Edinburgh Research Explorer

Screening children with a history of maltreatment for PTSD in frontline social Care organisations

Link:
Link to publication record in Edinburgh Research Explorer

Document Version:
Publisher's PDF, also known as Version of record

Published In:
Child Abuse Review

Michael Duffy* ⓘD

School of Social Sciences, Education and Social Work and Centre for Evidence and Social Innovation, Queen's University Belfast, UK

Colm Walsh ⓘD

School of Social Sciences, Education and Social Work, Queen's University Belfast, UK

Ciaran Mulholland

School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, UK

Gavin Davidson ⓘD

School of Social Sciences, Education and Social Work and Centre for Evidence and Social Innovation, Queen's University Belfast, UK

Paul Best

Lisa Bunting

Stephen Herron

Paul Quinn

School of Social Sciences, Education and Social Work, Queen's University Belfast, UK

Catherine Gillanders

Belfast Health & Social Care Trust, Belfast, UK

Caroline Sheehan

Southern Health & Social Care Board, Portadown, UK

John Devaney ⓘD

School of Social and Political Science, University of Edinburgh, UK

Screening Children with a History of Maltreatment for PTSD in Frontline Social Care Organisations: An Explorative Study

Traumatic experiences during childhood are common and often lead to chronic mental health conditions such as posttraumatic stress disorder (PTSD). The primary aim of this study was to determine whether a well-validated screening tool for PTSD administered in frontline services effectively identifies diagnosable PTSD in young people with a history of maltreatment. In total, 141 young people in community care settings were screened using three screening instruments (Child Revised Impact of Events Scale-8; Generalised Anxiety Disorder-2; Patient Health Questionnaire-2). Participants described a range of adverse life events: 110 of the 141 participants reported at least one adverse life experience (mean number for the total sample was 2.8), with 44.2 per cent ($n = 46$) experiencing at least one form of interpersonal trauma; and 102 participants (72.3 per cent) screened positively for probable PTSD and subsequent mental health assessments confirmed this condition in 64.7 per cent of these participants. Further, 36.9 per cent ($n = 52$) and 46.8 per cent ($n = 66$) met the threshold for probable depression and anxiety, respectively. Three items were associated with positive PTSD screens: a history of being on the child protection register, previous mental health contact and interpersonal index trauma. Interpersonal traumas were also associated with higher risks of offending. It seems feasible to use screening measures effectively within frontline social care services if staff are provided with appropriate training and support to identify young people with PTSD who may benefit from evidence-based mental health therapies. © 2021 The Authors. Child Abuse Review published by Association of Child Protection Professionals and John Wiley & Sons Ltd.

KEY PRACTITIONER MESSAGES:

- There is strong evidence of the link between childhood adversities and poor mental health, including PTSD.
- This study found that a short instrument can be embedded within social care services to screen children and young people for PTSD.
- It is important that frontline staff have the necessary training and tools to understand the effects of trauma and screen children's mental health in order to facilitate access to effective therapies at an early stage.

*Correspondence to: Dr Michael Duffy, School of Social Sciences, Education and Social Work, Queen's University Belfast, 7 College Park, Belfast BT7 1NN, UK. E-mail michael.duffy@qub.ac.uk

Introduction

Over the past 25 years, the impact of maltreatment on children's mental health has been investigated extensively (e.g. Cecil *et al*., 2017; Hanlon *et al*., 2020). Exposure to one or more potentially traumatic events in childhood is unfortunately a common experience, with nearly 60 per cent of children reporting at least one, including physical, emotional and sexual abuse, and physical and emotional neglect (Runyon *et al*., 2019). Exposure to such potential traumas is associated with an increased risk of mental health problems such as posttraumatic stress disorder (PTSD), anxiety, depression, suicidal ideation and substance abuse across the life course (Hanlon *et al*., 2020; Leenarts *et al*., 2013). Studies have shown that the degree or level of trauma exposure increases the risk for PTSD (Pine & Cohen, 2002), and interpersonal traumas (personal attacks, violence, abuse) are associated with higher rates of PTSD (Leenarts *et al*., 2013). High rates of PTSD are also reported in studies of violent young offenders, with up to 32 per cent meeting the criteria for PTSD and half of the subjects describing the witnessing of interpersonal violence as the traumatising event (Steiner *et al*., 1997).

There are some differences between the two international mental health classification manuals - DSM-5 (*Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*; American Psychiatric Association, 2013) and ICD-11 (*International Classification of Diseases 11th Revision*; World Health Organization (WHO), 2019) - in the diagnostic criteria for PTSD. However, both manuals agree that three core symptom clusters (re-experiencing, avoidance and hyperarousal) differentiate PTSD from other disorders. These core symptoms form the basis for the study and discussion of screening within this study. ICD-11 has introduced an additional category of Complex PTSD (CPTSD), which includes all the core PTSD diagnostic criteria along with three additional symptom clusters that reflect disturbances in self-organisation: affect dysregulation, negative self-concept and interpersonal difficulties (WHO, 2019). It is argued that CPTSD is more relevant to individuals exposed to very severe, repeated or prolonged trauma (Karatzias *et al*., 2017).

The systems and processes for identifying and protecting children from immediate harm are robust in many countries, but there is concern that the impact of maltreatment on children is often under studied and children's needs for therapeutic support often go unrecognised, with long-term consequences (Teicher *et al*., 2016). Children with the highest levels of trauma-related psychopathology are sometimes the least supported (van Vugt *et al*., 2014). There are several reasons why this may be the case, including uncertainty regarding conceptualisation of the negative mental health effects of childhood trauma, in particular, the recognition and diagnosis of PTSD (see Hatfield *et al*., 1996; Morris *et al*., 2015). While it is known that early interventions after trauma exposure can be effective, it has previously been noted that they are not often offered (Kramer & Landolt, 2011) and, arguably, this is still true a decade later. It is suggested that screening in frontline services can facilitate early access to evidence-based therapies (Kramer & Landolt, 2011).

'Exposure to one or more potentially traumatic events in childhood is unfortunately a common experience'

'Children's needs for therapeutic support often go unrecognised, with long-term consequences'

Aims and Research Questions

The aim of this study, based on prior literature, was to assess the rates of PTSD using a well-validated screening tool (i.e. Child Revised Impact of Events Scale-8 (CRIES-8) - see the Mental Health Measures section for details) in older children and young adults involved with frontline services as compared to a full mental health assessment. Secondary research questions included:

- What are the associations between participant characteristics – specifically, gender, reason for referral (e.g. specific behavioural or emotional problem identified), trauma history including life events (interpersonal versus non-interpersonal), involvement with mental health services, care history and presence of a child protection plan – and PTSD severity and diagnosis?
- What is the prevalence of comorbid anxiety and depression in those with PTSD compared with those without PTSD?

