when an attachment figure is responsive to a child's proximity seeking and provides comfort when they are distressed, over time the child will feel secure in the relationship. They will use the caregiver as a 'safe base' from which to explore the world. However, if the caregiver is not emotionally or physically available in times of distress, the child will not develop a feeling of security in the relationship. They will not learn to use their caregiver as a 'safe base' and will remain distressed.

Ainsworth (1969), developed a system for classifying and empirically testing security in attachment relationships. She observed that when caregivers are not responsive to a child's distress, or are unpredictable, the child will have two main coping strategies to deal with the distress. These emotion regulation attempts include hyperactivating or deactivating the attachment system (Cassidy & Kobak 1988; Main, 1990). Hyperactivating involves increasing the intensity of attachment behaviours, such as crying, clinging, or shouting, in an attempt to

gain the caregiver's attention. Deactivating involves withdrawing and attempting to deal with the distress alone. If abuse or neglect has occurred in the context of an attachment relationship, the child may lack a coherent strategy for regulating their emotions and may freeze or dissociate. These strategies have been broadly labelled 'insecure attachment styles'.

Security in attachment relationships is thought to be protective, and has been linked to effective emotion regulation abilities, better mental health and healthier relationships (Mikulincer & Shaver, 2012). Conversely, attachment insecurity has been linked to difficulties effectively regulating emotion, lower self-esteem, interpersonal difficulties, and mental health problems (Wei, Vogel, Ku, & Zakalik, 2005; Roberts, Gotlib & Kassel, 1996; Foster, Kernis & Goldman, 2007; Van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999).

Children who experienced early trauma and abuse are more likely to have insecure attachment styles than those who have not (Baer & Martinez, 2006; Carlson, Cicchetti, Barnett & Braunwald, 1989), They are also more likely to experience mental health and interpersonal difficulties (Green, 1993), which continue to impact into adulthood (Horwitz Widom, McLaughlin & White, 2001; Sugaya, 2012; Polusny & Follette, 1995).

### **2.2.2 Complex trauma: consequences and interventions**

Trauma and abuse that begin early in life and are chronic and interpersonal in nature are described as 'complex trauma' (Cook, Blaustein Spinazzola, & Van der Kolk, 2003). The significant and enduring mental health, emotion regulation and interpersonal consequences of complex trauma are well documented (Courtois & Ford, 2009; Spinazzola et al., 2013). Interventions for CYP which consider complex trauma and attachment have garnered interest and an evidence base (Becker-Weidman & Hughes, 2008).

### **2.2.3 Local context**

A ‘Gaps Analysis’ (Walters & Todd- Jones, 2016) found that CYP with complex trauma and attachment difficulties, were ‘falling through the gaps’ between services in South Wales. Many were not being accepted into S-CAMHS as their difficulties did “not fit with the prevailing psychiatric referral criteria” (p.4). Others were being diverted to primary care, where staff were struggling to cope, feeling that the level of complexity was beyond their level of clinical skill. Collectively, the services were not meeting the needs of these children. A further paper showed that CYP with these difficulties were frequently presenting across services, for example education, health and local authorities (McDonnell & Kirkaldie, n.d.).

### **2.2.4 Introduction of attachment and trauma training**

In view of the above, services recognised that an interagency approach was needed to intervene effectively and help this client group. On the basis of these reports (McDonnell & Kirkaldie, n.d; Walters & Todd-Jones, 2016) a new psychology service was commissioned to organise this interagency approach, and by doing so meet the mental health needs of these children. Initially, the psychology service has taken an indirect approach to helping CYP with these difficulties, with a view to providing direct interventions at a later date. Currently, this indirect approach involves providing attachment and trauma informed training for staff across agencies, including health, local authority and education.

This service approach is in line with NICE (2015) guidance, which recommends multi-agency training in attachment and trauma informed approaches for frontline staff. This approach is

also in line with Welsh Government agenda for mental health services, which recommends a whole systems approach (Welsh Government, 2012). Finally, by making the most effective use of resources, the service adheres to the principles of prudent health care (Aylward, Phillips & Howson, 2013) which is necessary in the current economic and political climate. If the service only provided direct interventions to CYP with complex needs, and their families, it is likely that demand would soon outstrip resource.

### **2.2.5 Staff wellbeing and support**

As well as covering attachment theory, complex developmental trauma and skills training, the staff training also includes a focus on staff wellbeing, and measures whether this changes over the course of training. The service rationale is that working with clients who have attachment difficulties and trauma histories is likely to affect staff wellbeing. This is because clients often experience interpersonal and emotion regulation difficulties, and/ or engage in self-harming behaviours (Gunderson, 2001; Farber, 2008) which can evoke negative emotions in staff (Swenson, Sanderson, Dulit & Linehan, 2001). Furthermore, the impact of working with this client group and hearing traumatic stories can cause burn out (Van Hook, Rothenberg, 2009). Health care staff's wellbeing is known to affect patient outcome (Firth-Cozens, 2001; Shanafelt, Bradley, Wipf & Back, 2002) and national guidance recommends that staff wellbeing is addressed (Royal College of Psychiatrists, 2015).

Related to wellbeing, staff perceptions of how supported they felt by their service were also measured. This is grounded in literature that discusses the idea of 'attachment informed' services which emphasise the importance of staff – service-user relationships. Bucci, Roberts, Danquah & Berry (2015) highlighted that working in an attachment informed way might test the coping strategies of staff, as service-users with difficult attachment histories may bring



these into current relationships. Key recommendations include supporting staff in various ways, for example staff training, supervision and consultation. Reflective practice was also deemed important to build self-awareness, increasing the likelihood that staff will notice if they are being drawn into an unhelpful enactment of a service-user's attachment history. All of these key recommendations are included in the new psychology service's training, to support the service work in an attachment informed way.

### **2.2.6 The link between support and wellbeing**

Evidence points towards a link between employee wellbeing and supportive organisations (Dickson-Swift, Fox, Marshall, Welch & Willis, 2014). In this study, managers were involved in decision making around which teams were trained, and were encouraged to attend the training themselves. It was hoped that they would embed the changes needed to sustain this way of working and help employees view their organisation as more supportive.

As far as the authors are aware, there is no literature directly exploring the impact of attachment informed training for staff on staff wellbeing or perceived levels of support. Therefore the findings of this paper will be a novel contribution to this field of study.

### **2.2.7 Hypotheses**

1. Part of the training includes a focus on wellbeing. It is predicted that staff wellbeing (measured by The Warwick Edinburgh Mental Wellbeing- Scale; WEMWBS; Tennant et., al 2007) will significantly increase following training

2. The psychology service is offering staff training, a space for reflection and consultation. It is therefore predicted that staff perception of support (measured by the bespoke measure of perceived support) will significantly increase following training
3. Based on research which suggests that employee wellbeing is related to support, it is predicted that any change in staff wellbeing will co-vary on the basis of staff support (measured by The Warwick Edinburgh Mental Well-being Scale, Tennant et al., 2007)

Two questionnaires used by the service are bespoke, and not validated. This includes the knowledge, confidence and worries (KCW) questionnaire, and the measure of support. A further aim of this paper is to assess the validity of these measures.

## **2.3 Method**

### **2.3.1 Recruitment**

Participants are working-age professionals employed in education, social and health care services in Wales, who have attended attachment and trauma training with the service in question. Recruitment was guided by senior managers of education, social and health care. Training was offered and managers decided the order of priority in which teams would be trained.

### **2.3.2 Participants**

369 staff members, including 16 managers, had completed the training at the point of data analysis. This comprised of employees in social services, health and pupil referral units, who

work directly with CYP with histories of complex trauma and disrupted attachment. The duration that staff had worked in their post ranged from 0 (just started) to 312 weeks, and the number of children on their case-load ranged from 0 to 156.

