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BASIC RESEARCH ARTICLE



# A survey of evidence-based practice, training, supervision and clinician confidence relating to post-traumatic stress disorder (PTSD) therapies in UK child and adolescent mental health professionals

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## ABSTRACT

**Background:** Post-Traumatic Stress Disorder (PTSD) in children and adolescents has received increasing recognition in recent decades. Despite development of treatments and improved dissemination efforts, research has identified a number of barriers to implementing these approaches.

**Objective:** This study sought to understand what interventions mental health professionals working with children and adolescents utilised to treat PTSD, their training and supervision, their confidence in assessing and treating PTSD, and how these factors relate to clinicians characteristics (e.g. age, gender, professional background).

**Method:** The study comprised an internet-delivered survey of clinicians working in child and adolescent mental health services in the UK (N = 716).

**Results:** Many clinicians (>40%) had not received training in working with PTSD, with considerable variation between professional background. Lack of training and supervision was associated with reduced clinician confidence in treating children with PTSD (possible range 0–10; training M = 7.54, SD = 1.65, no training M = 5.49, SD = 2.29; supervision M = 7.53, SD = 1.63, no supervision M = 5.98, SD = 2.35). Evidence-based therapies for PTSD such as Trauma-Focused Cognitive-Behavioural Therapy and Eye Movement Desensitisation and Reprocessing were only endorsed modestly by clinicians (58.4% and 37.5%, respectively). Regression analyses identified that lack of training and supervision were significant barriers to the use of evidence-based interventions. Other predictors of clinician confidence and use of evidence-based interventions included profession and years of experience. Participants almost universally wanted more training in working with PTSD.

**Conclusions:** Evidence-based treatments are not currently universally delivered by mental health professionals in the UK, with certain professions particularly lacking training and confidence with this condition. Training around trauma and PTSD may be an ongoing need to boost and maintain confidence in working with PTSD in youth.

## Una encuesta sobre práctica basada en la evidencia, capacitación, supervisión y confianza del médico en relación con las terapias para trastorno de estrés postraumático (TEPT) en profesionales de la salud mental infantil y del adolescente del Reino Unido

**Antecedentes:** El trastorno de estrés postraumático (TEPT) en niños y adolescentes ha recibido un reconocimiento cada vez mayor en las últimas décadas. A pesar del desarrollo de tratamientos y la mejora en esfuerzos de difusión, la investigación ha identificado una serie de barreras para implementar estos enfoques.

**Objetivo:** Este estudio buscó comprender qué intervenciones utilizaron los profesionales de salud mental que trabajan con niños y adolescentes para tratar el TEPT, su capacitación y supervisión, su confianza en la evaluación y tratamiento del TEPT y cómo estos factores se relacionan con las características de los médicos (por ejemplo, edad, género, antecedentes profesionales).

**Método:** El estudio comprendió una encuesta a través de Internet de los clínicos que trabajan en servicios de salud mental para niños y adolescentes en el Reino Unido (N = 716).

**Resultados:** Muchos clínicos (> 40%) no habían recibido capacitación para trabajar con TEPT, con variación considerable entre los antecedentes profesionales. La falta de capacitación y supervisión se asoció con una menor confianza del clínico en el tratamiento de niños con TEPT (rango posible 0-10; entrenamiento M = 7.54, SD = 1.65, sin entrenamiento M = 5.49, SD = 2.29; supervisión M = 7.53, SD = 1.63, sin supervisión M = 5.98, SD = 2.35). Las terapias basadas en evidencia para el TEPT, como la terapia cognitivo-conductual centrada en el trauma y la desensibilización y reprocesamiento mediante movimientos oculares, solo fueron avaladas modestamente por los clínicos (58,4% y 37,5%, respectivamente). Los análisis de regresión

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## KEYWORDS

Trauma; post-traumatic stress disorder; children; adolescents; training; supervision

## PALABRAS CLAVE

Trauma; Trastorno de estrés postraumático; Niños; clínico; practicante; capacitación; supervisión

## 关键词

创伤; 创伤后应激障碍; 儿童; 临床; 从业者; 培训; 督导

## HIGHLIGHTS

- Research has identified a number of barriers to implementing evidence-based approaches to treating PTSD in young people.
- Clinician confidence in treating PTSD was related to training, supervision, profession and experience.
- Results emphasised the need for training, supervision and improved dissemination.

identificaron que la falta de capacitación y supervisión eran barreras significativas para el uso de intervenciones basadas en evidencia. Otros factores de predicción de la confianza y uso de intervenciones basadas en la evidencia por el clínico incluyeron la profesión y los años de experiencia. Los participantes querían casi universalmente más capacitación en el trabajo con TEPT.

**Conclusiones:** Actualmente, los tratamientos basados en evidencia no son entregados universalmente por los profesionales de la salud mental en el Reino Unido, y algunas profesiones carecen particularmente de capacitación y confianza en esta afección. La capacitación sobre el trauma y el TEPT puede ser una necesidad continua para impulsar y mantener la confianza en el trabajo con TEPT en los jóvenes.