Method

Recruitment

A convenience sample was recruited from two non-governmental agencies operating across Northern Ireland that were commissioned to provide services to young people involved with child welfare and youth justice services. These agencies provide a range of person-centred interventions over an average period of six months (range between 1 and 12 months) for those believed to be at risk of maltreatment or coming into conflict with the law. Services included: psycho-social support, counselling and group support. Each agency has a standard assessment framework onto which the screening instruments were added for the purposes of this study. The frontline staff in both organisations were mostly university graduates from a range of different disciplines including social work and community youth work. The agencies were chosen because they provided similar support and early intervention services to youth aged ten to 18 years who demonstrated significant and emerging welfare and/or behavioural concerns resulting in the involvement of statutory child welfare services. A key aim of both agencies was to reduce the need for the young people to enter state care for welfare or offending reasons. A total of 32 practitioners engaged in the screening process throughout the study over a period of 18 months. The median number of screens was four per staff member with a range between one and 20.

Participants

'141 youth were recruited from all new and recent referrals'

In total, 141 youth were recruited from all new and recent referrals (agency 1: $n = 94$; agency 2: $n = 47$). Participants in the study were referred to both agencies from various sources, such as statutory children's services (56.0%), non-governmental organisations (18.3%), educational welfare services (6.4%), child and adolescent mental health services (5.0%), general practitioners (4.3%), multiagency family support hubs (4.3%), the Police Service of Northern Ireland (0.7%) and self-referral (5.0%).

Table 1 provides an overview of the key participant characteristics across the two organisations. The sample was predominantly male (overall *n* = 95, 67.4%), with the majority (85.2%) aged ten to 14 (median and mode age = 12; range 10–18). Overall, 13.5 per cent were either currently or previously 'looked after children' and more than a third were currently or previously subject to a child protection plan (36.9%). In discussions with the agencies, consideration of referral material and discussion with caregivers, there was no indication that any young person in the study had a prior diagnosis of PTSD. The agencies were unable to provide us with accurate data on mental health histories so we could not report on any other formal diagnosis of mental disorder at the time of the study.

> **'The sample was predominantly male … with the majority (85.2%) aged 10–14'**

Study Protocol

The study received ethical approval from the School of Social Sciences, Education and Social Work, Queen's University Belfast Research Ethics Committee. All children newly referred into each project were verbally advised of the study by agency staff and provided with an information sheet. At least one week later, assent or consent (depending on age) was sought from all participants, and consent from caregivers. The agency practitioner created a unique case identification for the young person who agreed to participate.

Training of Screening Staff

All staff involved in screening were provided with one initial day of training and a follow-up training day with ongoing consultation and guidance available from the research team. Training content covered the psycho-social impacts of childhood trauma, case examples of PTSD, use of evidence-based screening tools and the implementation of the screening instruments: CRIES-8, the Generalised Anxiety Disorder-2 (GAD-2) and the Patient Health Questionnaire-2 (PHQ-2) (see the Mental Health Measures section for details). A short research protocol was developed and practised during the training sessions. Following the training, a member of the research team met with the practitioners in each organisation to discuss pilot application of the screening, and thereafter group meetings were held with all screening staff on a monthly basis to review progress and implementation.

All participants were screened for probable PTSD and related mental health problems (depression and anxiety) by frontline staff within both agencies.

> **'All participants were screened for probable PTSD and related mental health problems (depression and anxiety) by frontline staff within both agencies'**

Table 1. Participant characteristics (*n* = 141)

Characteristic	N	%
Gender		
Male	95	67.4
Female	46	32.6
Care status		
LAC	19	13.5
CPP	52	36.9
Mental health service involvement[a]	69	48.9

Child age range 10–18 years (median and mode = 12 years).
[a]Participant has current or previous involvement with child and adolescent mental health services.
CPP = Child protection plan; LAC = looked-after child.

Screening

Self-reports from youth were collected and, whenever needed, a practitioner provided support by reading out the items/questions and/or clarifying points. Where appropriate an accompanying parent or caregiver was present. The practitioner scored the results and uploaded these using the case identification to an online platform (Jotform) for analyses.

Assessment

After the screening process, a sample of screened cases (*n* = 43, 30.5%) was selected for a formal mental health assessment. On account of time frame restrictions, these formal assessments were completed for a relatively small percentage of those who screened positively for PTSD within agency one (*n* = 16; 21.9% of positive screens) and a larger proportion of all screens (positive or negative) within agency two (*n* = 27; 57.4% of all screens). Participants were assessed by experienced clinicians (Cognitive Behavioural Therapy-trained nurses and specialist psychiatry trainees) who were blind to the screen results at the time of assessment. Assessments were supervised by a consultant psychiatrist (CM) and the principal investigator (MD) who is a consultant cognitive psychotherapist, both with extensive experience in mental health assessments and supervision of mental health studies and clinical trials. All assessors in the pilot phase were provided with cases which were discussed in detail with MD and CM to enhance inter-rater reliability.

Measures

Screening instruments were completed for all participants even if a specific traumatic experience that would meet criterion A for PTSD was *not* clearly identified at the start of the interview because of the difficult histories of these young people or a tendency for some young people to under-report traumatic experiences, or because the screens covered depression and anxiety as well as PTSD. The screening instrument for the study consisted of four sections as described later, with measures selected where possible for brevity but also good reliability and validity.

Demographic Details

Characteristics such as gender, age, usual place of residence, reason for referral and care status were recorded in the first section.

Trauma Experiences

One measure was used to assess for prior potentially traumatic experiences. The set of questions was derived from the children and youth version of the Life Events Checklist (LEC-5; Weathers *et al.*, 2013). The LEC-5 is intended to gather information about potentially traumatic experiences that a person has experienced so it contains no formal scoring protocol (Gray *et al.*, 2004). Respondents indicate varying levels of exposure to each type of potentially traumatic event on a nominal scale. In this study, we used a version containing more appropriately framed questions for children and youth. During the pilot and training phase, the scale was reduced for brevity to include only the main types of potentially traumatic events reported by staff to be more commonly experienced by this young population (see Table 2).