### **2.3.3 Staff training**

Training took place over two-days. The components of the training were based on the results of a paper (Heaney, 2017), which identified the overlapping themes in successful attachment informed training for staff. This included both content and process elements of the training. It also included the decision that the training should be two-days long (optimal training was found to be 2-4 days long), with 6 skills development sessions to consolidate learning.

The first day included information about: attachment theory, the impact of trauma on the brain, the implications of disrupted attachment on mental health, relationship building and behaviour. The second day included how to work in an attachment and trauma informed way with CYP, including intervention strategies. The concept of containment was discussed as was the importance of staff self-care and wellbeing when working with people who have complex difficulties. This included a discussion about the importance of staff supervision to reflect on difficult feelings that arise and how to provide a 'safe base' for employees.

Six 'skills development' sessions (SDS) followed at approximately 6-week intervals. These sessions were two-hour consultation sessions, involving guidance from an attachment and trauma informed perspective about how to work with specific children on staff case-loads. This involved team formulations, and practicing attachment interventions using, for example, role play techniques. The idea was to consolidate the skills and intervention techniques taught in the two-day training.

Content of the two-day training was drawn from Dyadic Developmental Psychotherapy, an evidence-based attachment and trauma informed therapy for CYP and their carers (Becker-Weidman & Hughes, 2008). Skills sessions are based on the Golding (2004) attachment informed model of consultation. Psychological models of consultation have been found to increase staff knowledge, confidence and perceived support (Jackson, Heaney, Walters & Wilcox, n.d.).

### 2.3.4 Measures

1. The Warwick Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007) has been shown to be a reliable and valid measure of wellbeing in student and general populations (Tennant et al., 2007). It is a self-report measure that asks participants to rate how well each statement describes their experience over the past two weeks, on a 5- point Likert scale; the higher a person's score, the higher their wellbeing. Wellbeing as defined by this measure includes two aspects: 1) "the subjective experience of happiness (affect) and life satisfaction (the hedonic perspective)" 2) "positive psychological functioning, good relationships and self-realisation" (Taggart, Stewart-Brown & Parkinson, 2016).
2. A bespoke measure of perceived support (PS), which was designed by clinical psychologists in the service and awaits validation. It is a self-report measure that asks participants to respond yes/ no to 11 questions. i.e. *'Are you supported to do training in your area of work?'*

See Appendix D for a copy of the support questionnaire.

### **2.3.5 Procedure**

Participants were given the WEMWBS (Tennant et, at 2007) and the PS questionnaire before the two-day training and after the fifth SDS. The service plans to collect further data one year post training.

### **2.3.6 Ethics**

Informed consent was gained by participants prior to the training, which detailed the nature of the research and the right to refuse or withdraw at any time without training opportunities being adversely affected.

A research proposal was submitted to University Ethics, and permission granted for this large scale service evaluation (see Appendix E).

## **2.4 Results**

### **2.4.1 Missing data**

If participants had not filled out 20% or more of the items on a questionnaire, their data set was disregarded for that particular questionnaire (see table 7). All other missing values were replaced with the mean of nearby points using SPSS.

Table 7

*Disregarded Datasets*

Questionnaire	Disregarded data for particular questionnaire
WEMBWS	257
PS	262

The Qualtrics sample size calculator was used to determine whether there was sufficient data remaining for each questionnaire to draw statistically valid conclusions. A 95% confidence interval and 5% margin of error were chosen for this calculation as these are the most commonly utilised in this field, and were considered to demarcate an acceptable level of precision (Field, 2018). The WEMBWS and the PS were both administered pre and post training, a total of 738 times each. For this population size, it was calculated that an acceptable response rate would be 253. Response rates for both questionnaires exceeded this amount (see table 8).

Table 8

*Response rates*

Questionnaire	Response rate
WEMBS	481
PS	476

## 2.4.2 Wellbeing

### **Power calculation.**

A power calculation was conducted to determine the sample size required to detect a significant finding for the study's main hypothesis. Previous research utilising the WEMBWS has typically found large effect sizes (Beshai, McAlpine Weare & Kuyken 2016; Marshall Donohue Morrissey & Power, 2018). G\*Power indicated that a sample size of 15 would be

needed to detect this effect size, based on  $\alpha = 0.05$  and  $1 - \beta = 0.8$  (as recommended by Field, 2017). This indicated that the current study was adequately powered.

### 2.4.3 Hypothesis 1: Paired samples t-test: WEMBS

A paired samples t-test was used to determine whether there was a statistically significant mean difference between wellbeing scores pre staff training compared to after the 5<sup>th</sup> SDS (N=112). The assumption of normality was not violated as assessed by visual inspection of a Normal Q-Q plot. Four outliers were detected that were more than 1.5 box-length from the edge of the box in a boxplot. When outliers were excluded, participants' wellbeing scores did not significantly change from pre ( $M = 47.38$ ,  $SD=6.489$ ) to 5<sup>th</sup> SDS ( $M=47.85$ ,  $SD = 7.526$ ), ( $M = 471$ , 95% CI  $-0.755-1.696$ ,  $t(107) = .761$ ,  $p=.448$ ). A paired t-test including the outliers did not impact on significance ( $p=0.781$ ). The non-significant result meant that it was not possible to test whether change in wellbeing scores co-varied on the basis of perceived support (measured by the bespoke measure of staff support).

Table 9

*Mean scores and significance level for WEMBS*

Pre Mean	Post 5 <sup>th</sup> SDS Mean	Significance level
47.38	47.85	P=.448

### 2.4.4 Hypothesis 2: Wilcoxon Signed-Rank Test: Support Questionnaire

The difference between scores of perceived support before and after the 5<sup>th</sup> SDS session were normally distributed, as assessed by visual inspection of a Normal Q-Q plot. There were outliers in the data, as assessed by inspection of a box plot for values greater than 1.5 box-

lengths from the edge of the box plot. This included one ‘extreme’ outlier which was more than three box lengths from the edge of a box plot. A Wilcoxon Signed-rank test without the outliers did not impact on significance ( $p=0.001$ ), therefore they were kept in the analysis. Participants scored higher in perceived support after the 5<sup>th</sup> SDS ( $M = 8.03, SD = 1.965$ ) compared to pre training ( $M= 7.42, SD = 2.320$ ), a statistically significant mean increase of 0.613, 95% CI (0.87 – 1.138),  $t(106) = 2.13, p=0.02, d = 0.22$ . 107 participant data sets were used in this analysis.

Table 10

*Mean scores and significance level for Support Measure*

Pre mean	Post 5 <sup>th</sup> SDS Mean	Significance level
7.42	8.03	$p=0.02$

#### **2.4.5 Validation of the support questionnaire: Principle Component Analysis**

A PCA was run on a bespoke 11 item questionnaire that measured support, utilising 107 participant datasets. Lared Statistics (2015) recommends 5 - 10 participants per item for a PCA, meaning that the current sample size was adequate for this analysis. The suitability of PCA was assessed prior to analysis. Inspection of the correlation matrix showed that all variables had at least one correlation coefficient greater than 0.3, other than item 2. The overall Kaiser-Mayer-Olkin (KMO) measure was 0.84 with individual KMO measures all greater than 0.5. Bartlett’s Test of Sphericity was statistically significant ( $p<.001$ ), indicating that the data was likely factorizable.

The PCA revealed that three components that had eigenvalues greater than one which explained 48.26%, 12.42% and 10.35% of the total variance, respectively. However, visual inspection of the scree plot (figure 2 ) indicated that two components should be retained



(Cattell, 1966). In addition, a two-component solution met the interpretability criterion. As such, two components were retained.

