

Child and Adolescent Sexual Abuse: Current Empirical Assessment Methods

Grant James Devilly*

Tracey Varker

Fallon Cook

Marie Bee Hui Yap

Swinburne University

* *Contact:* Professor Grant J. Devilly. Director of Clinical & Forensic Psychology Research Unit, Brain Sciences Institute, Swinburne University of Technology, PO Box 218, Hawthorn, Victoria 3122, Australia.

Childhood sexual abuse raises strong emotions not just within the greater community but also within academic and therapeutic circles. With this in mind, there is little doubt that the use of carefully considered, timely and reliable assessment procedures is of paramount importance in cases of suspected and / or corroborated abuse. The purpose of this chapter is to outline some of the factors to be borne in mind during the assessment process and to outline some of the assessment devices available. This chapter does not aim to provide an exhaustive review of all available devices and to comment on all context specific issues that occur during the assessment stages. Rather, we aim to provide the generic counsellor / agency worker with more domain specific knowledge regarding the issues related to evaluation. To achieve this goal we will firstly outline some of the generic factors to be considered when assessing children for abuse. This includes issues of disclosure, comorbidity, ethnicity, gender, family functioning, legal and child protection responsibilities and the possibility of creating a trauma myth. We will then outline common structured and semi-structured interviews and self-report instruments used during assessment. While it is accepted that individualised case formulations require the use of psychometric assessments covering many presentations (e.g., depression, anxiety, general internalising or externalising behaviours) the current review focuses mainly on the evaluation of trauma symptoms. This will be followed by a short introduction into the developing area of psychophysiological assessment.

Assessment Issues

There are a myriad of relevant issues for consideration when assessing suspected child or adolescent victims of child sexual abuse, and only a few can be outlined here. The issues covered include disclosure-related matters; physical and psychiatric

comorbidity; gender; ethnicity; family functioning/dysfunction; and legal/child protection matters. However, firstly, we wish to draw attention to the need to be careful to not create a trauma myth where none had occurred or had not been perceived by the child.

Trauma Myth

Therapeutic process and assessment, requires the suspension of disbelief. On the other hand, objective assessment, as in the case of a forensic evaluation, requires the suspension of belief and an impartial approach to the ‘suspicions’ or accusations of the referrer / source of information. This requires a delicate balance between outward disbelief and disenfranchisement of the victim and the need to obtain unprejudiced information. In effect it is necessary to acknowledge that the assessment process can have unintended consequences. For example, it is possible to transmit to the abused child that something exceptionally terrible has happened to them when, in fact, they have not perceived this to be the case and are consequentially asymptomatic. At the other end there is the possibility of creating a trauma history in the child’s mind when, in fact, one has not occurred. For these reasons the assessor should at least be aware of growing research related to memory distortion from child assessments.

A large body of research indicates that memory is fallible, that memory can be influenced and distorted, and that confabulation in memory can easily occur. This has been shown to be the case for both traumatic and non traumatic memories with many types of people studied or treated (e.g., victims of sexual abuse, non-victims of sexual abuse, eye witnesses to crimes, etc; Hyman & Loftus, 1998; McNally, Clancy & Schacter, 2001; Nourkova, Bernstein, & Loftus, 2004; Wells, Wright & Bradfield, 1999; Zoellner, Foa & Brigidi, 2000). Distortion of memory can also occur at any of the three

stages of memory: at the time of encoding, during the period of storage, and during retrieval. Furthermore, inaccurate memories can be believed by the individual and described convincingly in as much detail as accurate memories (Schooler, Bendiksen, & Ambadar, 1997, Garven, Wood and Malpass, 2000). For example, Garven, Wood, Malpass and Shaw (1998) investigated iatrogenesis and suggestion in school children in relation to the highly publicised “daycare ritual abuse cases”. These authors found that the interviewing techniques used during the cases at the McMartin School contained at least six serious leading and reinforcing strategies and that when the investigators used these strategies 58% of a classroom made false accusations regarding a classroom visitor compared to only 17% of a group who were questioned with simply ‘suggestive’ questions.

In essence, six interviewing techniques which were identified through viewing the tapes of the original McMartin interviews, and should be avoided during assessment of child populations, include: Providing negative consequences for ‘denial of problem’, such as criticising an answer; Repetitive questioning although a ‘non preferred’ answer has already been given; Inviting speculation on what “might” have occurred if it happened; suggestive questions introducing new material into the interview, e.g. “When your dad put you to bed at night,”; Conformity pressure by claiming that “others” or co-witnesses have already told you similar stories and hence normalising an ‘expected or desired’ answer; And providing positive consequences such as praising a ‘preferred answer’ or providing ‘special’ treatment for this ‘special’ population..

The above study was followed by Garven et al. (2000) who found that even when only two elements of the ‘McMartin’ interviewing techniques were utilised

(reinforcement and co-witness information) more children made false allegations about a classroom visitor compared to children who were asked questions that were only 'suggestive' in nature. However, the largest difference between the two groups was on highly implausible and fantastic false accusations (such as a visitor taking the child flying in a helicopter - which never happened) where 52% of those assessed with the McMartin interview agreed that this had occurred, compared to only 5% agreement made by the controls. Of even more importance here, though, is that even once the interviewing techniques of reinforcement and co-witness testimony had been discontinued the children repeated the allegations and, when challenged, the children insisted that their reports were based on their personal observations. Garven et al. (2000) also found that reinforcement had a greater effect than providing co-witness enticements to agree with accusations. These authors (p.45) noted that positive reinforcement in eye witness testimony cases can alter "confidence of adult eyewitnesses in false identifications and change their retrospective reports in forensically important ways".