### 英国儿童和青少年心理健康专业人员中创伤后应激障碍 (PTSD) 疗法相关的循证实践, 培训, 督导和临床信心调查。

背景:近几十年来, 已经日益认识到了儿童和青少年的创伤后应激障碍 (PTSD)。尽管开发出了治疗方法并加大了宣传力度, 研究仍发现了实施这些方法的许多障碍。

目的:本研究旨在了解服务儿童和青少年的心理健康专业人员用于治疗 PTSD 的干预措施, 他们的培训和督导, 他们对 PTSD 评估和治疗的信心以及这些因素如何与临床特征相关 (例如年龄, 性别, 专业背景)。

方法:本研究由对英国从事儿童和青少年心理健康服务的临床医生进行的互联网调查组成 (N = 716)。

结果:许多临床医生 (> 40%) 未接受过 PTSD 的培训, 专业背景之间差异很大。缺乏培训和督导会降低 PTSD 儿童患者的临床信心 (可能范围 0-10; 培训 M = 7.54, SD = 1.65, 无培训 M = 5.49, SD = 2.29; 督导 M = 7.53, SD = 1.63, 无督导 M = 5.98, SD = 2.35)。PTSD 的认知行为疗法, 眼动脱敏与再加工等循证治疗仅得到临床医生的一定认可 (分别为 58.4% 和 37.5%)。回归分析表明, 缺乏培训和督导是使用循证干预措施的显著障碍。临床信心和使用循证干预措施的其他预测因素包括专业和经验年限。参与者几乎都希望获得更多处理 PTSD 的培训。

结论:目前, 英国的心理健康专业人员尚未普遍采用循证治疗, 其中某些专业人员尤其缺乏对这种疾病的培训和信心。可能需要持续的围绕创伤和 PTSD 的培训, 以增强和保持处理青少年人 PTSD 的信心。

## 1. Introduction

### 1.1. Prevalence of post-traumatic stress disorder (PTSD) in children and adolescents

Traumatic events are experienced by more than two-thirds of children and adolescents worldwide (Copeland, Keeler, Angold, & Costello, 2007). Traumatic events are those where the individual is exposed to 'death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence' (5<sup>th</sup> ed.; *Diagnostic and Statistical Manual of Mental Disorders [DSM-5]*; American Psychiatric Association, 2013). Research has found that approximately one in six children world-wide who are exposed to trauma go on to develop PTSD (Alisic et al., 2014). PTSD is characterised by the reliving of traumatic events in the form of flashbacks or nightmares, avoidance of reminders of the events, and a hypervigilance to threat with increased physiological arousal (DSM-5). PTSD in young people has been found to be associated with increased mental health difficulties and behaviour problems, as well as a range of negative educational and social outcomes (Mathews, Dempsey, & Overstreet, 2009; Trickett, Noll, & Putnam, 2011).

### 1.2. Interventions

Increasing recognition of the importance of treating PTSD in children has led to the development of interventions aimed at addressing this issue (Dorsey et al.,

2017). In particular, Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) was initially developed for children who had experienced sexual abuse but has expanded for use with any type of trauma (Cohen, Mannarino, & Deblinger, 2006). TF-CBT has the largest evidence base for treating PTSD in children and is endorsed internationally by providers of treatment guidelines including the International Society for Traumatic Stress Studies (ISTSS), the American Psychiatric Association (APA) and the UK's (UK) National Institute for Health and Care Excellence (NICE; the American Academy of Child and Adolescent Psychiatry (AACAP), 2010; Foa, Keane, Friedman, & Cohen, 2000; NICE, 2018).

TF-CBT is a structured, time limited therapy. The key components include psychoeducation, relaxation skills, cognitive processing of the traumatic event, development of a trauma narrative and in vivo exposure to reminders of the trauma (Cohen et al., 2006). In addition to TF-CBT, promising evidence has been found for interventions including Eye Movement Desensitisation and Reprocessing (EMDR; Chen et al., 2014) and Narrative Exposure Therapy (NET; Robjant & Fazel, 2010).

### 1.3. Barriers to the use of evidence-based interventions in PTSD

For the purpose of this paper, evidence-based interventions are those for which an evidence base exists and are endorsed by national guidelines for PTSD.

Despite the development of evidence-based interventions for children with PTSD, there remains a question in the literature relating to the extent to which these approaches are being used in clinical practice (Allen, Gharagozloo, & Johnson, 2011; Becker, Zayfert, & Anderson, 2004). Evidence indicates that psychological therapies which are found to be effective often take a long time to be implemented in practice (Hoagwood & Olin, 2002; Palinkas et al., 2017). In particular, research has indicated that when working with children who have experienced trauma, clinicians are likely to avoid treatment that directly addresses the traumatic event (Allen, Wilson, & Armstrong, 2014). This is concerning, given the wealth of information supporting exposure techniques (Farrell, Kemp, Blakey, Meyer, & Deacon, 2016).

