‘Am I safe here and do you like me?’
Understanding complex trauma and attachment disruption in the classroom

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Elementary and special education teachers and school counsellors currently provide support to children presenting learning disabilities and behavioural problems symptomatic of the more hidden diagnosis of complex trauma resulting from abuse or severe attachment disruption. Specific disorders such as attention deficit/hyperactivity disorder (AD/HD) may be diagnosed in such children, but not the aetiology of complex trauma, resulting in missing information in the development of remedial and behavioural interventions. The evolving field of trauma counselling provides important information to special education teachers and school counsellors who work with children who have experienced trauma. In this review article authors Linda O’Neill of the University of Northern British Columbia (UNBC), Francis Guenette who is a doctoral student at the University of Victoria and Andrew Kitchenham of the University of Northern British Columbia summarise attachment, neurobiological, and complex trauma research that can be used in school settings to understand better the needs of these children. They conclude by suggesting that teachers and school counsellors would benefit from training on the consequences of childhood trauma and attachment disruption to develop interventions that will be effective and to identify what types of behaviours children can control and those they cannot.

Key words: trauma, attachment, abuse, counselling, behavioural.

Introduction
Children who have experienced the consequences of trauma from abusive environments and disorganised attachment relationships may be at risk for multiple academic and behavioural challenges in the elementary classroom setting. The evolving field of trauma counselling provides important information to special education teachers and school counsellors supporting such children in the classroom. In fact, recent research indicates that teachers and school counsellors would benefit from training on the consequences of childhood trauma and attachment disruption to develop interventions that will be effective and to identify what types of behaviours children can control and those they cannot.

Complex trauma is the term used to describe the complicated and pervasive developmental and long-term consequences of interpersonal victimisation of children involving multiple events and exposure of an extended duration (Cook et al., 2005; Courtois, 2008; Luxenberg, Spinazzola & van der Kolk, 2001). Complex trauma has a developmental and chronic aetiology related to childhood experience between birth and five years of age (Briere & Scott, 2006).

Child abuse and neglect often occur in a developmentally vulnerable period, when the nervous system is undergoing tremendous maturational and organisational change (Gilles, 1999). This type of early environment and life stress can lead to numerous differences in the structure and physiology of brain development, with resulting long-term effects on multiple human functions and behaviours (Anda, Felitti, Bremner, Walker, Whitfield, Perry, Dube & Giles, 2006; Jackowski, de Araujo, de Lacerda, de Jesus Mari & Kaufman, 2009). Neurobiological research indicates that changes are structural as well as functional (Beers & DeBellis, 2002; Ciaramella, Aimi, Dean, Morilak, Porteus & Cicchetti, 1995). These recent findings shed light on the long-term development of emotional, behavioural, cognitive, and social difficulties observed in traumatised children (Diseth, 2005; Gabowitz, Zucker & Cook, 2008).

An example from a primary school classroom exemplifies complex trauma. In a Grade 1 classroom, a six-year-old child from a severely neglectful environment and several subsequent foster placements, grows restless after a few minutes during circle time, loudly tells his teaching assistant that he needs to eat, then pulls himself up on the handles of the cupboard so he can rummage through the shelves. Frustated with not finding a snack, he runs down the hall and out the door, yelling at staff members who try to intervene. His effort at socialisation includes tackling potential playmates and wrestling them to the ground. In his initial attempt at verbal assessment, he does not make the baseline and relays to his teaching assistant that he is not very good at that kind of stuff.
Developmental attachment theory and research have recently begun to inform practice in foster care and adoption, and now trauma theory adds a new dimension of insight (Briere, 2005; Howe, 2006). Awareness of the complexity and profundity of the implications of attachment disruption and complex trauma during infancy and early childhood is growing, and there is potential for this information to be used in the development of critical, appropriate interventions in the home and at school. The two dominant theoretical perspectives used for child traumatisation and abuse have been the developmental-organisational perspective and social learning theory, perspectives now joined by the field of neurobiology, resulting in a new understanding of complex trauma (Gunnar & Fisher, 2006). Little research exists that reports on the educational implications of dealing with this ever-growing number of children suffering from complex trauma. These current changes in the field of trauma have led us to explore what the implications are for counselling and educational settings of these new interpretations of the effects of complex trauma and attachment disruption.