Indeed, there is evidence that false memories are easily introduced during assessment and therapeutic processes with adults, incorrect recalls are more confidently held (Deville, Varker, Hansen, & Gist, in press) and are more stable than true memories (particularly related to child memories; Brainerd, Reyna & Brandse, 1995). It is hypothesised that this could be due to true memories being based on unstable narratives while false memories are based upon relatively stable ideas.

Disclosure

The timing and circumstances surrounding the disclosure of abuse by the child or adolescent victim can have significant implications on child outcomes. It is crucial to

keep in mind before assessing the child for abuse and making professional judgments about the child's needs, that disclosure of abuse by a child or adolescent victim does not necessarily entail a termination of the abuse or even the child's distress (Palmer, Brown, Rae-Grant, & Loughlin, 1999). The responses received by these children to their disclosure have long-term effects on their self-esteem and later family functioning in adulthood. In fact, a follow-up study of child sexual abuse (CSA) victims revealed that children who voluntarily disclosed their abuse received less support and treatment than children whose abuse was accidentally discovered by an adult. Consequently, it has been argued that the latter group had better outcomes at the 1-year follow-up (Nagel, Noll, Putnam, Trickett, 1997).

Findings from a recent study of 8-13 year-old sexually abused children highlight the importance of assessing children's reactions as soon as possible after disclosure of abuse. Sexually abused children who exhibit symptoms of avoidance, anxiety/arousal, and dissociation, either during or immediately following disclosure of abuse, were at increased risk of developing PTSD symptoms at a later date (Kaplow, Dodge, Amaya-Jackson, & Saxe, 2005). In particular, the younger the child, the more likely they are to demonstrate anxiety/arousal symptoms, and to use avoidant coping upon disclosure of their abuse. Kaplow et al., (2005) attributed the latter finding to the limited language capacity and emotion identification abilities of these young children. Furthermore, children who displayed dissociative symptoms immediately after disclosure were at greater risk of later PTSD symptoms, purportedly because these dissociative responses prevent the open expression of trauma-related emotions and cognitions. These findings

suggest the importance of tailoring assessments more sensitively to these children's needs, in order to address their dissociative, arousal based, and avoidant responses.

The assessment and treatment planning process needs to allow for asymptomatic presentations, and/or "sleeper effects" in some children who present with few or no symptoms upon disclosure, but deteriorate in the medium to long term (Briere, 1992). Some reasons proposed to explain some children's asymptomatic presentation include the possibility that they had relatively minor abuse experiences, they did not experience the events as traumatic and hence forgot the specific events, they are more resilient, or they have adopted an avoidant coping style (McNally, Clancy, Barrett, & Parker, 2004; Finkelhor & Berliner, 1995). However, the limited longitudinal data available suggests that 10% to 20% of asymptomatic children deteriorate over the first 12-18 months (Kendall-Tackett, Williams, & Finkelhor, 1993; Mannarino, Cohen, Smith, & Mooremotily, 1991), with some evidence that such deterioration is especially likely in children who present with the least initial symptoms (Gomes-Schwartz, Horowitz, Cardarelli, & Sauzier, 1990). However, as discussed above, this may be exacerbated by other factors, such as repeated questioning by well intentioned but misguided assessors. Furthermore, family and abuse-related variables did not emerge as good predictors of 5-year-outcome in sexually abused children, although children who were sad or depressed and had low self-esteem at intake were likely to have continuing problems in these areas (Tebbutt, Swanston, Oates, & Otoole, 1997).

Given the abovementioned disclosure-related matters, some recommendations for assessment are proposed. Firstly, asymptomatic children should not necessarily be 'force questioned' under the assumption that something is wrong yet not evident. However, this

does not detract from the need to also assess for additional risk factors such as family substance abuse, mental illness, domestic violence, or other family dysfunction (Putnam, 2003). Secondly, children who present with avoidance symptomatology at initial assessment, or upon disclosure, may need extra monitoring over time for deterioration, especially if their avoidance seems to be contributing to their asymptomatic presentation. Thirdly, children who present with depressive, dissociative and anxiety/arousal symptoms, and those with low self-esteem may be at risk for unrelenting and/or increasing depressive and posttraumatic problems. Therefore, assessment should include measures of such symptomatology and functioning and be conducted in a structured and reliable way.

Comorbidity

Given the usual traumatic nature of child sexual abuse, comorbid psychiatric and physical problems may be present, hence presenting a major challenge for assessment and diagnosis. Child sexual abuse has been associated with a whole range of disorders in children and adolescents, including major depression, PTSD, phobias, obsessive compulsive disorder, eating disorders, somatization disorder, substance abuse disorders, sexual disturbances and behaviour problems (Putnam, 2003; Wolfe & Kimerling, 1997; Wonderlich, Brewerton, Jovic, Dansky, & Abbott, 1997). Other concerns include adverse health outcomes (Seng, Graham-Bermann, Clark, McCarthy, & Ronis, 2005) and increased suicidality (Brand, King, Olson, Ghaziuddin, & Naylor, 1996; Sansonnet-Hayden, Haley, Marriage, & Fine, 1987), especially in victims of chronic sexual abuse.