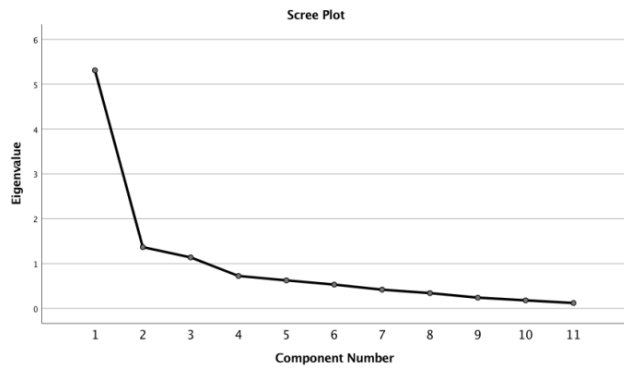


Figure 2: Scree plot for support

A two-component solution explained 60.681% of the total variance. A varimax orthogonal rotation was employed to aid interpretability. The rotated solution exhibited 'simple structure' (Thurstone, 1947). Interpretation of the data suggested that the components were consistent with the attribute the questionnaire was designed to measure, 'support'. Components loadings and communalities of the rotated solution are presented in Table 11.

Eight items more strongly loaded onto component 1 (listed in ranked order):

1. Do you have clear, planned goals and objectives you agreed to and regularly refer to?
4. Are you encouraged to develop your own expertise?
5. Are you supported to do training in your area of work?
6. Do you get clear feedback about how well you are doing in your job?
9. Does your organisation treat you fairly regardless of, for example, race or ethnic background, gender, religion and belief, sexual orientation, pregnancy, disability, marriage or civil partnership, age or caring responsibilities?

10. Do you feel that there is someone in work that you can seek professional supervision from to support you with challenging experiences?

3. In the last 12 months, have you been moved from your own clinical area to another, where you have not felt competent to work?

11. Do you feel supported to protect time in your diary to complete office-based tasks including admin, CPD and mandatory training?

It may be that component 1 aligns with ‘support’, the attribute the questionnaire was designed to measure. Specifically, it could be that these items are measuring how well the organisation supports staff to feel competent (item 1, 6, 3), autonomous (items 4,5,11) and related to others (items 10 and 9). According to self-determination theory, these are thought to be three intrinsic and innate drivers for human motivation (La Guardia, Ryan, Couchman & Deci, 2000).

Three items loaded more strongly on to component 2:

2. Do you have time to carry out all your work?

7. In the last 12 months have you had a personal development appraisal or KSF review?

8. If you had a review, did it help you to improve how you do your job?

After closer inspection component 2 may align with organisational support, such as help with workload management. However, using this theme items 1 and 11 would perhaps adhere more to this group. Overall it seems that different elements of ‘support’ are being measured, such as emotional support and ensuring self-efficacy, and organisational support, such as help with workload management.

Table 11

*Rotated Structure Matrix for PCA with Varimax Rotation of a questionnaire that measures support  
Rotated Component Co-efficients*

Items	Component 1	Component 2	Communalities
Qu1	<b>0.720</b>	0.278	0.596
Qu 2	-.303	<b>0.449</b>	0.294
Qu 3	<b>0.757</b>	-0.61	0.577
Qu 4	<b>0.825</b>	0.244	0.740
Qu 5	<b>0.893</b>	0.52	0.801
Qu 6	0.567	<b>0.559</b>	0.635
Qu 7	0.098	<b>0.731</b>	0.543
Qu 8	0.336	<b>0.655</b>	0.542
Qu 9	<b>0.897</b>	-0.051	0.807
Qu 10	<b>0.875</b>	0.166	0.793
Qu 11	<b>0.551</b>	0.206	0.348

## 2.5 Discussion

Following a review which demonstrated that CYP with complex trauma histories were not getting their needs met by current services, a new psychology service was commissioned. The aim of this paper was to evaluate the training that the new service provides, including changes in staff wellbeing and support. Further aims were to conduct a PCA on the bespoke support questionnaire.

### 2.5.1 Hypothesis 1: Wellbeing

The study was adequately powered to detect any significant findings. However, participant wellbeing scores did not change significantly from before staff training, to the 5th SDS. Mean scores stayed around 48, out of a possible 58. The population mean average is between 46 and 51, depending on which population you draw from (Stewart-Brown, Janmohamed, 2008).

It is recognised that staff who work in mental health often experience high levels of stress and emotional exhaustion (Edwards, D., Burnard, P., Coyle, D., Fothergill, A., & Hannigan, B. (2000; Maslach, Jackson & Leiter, 1996). Therefore it is possible that by scoring around the population average, this group of workers were already hitting the top end of what they could score (a ceiling effect), considering the sector within which they work, and the implicit stressors (Walsh, 2001). It could be that the workers were already familiar with and using the self-care and wellbeing advice provided by the training, so they were superfluous and did not add to participant wellbeing. Alternatively, there is evidence that staff mental health is related to size of case-load (Walsh & Walsh, 2002), and it is notable that in the current sample staff had case-loads of up to 156 CYP. It is possible that this could be blocking any overall increase in staff wellbeing.

Due to these non-significant findings, it was not possible to test the hypothesis that changes in wellbeing scores co-varied on the basis of perceived support.

### **2.5.2 Hypothesis 2: Support**

Participants' scores significantly increased from before staff training to after session 5 of the skills development session, however, the effect size was small (0.22). As far as the authors are aware this is a novel finding. The findings are in line with this study's hypothesis, and also with recommendations for providing attachment informed care (Bucci, Roers, Danquah & Berry, 2015).

### **2.5.3 Validation of Support Measure**

A PCA was run on the support data and produced two components which explained 61% of the variance. Eight items loaded strongly onto component 1, and these items seem to align with

what the questionnaire is designed to measure: support. More specifically, it may be that these items are measuring how well the organisation supports staff to feel competent (items 1, 6, 3), autonomous (items 4, 5, 11), and related to others (items 10 and 9). These three elements (known collectively as ‘self-determination’), have been shown to be predictive of attachment security (La Guardia, Ryan, Couchman & Deci, 2000). It is therefore possible that this component is measuring the type of support that is directly relevant to an attachment informed service, the idea of which is to facilitate a ‘safe base’ and secure attachment for both staff and service users (Bucci, Roers, Danquah & Berry, 2015).

After closer inspection component 2 may align with organisational support, such as help with workload management. Alternatively, it is possible that Knowledge and Skills Reviews (KSR) reviews are not seen as supportive, but rather as evaluative, and encroaching on autonomy rather than enhancing it. However, these ideas are purely speculative, and pertain only to the current sample. It would have been interesting to conduct a focus group with staff to see how these items were interpreted, and to provide some face validity. However, due to time constraints this was not possible.

#### **2.5.4 Limitations**

Healthcare staff wellbeing is recognised nationally as a priority (Royal College of Physicians, 2015), and is strongly related to patient outcome (Firth-Cozens, 2001; Gunderson, 2001; Shanafelt, Bradley, Wipf & Back, 2002). However, the lack of direct empirical evidence regarding the effects of training in attachment informed approaches on staff wellbeing, means that the service decision to use the WEMWBS (Tennant et, at 2007) may have lacked a solid rationale. This is a weakness of the current paper, and may explain why no changes in staff wellbeing were found. It may have been more useful to take a more exploratory, qualitative

approach instead, and conducted interviews or focus groups to gauge staff opinion about the training. This could have included staff views regarding the impact of training on staff-service user relationships, and service user outcome. This is an important avenue for future research, that has been so far overlooked.

A related weakness was the use of a bespoke questionnaire. The measure has not been validated and reliability has not been tested. This means that changes observed cannot be directly compared to previous research, or generalised further than this sample. Furthermore, it is not possible to say whether these changes are clinically meaningful, as opposed to merely statistically significant, as there is no further guidance on this or cut off points. The lack of qualitative feedback on the measures compounds this problem.

Missing data can cause numerous difficulties, and impact the validity of conclusions drawn (Graham, 2009). A further limitation therefore pertains to data collection. There was a lot of missing data, particularly for the support questionnaire. Data was excluded for a specific questionnaire if the participant had filled in less than 20% of the items. However, this is potentially problematic as it is not known whether this has resulted in a bias in the representativeness of the data obtained. For instance, it is not known whether the participants whose data was excluded for particular questionnaires were those who felt, for example, unsupported by their organisation, or particularly low in wellbeing due to work stress. Accordingly, caution is advised when interpreting results. That said, it should be noted that following a calculation it was established that response rates for both questionnaires were above what is considered acceptable for this particular sample size.