Research has explored barriers to implementing evidence-based interventions for PTSD. A number of barriers have been identified, including clinicians' fear of increasing distress, lack of training and supervision, a lack of confidence, and beliefs relating to the restrictiveness of manualised approaches (Becker et al., 2004; van Minnen, Hendriks, & Olff, 2010; Whiteside, Deacon, Benito, & Stewart, 2016). Czincz and Romano (2013) surveyed psychologists in Canada working with children who had suffered sexual abuse and found that 77.5% of clinicians received no training in trauma approaches, and 66.2% reported never receiving clinical supervision.

Given these barriers, it is important that research not only establishes the current provision being offered to children who have experienced trauma, but also identifies the training and supervision needs of clinicians. In 2015, the UK Department of Health produced the 'Future in Mind' report which outlined recommendations for the treatment of mental health in children (Department of Health, 2015). Included in these recommendations were guidelines for enhancing training to increase awareness of trauma, emphasis on training and experience of clinicians, and an acknowledgement of the need for staff confidence in promoting children's mental health.

In addition, NICE guidelines recommend that the primary response to working with young people with PTSD is the provision of psychological therapy, particularly TF-CBT (NICE, 2018). In the UK there is a clear policy drive towards recognising the impact of trauma in young people, and Child and Adolescent Mental Health Services (CAMHS) are being transformed in line with this (Department for Health and Social Care and Department for Education, 2017). There is therefore a clear role within research and policy for the development, implementation, dissemination and evaluation of evidence-based interventions within this population.

The primary objective of the study was to survey clinicians working within CAMHS in the UK to identify treatment strategies being routinely used, alongside the training and supervision received and clinician confidence in recognising and treating trauma. The study aimed to 1) map current practice onto the evidence base for PTSD to understand any discrepancies; 2) identify clinician characteristics that predicated clinician confidence in recognising and treating trauma in children and young people, treatment decision-making and the use of evidence-based interventions in the treatment of trauma in young people.

## 2. Methods

### 2.1. Participants

Staff working within the National Health Service (NHS) CAMHS or youth mental health services in the UK were invited to participate in an online survey of training, supervision and treatment practice. Recruitment methods were via three different routes. These included professional bodies who distributed the survey via their member email distribution lists. Participating overseeing bodies included the British Psychological Society, the Royal College of Psychiatrists, the Royal College of Occupational Therapists, the British Association of Behavioural and Cognitive Psychotherapies, the British Association of Social Work, the Royal College of Nursing and the Association for Family Therapy. In addition, participants were recruited via the National Institute for Health Research Clinical Research Network, who corresponded directly with CAMHS teams in 13 NHS trusts. Finally, the survey link was shared via social media on special interest groups such as those for individuals working in CAMHS.

### 2.2. Procedure

An internet-based survey collected quantitative data including demographic information, training and supervision received, staff confidence in recognising and treating trauma in children and young people, self-reported treatment strategies, and perceived barriers to evidence-based interventions.

#### 2.2.1. Measures

The primary questionnaire was developed solely for the purpose of the study, and therefore the procedure for the development of this measure is outlined below.

**2.2.1.1. Demographic and employment information.** Participants were asked to provide demographic information including age, gender, profession and



highest level of education. Information was also collected on employment setting and years of experience.

#### **2.2.1.2. Training, confidence in assessing and treating PTSD, supervision and treatment strategies.**

Participants were asked questions relating to the training and supervision that they receive specific to working with trauma, how confident they feel (based upon a 10-point Likert scale) in recognising and treating PTSD, and the routine treatment strategies used. Participants were asked to rate to what extent they would be likely to use different treatments on a Likert scale ranging from 1 (extremely unlikely to use treatment) to 5 (extremely likely to use treatment). For the purposes of analysis, a score of four or five was considered to be endorsement of use of the treatment. The survey questionnaire was developed in collaboration with experts in the field including Clinical Psychologists and Child Psychiatrists working on similar studies. The survey was submitted to a local expert group comprising of a CAMHS team made up of Clinical Psychologists, Mental Health Practitioners, Social Workers and Assistant Psychologists. This enabled feedback relating to the suitability and external validity of the questions.

**2.2.1.3. Barriers.** A sub-set of participants (N = 455) consented to completing an additional survey. This additional survey asked participants to rate ten potential barriers to the use of evidence-based interventions on a Likert scale from 1 (extremely likely to be a barrier) to 5 (extremely unlikely to be a barrier).

#### **2.2.2. Ethical approval**

Ethical approval was received from the Faculty of Medicine and Health Sciences Ethics Committee at the University of East Anglia (ref 2017/8 – 7). Approval to disseminate the survey to NHS trusts was given by the Health and Research Authority (HRA; ref 243374). Completion of the study was anonymous to ensure privacy and data security.

### **2.3. Analyses**

Alpha level was set at .05 for all statistical analyses. Assumption testing was carried out to check for normality, outliers and multicollinearity. No serious violations were found.