Amongst these potential problems, depression and PTSD comorbidity seems to be most common amongst both male and female victims of child sexual abuse (Wolfe &

Kimerling, 1997). Notably, some research evidence suggests that a history of childhood abuse may alter the clinical presentation of major depression, such as the reversal of neurovegetative signs (Levitan et al., 1998). A further challenge to the assessment of child and adolescent victims is the difficulty of determining whether depressive symptoms following trauma constitute an independent disorder, or are primarily correlates of PTSD.

A variety of behaviour and conduct problems, especially sexualized behaviours, are very closely linked to CSA (Putnam, 2003). Several studies have found that sexually abused children display more sexualised behaviours than various comparison groups, including nonabused psychiatric inpatients, especially if they are younger, were abused at a younger age, and were assessed relatively proximal to the abusive experiences (Cosentino, Meyerbahlburg, Alpert, Weinberg, & Gaines, 1995; Friedrich et al., 2001; McClellan et al., 1996; Paolucci, Genuis, & Violato, 2001). Although these overtly sexualised behaviours may decrease over time, adolescents with a history of CSA have a significantly increased arrest rate for sex crimes and prostitution, and are at heightened risk for early pregnancy, pregnancy-related complications, and human immunodeficiency virus risk-related behaviours (Putnam, 2003). However, it should be kept in mind that such behaviours should not be seen as indicative of a 'hidden' abuse history when one has not been reported, but rather the evidence shows that those with diagnosed conditions following corroborated abuse histories are at greater risk for developing these behaviours.

Gender

Certain gender issues should be attended to as part of the assessment process. For example, whilst maltreated children and adolescents with PTSD had smaller intracranial

and cerebral volumes than matched controls, males with PTSD showed evidence of a greater volume decrease than females with PTSD (De Bellis et al., 1999). This finding is noteworthy given that decreased brain volume is associated with earlier onset of PTSD, longer duration of trauma, and more symptoms of intrusive thoughts, avoidance, hyperarousal or dissociation. A more recent study also found that boys are more likely to display avoidant behaviours upon disclosure of sexual abuse (Kaplow et al., 2005).

A different angle on gender issues is the effect of the perpetrator's gender on child protection professionals' decisions and attitudes concerning child sexual abuse, and on child outcomes. Research evidence suggests that whilst police and social workers considered CSA perpetrated by females to be a serious issue warranting intervention, some decisions made by these professionals suggest a minimization of female perpetrated in comparison to male perpetrated abuse (Hetherington & Beardsall, 1998). In particular, male social workers considered that social service involvement and investigation were less warranted when the perpetrator was a woman. Case registration and imprisonment of a male perpetrator was considered more important by both professional groups. Another study found that both psychiatrists and police viewed sexual abuse by women as less harmful than sexual abuse by men (Denov, 2001). Moreover, it was noted that efforts were made by both professional groups, either consciously or unconsciously, to transform the female sex offender and her offense, realigning them with more culturally acceptable notions of female behavior. This ultimately led to a denial of the problem. Notably, a recent qualitative study of the long term effects of CSA found evidence to dispute the perceptions of the general public and child welfare professionals that sexual abuse by women is relatively harmless and inconsequential as compared to sexual abuse by men

(Denov, 2004). Specifically, almost all participants (93%) reported that the sexual abuse by women was harmful and damaging. In fact, all respondents who were abused by men and women reported that the sexual abuse by women was more harmful and detrimental than the sexual abuse they had experienced by men.

It is, therefore, important for professionals involved in the assessment and treatment of child victims of abuse to be mindful of the gender biases underlying their professional attitudes and decisions.

Ethnicity

In order to determine whether a presenting behaviour signals clinical distress, an important consideration for assessment and diagnosis is how it compares to its normal rate in a specific child within that child's particular sociocultural environment (Ronen, 2002). Importantly, although race and ethnicity do not seem to be risk factors for CSA, preliminary research suggests that they may influence symptom expression (Mennen, 1995; Shaw, Lewis, Loeb, Rosado, & Rodrieguez, 2001) and rates of rape victimization later in life (Urquiza & Goodlin-Jones, 1994). Unfortunately, whilst children of certain ethnicities may be overrepresented in the child welfare system, they may also be underrepresented in preventive or treatment services (Webb & Harden, 2003). Hence, mental health services need to address ethnic minority groups' unique cultural needs and incorporate culturally sensitive strategies for assessment and intervention. For instance, the language of assessment instruments and scales can often be a challenge to assessing ethnic minorities whose native language is not English, or who have different perceptions of numbers. An example described by Ronen (2002) illustrates this challenge well: when 8-10-year-old Israeli children were asked to rate their anxiety on a scale of 0 to 7, they

were confused and unable to use the scale because they were accustomed to the school grading scale of 0-10 where “10 is always the best”. Hence the maximum rating (10 rather than 7) and the direction of the scale had to be modified to accommodate the children’s language and way of thinking. Nonetheless, minor changes in wording of questions can change the meaning of the question in an instrument, hence it is important to use standard, recommended changes as suggested, for example, in manuals provided for the instruments (Nader, 1997). Where necessary and possible, translation of instruments may be conducted, but accurate translations involving at least one back-translation that has been reviewed by the author(s) are essential to maintain the integrity and validity of the assessment (Nader, 1997)