Furthermore, no participant demographics were collected, and it could be that case that the training was particularly useful or ineffective for particular groups of people.

Finally, any inferences drawn from the PCA's are limited to the current sample. Ideally, a two factor questionnaire would have been given to a new sample, and another PCA run to cross-validate results (Field, 2017), and provide more firm conclusions.

### **2.5.5 Clinical implications and future research**

Results demonstrating changes in staff support over the course of training are promising, and provide initial evidence for the psychology service that their training is effective. Furthermore, this is in line with recommendations for creating attachment informed services.

The results of the PCA for the support data are potentially useful for the service in adapting their measure. A two component solution was found, however, the second component only consisted of three items. Some researchers advise that components are only accepted with four or more items loaded onto them (Field, 2017). Therefore, the service may want to consider removing the items that load on to component 2, then cross validating this more parsimonious measure on a new participant data set (Field, 2017). It may also be useful to run focus groups to discover what staff think these items are measuring, providing some face validity for the measure. Creating a questionnaire that is measuring what the service intends to measure, and is reliable, means that the service can start to add to the evidence base regarding the efficacy of attachment informed approaches. This may also help with bidding for more financial resources to expand the service.

Finally, it may be useful for the new service to reflect on the reasons that wellbeing did not increase pre to post training. The service may consider running focus groups with staff and managers to discover what they think would improve wellbeing.

### **2.5.6 Conclusion**

Following a review which demonstrated that CYP with attachment and trauma histories were not getting their needs met by current services, a new psychology service was commissioned. This service provides attachment and trauma informed training to frontline staff across agencies including health, social care and education. The aim of the current paper was to provide a service evaluation. Results showed that staff perception of support increased over the course of staff training. This provides some evidence that the service is effective. Staff wellbeing did not change over the course of staff training and different explanations for this were offered. A PCA was conducted as one of the measures used was bespoke. A two component solution was found for the support questionnaire. It was advised that one component should be removed, and the new questionnaire repeated on a new sample



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## **Paper 3: A Critical Reflection**

### **3.0 Introduction**

This paper will provide a critical reflection on my systematic review of reviews, and my empirical paper. To begin, I provide personal and professional reflections on my choice of subject area. For both the empirical paper and the systematic review of reviews, I consider strengths and weaknesses, and provide suggestions for alternative methodologies. I consider theoretical, clinical and service implications, and reflect on general limitations for this line of research. I will situate this research within local and national policy and practice. Finally, I discuss implications for dissemination. Throughout this process I reflect on the decision making process I went through, to demonstrate that I followed a systematic approach to my research.

#### **3.1 Personal and Professional Reflections**

My child placement in S-CAMHS was fortuitously situated in the same building as the new psychology service. I attended their training on using attachment and trauma informed approaches to work with Children and Young People (CYP) with complex trauma histories and found it extremely helpful. They made a vast amount of complex information seem simple, intuitive, and clinically useful.

I had previously read about the effects of trauma and attachment, but had mainly used these ideas to inform my thinking, rather than explicitly bringing them into my clinical practice. After attending this training I was inspired, and my work changed. The content of their training



draws from Dyadic Developmental Psychotherapy (DDP) (Hughes, 2007), which is an approach for working with CYP who have experienced complex trauma. It was developed out of a recognition that children with these histories do not respond well to traditional behavioural approaches commonly used, and utilises evidence from neuroscience to understand the reasons why (Hughes, Golding & Hudson, 2015). My supervisor on my child placement was trained in this approach, and using ideas from the training, and her support, I was moved to see how much of an effect I could have on the children and young people (CYP) I worked with, and their carers.

From a wider perspective, taking an attachment and trauma informed approach is a way of understanding what has happened to people, rather than what is wrong with them (Sweeney, Filson, Kennedy, Collinson & Gillard, 2018). This has always been important to me both personally and professionally. In 2013, The Division of Clinical Psychology released a position statement, stating that a diagnostic approach has “significant conceptual and empirical limitations” (p. 1) and called for a paradigm shift, a system that this not based on a disease model. The introduction of attachment and trauma informed services is in my view an example of such a paradigm shift (Harris & Fallot, 2001) and I am excited to be contributing to the pool of practice based evidence to support this.

### **3.1.2 Formulating the research question**

I wanted to conduct a review that would be useful for the psychology service. Their long term aim is to move on to direct therapeutic work with the CYP. My initial idea was formed on this basis, and I decided I would conduct a systematic review of attachment informed interventions for children with attachment difficulties, foster children, adoptive children, and foster and adoptive carers. I tried various search strategies, the majority of which produced thousands of

results. Consequently, I went to see the subject librarian and took some advice about including specific therapeutic approaches in my search terms. So, for example, I searched using mentalised based therapy. However, a systematic review on this subject had already been conducted (Malda-Castillo, Browne & Perez-Algorta, 2018). I then searched for psychodynamic therapy using attachment outcomes, but I couldn't find any papers on this subject. I encountered similar problems to these with other specific therapies for which I tried to search.

Following a discussion with my tutor, we reflected that another useful review would be to look at the long term mental health impact of early trauma and abuse. This could potentially help the service if they were bidding for more funding. I found numerous relevant reviews (Norman, Byambaa, Butchart, Scott, & Vos, 2012; Carr, Martins, Stingel, Lemgruber & Juruena, 2013) and began to realise how vast the subject is, and how many different terms were used, including for example, early life stress, adverse childhood experiences, childhood maltreatment, childhood trauma and childhood abuse.

I decided that one way to narrow down my interest was to search for papers under one paradigm. So, I first looked at Adverse Childhood Experiences (ACEs) which include abuse, domestic violence and other forms of household difficulties that occur before the age of 18 (Chapman et al., 2004). However, I quickly found numerous systematic reviews already on this subject (i.e. Kalmakis & Chandler, 2015).

My thoughts turned to conducting a systematic review of reviews, which is a relatively new approach. The rationale for which is that many health care providers and other bodies look to systematic reviews to provide a coherent overview of the literature in the area and make

important decision on this basis. However, many systematic reviews are not of a good enough quality and may therefore be misleading (Shea et al, 2017). After more scoping searches, which demonstrated that a review of review of ACE's would still be a huge undertaking, I decided to focus on one type of childhood maltreatment. This decision was also informed by a criticism of the ACE's literature, which delineates that it is an oversimplification of a "complex and nuanced mechanism" (Johnson, 2018; p. 52), meaning that the effects of each specific type of ACE are obscured. Consequently, I reflected that more precision was needed.

My final decision to look at the long term mental health impact of childhood emotional abuse was influenced by a White Paper, which detailed that confirmed cases of child maltreatment are thought to be hugely underestimated (White Paper Steering Committee, 2013). This is due to services needing sufficient evidence to conclude that the child maltreatment (CM) occurred, which frequently includes physical injury. If there are not physical marks, for example in case of sexual or emotional abuse, the child is frequently coerced into retracting their statement, or often it is deemed there is not sufficient evidence to proceed. Emotional and physical abuse may be invisible, but I know from my clinical experience that the long term impact can be devastating. Childhood sexual abuse had already garnered an extremely large literature base, evidenced by a systematic review of reviews (Maniglio, 2009), and I decided to focus on childhood emotional abuse (CEA).