Descriptive analyses were employed to determine the level of training and supervision received, clinician confidence in recognising and treating trauma in young people, and treatment strategies routinely used. To explore clinician characteristics that predicted confidence and use of evidence-based interventions multiple and logistic regressions were conducted. Predictor variables were selected based upon previous literature identifying potential barriers and facilitators to the use of evidence-based interventions (Becker et al., 2004; van Minnen

et al., 2012). Clinician confidence was measured using a Likert scale from 0–10 where clinicians self-reported confidence in recognising and treating PTSD.

Initial multiple regressions aimed to explore factors associated with clinician confidence. The following predictor variables were included: profession, and trauma related training and supervision. Sample size calculations were conducted using G\*Power statistical analysis tool (Faul, Erdfelder, Lang, & Buchner, 2007) based on multiple regression analysis using nine predictor variables with a medium effect size (R<sup>2</sup>), indicating a minimum sample size of 114 participants.

Logistic regressions were used to assess therapist related factors associated with the use of evidence-based interventions including TF-CBT and Eye Movement Desensitisation and Reprocessing (EMDR). The TF-CBT and EMDR outcomes were constructed by collapsing a Likert scale measuring how likely clinicians would be to use these approaches. Collapsing these scales allowed outcomes to become binary (i.e. scores of 1–3 for not endorsing, 4–5 for endorsing). The following predictor variables were included: profession, years of experience, and trauma training and supervision. Sample size calculations based on logistic regression analysis indicated that a minimum of 308 participants were required to detect a small effect size (odds ratio 1.5; Cohen, 1988).

Responses to questions on potential barriers to the use of evidence-based interventions were also collapsed (i.e. scores of 1–2 for endorsing as a barrier, 3–5 for not endorsing).

## **3. Results**

### **3.1. Sample characteristics**

Seven-hundred-and-sixteen clinicians participated. There was a broadly similar number of females and males in the sample. Participants were aged from 18 to above 75 years, with the majority aged between 26 and 45 years (64.7%). The majority of clinicians held a master's degree or more advanced as their highest level of education (75.7%). Primary employment setting was NHS CAMHS (62.7%), and the most common professions were Clinical Psychologists (28.6%), Nurses/Mental Health Practitioners (23.5%) and Psychiatrists (15.9%). Table 1 presents all demographic information.

### **3.2. Training**

A majority of clinicians reported receiving training specific to working with trauma during their professional qualification (56.7%). Approximately half of clinicians (50.6%) also reported receiving training specific to trauma since completing their qualification. Of these, 70% reported receiving training

**Table 1.** Sample demographic characteristics.

Sample Characteristics		Frequency (N = 716)	%
Age	18–25	17	2.4
	26–35	239	33.4
	36–45	224	31.3
	46–55	173	24.2
	56–65	59	8.2
	66+	4	0.6
Gender	Male	348	48.6
	Female	368	51.4
Highest Education	Below BSc	50	7.0
	BSc or equivalent	123	17.3
Profession <sup>a</sup>	MSc or equivalent	291	40.8
	Doctorate or equivalent	249	34.9
	Clinical Psychologist	205	28.6
	Psychiatrist	114	15.9
	Nurse/Mental Health Practitioner	168	23.5
	Occupational Therapist	19	2.7
	Social Worker	43	6.0
	CBT Therapist	31	4.3
	Psychotherapist	51	7.1
	Family Therapist	22	3.1
Employment Settings	Other	63	8.7
	CAMHS	449	62.7
	Other	148	20.7
	3 <sup>rd</sup> Sector/Private CAMHS	16	2.2
	3 <sup>rd</sup> Sector/Private Other	18	2.6
	Education	23	3.2
Years of Experience <sup>b</sup>	Social Care	14	2.0
	Other	48	6.5
	Less than 3 years	184	25.8
	3–5 years	108	15.1
	5–10 years	130	18.2
	10–15 years	117	16.4
	15+ years	176	24.6

N = 716. CAMHS = Child & Adolescent Mental Health Service. <sup>a</sup> Missing cases = 3. <sup>b</sup> Missing cases = 1.

specific to working with children who have experienced trauma. Clinicians were asked whether they would like to receive further training relating to children experiencing trauma, with a large majority of clinicians indicating that they would (89.6%). Those clinicians who received training specific to working with trauma were asked to identify the methods of training. The following teaching methods were reported: e-learning (20.8%), training using specific techniques such as exposure or relaxation (51.2%), group discussion (40.5%), case presentations (44.1%), video examples (19.6%) and role play (23.2%).

Descriptive analyses were conducted to explore training received by different professions. Table 2 displays these results. The results indicate that certain professions, in particular Clinical Psychologists and CBT Therapists report higher levels of training both during and after qualification when compared to professions including Occupational Therapists and Social Workers.