Attachment theory
Infancy is a developmentally critical period when age-related and stage-related tasks must be successfully achieved in order to allow for continual adaptation by the child to the environment (Gilles, 1999). Emotional abuse and the inadequate provision of emotional support for children have a profound effect on infant and child psychological development through the inability of the child to negotiate developmental crisis, resulting in subsequent psychosocial problems (Thompson & Kaplan, 1996).

The internalisation of a caring object takes place within the earliest of relationships (Davies, 2002). Bowlby and Ainsworth were the first to indicate that an infant or child who had witnessed a disturbing interpersonal event or who had lost a caregiver was not too young to know what was going on (Honig, 1998). Theories of attachment explaining the long-term effects of secure versus insecure attachments to caregivers are some of the best-known developmental constructs in the field of psychology (Furrer & Skinner, 2003). Attachment was conceived by Bowlby and Ainsworth as a behavioural-motivational control system, the first social system to develop, with the goal of providing security for the infant (Ainsworth, Blehar, Waters & Wall, 1978; Bowlby, 1982). Bowlby (1982) initially became concerned about children raised in institutions such as orphanages, with many of the children he observed demonstrating difficulty in forming relationships and struggling with emotional problems.

Attachment could be viewed as a relatively enduring, unique property of the caregiver and child dyad (Marcus & Sanders-Reio, 2001). Ainsworth and colleagues (1978) observed that securely attached infants use their mothers as a secure base for exploration. Their mothers were responsive and sensitive to their infants’ needs. Insecure avoidant infants ignored their mothers and were not upset when they left. These mothers often displayed rejecting, insensitive and interfering behaviours. Insecure-ambivalent infants were clingy, becoming upset when their mothers left, and switching between happiness and anger when they returned. These mothers demonstrated inconsistent behaviour.

 Seriously disrupted attachment can be traumatic in and of itself (Pearlman & Courtois, 2005). Ainsworth et al. (1978) found that separation between six months and three to four years of age was the most traumatic, with intense attachment taking place during these developmental times when children were unable cognitively to deal with separation. Neurobiological research provides evidence to support Ainsworth’s earlier work: an increase in myelination of neurons from the age of six months to three years has been documented, and a decrease in proportion of cerebral grey matter to white matter after the age of four, suggesting a developmental period of stress-related vulnerability from six months to four years of age (Lipschitz, Morgan & Southwick, 2002).

Neufeld and Maté (2004) are strong advocates for attachment theory in school-aged children. They argued that there are six forms of attachment:

- senses (sensing the person to whom you attach);
- sameness (being like others to whom you attach);
- belonging and loyalty (being part of and like the person to whom you attach);
- significance (knowing that you matter to the person to whom you attach);
- feeling (demonstrating emotional intimacy towards the person to whom you attach);
- being known (psychologically to the person to whom you attach).

Highly disrupted attachment may result in controlling behaviours, compulsive caregiving, compulsive compliance, self-reliance, or coercion, moving from the behavioural extremes of destructive aggression to disarming and helplessness (Berlin, 2001; Howe, 2006). This wide range in behaviour may be linked to these six ways of attachment and the development of complex trauma in the elementary school context. The neurobiological effects discussed in the next section help to explain this connection.

Neurobiological change in children who experience complex trauma
The goal of brain development is to produce an organism that is well suited to the demands of the environment (Teicher, Tomoda & Andersen, 2006). The precise effects of trauma on the brain are not fully understood, but there is a consensus that trauma has a significant impact on brain functioning and that traumatic experiences, during periods of neurodevelopmental growth and stabilisation, can have differential effects on brain structures and influence responses at subsequent stages of development (Lester, Wong & Hendren, 2003). Cognitive, affective, behavioural, physiological, relational and self-attribution domains may be affected, with children also put at risk of developing other...
psychiatric disorders later in life, such as anxiety disorders and borderline personality disorders (Bailey, Moran & Pederson, 2007; Gabowitz et al., 2008). A recent and major influence on research related to maltreatment and brain development is the use of neurobiological models, which many researchers view as holding the key to understanding individual responses to early trauma (Gunnar & Fisher, 2006).