Family Functioning/Dysfunction

Research has clearly demonstrated that the family context has implications for the level of distress and speed of recovery in child trauma victims. Such contextual factors includes parental support (Everson, Hunter, Edelsohn, & Coulter, 1989), maternal distress (Newberger, Gremy, Waternaux, & Newberger, 1993), and help-seeking (Waterman, 1993) in response to family crisis, as well as general family functioning, including cohesion and healthy conflict management (Conte & Schuerman, 1987). Parental impairments, especially maternal illness, maternal alcoholism, extended maternal absences, serious marital conflicts, parental substance abuse, social isolation, and punitive parenting, are all associated with increased risk for CSA in some studies (e.g., Fergusson, Lynskey, & Horwood, 1996; Nelson et al., 2002). Family (especially parental) functioning has implications for assessment not only because it influences parental report of child functioning, but also because of the potential for the transmission

of anxiety symptoms from parent to child, such that child responses and behaviours become in part a reflection of their parents' reactions (Ronen, 2002; Stover & Berkowitz, 2005). This challenge to assessment is especially important if the parent is displaying PTSD symptoms him/herself, because of the high correlation between parent and child PTSD symptomatology (Laor, Wolmer, & Cohen, 2001; Wolmer, Laor, Gershon, Mayes, & Cohen, 2000). However, caution is required here due to inconsistent research. For example, in one study, age, gender, injury severity, threat appraisal, and maternal PTSD did not significantly contribute to child trauma symptoms (Landolt, Vollrath, & Timm, 2005).

Specifically related to child PTSD, as opposed to the event of child sexual abuse, it should also be noted that Kilpatrick and Williams (1997) found an increased prevalence of trauma reactions among children who witnessed domestic violence as compared with children who did not witness such violence. Together with Canadian research suggesting that 37% of adults who reported they were assaulted by a spouse also reported that their children had heard or seen the violence take place (Dauvergne & Johnson, 2001), this makes for worrying possibilities.

Legal and Child Protection Issues

There is a whole range of legal, ethical and child protection issues involved in the assessment and reporting of sexual abuse in children and adolescents. For example, in most states of America and Australia there is a mandatory reporting requirement for certain groups of professionals (e.g., medical practitioners, police, teachers) to report their belief or suspicion, based on reasonable grounds, that a child has suffered or is likely to suffer significant harm. This extends to the child's parents or caregivers have

demonstrably not protected, or are unlikely to protect, the child from harm (Victorian Government Department of Human Services, 1999). In some European countries and in the United Kingdom where there are no mandatory reporting laws, most professionals who work with children and families have internal procedures to follow if they have concerns about the welfare of a child (NSPCC Library and Information Service, 2006). However, research in Europe, the U.S.A., Canada and Australia have revealed that despite mandatory reporting laws, medical practitioners and teachers continue to have low overall reporting rates. Various reasons cited for this include ethical concerns about confidentiality, mistrust of state services, ignorance about reporting laws and procedures, and fear of making an inaccurate report (Scottish Executive, 2002). Moreover, there is some research evidence suggesting that mandatory reporting is inefficient and ineffective, because mandatory reporting systems were overburdened with notifications, many of which proved to be unsubstantiated, yet were time-consuming and costly (Ainsworth, 2002). Some ethical dilemmas inherent in mandatory reporting include firstly, the possibility that even after the report and alerting the alleged offending adult, the child may remain under the custody of this adult and hence be at greater risk for continued and further harm. Secondly, by reporting abuse when there has in fact been no abuse, one is essentially creating not just one victim, but two or more.

Another noteworthy legal/child protection matter is the potential conflict of priorities between child protection authorities and child and family mental health professionals, especially with regards to the role of the parent in decision making. For example, investigations through Child Protection Services, and decisions about placements that may result in removal from parental custody, or even termination of

parental rights, are inherently adversarial (Webb & Harden, 2003), and some procedures may be perceived as inflicting more harm upon the child and the family. An additional complication to the matter is where non-offending parents of CSA victims have substance abuse (U.S. Department of Health and Human Services, 1999) or mental health problems, which impair their ability to exercise judgement about appropriate services for their children (Webb & Harden, 2003). Nonetheless, some recent changes in the US Child Protection Services entailing the offer of assessment and services to families where there is no ongoing threat to the child's safety, who otherwise might have been subjected to investigation (Webb & Harden, 2003), represent a promising step towards improving the overall assessment and intervention services to young CSA victims.

Structured and Semi-structured Interviews

General Assessment Issues

Currently, few well-validated, DSM-IV based standardised interviews exist. Many of the older scales have not been developed explicitly for children, or are based on old definitions of the underlying constructs. Newer scales are often designed to overcome these problems, but have not been used for long enough for definitive conclusions regarding their reliability or validity to be reached (Balaban, 2006). Many interviews lack usable norms, meaning that a clinician is unable to interpret a given score based on its statistical extremity in the general population, making it impossible to determine the extent to which this score represents dysfunction (Brier & Elliot, 1997).