Table 2. Adapted trauma checklist for youth: types and percentages of adverse experiences reported
(*N* = 110)

Experience	N	%
Domestic violence	12	10.9
Slapped, kicked, hit, bit, attacked or beaten up	16	14.5
Someone touching our body or made to touch someone else's body	7	6.4
Death or loss of someone close	45	40.9
Illness or injury that could have caused death	5	4.5
Not having enough food, home alone or lack of care	12	10.9
Living in an area where there was fighting or war	2	1.8
Any other very bad or scary event	1	0.9
Parental mental health or substance abuse	3	2.7
Exclusion	1	0.9
Would not disclose	6	5.5
Total	110	

Note: Thirty-one participants did not report any of the above adverse experiences.

Mental Health Measures

Three measures were used to assess participants' mental health (specifically, PTSD, anxiety and depression). Although most of these measures were originally designed for adults, all these tools have been successfully modified for and used in studies with young people.

PTSD Screening Measure: CRIES-8 (Perrin et al., 2005)

The CRIES-8 is a modified version of the Impact of Events Scale (Horowitz *et al.*, 1979). It consists of: eight items designed to identify core PTSD symptoms of 're-experiencing' and 'avoidance'; four items measuring Intrusion; and four items measuring Avoidance. A cut-off score of 17 is recommended for PTSD caseness. In several studies, the instrument has demonstrated both validity and reliability as a screening tool for PTSD with children aged eight years and above (e.g. Morris *et al.*, 2015; Perrin *et al.*, 2005; Yule, 1997).

Depression Screening Measure: PHQ-2 (Kroenke et al., 2003)

This two-item PHQ measure is derived from the longer nine-item instrument (PHQ-9) to test for depression. PHQ-2 scores range from zero to six with a score of three as the optimal cut-off point when screening for depression. The PHQ-2 has been shown to have a sensitivity of 91 per cent and a specificity of 65 per cent for a diagnosis of depression (Kroenke *et al.*, 2003), and performed well when compared to the longer nine-item instrument (Arroll *et al.*, 2010).

Anxiety Screening Measure: GAD-2 (Kroenke et al., 2007)

This two-item measure derived from the seven-item GAD-7 has performed equally well as the longer seven-item instrument as a screening tool in primary care (Kroenke *et al.*, 2007). GAD-2 scores range from zero to six with a cut-off score of three recommended as the optimal point when screening for general anxiety disorder. A recent review of this measure found good sensitivity and specificity for the diagnosis of the most common anxiety disorders encountered in primary care (Sapra *et al.*, 2020).

Risk of Offending/ReOffending

Staff in both agencies had considerable experience of working with young offenders and prior training in youth offending/reoffending. During training

'Three measures were used to assess participants' mental health'

for this study, predictors that were reported included: persistent attentional deficits and/or disruptive/aggressive behaviour; prior contact with youth justice services/court services; having friends in a gang; persistent disruption in school activities; and previous possession of a weapon (see MacRae *et al.*, 2009). Staff were asked to indicate, based on their knowledge and information provided by the referral agencies (e.g. police, youth justice services or social services), whether there was a perceived risk of offending/reoffending for each participant. A dichotomous variable was created (yes/no) to facilitate exploration of associations between PTSD and staff perceptions of risk of offending behaviour.

Assessment Instruments

'The measures used in the formal mental health assessments mimicked the screening measures as much as possible'

The measures used in the formal mental health assessments mimicked the screening measures as much as possible. The PTSD screening measure (i.e. CRIES-8; Perrin *et al.*, 2005) was repeated to test for any variation in scores over time, and a more comprehensive and structured PTSD assessment instrument, namely Clinician-Administered PTSD Scale for DSM-5 Child/Adolescent Version (CAPS-5) (Pynoos *et al.*, 2015) (see later), was completed by the assessor interviewing the youth for comparison. The LEC-5 was repeated at assessment to confirm that the index trauma indicated at screening was the same traumatic experience being measured at assessment. The longer versions of the depression and anxiety measures used at the screening interviews (depression – PHQ-9; anxiety – GAD-7) were also completed at the interview phase to compare with the results found during the screening phase. These new measures are outlined here.

CAPS-5 (Pynoos et al., 2015)
The CAPS-5 is a 30-item structured interview used to diagnosis PTSD. It is regarded as the gold standard in PTSD assessment. The instrument records: the core onset and duration of symptoms, subjective distress, the impact of symptoms on social and occupational functioning, overall PTSD severity and specifications for the dissociative subtype (depersonalisation and derealisation). The assessor combines information about the frequency and intensity of an item into a single severity rating (0 = absent and 5 = extreme/incapacitating). A review of ten years of research indicated that the CAPS-5 has excellent reliability (consistent scores across items, raters and testing occasions) and excellent validity (convergent and discriminant validity, diagnostic utility and sensitivity to clinical change) (Weathers *et al.*, 2001).

PHQ-9 - Depression (Kroenke et al., 2001)
This nine-item measure of depression is the most commonly used tool to screen for depression in primary care. It scores each of the nine DSM-IV (American Psychiatric Association, 1994) criteria as zero (not at all) to three (nearly every day), and scores of five, ten, 15 and 20 represent thresholds of mild, moderate, moderately severe and severe depression, respectively. In a review of 29 studies, sensitivity (88%) and specificity (85%) were maximised at a cut-off score of ten or above (Levis *et al.*, 2019).

GAD-7 - Anxiety Disorders (Spitzer et al., 2006)
This seven-item measure of general anxiety disorder is calculated by assigning scores of zero, one, two and three to the response categories of 'not at all',

'several days', 'more than half the days' and 'nearly every day', respectively. Total scores of five, ten and 15 are taken as the cut-off points for mild, moderate and severe anxiety. When used as a screening tool, a threshold score of ten is recommended, and the GAD-7 has been found to have a sensitivity of 89 per cent and a specificity of 82 per cent. It is moderately good at screening for panic disorder, social anxiety disorder and PTSD (Kroenke *et al.*, 2007).

Statistical Analysis

A series of statistical tests including univariate and bivariate analyses, chi-square tests, correlation tests and independent sample *t*-tests were used to examine associations between the variables. Cross-tabulation tables present the level of agreement between the screening results and the formal mental health assessments.

Results

Reasons for Referral to the Agencies

Staff recorded two main reasons for participants being referred to the agencies: behavioural problems ($n = 104$, 73.8%) and emotional wellbeing support ($n = 35$, 24.8%).