When I started reading more of the literature looking at the long term mental health impact of CEA, I realised that authors used different words to refer to overlapping experiences. CEA was also called emotional trauma (Fernandes & Osorio, 2015), and psychological abuse (Infurna et al. 2016). Furthermore, different definitions were used. Some authors differentiated between childhood emotional neglect (CEN), an act of omission, and childhood emotional abuse (CEA),

an act of commission (Kimber et al., 2017). Whereas others combined them both into one category (Bonoldi, 2013), and others did not include definitions (dos Santos, Basto-Pereira & da Costa Maia, 2017). This lack of consistency in definition and language was potentially problematic, as it leads to questions as to whether the same concept is being measured, and comparison and collation of the literature is therefore difficult. To increase precision, and because there is evidence to suggest differential effects (Hibbard, Barlow, MacMillan & Committee, 2012; Kimber et al., 2017), I decided to look at the effects of CEA as distinct from CEN.

In light of the decision making process and the rationale delineated above, I wrote a systematic review of the systematic reviews investigating the link between Childhood emotional abuse (CEA) and later mental health problems.

## **3.2 Methodology: rationale**

### **3.2.1 Search strategy**

I reflected that I needed to make my search broad enough to capture all of the papers of interest, but narrow enough to filter out enough irrelevant papers to make the task achievable in terms of time constraints. I therefore consulted the subject librarian for specialist input, and read some relevant websites (Scottish Intercollegiate Guidelines Network, n.d) regarding search filters and data bases. To ensure good practice and a systematic approach to writing I utilised the PRISMA checklist and flowchart (Moher, Liberati, Tetzlaff & Altman, 2009), and registered a pre-written protocol with PROSPERO (CRD42019128092).

I searched three data bases relevant to my research question. I chose PsycINFO as it focuses on psychology and psychiatry, and Web of Science and Scopus as they cover social sciences. My rationale was that the former website provides specificity, whilst the latter two provide breadth.

### **3.2.2 Quality Appraisal Tool**

I consulted various guidance and literature with regards to my decision about the most appropriate quality appraisal tool to use. First, I consulted the Cochrane Website which recommends neither a check list nor a scale but a domain based evaluation tool (Cochrane Collaboration, 2011). It is argued that checklists and scales are frequently not psychometrically tested, and that using a total score obscures the relative importance of each item, which may be more or less relevant to overall quality (Shea et al. 2017).

I then consulted literature, including systematic review of quality appraisal tools (Zeng et al, 2015). I discovered that there were relatively few tools available for assessing systematic reviews (Shea et al. 2017). Amongst those available were the Critical Appraisal Skills Programme Checklist (CASP, 2017) and the Scottish Intercollegiate checklist (SIGN, n.d.). However, these tools did not contain detailed guidance on interpretation, which I thought would have limited my quality assessment. Furthermore, they are checklists, which goes against Cochrane guidance (Cochrane Collaboration, 2011). I also considered the Joanna Briggs Institute Checklist (JBI, 2016), which has more detailed guidance but it similarly does not provide a quality rating at the end, and appears to be more relevant to a decision making process about whether to include an SR in your review or not. Finally, I considered the Risk

Of Bias In Systematic reviews (ROBIS, 2013). However, this focuses on risk of bias and I wanted something with a broader objective of critical appraisal and quality assessment.

I decided to use the AMSTAR 2 (Shea et al., 2017), which is one of the few tools available for assessing the quality of systematic reviews, that has had its psychometric properties documented (Shea et al, 2017). The AMSTAR 2 has detailed guidance and is a domain based tool, which is in line with Cochrane recommendations (Cochrane Collaboration, 2011). However, the AMSTAR 2 was designed for quality appraising health care interventions. The reviews I included in my paper are based on observational studies, due to the nature of the research question. This meant that some of the items of the AMSTAR 2 ( Shea et al., 2017) were not relevant, or needed adapting. Based on consultation with my supervisor, I decided to omit five questions, modify three, and collapse two to form one question.

I performed the quality appraisal for all included papers, and a second reviewer independently rated them. Agreement was 100% for all the papers, which attested to the reliability of the measure, despite modifications.

### **3.2.3 Method: strengths and limitations, and considerations of alternatives**

I think that the strength of my methodology was the considered approach I took to the decisions I made. Using the PRISMA checklist and flow diagram (Moher, Liberati, Tetzlaff & Altman, 2009), I ensured my review was systematic and transparent.

Of note, I chose to exclude articles that were not written in English. This decision had limitations, as there is evidence to suggest that non-English speaking journals are more likely to publish articles that show non-significant findings than English speaking ones (Egger et al.

1997). This may have biased my results. My decision was based upon my inability to speak other languages, although it may have been feasible to pay for translation services with my research budget.

The other main methodological limitation concerns my choice of quality appraisal tool. I chose to use the AMSTAR 2 (Shea et al., 2017), which was not designed specifically for reviewing systematic reviews of observational studies. Modifying and omitting certain items is likely to have effected the psychometric properties of the measure. Instead of using this tool I could have chosen a more general one, such as the JBI.

#### **3.2.4 Further strengths and weaknesses**

There are some limitations with regards to researching the link between CEA and later mental health outcomes. Prospective research is needed to support any causal link, and these types of studies are costly. Furthermore, due to the type of research question, this type of research is non – experimental and cannot control for confounding variables which may impact on results. Therefore, conclusions drawn cannot omit the possibility that some other, unknown factors are causing the outcome of interest. Prospective studies have also come into criticism for only capturing a small proportion of the population of interest, that is known to services. With regards to retrospective studies, these have come under criticism due to the potential for recall bias, which potentially invalidates findings (Johnson, 2018).

Despite these limitations, I think that this line of enquiry as a whole is fruitful. Research may be costly, however, there are significant familial, societal and economic impacts of both child maltreatment and mental health problems (WHO, 2013). The more high quality evidence there

is to demonstrate that CEA causes later mental health problems, the more investment is justified for prevention and trauma informed interventions.

### **3.2.5 Implications for future research and clinical practice**

My review found evidence that CEA was associated with a range of adulthood mental health difficulties, including suicide attempts. In light of my results and of evidence demonstrating that clinicians do not routinely ask about trauma history (Cunningham et al., 2016; Rossiter et al., 2015), due to lack of knowledge, or beliefs about the biological basis of mental health problems (Read, & Fraser, 1998; Read, Dillon, & Lampshire, 2014), it is suggested that trauma training should be delivered to all mental health staff. This could include General Practitioners, as they are often the first point of contact. This training may prove vital for providing early assessment and psychological interventions to preventing further distress, and suicide. There is now a large evidence base for trauma informed interventions, including Eye Movement Desensitisation Reprocessing (EMDR) (Solomon Solomon & Heide, 2009), and Cognitive Behaviour Therapy for trauma (Mendes, et al., 2008), which could be utilised to help with population.

My review also reported on papers that looked at mediators in the relationship between CEA and later mental health difficulties. Liu, Pittman, & Zamora (2018) reported that four studies found negative cognitive tendencies were mediators for the link between CEA and non-suicidal self-injury. Compassion-focused therapy targets negative cognitive tendencies, including self-criticism, and helps people generate feelings of warmth and safety (Gilbert, 2009). It could be that this intervention would be helpful for people who self-harm and have experienced CEA. Providing this intervention for this client group could be an interesting avenue for future research.



Kimber et al (2017) reported on one study which demonstrated that anger and self-criticism mediate the relationship between CEA and eating disordered behaviour (EDB). Compassion focused therapy for people with EDB has already been developed, to target the link between EDB and self-criticism (Fennig et al., 2008). The current research suggests that that this intervention is particularly helpful for people who have experienced CEA. Future research is needed.

The aforementioned findings may mean that it is helpful to work in a trans-diagnostic manner. Future research could discover whether negative cognitive tendencies mediates the relationship between CEA and other mental health outcomes. If this was the case, then a more prudent way to treat could be compassion focused therapy groups, with referral criteria being based on abuse history and patterns of self-critical thinking rather than diagnosis.

It is interesting that anger also mediates the relationship between CEA and EDB behaviour (Kimber et al. 2017). It could be that anger is hypervigilance for threat, underpinned by anger towards an abuser. Future research could investigate this link, and whether on this basis the anger protocol for Eye Movement Desensitisation Reprocessing ([EMDR], Veerbeek, 2013) may be helpful.