### 3.3. Supervision

Participants were asked to report on the type and frequency of the supervision that they receive. The

**Table 2.** Frequency of clinicians receiving training and supervision by profession.

Profession	Training During Qualification		Training Since Qualification		Supervision Received	
	n	%	n	%	n	%
Clinical Psychologist	188	91.7	127	62.6	181	88.3
Psychiatrist	85	74.6	55	48.2	56	49.1
Nurse/MHP	45	26.8	62	36.9	94	44.0
Occupational Therapist	2	10.5	5	26.3	8	42.1
Social Worker	8	18.6	21	48.8	26	60.5
CBT Therapist	21	67.7	24	77.4	27	87.1
Psychotherapist	21	41.2	35	68.6	41	80.4
Family Therapist	5	22.7	14	63.6	14	63.6
Other	31	49.2	16	27.6	41	65.1
Total	406	56.7	359	50.6	468	65.4

MHP = Mental Health Practitioner.

majority of clinicians reported receiving routine clinical supervision (56.6%), with a further 8.8% of clinicians reporting supervision specific to PTSD, and 34.6% of clinicians reporting receiving no supervision. With regards to supervision frequency, the majority of clinicians (55.6%) received monthly supervision, with 28.5% of clinicians receiving supervision more often and the remaining 15.9% of clinicians receiving supervision less than monthly. Descriptive analyses were used to further explore the supervision received by different professions. Table 2 displays the results of these analyses.

### 3.4. Confidence

Participants were asked to report confidence in recognising and treating trauma. This was based upon a Likert scale ranging from one to ten where one indicated no confidence at all, and ten indicated feeling very confident. The mean confidence in recognising trauma was 6.99 (SD = 2.05; 95% CI for mean, 6.84–7.14), and the mean confidence in treating trauma was 5.69 (SD = 2.32; 95% CI for mean, 5.52–5.86). Table 3 displays mean confidence scores for recognising and treating PTSD by profession, training, supervision, highest education, age, gender and years of experience. For this and subsequent analyses, the training variable was constructed by collapsing two variables ‘training during qualification’ and ‘training after qualification’, and clinicians were identified to have received training if they answered yes to either of the above.

A multiple linear regression model was conducted to predict confidence in recognising PTSD in young people on the basis of profession, training and supervision. The model significantly predicted confidence in recognising PTSD ( $F[9,705] = 33.72, p < .0005$ ; model  $R^2 = 29.2\%$ ; see Table 4). Five variables accounted for unique variance in confidence in recognising PTSD: training, supervision, and being a Clinical Psychologist, Psychiatrist or Social Worker.

**Table 5.** Multiple regression model predicting confidence in treating PTSD from Profession, training and supervision.

Variable	B	SE	$\beta$	p
Training	1.792	.182	.343	.000
Supervision	1.149	.165	.236	.000
Clinical Psychologist	.845	.250	.165	.001
Psychiatrist	.785	.272	.124	.004
Nurse/Mental Health Practitioner	-.255	.253	-.047	.313
Occupational Therapist	.013	.481	.001	.979
Social Worker	.626	.352	.064	.075
CBT Therapist	.600	.398	.053	.132
Psychotherapist	.827	.335	.092	.014

B = unstandardized regression coefficient; SE = Standard error of the coefficient;  $\beta$  = standardized coefficient.

**Table 3.** Mean confidence scores (with 95% confidence intervals) for recognising and treating PTSD, by sample characteristics (possible range 0–10).

Variable	Confidence Recognising			Confidence Treating		
	Mean	SD	95% CI	Mean	SD	95% CI
Whole sample	6.99	2.05	6.84–7.14	5.69	2.32	5.52–5.86
Profession						
Clinical Psychologist	7.85	1.37	7.66–8.04	6.79	1.76	6.55–7.03
Psychiatrist	7.71	1.75	7.38–8.04	5.96	2.25	5.54–6.39
Nurse/MHP	5.98	2.16	5.65–6.31	4.34	2.18	4.00–4.67
Occupational Therapist	5.05	2.37	3.91–6.19	4.26	1.85	3.37–5.16
Social Worker	6.91	1.73	6.37–7.44	5.60	2.11	4.96–6.25
CBT Therapist	7.45	1.90	6.76–8.15	6.42	2.17	5.62–7.22
Psychotherapist	7.14	2.10	6.55–7.73	6.39	2.32	5.74–7.04
Training and Supervision						
Training	7.54	1.65	7.40–7.68	6.40	2.00	6.23–6.57
No training	5.49	2.29	5.17–5.82	3.76	2.02	3.47–4.04
Supervision	7.53	1.63	7.38–7.68	6.38	1.99	6.20–6.56
No supervision	5.98	2.35	5.68–6.28	4.40	2.33	4.10–4.69
Highest Education						
Under MSc	5.85	2.31	5.51–6.20	4.50	2.39	4.14–4.86
MSc or equivalent	6.92	2.02	6.69–7.16	5.48	2.23	5.22–5.73
Doctoral level	7.87	1.39	7.69–8.04	6.79	1.83	6.56–7.02
Age						
18–25	4.94	2.43	3.69–6.19	3.82	2.30	2.64–5.00
26–35	6.79	1.94	6.54–7.04	5.32	2.21	5.04–5.60
36–45	7.05	2.09	6.78–7.33	5.87	2.34	5.56–6.18
46–55	7.35	2.04	7.04–7.66	6.13	2.33	5.78–6.48
56–65	7.15	1.91	6.65–7.65	5.98	2.14	5.43–6.54
Gender						
Female	6.84	2.14	6.62–7.06	5.46	2.40	5.21–5.71
Male	7.16	1.94	6.95–7.36	5.95	2.20	5.71–6.18
Years of Experience						
Less than one year	5.92	2.41	5.32–6.52	4.42	2.38	3.83–5.02
1–3 Years	6.51	1.94	6.16–6.86	5.02	2.20	4.62–5.41
3–5 Years	6.93	1.77	6.59–7.26	5.79	1.97	5.41–5.92
5–10 Years	6.85	2.22	6.47–7.24	5.51	2.38	5.10–5.92
10–15 Years	7.32	2.02	6.95–7.69	6.14	2.32	5.71–6.56
15+ Years	7.66	1.77	7.40–7.93	6.43	2.22	6.10–6.76