Adverse Life Events Reported by the Sample

Overall, 110 (78.1%) of the 141 participants reported at least one form of adverse experience using the adapted LEC-5, and the remaining 31 (21.9%) reported no adverse experiences. Six (5.5%) of the 110 participants reporting an adverse incident did not disclose the details (Table 2). Nearly one-third ($n = 46$, 32.6%) of participants reported having experienced four or more types of adverse life events. These 110 youth who reported an adverse experience were asked to describe their 'index' or most significant adverse experience: the most common was the death or loss of someone close ($n = 45$, 40.9%), followed by experiences of non-sexual violence and aggression ($n = 28$, 25.5%). Nearly 42 per cent ($n = 46$, 41.8%) of all reported adverse experiences were interpersonal in nature. On average, young people reported that it was just under three years since they had been exposed to the index adverse event ($M = 35.3$ months, SD $= 31.6$) and the range was considerable (1–120 months).

'Overall, 110 (78.1%) of the 141 participants reported at least one form of adverse experience using the adapted LEC-5'

Screening Results

In total, 102 (72.3%) participants screened positively for PTSD, that is, above the threshold on the CRIES-8. Table 3 provides the mean age of participants, the number of adverse life experiences, the time since trauma and the total CRIES-8 scores. The mean number of adverse life experiences for the total sample was 2.8 (SD $= 2.2$), but for those who scored above the clinical threshold for PTSD, the mean number was 3.1 compared to 2.0 for those scoring below the threshold.

'In total, 102 (72.3%) participants screened positively for PTSD'

Table 3. Means and standard deviations for age, adverse life experiences, time since trauma and CRIES-8 (total scores)

	Age (years)		Declared adversities		Time since index trauma (months)		CRIES-8 score	
	M	SD	M	SD	M	SD	M	SD
Total sample	12.5	2.0	2.8	2.2	35.3	31.6	21.7	10.1

CRIES-8 = Posttraumatic stress disorder measure – see the text for details.

Table 4. PTSD cases screened compared with cases assessed (N = 43)

	PTSD diagnosed		
PTSD screened	Yes	No	Total
Yes	22 (64.7%) True positive-sensitivity	12 (35.3%) False positive	34
No	2 (22.2%) False negative	7 (77.8%) True negative-specificity	9

PTSD = Posttraumatic stress disorder.

Comparing Screening Results with Formal Mental Health Assessments

The screening results and subsequent formal assessments were compared using Cohen's κ test. Thirty per cent of all screens were assessed (*n* = 43) and the differences were not statistically significant (κ = 0.23, *p* = 0.13) (see Table 4). In agency one, only 16 positive screens could be followed up and three out of four positive PTSD screens were subsequently agreed by mental health assessments (*n* = 12; 75%). In agency two, a sample of 27 positive and negative results were assessed and approximately half (55.6%; *n* = 10) of those who screened positively for PTSD were subsequently agreed by formal mental health assessments and almost a quarter (22.2%; *n* = 2) who did not meet PTSD threshold on the screens were subsequently assessed positively for PTSD by mental health assessments (Table 4). Practitioners who participated in higher numbers of screens (3 or more) had higher rates of agreement with the subsequent formal clinical diagnosis.

Variables Associated with PTSD

The CRIES-8 scores were disaggregated by variables highlighted in the Aims and Research Questions section. Two items, namely a history of being subject to a child protection plan and former contact with mental health services, were statistically significantly associated with positive PTSD screens (Table 5). For the first item, 85 per cent (*n* = 44) of those with a history of being subject to a child protection plan screened positively for PTSD compared with 65 per cent (*n* = 58) of those with no history. Gender, reason for referral to the current service and looked-after status were not associated with probable PTSD (see Table 5). Age was not positively correlated with increased scores on the PTSD measure (*r* = 0.018, *p* = 0.83) and there was no statistically significant difference between the ages of those with or without probable PTSD (*t* (139) = 0.008, *p* = 0.994).

'Gender, reason for referral to the current service and looked-after status were not associated with probable PTSD'

Table 5. Associations between probable PTSD (above the clinical threshold using the CRIES-8 screening instrument) and gender, reason for referral, care histories and mental health service contact

	X^2	df	p
Gender	1.68	1	0.20
Reason for referral	0.01	1	0.94
Care histories			
CPP	5.21	1	0.02*
LAC	0.018	1	0.89
Mental health service contact[a]	6.42	1	0.01*

*$p < 0.05$.
[a]Participant has current or previous contact with child and adolescent mental health services.
CPP = Child protection plan; CRIES-8 = PTSD measure – see the text for details; LAC = looked-after child; PTSD = posttraumatic stress disorder.

Table 6. Associations between total CRIES-8 scores and gender, reason for referral, care histories, mental health service contact and risk of offending

	Total CRIES-8 scores		
	t	df	p
Gender	−1.5	139	0.135
Reason for referral	.931	137	0.353
Care histories			
CPP	2.25	139	0.026*
LAC	−.7	139	0.488
Mental health service contact[a]	3.09	138	0.002*
At risk of offending	2.15	139	0.034*

*$p < 0.05$.
[a]Participant has current or previous contact with child and adolescent mental health services.
CPP = Child protection plan; CRIES-8 = posttraumatic stress disorder measure – see the text for details; LAC = looked-after child.

The item 'number of adverse experiences' positively correlated with higher CRIES-8 scores at the point of statistical significance ($r = 0.281$, $p = 0.001$), albeit with a small effects size (Cohen D). Two items linked to secondary aims in this study, namely 'previous mental health service contact' and 'perceived risk of offending', were associated with higher mean CRIES-8 scores (Table 6).

The large majority of those reporting interpersonal index adverse experiences scored above the threshold for probable PTSD (90.9%) compared to those who had not reported an interpersonal index adverse experience (78.3%). An independent samples *t*-test comparing the mean CRIES-8 scores for those with interpersonal adversities (M = 27.37) and those without (M = 21.59) found a significant difference (SD = 9.64; $t(102) = 3.5$, $p = 0.001$), indicating that youth who experienced interpersonal adversity were more likely to score higher for PTSD.

PTSD and Risk of Offending

There was a statistically significant association between probable PTSD and a perceived risk of offending ($X^2 (1, 139) = 3.64$, $p = 0.036$). While we found no statistically significant relationship between the type of index trauma and a perceived risk of offending, two types of interpersonal traumas, namely

'There was a statistically significant association between probable PTSD and a perceived risk of offending'

'domestic violence' and 'slapped, kicked, hit, bit, attacked or beaten up', were more heavily weighted towards a perceived risk of offending than all other categories.