Increasingly clinicians and researchers use a multi-modal, multi-informant approach for assessment and diagnosis of psychiatric disorders in children and adolescents (Hawkins & Radcliffe, 2006). Although there is often low agreement

between parent and child reports of diagnostic conditions, with children reporting more symptoms than their parents report for them (e.g. Earls, Smith, Reich & Jung, 1988; Handford et al., 1986; Korol, Green, Gleser, 1999), both informants provide valuable information. The quality and accuracy of a child's report depends upon many factors, including the child's developmental level, questions posed, the manner in which questions are asked, and factors about the event itself (Hawkins & Radcliffe, 2006).

Empirically-Based Assessment Interviews

In this section a number of the most frequently used and methodologically sound structured (or semi-structured) clinical interviews assessing trauma symptomatology in children and adolescents are reviewed. The interviews were divided into three categories based upon administration method: child interview with companion parent interview; child/adolescent interview; and parent interview.

Child / Adolescent Interview with Companion Parent Interview

Child and Adolescent Psychiatric Assessment (CAPA; Angold et al., 1995). A psychiatric interview for children aged 9 to 17 years, the CAPA is an interview designed to be used with parents and children separately, using different interviewers. Diagnosis can be made using Diagnostic and Statistical Manual of Mental Disorders – IV (DSM-IV) or International Classification of Diseases (ICD-10) criteria. Interviewees are asked whether, during the past 3 months a number of symptoms have occurred. Unlike most of the other interviews discussed here, it does not provide a lifetime diagnosis. When a symptom is reported, questions are asked to find out exactly when the symptom occurred. Parents and children are first asked three screening questions to establish if the core symptoms of PTSD are present in the child. They are first asked if painful recall or re-

experiencing has occurred, then, if the answer is yes, they are asked about hypervigilance and avoidance. For events where severity is of relevance (e.g. physical or sexual abuse), then this is also determined. The measure has relatively good reliability and discriminant validity for both the child version and the adult version (Costello, Angold, March & Fairbank, 1998), although this assessment was based on a relatively small sample (9 youths with PTSD).

The Childhood PTSD Interview Child Form (CPTSDI-C) / Childhood PTSD Interview-Parent (CPTSDI-P; Fletcher, 1996). Both this clinician-administered child interview and the companion parent interview are designed to assess PTSD symptomatology in children and adolescents who have been exposed to traumatic events. Both the child and parent are asked questions assessing PTSD symptoms. Additional questions are included to capture associated features of PTSD such as depression, denial, dissociation, self destructive behaviour and survivor guilt. Each interview takes approximately 40 minutes to administer and the measure was developed with the incorporation of DSM-IV criteria. Good internal consistencies have been reported although these are based upon a sample of 10 children with a history significant trauma exposure, and 20 children without (Fletcher, 1996).

Diagnostic Interview for Children and Adolescents- Revised (DICA-R; Welner & Reich, 1997). The DICA-R is a semi-structured interview designed to assess present and lifetime common psychiatric conditions. It is based on the DSM and includes a PTSD scale. As such, it is possible to make a DSM-IV diagnosis of PTSD. The DICA-R is available in child (DICA-C-R, age range 6 to 12), adolescent (DICA-A-R, age range 13 to 17) and parent versions (DICA-P-R). The PTSD module comprises 17 questions,

which address six criteria (traumatic experience, re-experiencing, numbing / avoidance, arousal, duration, intensity). This measure has acceptable sensitivity, reliability, validity (De la Osa et al., 1997; Reich, 2000) and has been translated into Spanish and Arabic.

Child / Adolescent Interview

Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA; Newman et al., 2004). The CAPS-CA is a 36-item semi-structured clinical interview designed to assess PTSD symptomatology in children and adolescents aged 8 to 15 years. It is a modified version of the adult measure, the Clinician-Administered PTSD Scale (Blake et al., 1990), and provides a scalar and categorical assessment of both PTSD and PTSD-related psychopathology such as school problems and hostility (Nader, Blake, Kriegler & Pynoos, 1994). It also measures the impact of symptoms on aspects of functioning such as coping skills, overall distress and impairment. In a recent review of the frequency in which clinicians use trauma exposure and assessment measures, the CAPS-CA was found to be the most commonly used child and adolescent interview, being used by 7% of the clinicians in the sample ($n = 227$; Elhai, Gray, Kashdan & Franklin, 2005). However, the interview is not based on DSM criteria, and as such it is not possible to make a DSM-IV diagnosis. Test-retest reliability is not available and there is no published normative data. Therefore, although this newly developed measure appears promising, further information on its psychometric properties is required.

UCLA PTSD Reaction Index- Revised for DSM-IV (PTSD-RI; Pynoos, Goenjian & Steinberg, 1998). This 20-item instrument is one of the oldest and best studied semi-structured interviews for PTSD. Used when a traumatic event is known to have occurred, the PTSD-RI is a revised version of the widely used and researched Child Posttraumatic

Stress Disorder Reaction Index (CPTS-RI; Frederick, Pynoos, & Nader, 1992). It can be used with children aged 8 yrs or older, and is sometimes used as a self-report measure. The interview takes approximately 90 minutes to administer. The items are based on an adult measure of PTSD, and only assess reactions to a specific trauma. The interview emphasises projective techniques such as play and drawings to explore the child's trauma reactions, rather than direct inquiry. There is no normative data available for this measure, and no interrater reliability, internal consistency reliability scores, or validity scores have been published. As such, the confidence with which clinicians can draw conclusions about the implications of their findings is severely diminished.