### **3.2.6 Implications for theory**

The finding that self-criticism and negative cognitive tendencies mediate the relationship between CEA and later mental health problems is consistent with attachment theory. Bowlby (1982) proposed that caregivers are pivotal in the development of a child's internal working model, which includes beliefs about the self, others and the world. If a caregiver is emotionally abusive, this may lead to a negative internal working model, manifesting in negative cognitive tendencies. Some reviewers reported on emotion regulation as the mediator between CEA and

mental health difficulties later in life (Kimber et al., 2017)), which is consistent with an attachment framework, which predicts emotion regulation difficulties from abusive caregiving (Bowlby, 1982).

Further research is needed to test the theoretical underpinning of the link between CEA and later mental health difficulties. This could inform how to proceed clinically. For example, if attachment theory does underpin this association it may be useful to think about this client group's relationships. Attachment theory would predict that they have an insecure attachment style (Riggs, 2010) and so need more time to develop a therapeutic relationship (Daniel, 2006), this could inform decisions about the number of sessions provided by a therapist. There is also evidence that secure attachments are protective for mental health (Mikulincer & Shaver, 2012), so facilitating a stable relationship for this client group may be of primary importance. Future research would be needed to support these speculations.

### **3.2.7 Limitations of this line of enquiry**

I reflected on the ecological validity of this line of research, and wondered whether the difference between CEA and CEN may be more of an academic exercise than one with 'real world' impact. The nuance of attempting to find out whether CEA or CEN has occurred may be unrealistic, perhaps one does not occur without the other. Literature confirms that we know very little about the actual prevalence of childhood abuse, particularly 'invisible' forms such as CEA (White Paper Steering Committee, 2013). Therefore, it could be that a more important line of enquiry is how to prevent CEA from occurring, regardless of whether it is defined separately to CEN. Evidence suggests that child abuse and neglect are more likely to occur in lower socio-economic groups (Pelton, 1978), so putting systems of support in at this level seems vital. This aligns with the Welsh Government's Flying Start Scheme which provides

free, intensive support for young children and their families in deprived areas, including a focus on promoting language and social and emotional skills (Welsh Government, 2017).

### **3.3 Paper 2**

#### **3.3.1 National and Local Policy**

The new psychology service aims to provide attachment and trauma training for frontline staff. This is in line with national guidance (NICE, 2015), which recommends an interagency approach and training from this perspective. The service approach is also informed by local policy. Public Health Wales (2018) has committed to mitigating the harm caused by trauma and abuse occurring before the age of 18, by enabling all public services in Wales to respond effectively. Additionally, the Welsh Governments' overarching agenda for Mental Health Services is a whole system approach (Welsh Government, 2012). Finally, an indirect approach to addressing the mental health needs of CYP is informed by prudent health care (Aylward, Phillips & Howson 2013), if the service provided direct care to CYP they would run out of resources due to the high demand.

The structure of the training is two consecutive days of theory and clinical skills practice, followed by 6 skills development sessions at approximately six week intervals, which is based on consultation literature (Golding, 2004).

#### **3.3.2 Aims**

The aim of my empirical paper was to evaluate the effectiveness of the new psychology service. The service had already collected data for participants who had completed their training.

### **3.3.3 Ethics**

NHS ethical approval was not required for this project as it was large scale research evaluation, which did not include services users. Instead, permission was granted by the university ethics board. Informed consent was gained by participants before training, including an acknowledgment that training opportunities would not be affected if they refused, or withdrew at any point.

### **3.3.4 Method: strengths and limitations, and considerations of alternatives**

A limitation relates to data collection. There were many missing data points, especially for the support questionnaire. I considered using multiple imputation to replace the missing data points, however this was not suitable for a principal component analysis, so I used the mean of nearby points (a function in SPSS), which could have impacted results. No participant demographic data was collected, so it was not known whether the training was more or less effective for particular groups.

Another limitation was the service decision to use a bespoke questionnaire, the measure of support. The psychometric properties have not been tested. Implications of this include not being able to generalise further than the current sample, or compare results with other research. Previous research on attachment and trauma training for staff have similarly used bespoke measures (Heaney, 2017) therefore, it is more difficult to establish a robust evidence base for attachment and trauma informed approaches. High quality research is needed to establish a solid case for future funding for these types of services to become more mainstream. Finally, the use of bespoke measures means that it is difficult to interpret whether the results are clinically meaningful, rather than just statistically significant.

### **3.3.5 Further strengths and weaknesses**

The new psychology service commissioned 'Voices from Care' who are an organisation who ensure that the perspectives of CYP who have been in care are incorporated as part of other organisation's research. The new psychology service commissioned them to conduct focus groups with CYP about their experiences of health, education and social care services. The service also interviewed foster carers and adoptive parents about their experiences, and service users employed in local healthcare agencies were consulted. These perspectives were fed into the design of the training. I think that this a strength of the research, which aligns with increasing recognition that service user input is vital in research, and service design and delivery (Thornicroft & Tansella, 2005).

### **3.3.6 Implications for future research, and clinical practice and service improvement**

Creating questionnaires that are measuring what the service intends to measure is important if the service intends to add to the evidence base to demonstrate the effectiveness of attachment and trauma informed services. There is arguably a lack of measures well-tailored towards this style of service, and so the development and validation of such a measure could be extremely useful to inform service delivery and development.

With this in mind, the results of the PCA for the Support measure, is potentially useful for the service in refining their measure. These have been discussed at length in my empirical paper.

### **3.3.7 Implications for theory**

Attachment theory delineates that poor relationships with caregivers can predict later mental health difficulties (Roberts, Gotlib & Kassel, 1999) and that a secure attachment relationship is

protective (Mikulincer & Shaver, 2012). A further avenue for research could therefore be to assess the security of staff-service user relationship before and after training. Mental health and emotion regulation could also be assessed by questionnaires given to the CYP before and after training. This would allow the possibility of measuring whether there is an association between security in staff service user relationships and service user mental health outcome.

### **3.3.8 Limitations of this line of enquiry**

The service has chosen to focus on outcome measures associated with staff perception. This is limited as it does not provide an insight into service user outcome. This is potentially problematic as the service was commissioned to address the mental health needs of CYP with trauma histories and attachment difficulties. If questionnaires for CYP are considered impractical or intrusive, then objective measures such as incidents of self-harm or aggressive behaviours could be analysed.

My overarching reflection is that mental health research appears to be predominately diagnostically focused, with a recent move towards transdiagnostic research (Pearl & Norton, 2017). Comparatively less research has focused on attachment and trauma informed interventions. From a wider perspective, the medical model is still dominant in mental health design and delivery and this is thought to have effected research focus and dissemination (Deacon, 2013). A limitation of the current research may be that it is not founded on a robust evidence base.

Despite these limitations, I think that this line of enquiry as a whole is worthwhile. The significant familial, societal and economic impacts of child maltreatment has already been discussed (WHO, 2013). The evidence base for the aforementioned interventions must start somewhere and there is a place for practice based evidence. (Kazdin, 2008). The attachment

service is an example of system wide change, which may be hard to achieve due to the structurally embedded dominance of the medical model (Samson, 1995). However, trauma informed service delivery has recently started to build an evidence base (Rose, Freeman & Proudlock, 2012), and although attachment informed services are still in their infancy, their theoretical underpinnings are being discussed (Elliott, Bjelajac, Falot, Markoff & Reed, 2005).

### **3.4 Dissemination**

I intend to disseminate these findings by publishing both papers in academic journals. These papers have been prepared in accordance with journal guidelines (Appendix F). Additionally, I will meet with the lead of the psychology service to discuss the main findings of my empirical paper. This will include confirming that one of the main aims of the service has been met. Staff perception of support increased over the course of training. I imagine that starting a new service is daunting in many ways, and I hope this positive feedback will be validating and motivating.