MHP = Mental health practitioner.

A further multiple linear regression model was undertaken to predict confidence treating PTSD in young people on the basis of profession, training and supervision. The model significantly predicted confidence treating PTSD ( $F(9,706) = 42.415$ ,  $p < .0005$ ; model  $R^2 = 35.1\%$ ; see Table 5). Five variables significantly predicted confidence treating PTSD,  $p < 0.05$ : training, supervision, and being a Clinical Psychologist, Psychiatrist or Psychotherapist. In order to demonstrate the additive effects of training, supervision and profession, a further table was produced presenting confidence

**Table 6.** Logistic regression predicting use of TF-CBT.

Profession	B	SE	Wald	df	p	Odds Ratio
Training	.718	.206	12.183	1	.000	2.050
Supervision	.655	.188	12.135	1	.000	1.925
Clinical Psychologist	1.319	.300	19.388	1	.000	3.740
Psychiatrist	.669	.314	4.258	1	.033	1.952
Nurse/MHP	.059	.284	.044	1	.834	1.061
Occupational Therapist	-.272	.559	.236	1	.627	.762
Social Worker	.366	.388	.888	1	.346	1.442
CBT Therapist	1.812	.592	9.369	1	.002	6.124
Psychotherapist	-.942	.395	5.693	1	.017	.390
Years of Experience	-.018	.053	.115	1	.734	.982

B = unstandardized regression coefficient; MHP = Mental health practitioner; SE = Standard error of the coefficient.

**Table 4.** Multiple regression model predicting confidence in recognising PTSD from profession, training and supervision.

Variable	B	SE	$\beta$	p
Training	1.256	.167	.272	.000
Supervision	1.021	.152	.237	.000
Clinical Psychologist	.934	.230	.206	.000
Psychiatrist	1.413	.251	.252	.000
Nurse/Mental Health Practitioner	.109	.232	.023	.640
Occupational Therapist	-.574	.441	-.045	.194
Social Worker	.730	.323	.085	.024
CBT Therapist	.628	.365	.062	.086
Psychotherapist	.506	.307	.064	.100

B = unstandardized regression coefficient; SE = Standard error of the coefficient;  $\beta$  = standardized coefficient.

in treating PTSD by profession and whether the participant had supervision or training (see Supplementary Table 1). Even for those participants who had undergone training and received supervision, mean confidence ranged from 5.33 to 7.09.

### 3.5. Approaches used to treat PTSD

Clinicians self-reported use of between zero and 14 approaches (out of 15), with the majority using between four and seven approaches (58%). The percentage of clinicians implementing each approach was as follows: Psychoeducation (79.2%); Guided Self-Help (68.8%); Case management (59.5%); TF-CBT (58.4%); CBT (52.8%); Mindfulness Based Therapy (43.7%); Family Therapy (43.6%); EMDR (37.5%); Compassion Focused Therapy (31.7%); Referral to peer support (31.2%); Exposure (30.6%); Person centred therapy (28.5%); medication (23.8%); Psychodynamic psychotherapy (18.5%); Cognitive Analytic Therapy (15.4%) and Group Therapy (14.7%).

### 3.6. Predictors of the use of evidence-based interventions

Three logistic regressions were undertaken to consider there was a relationship between profession, years of experience, training and supervision on use of evidence-based interventions for PTSD in youth. The first logistic regression addressed the use of TF-CBT. The logistic regression model was significant  $\chi^2$

(10) = 143.75,  $p < .0005$ , explaining 24.5% (Nagelkerke  $R^2$ ) of the variance in use of TF-CBT and correctly classifying 68.7% of cases. Of the 10 variables, six were statistically significant: training, supervision, Clinical Psychologist, Psychiatrist, CBT Therapist and Psychotherapist (for regression coefficients see Table 6). Each predictor variable increased the likelihood of using TF-CBT, with the exception of being a Psychotherapist which decreased the likelihood of using TF-CBT.