Contact with Mental Health Services

Those who reported four or more adverse experiences were significantly more likely to have had contact with mental health services (69.6%) than those who self-reported less than four adverse experiences (39.4%) (X^2 (1, 139) = 10.1, p = 0.001). Forty-four per cent (N = 44) of those who screened for probable PTSD reported no previous or current contact with mental health services. Eighty-three per cent of those (N = 57) who had contact with mental health services screened positively for PTSD compared to 62 per cent (N = 44) of those who had no mental health involvement. The mean CRIES-8 score for the group that had contact with mental health services (M = 24.29, SD = 9.15) was higher than the mean score for the group that reported no contact with mental health services (M = 19.14, SD = 10.5).

PTSD and Comorbid Anxiety or Depression

'Almost half the sample… of youth screened positively for comorbid symptoms of either anxiety or depression'

Almost half the sample (n = 67, 47.5%) of youth screened positively for comorbid symptoms of either anxiety or depression (i.e. above the threshold on GAD-2 and PHQ-2, respectively). Fifty-two participants (36.9%) screened for probable depression and 66 participants (46.8%) screened for probable anxiety. The mean scores on both the PHQ-2 (2.26 v 1.33) and the GAD-2 (2.92 v 1.36) were higher for the probable PTSD group than for the non-probable PTSD group. There was a statistically significant difference between the mean scores of male and female youth for probable depression (t (139) = −2.07, p = 0.04) and anxiety (t (139) = 2.3, p = 0.02) (Table 7).

The PHQ-2 scores positively correlated with higher CRIES-8 scores at the point of statistical significance, albeit that the strength of the correlation was small (Cohen D) (r = 0.285, p = 0.001). Further, there was a medium-sized correlation between the anxiety screen scores and PTSD scores (r = 0.398, $p < 0.001$). The anxiety scores help to explain 16 per cent of the variance in the CRIES-8 score results.

Discussion

The first aim of the study was to determine whether screening using a well-validated instrument administered by frontline staff led to the

Table 7. Means and standard deviations for depression and anxiety screening results with the screening instruments PHQ-2 and GAD-2

PHQ-2		PHQ-2 score by gender		PHQ-2 score by CPP		GAD-2 score		GAD-2 score by gender		GAD-2 score by CPP	
M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
2.01	1.73	Male 1.80	1.63	Yes 2.17	1.89	2.49	2.04	Male 2.31	2.08	Yes 3	2.2
		Female 2.43*	1.86	No 1.91	1.63			Female 2.87*	1.93	No 2.19	1.88

CPP = Child protection plan; GAD-2 = anxiety screening measure - see the text for details; PHQ-2 = depression screening measure - see the text for details.
*$p < 0.05$.

identification of probable PTSD. In our study, more than 72 per cent of participants screened positively for probable PTSD which seems higher than the value reported in the epidemiological study by Lewis *et al.* (2019) of the general youth population. Lewis *et al.* (2019) explored risk factors for PTSD based on participants from the Environmental Risk Longitudinal Twin Study at four assessments between ages five and 12 years, and at a follow-up assessment at age 18 years and reported a lifetime prevalence of 7.8 per cent for PTSD. However, our finding is more in line with studies involving similar at-risk populations of 'justice involved' or 'looked after' children and young people. In a study of looked-after children using the CRIES-8 as a screening instrument, Morris *et al.* (2015) reported that 75 per cent scored above the threshold for probable PTSD.

The main aim of the present study was to compare the results of a brief screening tool for PTSD administered in frontline services with more comprehensive mental health assessments in order to determine the reliability of the screening tool when used in frontline services. In our study, approximately 65 per cent of cases that screened positively for PTSD were subsequently agreed by mental health assessments, with a higher proportion matching positive results in one agency (75%). These results suggest that a screening process can identify significant mental health needs of children and youth, which is an important finding given that many mental health problems are amenable to effective treatments. Although approximately a third of cases (35.3%) produced false-positive results, only two (22.2 %) of the nine cases that screened negatively for PTSD were subsequently assessed as positive compared with seven negative screens (77.8%) by the formal mental health assessors. These results suggest that few cases of probable PTSD were missed. The finding that practitioners who participated in higher numbers of screens (3 or more) had higher rates of agreement with the subsequent formal mental health assessments suggests that more practice with assessment tools under supervision may be important. More training for screening staff and more practice in using the instruments may help staff differentiate between specific conditions/problems and improve screening outcomes.

In relation to the secondary aims of the study, we were interested in discovering variables associated with a higher risk of PTSD in this population. The number of potentially traumatic events that participants have experienced indicates the troubled background of many young people in the care system. Over three-quarters of the sample (78%) reported exposure to at least one form of adverse life event from the checklist. This finding is over twice the rate discovered from a general population study of young people which reported a 31.1 per cent exposure to at least one traumatic experience (Lewis *et al.*, 2019); however, it is less surprising given the context of the study and the histories of these children and youth. Previous studies and reviews (see Pine and Cohen, 2002) have reported that the level of exposure to virtually all types of trauma including physical and sexual abuse predicts the risk for later psychiatric symptoms. Our study found that the number of adverse incidents was 56 per cent higher for the group that scored above the clinical threshold for PTSD compared to the group that scored below the clinical threshold.

In our study, the mean length of time from the index trauma until screening was almost three years, which is concerning given the age of this sample

'In our study, approximately 65 per cent of cases that screened positively for PTSD were subsequently agreed by mental health assessments'

'The mean length of time from the index trauma until screening was almost three years, which is concerning given the age of this sample'

(mode = 12 years). Previously, we explained that individuals exposed to very severe, repeated or prolonged trauma are vulnerable to developing more complex forms of PTSD (Karatzias *et al*., 2017). Youth with undiagnosed and untreated PTSD are also at an increased risk of social isolation or loneliness, self-harm and suicide; and in being less involved in education, employment or training (Lewis *et al*., 2019). Comorbidity was high within our study, with almost half the sample screening positively for comorbid symptoms of either anxiety or depression. In a study of children in long-term out-of-home care, Hiller and St Clair (2018) found that 30 per cent of young people scored on the borderline for abnormal emotional problems, 50–65 per cent scored within the abnormal range for conduct disorder and 45–55 per cent scored in the abnormal range of hyperactivity. Our findings are similar to those of a recent survey of young people (Elliott *et al*., 2021) which found that approximately half of those identified with PTSD also experienced elevated depression and/or anxiety symptoms. There are two important implications of these high rates of comorbidity. Firstly, practitioners should recognise that other conditions may mask the identification of PTSD as the primary condition. Secondly, it is important that PTSD screening protocols should also screen for depression and anxiety given these levels of comorbidity and co-occurrence.