The PTSD-RI is reported to relate well to clinical judgement of PTSD severity (Yule & Udwin, 1991), however not all of the DSM-IV symptoms are covered. As such, it is not possible to make a DSM diagnosis of PTSD using this measure. The PTSD-RI has been used to assess children who have experienced a diverse range of traumatic events including earthquakes (Asarnow, et al., 1999; Goenjian et al., 1995), sniper attack (Nader et al., 1990), war (Laor, Wolmer & Cohen, 2001; Thabet & Vostanis, 2000) and hurricane (Chemtob, Nakishima & Carlson, 2002). The measure has also been translated into Armenian, Cambodian, Arabic, Croatian, and Norwegian. However, normative data for these multi-ethnic populations is not available.

Children's PTSD Inventory (Saigh, 2002). This clinician-administered structured interview can be used to assess children and adolescents aged 7 to 18 years. The items were designed based on DSM-IV criteria, although minor modification of items occurred based upon feedback from youths regarding clarity, comprehension and developmental relevance. The child or adolescent is first assessed for potential exposure to a traumatic

event. If they do not meet criteria for a significantly traumatic event then the interview is terminated. If the child does have a trauma history then the interview takes approximately 20 minutes to complete. This measure has good reliability (Saigh et al., 2000) and validity (Yasik et al., 2001), and convergent validity between the inventory's scores and the DSM-IV criteria appears to be excellent, although it has only been utilised in a small number of studies. However, this is a newly developed scale and preliminary results suggest that this may be a highly applicable scale.

Parent Interview

Posttraumatic Stress Disorder Semi-Structured Interview and Observation Record (Scheeringa & Zeanah, 1994). This examinee-based interview of the parent is designed to assess PTSD symptomatology in children aged 0 to 6 years. Conducted whilst the child is present in the room, this interview measures DSM-IV PTSD symptoms as well as symptoms such as loss of previous skills, separation anxiety and aggression. Raters are able to diagnose the child using the DSM-IV criteria, or by an alternate criterion created by the authors. The child's parent is asked a number of questions, with the parent initially asked about a series of traumas that the child may have experienced. If the parent endorses any of these events, then they are asked a series of questions about each of the PTSD symptoms, the symptom's onset, frequency and duration. At the same time as questioning the parent, the interviewer must also observe the child to see if any symptoms are visible. The division of attention that is required by the interviewer can be somewhat problematic, making this quite a difficult measure to use. No test-retest or internal consistency reliabilities have been reported.

Preschool Aged Psychiatric Assessment (PAPA; Egger, Ascher & Angold, 1999).

The PAPA is a structured interview of the parent, and is a comprehensive assessment of mental health symptoms in children aged 2 to 5. It is based on the Child and Adolescent Psychiatric Assessment (CAPA), which is designed for children aged 8 to 15. It includes items which assess those DSM-IV criteria that are relevant to very young children. It also assesses family environment and relationships, psychosocial problems and life events. The parent is first asked about a series of potentially traumatic life events, and whether the parent would attribute a symptom (e.g. separation anxiety, physical symptoms) to this event. If at least one event and one symptom are endorsed, the interview continues, and the parent is asked a series of questions related to PTSD symptomatology in children. The PAPA is a lengthy assessment of a wide range of psychiatric conditions in children, and as such it is a time consuming measure to administer. Test-retest scores, and reliability and validity data have not been published for the PAPA. There are no published studies where the PTSD module of the PAPA has been used solely for the assessment of PTSD and there is no psychometric data available for the PTSD module alone.

The Schedule for Affective Disorders and Schizophrenia for School Aged Children (K-SADS; Kaufman et al., 1997). This semi-structured interview was originally designed as a comprehensive assessment of psychopathology in children. The K-SADS contains a PTSD module that reflects DSM-IV criteria, and which assesses for a lifetime and current diagnosis of PTSD. Interviewees are asked whether a series of traumatic events have occurred recently or in the past. If a traumatic event is endorsed then questions assessing PTSD criteria are asked in relation to one specific event. The authors

instructions indicate that the interview should be administered to the child and parent independently and a diagnosis formulated on the basis of these results combined. Reliability and validity has been found to be adequate (Kaufman et al., 1997), with these psychometrics being based on both the child and parent informants.

Self-report Measures

General Assessment Issues

Considerable difficulty is faced by researchers trying to develop self-report assessment measures appropriate for children of all ages. Reading and writing abilities vary depending on developmental stage and so does the comprehension of language. To combat this, several measures have been designed that require the care-giver of the child to report symptoms or behaviors on the child's behalf.

It has been shown that gaining reports from both an abused child and the child's non-offending care-giver provides the most accurate representation of both the traumatic event and the ensuing problems endured by the child (Jensen et al., 1999). Care-givers tend to have a better perception of the passage of time during the event and since the event, whereas children often cannot accurately perceive the amount of time that has past since the event. However, children more accurately report their emotions and feelings about the trauma than their parents (Korol, Green, & Gleser, 1999), hence the importance of assessing both the child and their care-giver, particularly when a young child (under 10) is concerned (see Ronen, 2002 for a review of these issues).

There are many psychometrically tested self report measures available for assessing posttraumatic stress in sexually abused children. Measures discussed here were selected on the basis of those most frequently used and those with psychometric data to

support their use. As with the structured interviews, this section will be divided into child self-report and parent / caregiver-report.