The second model addressed the use of EMDR. The logistic regression model was significant  $\chi^2$  (10) = 44.81,  $p < .0005$ . The model explained 8.3% (Nagelkerke  $R^2$ ) of the variance in use of EMDR and correctly classified 62.5% of cases. Of the 10 variables, only three were significant: training, supervision and years of experience (see Supplementary Table 2). Increased training and supervision were associated with an increased use of EMDR, alongside increased number of years of experience.

The third model addressed the implementation of UK evidence-based interventions as outlined by NICE guidelines, i.e. endorsing either TF-CBT or EMDR. The logistic regression model was significant  $\chi^2$  (10) = 144.10,  $p < .0005$ , explaining 25.8% (Nagelkerke  $R^2$ ) of the variance in use of evidence-based interventions and correctly classifying 75.2% of cases. Of the 10 variables, four were significant: training, supervision, Clinical Psychologist and CBT Therapist (see Supplementary Table 3). Increased training and supervision were associated with an increased likelihood of implementing evidence-based interventions, alongside being a Clinical Psychologist or a CBT therapist.

### 3.7. Barriers to implementing treatment

Participants reviewed a list of potential barriers and indicated whether each item would be a barrier to the treatment they would provide to young people with PTSD. The following barriers were the most highly endorsed: Service user substance use (81.1%); Treatment adopting a 'one size fits all' approach (74.5%); Lack of training (74.3%); Lack of supervision (73.4%); perceived risk of increasing distress (65.1%); Comorbidity (58.7%); Service user non-adherence (51.3%); Time taken to engage before trauma work can commence (44.8%); Relevance of research to clinical practice (38.5%); Comorbidity with physical health disorders (35.5%).

## 4. Discussion

This study explored the experience of clinicians working with children to identify treatment approaches, alongside training, supervision and clinician confidence in recognising and treating PTSD. It is important to gain an understanding of clinicians' perspectives, given their position as key agents in the

implementation of evidence-based interventions (Adams et al., 2016).

### 4.1. Training and supervision

Consistent with existing literature, training and supervision were identified as significant predictors of confidence in recognising and treating PTSD, as well as predicting the use of NICE recommended practices (Borah et al., 2017; Richards et al., 2017). This is important given that approximately half of clinicians received no trauma training, and almost a third received no supervision. These are better figures than the earlier study of psychologists by Czincz and Romano (2013), but their study focused exclusively on work with sexually abused children. Results identified noticeable differences between professions in the level of training and supervision received. Over half of the Psychiatrists, Nurses/Mental Health Practitioners and Occupational Therapists reported receiving no clinical supervision.

### 4.2. Clinician confidence with recognition and treatment of PTSD

Clinician confidence relating to recognition and treatment of PTSD in children was significantly higher for those who had received training and supervision. It is important to note that the effects of training and supervision were independent of each other, and indeed professional background. However, even those clinicians who reported having training and supervision did not report a large degree of confidence in treating PTSD.

### 4.3. Treatment approaches

TF-CBT, the main recommended treatment for PTSD in children by ISTSS, NICE and APA, was indicated by approximately 60% of clinicians as being an approach that they would use. The use of TF-CBT was predicted by training and supervision, alongside being trained and employed within specialist therapy groups. EMDR was indicated by only 37.5% of clinicians as an approach that they would use. Alongside training and supervision, EMDR was predicted by years of experience.

Psychoeducation was indicated as a likely approach by almost 80% of clinicians. Interestingly, almost a quarter of clinicians indicated medication as a likely approach for this population, despite NICE guidelines stating that drug treatment should not be used for children with PTSD; it is possible that clinicians have in mind the treatment of other comorbid conditions such as depression.

Interestingly, nursing was not found to be a significant predictor within any of the regression



models, suggesting that use of evidence-based interventions is highly varied within the profession. This is important to note, given that over 30% of the CAMHS workforce is made up of nursing staff (NHS Benchmarking, 2018).

#### 4.4. Barriers to implementing treatment

While participants felt that aspects of individual case presentations may be barriers to implementing evidence-based treatments (particularly service user substance abuse but also to a lesser extent comorbid mental health and physical health difficulties), therapists concerns around delivering such treatments were also commonly endorsed (e.g. treatment adopting a 'one size fits all' approach, lack of training and supervision). These findings are in line with research that has identified similar barriers in both adult-focused and child-focused settings and across different anxiety disorders (Allen et al., 2014; Becker et al., 2004; Whiteside et al., 2016). While concerns around the relevance of the evidence base were only endorsed by a significant minority of participants, these data nevertheless highlight a need for trainers and researchers like to pay close attention to the clinical dilemmas (treatment flexibility, concern around increasing distress) experienced by clinicians seeking to work with children and young people with PTSD.

#### 4.5. Clinical implications

The findings of the study highlight the importance of clinicians' having access to trauma related training and supervision. The results suggest that due to a lack of training and supervision, evidence-based interventions are not being implemented consistently with NICE guidelines in the UK. As a result, clinicians may be lacking in confidence and the treatment being offered to young people with PTSD may be less effective. Training and dissemination efforts should aim to address the barriers to the implementation of evidence-based interventions for these children. For example, many clinicians may be concerned about using trauma-related approaches such as exposure for fear of 're-traumatising' the individual (Becker et al. (2004). However, research has demonstrated that only a very small proportion of individuals who receive these therapies experience any adverse effects (Foa, Zoellner, Feency, Hembree, & Alvarez-Conrad, 2002; Larsen, Stirman, Smith, & Resick, 2016).