'Many of those who had current or previous contact with mental health services screened positively for PTSD'

In our study, many of those who had current or previous contact with mental health services screened positively for PTSD. This finding is comparable with those in other studies, such as Hiller and St Clair (2018) who reported that approximately half of their sample remained on a chronic mental ill health trajectory despite having had contact with mental health services. Other studies have found that children within the care system who receive a diagnosis of a mental health condition are twice as likely to receive support from mental health services (Tarren-Sweeney, 2008). Unfortunately, many vulnerable children in contact with children's services do not appear to receive evidence-based psychological therapies recommended by the National Institute for Health and Social Care Excellence (NICE, 2017, 2018) for PTSD and other disorders which may explain this enigma (Morris *et al*., 2015). Many reasons have been suggested for this failure to provide NICE-recommended therapies and treatments for PTSD, such as a reluctance to diagnose specific mental health problems, non-detection of mental health problems, limited resources to provide therapies (Hatfield *et al*., 1996), the ethics of labelling children (Morris *et al*., 2015), and an overlap between PTSD and conduct disorder (Steiner *et al*., 1997). Yet effective therapies for PTSD such as cognitive therapy for PTSD (Ehlers & Clark, 2000) and trauma-focused cognitive behavioural therapy (Cohen *et al*., 2012), which target many of the risk factors for chronic PTSD in children and young people, are available (Duffy *et al*., 2015; Trickey *et al*., 2012) and have been found to be effective for PTSD with this population (Smith *et al*., 2007).

Our finding that there was an association between probable PTSD and a perceived risk of offending/reoffending is interesting. Although the 'perception of offending/re-offending' variable was the 'subjective' view of staff members, their views were informed by training and experience. It is well documented how young people exposed to chronic and repeated stressors can develop PTSD and act out in disruptive and harmful behaviours (Dyregrov & Yule, 2006; Yule *et al*., 1999). Interestingly, 'behavioural problems' was cited in our study as the most common reason for referral to the two agencies. It is

possible that some 'challenging behaviours' displayed by trauma-exposed young people in the care sector might be more accurately conceptualised as PTSD-related behaviours. This distinction could help other professionals to better understand their behaviour (Dann, 2011).

One unexpected finding in our study was that the item most frequently listed by young people as a potentially traumatic experience was the death or loss of someone close (almost 41% of responses). This is an interesting finding given the ongoing debate within diagnostic classification systems (ICD-11 and DSM-5) about how to define a stressor as 'traumatic' and how to differentiate PTSD from other conditions such as adjustment disorder and traumatic grief reactions (see van Hooff *et al*., 2009). Earlier studies, using DSM-IV PTSD criteria, found high rates of PTSD and depression among those bereaved by natural disaster (Chan *et al*., 2012). In a study of 332 bereaved children and adolescents (aged 8–18), Boelen and Spuij (2013) reported that 51.5 per cent met the DSM-IV criteria for PTSD. Our findings highlight the importance of developing our understanding of the effects of death/loss on young people and how loss may be conceptualised as a 'traumatic' experience (PTSD, CPTSD) or a complex grief reaction (Prolonged Grief Disorder) as defined within the new ICD-11 (WHO, 2019). Our finding that interpersonal adverse experiences were associated with higher PTSD scores compared to non-interpersonal adverse life experiences is consistent with established findings in the literature (Leenarts *et al*., 2013).

Our finding that neither gender nor age was associated with increased PTSD scores supports the recommendations in the review by Trickey *et al*. (2012), that demographic and pre-trauma factors such as gender and age are weakly related to risk of PTSD and therefore unlikely to be useful as standalone variables for screening instruments.

Finally, all screening results in our study were shared with the young person and carer, and following assessment, onward referral for trauma-focused cognitive behavioural therapy was offered. It is possible that screening procedures using standardised measures can assist young people with ongoing referral to access evidence-based and disorder-specific therapies.

‘One unexpected finding… was that the item most frequently listed by young people as a potentially traumatic experience was the death or loss of someone close’

Limitations

There are a number of limitations to the study. It would have been more useful if we had been able to undertake more mental health assessments from a larger subsample and from both positive and negative screens in both agencies, but these aspirations were not practicable owing to organisational restraints within the study. However, we were able to access a more representative sample for formal assessment from both negative and positive screen results within agency two (57% of the sample screened). Another limitation of our study is that we were not able to ascertain what proportions of the reported deaths/loss were violent or non-violent, which in the context of an emerging post-conflict society in Northern Ireland may be more relevant. We were also unable within the agreed study protocol to delineate between PTSD and CPTSD in the assessment phase.

'Adequate training for screening staff is necessary to increase understanding of the effects of trauma on children's mental health'

Conclusion

Child maltreatment can result in both childhood and later life detrimental mental health consequences. Traumatic experiences have the potential to impair normal functioning and developmental trajectories in children and young people, and such traumas are elevated in at-risk groups (NICE, 2017). This study adds to previous work suggesting that the mental health needs of those at heightened risk are often not identified in a clear and consistent way. Our exploratory research findings suggest that a short screening instrument may be embedded within community-based social care services to identify significant pathology within children and youth in order to facilitate access to effective therapies at an earlier stage. However, adequate training for screening staff is necessary to increase understanding of the effects of trauma on children's mental health and to differentiate between specific mental health problems. We agree with the findings of an earlier study (Lewis *et al.*, 2019) that screening, comprehensive clinical assessment and reduced barriers to care are needed to ensure that youth exposed to trauma and those who develop PTSD receive appropriate therapeutic interventions and treatment.

Acknowledgements

References

American Psychiatric Association. (1994) *Diagnostic and statistical manual of mental disorders*, 4th edition. Washington, DC: American Psychiatric Publishing.