My feedback will also include some results that may be disappointing to hear, which is why I have chosen not to ask to present at a team meeting. I think that although this may be a more challenging aspect of dissemination, it is important to do so, to ensure that NHS resources are maximised. On this basis I will let the service know that the wellbeing scores did not change. Hopefully we can reflect together about possible reasons for these results, and what changes, if any, the service may want to make in the future. Within this context I will enquire about what the service rationale was for using the wellbeing measure, and put forward my aforementioned suggestions about measuring service user outcome.

I think it is also important that I discuss the results of the PCA. I have considered how to deliver my feedback in a careful way. This will include starting the discussion with conveying my main aim, which was to assist them in creating the most parsimonious measure possible. Hopefully by framing my ideas in a way that conveys my enthusiasm about the service, and how much I have learnt in the research process, this will make my feedback well received. Finally, my colleague and I are going to record a podcast episode for the public, which will include background information about attachment theory and the effects of trauma, and the results of this research, in layman's terms.

### **3.5 Conclusion**

This paper provided a critical reflection on my systematic review of reviews, and my empirical paper. I discussed strengths and weaknesses, and provided suggestions for alternative methodologies. I also considered theoretical and clinical implications, and reflected on limitations for this line of research as a whole. Finally, I situated this research within local and national policy and practice and detailed plans for dissemination.



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## Appendix A

**Table 2**

*AMSTAR 2 items*

Critical domains
2. Was there an explicit statement that a protocol was established prior to the review?
4. Did the authors use a comprehensive literature search strategy? *
7. Did authors provide numbers of excluded studies and justifications? *
9. Did authors use a satisfactory technique for assessing Risk of Bias (RoB), and did they include high RoB studies in their MA/SR? Did they discuss this? *
Non critical domains
1. Did the research question and inclusion criteria include Population Intervention Comparator group Outcome?*
5. Did authors perform study selection in duplicate?
6. Did authors perform data extraction in duplicate?
8. Did review authors describe the included studies in adequate detail?
10. Did authors report on the sources of funding for the studies included in the review, or conflicts of interest? *
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias and discuss it's likely impact on results?

\*

1. Modified – did not require a comparator group description
4. Modified – did not require a justification of publication restrictions to achieve a partial yes, and did not require authors to state they searched trial registries, to have searched the grey literature or conducted search within 24 months of the review. Considered too robust for non-intervention studies. Authors of this measure describe these items as flexible/ reviewers discretion
7. Modified – only number of studies and justification required not full list of references. Considered a robust requirement for health care interventions when risks are greater.
- 10 and 16 combined – again rigorous requirement more relevant for healthcare interventions

Items left out:

3. did the review authors explain their selection of study designs for inclusion in the review? (answers are limited to RCT and NRSI study designs)
9. Did review authors use a satisfactory technique for assessing Risk of Bias? (incorporated into modified Risk of Bias item above)
11. If MA was performed did the review authors use appropriate methods for statistical combinations? (Answers to this are broken in to answers relevant for RCTs and those relevant for NRSIs)
12. If MA was performed, did the review authors assess the potential impact of RoB on results of meta-analysis? (This is combined into the modified RoB question above)
13. Did the review authors account for RoB in individuals studies when interpreting/ discussing results? (Combined into modified RoB question above)

## Appendix B

**Table 4**

*CEA definitions*

Paper	Definition
<p>Carr, Martins, Stingel, Lemgruber &amp; Juruena, (2013)</p> <p><i>Separate definitions for CEA and CEN</i></p>	<p><i>CEA: “verbal abuse that affects the welfare or the morals of the child or any conduct that demeans, embarrasses, frightens, or insults, for example, blaming, ridiculing, belittling, threatening, frightening, discriminating, harassing, provoking, or rejecting.</i></p> <p><i>CEN: “a pattern of failure of the caregiver to provide the basic emotional and psychological needs, such as love, attention, motivation, encouragement, and emotional support, intentionally or not, for example, does not hold or comfort the baby, does not interact with the child, ignoring the child’s needs for affection, or not appreciating the achievements of children”</i></p>
<p>Kimber et al., (2017)</p>	<p><i>“CEA (acts of commission) and CEN (acts of omission) are distinct forms of child abuse with physiological and psychological consequences”</i></p>
<p>Martins, Baes, &amp; Juruena, (2011)</p> <p>Norman, Byambaa, Butchart, Scott &amp; Vos, (2012)</p> <p><i>CEN subsumed under larger neglect category resulting in a ‘pure’ CEA category</i></p>	<p><i>“Emotional and psychological abuse involves both isolated incidents, as well as a pattern of failure over time on the part of a parent or caregiver to provide a developmentally appropriate and supportive environment. Acts in this category may have a high probability of damaging the child’s physical or mental health, or his/her physical, mental, spiritual, moral, or social development. Abuse of this type includes the following: the restriction of movement; patterns of belittling, blaming, threatening, frightening, discriminating against, or ridiculing; and other non-physical forms of rejection or hostile treatment.</i></p> <p><i>Neglect: Neglect includes both isolated incidents, as well as a pattern of failure over time on the part of a parent or other family member to provide for the development and well-being of the child—where the parent is in a position to do so—in one or more of the following areas: health, education, emotional development, nutrition, shelter, and safe living conditions. The parents of neglected children are not necessarily poor (Butchart, 2006)”.</i></p>
<p>Mandelli, Petrelli &amp; Serretti (2015)</p> <p><i>Not a separate category for CEN BUT subsumed under larger neglect category</i></p>	<p><i>Emotional abuse: “A pattern of behavior or attitude by caregivers that may cause severe adverse effects on child’s psychological growth and emotional development. It involves words, actions and indifference that they can include refusing to touch a child or not calling by name, convey to child feeling of worthless, being unloved or inadequate, belittling, criticizing, shaming, ridiculing, insulting or verbally threatening the child. In some case the child may be encouraged to take anti-social behavior or he/she can not be allowed to have normal</i></p>

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Infurna et al., (2016)	<p><i>social relationships with the peers or other adults”.</i></p> <p><i>Neglect: “...characterized by persistent failure of a parent or other significant person to provide to the child basic physical and/or psychological needs. It is an act of omission by a caregiver, which prevents the child’s physical or mental health and do not promote an adequate development”</i></p> <p><i>“Neglect: The failure of parents to provide for the child’s basic material needs (food, clothing, shelter, and protection) and developmental needs (interest in school, friends, child’s happiness, health, and well-being).</i></p> <p><i>Psychological abuse: Episodes of humiliation, terrorization, cognitive disorientation, exploitation, or corruption of the child or intentional deprivation of needs or valued objects, from parents usually in the context of a parental, highly controlling and domineering relationship with the child.</i></p> <p><i>Antipathy: parental hostility, coldness or rejection shown toward the child, including scapegoating the child in contrast to treatment of siblings. (Bifulco et al., 1994; Moran et al)”</i></p>
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## Appendix C