It may be particularly important to note those professions (e.g. nursing) for whom discipline was not a significant predictor of implementation, in order to address the varied perceptions and treatment approaches within these groups. In addition, the dissemination of clinical guidelines for working with

this population should be a priority in clinical practice.

While the present study focused on treatments for PTSD in children and young people, our assessment-focused data warrant comment. It is reasonable to assume that most CAMHS clinicians should be able to assess PTSD as part of their role. However, many professionals (e.g. nurses, occupational therapists) who are key members of CAMHS teams did not rate their confidence in recognising PTSD highly, and no staff group scored very highly on this scale. This suggests that case management may be enhanced by specific training packages that address assessment of trauma and PTSD.

It is important to note that there was an overwhelming willingness to receive further training on PTSD in youth. This may go some way to explaining why, despite having had training and receiving supervision, many clinicians did not rate their confidence in working with PTSD very highly. Some professionals in the UK context (e.g. nurses) may not be expected to deliver trauma-focused psychological therapies as part of their clinical role, but these data raise the question of whether some professional groups may be involved more fully in undertaking this kind of work.

An interesting result to note was the finding that Guided Self-Help (GSH) is highly endorsed by clinicians working with young people who have experienced trauma. Although the evidence base is limited in relation to the use of GSH, this could be an important area to research given the lower intensity mode of GSH and the implications for its broader use.

#### 4.6. Limitations

While the logistic regression models exploring predictors of evidence-based interventions were significant, it is important to note that the amount of variance explained by the predictors in each of the models was low (24.5% for TF-CBT; 8% for EMDR; 25.8% for evidence-based practice). A similar proportion of variance was explained for confidence in recognition and treatment of PTSD. Factors other than clinician characteristics are influencing the use of evidence-based interventions and clinician confidence. Future research should aim to identify these influences. These factors could be explored through qualitative research such as in-depth interviews with clinicians. In addition future research should seek to include young people and their caregivers to gain a more comprehensive understanding of their experiences of receiving treatment for trauma. It is also important to note that 'confidence' does not necessarily translate into competence, effective implementation of evidence-based interventions or adherence to guidelines.

The results from this study were based upon self-report data. As such, these results may not provide an accurate representation of practice. In addition, given that participants were not randomly selected, there may be a bias towards the types of clinicians likely to participate. The questionnaire also provided cross-sectional data which explores clinicians experience at a specific time point, therefore limiting understanding of causality.

A particular limitation to note is related to the language used within the survey. To determine the treatment strategy used, the question was worded 'to what extent would you be likely to use the following treatment approaches to treat PTSD in children and adolescents'; the shortcoming within this question is its inability to capture clinicians that may still 'endorse' the approach but are unable to implement the intervention due to lack of training. This does not capture circumstances where clinicians may refer cases to other members of the team, which is an important aspect of clinical decision making. At a conceptual level, the study aimed to understand not only clinicians use of evidence-based interventions, but also their attitudes towards them.

Finally, the study recruited participants working in the UK NHS, and results may not be generalisable to clinicians working in other settings and other countries. Nevertheless, these data underline the need for broad-ranging dissemination efforts that address PTSD assessment and treatment, paying attention to the multidisciplinary nature of mental health services, considering the ongoing context in which evidence-based therapies may be delivered and the potential need for a sustained programme of on-going training.

#### 4.7. Strengths

A key strength of the study compared to previous surveys was the relatively equal representation of male and female participants. While the study received lower response rates from professions such as Occupational Therapy and Social Work, these subgroups were fairly representative of the numbers employed within CAMHS (NHS Benchmarking, 2018). This was also true of medical staff such as Psychiatrists. However, while specialist therapy groups such as Clinical Psychology and Psychotherapy were over-represented, nursing staff were slightly underrepresented given that this subgroup make up over 30% of the total CAMHS workforce. The over-representation of specialist therapy groups may be explained by the emphasis of research practices within their professional training.

#### 5. Conclusions

A large number of clinicians still do not have access to adequate training and support with respect to PTSD in children and young people. The results suggest that there

remains a research-practice gap in the treatment of trauma young people, with only 60% of clinicians endorsing TF-CBT and less than 40% of clinicians endorsing EMDR. It is important that future research and policy efforts focus on improving the training and dissemination related to these approaches and address the common barriers surrounding them.

#### Disclosure statement

In accordance with Taylor & Francis policy and our ethical obligation as researchers, we are reporting that author RMS occasionally delivers training in a form of trauma-focused cognitive behavioural therapy with children and adolescents for which he receives payment. All other authors declare that they have no potential conflicts of interest.

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#### Data Availability

The data that support the findings of this study are available from the corresponding author.

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