American Psychiatric Association. (2013) *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, 5th Edition. Washington, DC: American Psychiatric Publishing. Available from: https://doi.org/10.1176/appi.books.9780890425596

Arroll, B., Goodyear-Smith, F., Crengle, S., Gunn, J., Kerse, N., Fishman, T., Falloon, K. & Hatcher, K. (2010) Validation of PHQ-2 and PHQ-9 to screen for major depression in the primary care population. *The Annals of Family Medicine*, **8**(4), 348–353. Available from: https://doi.org/10.1370/afm.1139

Boelen, P.A. & Spuij, M. (2013) Symptoms of post-traumatic stress disorder in bereaved children and adolescents: Factor structure and correlates. *Journal of Abnormal Child Psychology*, **41**(7), 1097–1108. Available from: https://doi.org/10.1007/s10802-013-9748-6

Cecil, C.A., Viding, E., Fearon, P., Glaser, D. & McCrory, E.J. (2017) Disentangling the mental health impact of childhood abuse and neglect. *Child Abuse & Neglect*, **63**, 106–119. Available from: https://doi.org/10.1016/j.chiabu.2016.11.024

Chan, C.L., Wang, C.W., Ho, A.H., Qu, Z.Y., Wang, X.Y., Ran, M.S., Mao, W.J., Lu, B.Q., Zhang, B.Q., Zhang, X. (2012) Symptoms of posttraumatic stress disorder and depression among bereaved and non-bereaved survivors following the 2008 Sichuan earthquake. *Journal of Anxiety Disorders*, **26**(6), 673–679. Available from: https://doi.org/10.1016/j.janxdis.2012.05.002

Cohen, J.A., Mannarino, A.P. & Deblinger, E. (Eds). (2012) *Trauma-Focused CBT for Children and Adolescents: Treatment Applications*. New York: Guilford Press

Dann, R. (2011) Look out! 'Looked after'! Look here! Supporting 'looked after' and adopted children in the primary classroom. *International Journal of Primary, Elementary and Early*

Years Education, **39**(5), 455–465. Available from: https://doi.org/10.1080/03004279.2010.488069

Duffy, M., McDermott, M., Percy, A., Ehlers, A., Clark, D., Fitzgerald, M. et al. (2015) The effects of the Omagh bomb on adolescent mental health: a school based study. *BMC Psychiatry*, **15**, 18. Available from: https://doi.org/10.1186/s12888-015-0398-9

Dyregrov, A. & Yule, W. (2006) A Review of PTSD in Children. *Child and Adolescent Mental Health*, **11**(4), 176–184. Available from: https://doi.org/10.1111/j.1475-3588.2005.00384.x

Ehlers, A. & Clark, D.M. (2000) A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, **38**(4), 319–345. Available from: https://doi.org/10.1016/S0005-7967(99)00123-0

Elliott, R., McKinnon, A., Dixon, C., Boyle, A., Murphy, F., Dahm, T. et al. (2021) Prevalence and predictive value of ICD-11 post-traumatic stress disorder and Complex PTSD diagnoses in children and adolescents exposed to a single-event trauma. *Journal of Child Psychology and Psychiatry*, **62**(3), 270–276. Available from: https://doi.org/10.1111/jcpp.13240

Gray, M., Litz, B.T., Hsu, J.L. & Lombardo, T.W. (2004) Psychometric properties of the Life Events Checklist. *Assessment*, **11**(4), 330–341. Available from: https://doi.org/10.1177/1073191104269954

Hanlon, P., McCallum, M., Jani, B.D., McQueenie, R., Lee, D. & Mair, F.S. (2020) Association between childhood maltreatment and the prevalence and complexity of multimorbidity: A cross-sectional analysis of 157,357 UK Biobank participants. *Journal of Comorbidity*, **10**, 1–12. Available from: https://doi.org/10.1177/2235042X10944344

Hatfield, B., Harrington, R. & Mohamad, H. (1996) Staff looking after children in local authority residential units: interface with child mental health professionals. *Journal of Adolescence*, **19**(2), 127–139. Available from: https://doi.org/10.1006/jado.1996.0013

Hiller, R.M. & St Clair, M.C. (2018) The emotional and behavioural symptom trajectories of children in long-term out-of-home care in an English local authority. *Child Abuse & Neglect*, **81**, 106–117. Available from: https://doi.org/10.1016/j.chiabu.2018.04.017

van Hooff, M., McFarlane, A.C., Baur, J., Abraham, M. & Barnes, D.J. (2009) The stressor Criterion-A1 and PTSD: a matter of opinion? *Journal of Anxiety Disorders*, **23**(1), 77–86. Available from: https://doi.org/10.1016/j.janxdis.2008.04.001

Horowitz, M.J., Wilner, N. & Alvarez, W. (1979) Impact of event scale: A measure of subjective stress. *Psychosomatic Medicine*, **41**(3), 209–218. Available from: https://doi.org/10.1097/00006842-197905000-00004

Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthimiadou, E., Wilson, D. et al. (2017) Evidence of distinct profiles of posttraumatic stress disorder (PTSD) and complex posttraumatic stress disorder (CPTSD) based on the new *ICD-11* Trauma Questionnaire (ICD-TQ). *Journal of Affective Disorders*, **207**, 181–187. Available from: https://doi.org/10.1016/j.jad.2016.09.032

Kramer, D.N. & Landolt, M.A. (2011) Characteristics and efficacy of early psychological interventions in children and adolescents after single trauma: a meta-analysis. *European Journal of Psychotraumatology*, **2**(1), 7858. Available from: https://doi.org/10.3402/ejpt.v2i0.7858

Kroenke, K., Spitzer, R.L. & Williams, J.B. (2001) The PHQ-9. *Journal of General Internal Medicine*, **16**(9), 606–613. Available from: https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Kroenke, K., Spitzer, R.L.W. & Williams, J.B. (2003) The Patient Health Questionnaire – 2: validity of a two – item depression screener. *Medical Care*, **41**(11), 1284–1292. Available from: https://doi.org/10.1097/01.MLR.0000093487.78664.3C

Kroenke, K., Spitzer, R.L., Williams, J.B., Monahan, P.O. & Löwe, B. (2007) Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. *Annals of Internal Medicine*, **146**(5), 317–325. Available from: https://doi.org/10.7326/0003-4819-146-5-200703060-00004

Leenarts, L.E., Diehle, J., Doreleijers, T.A., Jansma, E.P. & Lindauer, R.J. (2013) Evidence-based treatments for children with trauma-related psychopathology as a result of childhood maltreatment: a systematic review. *European Child & Adolescent Psychiatry*, **22**(5), 269–283. Available from: https://doi.org/10.1007/s00787-012-0367-5