**Table 6**

*Results and quality appraisal rating*

Author	Key finding and conclusion
Angelakis, Gillespie, & Panagioti (2019)	CEA was associated with a 2.5-fold increased risk for suicide attempts (k = 12, OR 2.49, 95% CI 1.64–3.77). CEA was associated with a two-fold increased risk for suicidal ideation (k=5, OR 2.10, 95% CI 1.51-2.94) 'There is solid evidence that childhood maltreatment is associated with increased odds for suicidality in adults.
Goldstein & Gvion, (2019)	CEA was significantly associated with lifetime suicide attempt in women with BN. CEN and CPN were not.
Peh, Rapisarda & Lee, (2019)	UHR individuals were 5.06 times more likely to report emotional abuse (OR=5.06, 95% CI = 1.55-16.58, p=0.0007) than non UHR. CEA was more severe in UHR across all subtypes of CM
Liu, Pittman, & Zamora, (2018)	CEA associated with non-suicidal self injury (OR = 3.03, 95% CI = 2.56-3.54, p=<0.0001). Medium to large effect size.
Rafiq, Campodonico & Varese (2018)	CEA associated with dissociation in overall sample, (r=0.34, 95% CI 0.23, 0.44, p>0.0001). CEA was associated with dissociation in people with a diagnosis of schizophrenia-spectrum disorder (r=0.41, 95% CI 0.27, 0.54, p <0.001), and Personality disorders (r=0.25, 95% CI 0.14, 0.36, P<0.001). Significant association were found for emotional neglect and all of the above, with medium effect sizes. Across all the diagnostic samples the association between CEA and dissociation was particularly robust.
Castellví et al., (2017)	Those exposed to CEA had a higher mean number of suicide attempts than non-exposed. The review states that the study did not report whether this was significant.
Fusar-Poli et al., (2017)	There was strong meta-analytical evidence that the CEA was associated with the UHR state (OR= 5.84, 95% CI, 1.79-19.03, p=0.003)
Kimber et al., (2017)	1). Association between CEA and diagnosed ED ranged from weak to exceptionally strong, estimates of the association between CEA and eating disordered behaviour ranged from very weak, to moderately strong. 2). Emotion regulation difficulties partially mediate the association between CEA and adult ED behaviour
Liu et al., (2017)	CEA positively associated with suicide behaviour in men and women (OR = 2.33, SMD = 0.660, p<0.0001), stronger association than other subtypes of childhood trauma
Nelson, Klumppendt, Doeblner, & Ehring, (2017)	1). Risk of depression in adults with CEA compared with those without (OR=3.73, 95%CI 2.88-4.83, p<0.001) 2).Depression severity most prominently linked to CEA (r=0.29, 95%CI 0.25-0.33, p<0.001)
Zatti et. al, (2017)	CEA was associated with Suicide attempt (n=3, OR = 3.98, 95% CI 2.89-5.64, p<0.0001). Cohort longitudinal studies. Follow up periods were 3, 5 and 8 years.
Infurna et al., (2016)	There was a large association between psychological abuse and depression across studies (d=.932, 95%CI=.930-.934), stronger than any other maltreatment subtype. The mean effect size for the association between antipathy and depression was medium (d=.513, 95%CI, .201-.829)

Palmier-Claus, Berry, Bucci, Mansell, & Varese, (2016)	CEA associated with bipolar disorder (OR=4.04, 95% CI 3.12-5.22, P>0.001). CEA was four times more likely to occur in BPD groups than in 'healthy' controls. CEA had the strongest effect out of all of the trauma subtypes.
Mandelli, Petrelli & Serretti, (2015)	CEA showed the strongest association with depression (OR=2.78, 95% CI 1.89-4.09) compared with other kinds of childhood trauma
Schneeberger, Dietl, Muenzenmaier, Huber & Lang, (2014)	CEA was a strong predictor for current PTSD and anxiety symptoms (stats not given)
Carr, Martins, Stingel, Lemgruber & Juruena, (2013)	CEA was associated with diagnosis of/ self report PD (especially BPD, NPD, PAPD), schizophrenia, anxiety disorders (SP and PTSD), MDD. One study showed no association between CEA and psychopathology
Norman, Byambaa, Butchart, Scott & Vos, (2012)	CEA individuals at higher risk for developing depressive disorder than non-abused (OR=3.06, 95% CI 2.43-3.85) CEA associated with a significantly increased risk of anxiety disorders (OR=3.21; 95% CI 2.05-5.03) no dose response relationship found CEA associated with an almost 3 fold increased risk for developing ED (OR = 2.56; CI: 1.14-4.65) CEA associated with increased risk for suicide attempt (OR=3.08, 95% CI 2.42-3.93) Evidence for a dose response relationship between CEA and depression and anxiety.
Martins, Baes, & Juruena, (2011)	No statistics given and no conclusions regarding CEA and adulthood mental health problems. In results section comments on individual studies i.e. Afifi et al, 2007 - psychiatric symptoms more intense in people who suffered CEA than those who didn't. Wonderlich et al, 2007 CEA associated with ED in adulthood. Roy 2007 severity of CEA associated with severity of psychiatric symptoms. Holowka et al. 2003 CEA important in the aetiology of dissociation and schizophrenia

## Appendix D

### Bespoke Measure

#### How well are you supported?

	Yes	No
Do you have clear, planned goals and objectives you agreed to and regularly refer to?		
Do you have time to carry out all your work?		
In the past 12 months, have you been moved from your own clinical area to another, where you have not felt competent to work?		
Are you encouraged to develop your own expertise?		
Are you supported to do training in your area of work?		
Do you get clear feedback about how well you are doing in your job?		
In the last 12 months have you had a personal development appraisal or KSF review?		
If you had review, did it help you to improve how you do your job?		
Does your employer act fairly regardless of, for example, race or ethnic background, gender, religion and belief, sexual orientation, pregnancy, disability, marriage or civil partnership, age or caring responsibilities?		
Do you feel that there is someone in work that you can seek professional supervision from to support you with challenging experiences?		
Do you feel supported to protect time in your diary to complete office based tasks including admin, CPD and mandatory training?		

## Appendix E

### Anonymised Research and Design Approval

#### Research and Development Department Research Risk Review Panel.

25 January 2018

Dear XXXXXXXX

**Title:** Evaluation of Impact of Training and Follow-up Skills Development Sessions provided by XXXXXXXX Attachment Service to Professionals working in Health, Education and Social Care.

**Chief Investigator:** Dr XXXXXXXX

**Principal Investigator:** Alice Reid-Williams

**Reference Number:** SA/845/18

The Department decided that your study did not appear to pose any risk to the Health Board and agreed that your service evaluation be given a favourable opinion. If you require a Research Honorary Contract or Letter of Access please contact the R&D Department at the above email address. If you require any further assistance please do not hesitate to contact the Research and Development Department.

Yours sincerely,

**Acting Deputy Research and Development Director Acting Research Risk Review Panel  
Chairman**

## Appendix F

### Guidelines for Submission for the Clinical Psychology Review

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

#### Use of word processing software.

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts. Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

#### Article structure.

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

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

It is authors' responsibility to ensure their reviews are comprehensive and as up to date as possible (at least to 3 months within date of submission) so the data are still current at the time of publication. Authors are referred to the PRISMA Guidelines for guidance in conducting reviews and preparing manuscripts. Adherence to the Guidelines is not required, but is recommended to enhance quality of submissions and impact of published papers on the field.

#### Appendices.

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

#### Essential title page information.

*Title.* Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. **Note: The title page should be the first page of the manuscript document**

**indicating the author's names and affiliations and the corresponding author's complete contact information.**

### **Highlights.**

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

### **Abstract.**

A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

### **Abbreviations.**

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

### **Figure captions.**

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

### **Tables.**

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

### **References.**

Citations in the text should follow the referencing style used by the American Psychological Association. You are referred to the Publication Manual of the American Psychological Association, Sixth Edition, ISBN 1-4338-0559-6,

## **Guidelines for Submission for the Journal of Personality and Social Psychology**

### **Manuscript Preparation.**

Prepare manuscripts according to the Publication Manual of the American Psychology Association (6<sup>th</sup> Edition). Manuscripts may be copyedited for bias-free language

Review APA's journal manuscript preparation guidelines before submitting your article.

Double- space all copy. Other formatting instructions, as well as instructions of preparing tables, figures, references, metrics and abstracts appear in the Manual. Additional guidance of APA style is available on the APA Style Website.

### **Masked Review Policy.**

The journal has adopted a policy of masked review for all submissions. The cover letter should include all authors' names and institutional affiliations. The first page of the text should omit this information but should include the title of the manuscript and the data it is submitted. Every effort should be made to see that the manuscript itself contains no clues to the authors' identify.

### **Word limits.**

Although papers should be written as succinctly as possible, there is no formal word limit on submission.

### **Abstracts and Key words**

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five key words or brief phrases.

### **References.**

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.