Children's Self Report Measures

Trauma Symptom Checklist for Children (TSCC; Briere, 1996). The TSCC is a 54-item measure that was designed to specifically to assess the effects of trauma on children aged 8 to 16. A wide range of responses can be given and the TSCC is not specific to any one type of trauma. The measure consists of two validity scales (the first to assess under-responsiveness and the second to assess hyper-responsiveness), six clinical scales (to assess anxiety, posttraumatic stress, depression, sexual concerns, dissociation and anger), and six critical items. The six clinical scales are made up of 9-10 items each. In addition there are two subscales for the sexual concerns scale (sexual preoccupation and sexual distress) and the dissociation scale (fantasy and overt dissociation). This measure is not appropriate as a complete tool for the diagnosis of PTSD and should be used in conjunction with other measures.

The TSCC has been confirmed as a valuable measure for assessing symptoms in sexually abused children (Briere, 1996). It has been tested in samples of hospitalized adolescents and was found to accurately discriminate a group of sexually abused youths from the rest of the group (Sadowski & Friedrich, 2000). Normative data has been obtained from some 3008 children across three studies (Singer, Anglen, Song, & Lunghofer, 1995; Evans, Briere, Boggiano, & Barrett, 1994; Friedrich, 1995). The TSCC has been consistently reported as being a reliable measure (Elliot & Briere, 1994; Lanktree & Briere, 1995). It has been translated in to Cambodian, French, Dutch, Chinese, Japanese, Latvian, Spanish and Swedish.

Children's Impact of Traumatic Events Scale-Revised (CITES-R; Wolf & Gentile, 1991). The CITES-R was designed to assess the extent of posttraumatic stress in children, as well as possible mediating factors such as social reactions to disclosure of the trauma and abuse-related attributions. It was not specifically designed to diagnose PTSD and should, therefore, be used in conjunction with other measures. The CITES-R is a revised version of the original CITES, and has been tested in samples of sexually abused children (Chaffin & Shultz, 2001). While it was originally intended to be used as a structured interview, it is often used as a self report measure for children aged 12 and over who have good reading ability. Subscales of the CITES-R assess four aspects: PTSD (including intrusive thoughts, avoidance, hyperarousal, and sexual anxiety), abuse attributions (including self blame and guilt, empowerment, personal vulnerability and dangerous world), social reactions (including negative reactions by others and social support) and eroticism. Items of the PTSD subscale were based on those of the adult Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979).

The reliability and validity of the CITES-R has been well established, with several studies finding high correlations between subscales (Chaffin & Shultz, 2001; Nader, 1997) and high convergent validity with other measures including the TSCC (Crouch, Smith, Ezzell, & Saunders, 1999).

Child PTSD Symptom Scale (CPSS; Foa, Johnson, Feeny & Treadwell, 2001). The CPSS is a child version of the Posttraumatic Diagnostic Scale (PTDS; Foa, Cashman, Jaycox, & Perry, 1997). The language used has been simplified for easier comprehension for children aged 8 to 18. It allows for a PTSD diagnosis and includes one question from each of the DSM-IV PTSD criteria in order to assess the frequency of

symptoms in the past month. Seven questions assess daily functioning, and another 17 items form a symptom severity score which ranges from 0-51. From these 17 items, three symptom groups of reexperiencing, avoidance and arousal are formed. Psychometric data on the CPSS is limited, although initial examination shows good reliability and excellent convergent and divergent validity (Foa et al. 1997).

Other Important Self-Report Measures. When assessing a child's reaction following trauma, it is important to measure more than just PTSD symptoms. A child may not display all PTSD symptoms but may be experiencing problems with anxiety, fear and depression that may be otherwise undetected unless specifically assessed. Self-report measures such as the Revised Children's Manifest Anxiety Scale (RCMAS, Reynolds & Richmond, 1978), the Revised Fear Schedule for Children (Ollendick, 1983) and the Children's Depression Inventory (CDI; Kovacs, 1985) are commonly used for this purpose and help to gain a fuller picture of how the child is coping. They are generally quick to administer and can be given to any child with good reading ability to complete privately and in their own time.

Self Report Measures Completed by Care-givers

Trauma Symptom Checklist for Young Children (TSCYC; Briere et al. 2001). The TSCYC is a revised version of the TSCC that was specifically designed for care-givers to complete on behalf of their young children aged 3 to 12. It has been tested on many trauma populations. The TSCYC is a comprehensive measure which includes two validity scales: the first to assess care-givers tendency to deny what is considered normal or mildly problematic behavior (under-responsiveness) and the second to assess care-givers willingness to report odd or unrelated behaviors (hyper-responsiveness). In

contrast to the TSCC, the TSCYC includes 8 instead of 6 clinical scales: intrusion, avoidance, arousal, sexual concerns, dissociation, anxiety, depression and anger/aggression. A total of 90 items are completed by the care-giver. The TSCYC allows for a diagnosis of PTSD, except in the case of 3 and 4 year olds where further measures should be used (Briere, 2005).

The psychometrics of the TSCYC have been established (Briere et al., 2001; Gilbert, 2004). In one study, the TSCYC was administered to 219 children who consecutively presented at clinics across the United States following abuse or trauma (Briere et al., 2001). Of these children, 56% had a history of sexual abuse. Reliability was acceptable for all measures except for 'hyper-responsiveness.' Children who had a history of sexual abuse scored highly on measures of posttraumatic stress-intrusion, posttraumatic stress-avoidance, posttraumatic total score (sum of intrusion, avoidance and arousal subscales) and sexual concern. This measure is frequently used for the assessment of children following sexual abuse. Normative trials of the English version have been completed with 750 children, allowing for the calculation of standard scores based on age and gender (Stover & Berkowitz, 2005). The TSCYC has been translated into Spanish and Swedish.