Levis, B., Benedetti, A. & Thombs, B.D. (2019) Accuracy of Patient Health Questionnaire-9 (PHQ-9) for screening to detect major depression: individual participant data meta-analysis. *BMJ*, **365**, l1476. Available from: https://doi.org/10.1136/bmj.l1476

Lewis, S.J., Arseneault, L., Caspi, A., Fisher, H.L., Matthews, T., Moffitt, T.E. et al. (2019) The epidemiology of trauma and post-traumatic stress disorder in a representative cohort of young people in England and Wales. *The Lancet Psychiatry*, **6**(3), 247–256. Available from: https://doi.org/10.1016/S2215-0366(19)30031-8

MacRae, L.D., Bertrand, L.D., Paetsch, J.J., Hornick, J.P. & DeGusti, B. (2009) A Study of Youth Reoffending in Calgary. Prepared for the Alberta Law Foundation. Canadian Research Institute for Law and the Family: Calgary, AB. Available: http://hdl.handle.net/1880/107574 (downloaded from PRISM: https://prism.ucalgary.ca).

Morris, L., Salkovskis, P., Adams, J., Lister, A. & Meiser-Stedman, R. (2015) Screening for post-traumatic stress symptoms in looked after children. *Journal of Children's Services*, **10**(4), 365–375. Available from: https://doi.org/10.1108/JCS-10-2014-0045

National Institute for Health and Care Excellence. (2017) Child Abuse and Neglect Guideline NG76. NICE: London.

National Institute for Health and Care Excellence. (2018) Post-Traumatic Stress Disorder Guideline NG116. NICE: London.

Perrin, S., Meiser-Stedman, R. & Smith, P. (2005) The children's revised impact of event scale (CRIES): validity as a screening instrument for PTSD. *Behavioural and Cognitive Psychotherapy*, **33**(4), 487–498. Available from: https://doi.org/10.1017/S1352465805002419

Pine, D.S. & Cohen, J.A. (2002) Trauma in children and adolescents: Risk and treatment of psychiatric sequelae. *Society of Biological Psychiatry*, **51**(7), 519–531. Available from: https://doi.org/10.1016/S0006-3223(01)01352-X

Pynoos, R.S., Weathers, F.W., Steinberg, A.M., Marx, B.P., Layne, C.M., Kaloupek, D.G. et al. (2015) Clinician-Administered PTSD Scale for DSM-5 - Child/Adolescent Version [Online]. Available: www.ptsd.va.gov (National Center for PTSD) [1 November 2020].

Runyon, M.K., Risch, E. & Deblinger, E. (2019) Trauma-focused cognitive behavioral therapy: An evidence-based approach for helping children overcome the impact of child abuse and trauma. In: Farrell, L.J., Ollendick, T.H. & Muris, P. (Eds.) *Innovations in CBT for Childhood Anxiety, OCD, and PTSD: Improving Access and Outcomes*. Cambridge: Cambridge University Press, pp. 525–549. Available from: https://doi.org/10.1017/9781108235655.026

Sapra, A., Bhandari, P., Sharma, S., Chanpura, T. & Lopp, L. (2020) Using Generalized Anxiety Disorder-2 (GAD-2) and GAD-7 in a Primary Care Setting. *Cureus*, **12**(5), e8224. Available from: https://doi.org/10.7759/cureus.8224

Smith, P., Yule, W., Perrin, S., Tranah, T., Dalgleish, T. & Clark, D.M. (2007) Cognitive-behavioral therapy for PTSD in children and adolescents: A preliminary randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, **46**(8), 1051–1061. Available from: https://doi.org/10.1097/CHI.0b013e318067e288

Spitzer, R.L., Kroenke, K., Williams, J.B. & Löwe, B. (2006) A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine.*, **166**(10), 1092–1097. Available from: https://doi.org/10.1001/archinte.166.10.1092

Steiner, H., Garcia, I.G. & Matthews, Z. (1997) Posttraumatic stress disorder in incarcerated juvenile delinquents. *Journal of the American Academy of Child & Adolescent Psychiatry*, **36**(3), 357–365. Available from: https://doi.org/10.1097/00004583-199703000-00014

Tarren-Sweeney, M. (2008) The mental health of children in out-of-home-care. *Current Opinion in Psychiatry*, **21**(4), 345–349. Available from: https://doi.org/10.1097/YCO.0b013e32830321fa

Teicher, M.H., Samson, J.A., Anderson, C.M. & Ohashi, K. (2016) The effects of childhood maltreatment on brain structure, function and connectivity. *Nature Reviews Neuroscience*, **17**(10), 652–666. Available from: https://doi.org/10.1038/nrn.2016.111

Trickey, D., Siddaway, A., Meiser-Stedman, R., Serpell, L. & Field, A. (2012) A meta-analysis of risk factors for post-traumatic stress disorder in children and adolescents. *Clinical Psychology Review*, **32**(2), 122–138. Available from: https://doi.org/10.1016/j.cpr.2011.12.001

Vugt, E.v., Lanctôt, N., Paquette, G., Collin-Vézina, D. & Lemieux, A. (2014) Girls in residential care: From child maltreatment to trauma-related symptoms in emerging adulthood. *Child Abuse & Neglect*, **38**(1), 114–122. Available from: https://doi.org/10.1016/j.chiabu.2013.10.015

Weathers, F.W., Keane, T.M. & Davidson, J.R.T. (2001) Clinical-Administered PTSD Scale: A review of the first ten years of research. *Depression and Anxiety*, **13**(3), 132–156. Available from: https://doi.org/10.1002/da.1029

Weathers, F.W., Blake, D.D., Schnurr, P.P., Kaloupek, D.G., Marx, B.P. & Keane, T.M. (2013) The life events checklist for DSM-5 (LEC-5) Instrument [Online]. Available: www.ptsd.va.gov (National Center for PTSD) [1 November 2020].

World Health Organization. (2019) International Classification of Diseases 11th Revision (ICD-11) [Online]. Available: https://icd.who.int/en/ [1 January 2022].

Yule, W. (1997) Anxiety, depression and post-traumatic stress in childhood. In: Sclare, I. (Ed.) *Child Psychology Portfolio*. NFER-Nelson: Windsor, Canada, pp. 35–38.

Yule, W., Perrin, S. & Smith, P. (1999) Post–traumatic stress reactions in children and adolescents. In: Yule, W. (Ed.) *Posttraumatic Stress Disorders: Concepts and Therapy*. Chichester: John Wiley & Sons, pp. 25–50.