Child Sexual Behavior Inventory (CSBI; Friedrich, Grambsch, Damon, & Hewitt, 1992). Children who have been sexually abused have a tendency to display more sexual behavior than children with no history of sexual abuse (Gale, Thompson, Moran, & Sack, 1988; Goldsten, Turnquist, & Knutson, 1989). The CSBI is a 38-item measure designed to allow care-givers to report on sexual behaviour observed in the past 6 months in children aged 2 to 12. Behaviours assessed include sexually aggressive behavior,

violations of the personal boundaries of others and self-stimulation. It is commonly administered to sexually abused children as a means of assessing the psychological impact of sexual abuse on the child.

The CSBI has been psychometrically tested with normative, psychiatric and sexual abuse samples (Friedrich et al., 1992; Friedrich et al., 2001). The CSBI has good validity. This has been indicated by its ability to discriminate between sexually abused and non-abused children based on the number of non-normative behaviours indicated (Friedrich, Grambsch, Damon & Hewitt, 1992; Friedrich et al., 2001). The CSBI has been translated into French, Dutch, Spanish, German and Swedish.

Other Important Care-Giver Measures. There are many other common measures that can be completed by care-givers to gain a broader understanding of a child's reaction following sexual assault. For example, the Child Behaviour Checklist (CBCL; Achenbach, 1991) is an instrument designed to assess the occurrence of varying behaviors in children. It was not designed to assess the presence of PTSD following trauma, but is a good accompaniment to other PTSD measures. It allows for the monitoring of behaviour change over time- both before and after therapy, for example. The Trauma Exposure Symptom Inventory-Parent Report Revised (TESI-PRR; Ghosh-Ippen et al., 2002) is another useful measure designed to assess posttraumatic stress in children from birth through to age 6, an age group often excluded by other measures.

Psychophysiological Assessment.

The measurement of psychophysiological variables in studies of posttraumatic stress is becoming more common. Several key papers have highlighted the potential for psychophysiological measures to aid in the diagnosis of PTSD, assessment of treatment

outcomes and even to help differentiate ‘true’ cases of PTSD from ‘false’ ones. While progress is still in the early stages, results are encouraging. Such measures may aid in the comprehensive assessment of sexually abused children both following trauma and after treatment.

Several studies have examined the physical manifestation of PTSD symptoms. For instance, in order to examine the startle response (described in DSM-IV), Ornitz and Pynoos (1989) compared responses to an auditory stimuli in children who had developed PTSD after witnessing sniper fire and those who had not. The children who had witnessed sniper fire showed problems inhibiting startle responses in comparison to those children without PTSD. The startle responses of those with PTSD also tend to be much larger than those without PTSD. Heart rate responses are frequently reported as being much higher and skin conductance responses tend to decline more slowly in those with PTSD than those without (Orr, Lasko, Shalev, & Pitman, 1995).

Those with PTSD also seem to experience a permanently heightened sense of arousal, as indicated by increased resting heart-rate and blood pressure, than those without PTSD (Gerardi, Keane, Cahoon, & Klauminzer, 1994). Several studies have looked at physiological markers both before and after treatment and have observed that as PTSD symptoms wane, heart rate and skin conductance start to appear more normal (Keane & Kaloupek, 1982; Hyer, 1990). Readers particularly interested in this line of research are directed to Wilson and Keane’s excellent book (2004).

Several studies have also highlighted differences between those with and without PTSD, in their ability to complete certain tasks. PTSD patients show a tendency to have increased occurrence of memory deficits (Bremner, Scott, Delaney, & Southwick, 1993;

Hannay & Levin, 1985; Bremner et al., 1995), and have longer response latencies to trauma related words in an emotional Stroop task (Dubner & Motta, 1999).

Studies have shown electrophysiological differences between those with and without a history of trauma. Teicher and colleagues (Teicher, Ito, Glod, Andersen, Dumont, & Ackerman, 1997) demonstrated significant neural connectivity differences in sexually/physically abused children in comparison to non-abused controls. This demonstrated that neural development appears to be impeded in abused children and that these differences may be easily observed by use of EEG. In a similar study of adults with and without a history of trauma, very similar neural connectivity patterns were again observed between those with and without a history of childhood trauma (Cook, Ciorciari, Varker & Devilly, in submission). This suggests that electrophysiological assessment could differentiate those with and those without a trauma history. It may prove, with further exploration, to be a useful tool in the diagnosis of PTSD and in the monitoring of recovery.

Concluding Comments

It should be stressed that this chapter has focused predominantly on the assessment of PTSD following child trauma (and specifically sexual abuse), and in no way reflects all possible assessment strategies and needs which may occur following such harrowing events. We wish to stress the need for individualized case formulations and referral questions being the driving forces behind the selection of assessment methods. Hypothesis testing remains the bedrock of responsible assessment strategies when conducted in an objective yet sensitive manner, and we hope that we have outlined the

need, and some options for, forensically defensible approaches in the assessment of child trauma and sexual assault cases.

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