Teicher et al. (2006) hypothesise about the ways in which early childhood abuse and neglect are linked to brain development through a cascade of events, predominantly mediated by stress and the release of stress hormones, which enhance the turnover of neurotransmitters in key brain regions. Severe stress acts as a noxious agent, generating large amounts of neurotransmitter and neurohumeral effects, producing long-lasting alterations in brain functioning, and varying degrees of impairment (Teicher, Polcari, Andersen, Anderson & Navalta, 2003). When facing a threat, cortisol and other hormones become activated, with the amygdala triggering the flight or fight response. Severe stress allows the child to deal with emergencies (Davies, 2002). If the child continues to experience ongoing real and perceived danger, the physiological changes begin to break the body down, affecting developing systems, slowing brain cell and physical growth, and suppressing the immune system (Cook et al., 2005; Davies, 2002).

Researchers at Harvard found that early stress affected left and right hemispheric integration, with brain scans indicating deprivations in the corpus callosum, the neural pathway connecting the hemispheres. This area of the brain was shown to be up to 40% smaller than normal (Davies, 2002; Teicher et al., 2003), suggesting reduced neurogenesis linked to high levels of cortisol. With deficits in neural communication, the shift from the right hemisphere of feeling and sensing to the left hemisphere of abstract reasoning and planning cannot be fully made, resulting in a more active right hemisphere and less access to explicit memories in the left hemisphere (Cook et al., 2005; Williams, 2006).

Lester and colleagues (2003) describe how the amygdala, hippocampus and prefrontal integration are most sensitive to the experience of memory recall for traumatic events. Positron emission tomography (PET) scan studies with patients who are exposed to scripts of their own traumatic memories show increased activity in the amygdala, the median temporal lobe, and decreased activity in Broca’s area of the brain. Recollections are processed without the aid of Broca’s area, which is responsible for language processing and higher cognitive functioning.

**Early relationships and learning**

Children who experience ambivalent-avoidant caregiving, resulting in disorganised attachment, and children who experience early trauma, may suffer long-lasting impairment in the form of psychological dysfunction and cognitive deficits, impairments from the previously described consequences of stress on neurobiological development, some of which are irreversible or only partially reversible (Briere & Scott, 2006; Cook et al., 2005; Gabowitz et al., 2008; Howe, 2006). Trauma interferes at every stage of assimilation and accommodation learning (Fish-Murray, Koby & van der Kolk, 1989). Childhood abuse may result in the failure of hippocampal activation in memory tasks and deficits in verbal declarative memory (Anda et al., 2006). For children who have experienced abuse, emotional arousal may be chronically activated, leaving them unable to self-soothe (Howe, 2006).

The core of attachment is the regulation of emotional experiences (Carlson, 1998; Pearlman & Courtois, 2005). There is a short window of time during development when emotional stimulation allows children to identify appropriate emotions later in life, with the brain holding the evidence (Davies, 2002). Childhood abuse and neglect profoundly distort and impair self-regulation, interfering in the development of affect regulation and tolerance skills (Briere, 2005; van der Kolk, 2005). In longitudinal research as part of the Harvard Child Maltreatment Project, Cicchetti, Rogoth and Toth (2001) have noted delays in socio-emotional development at all ages. These children are not as good at self-recognition as developmentally matched non-abused peers. They have obtained object permanency for objects but not for the self. An immature understanding of self and others impairs the child’s ability to get along with others. This difficulty in relating to others compounds the effects of trauma through social isolation and alienation (Pearlman & Courtois, 2005). The inability to develop and sustain social relationships precludes such children from social learning experiences such as modelling and the refinement of communication skills.

Affect regulation requires development of the frontal cortex (Lester et al., 2003). Maturity of the cortex is accelerated through use – children who are taught how to self-regulate emotions become better and better at this activity (Davies, 2002). The more understood a child feels, the more he or she can understand the psychological make-up of others as well as his or her own (Howe, 2006). By making sense of their own and others’ behaviours, children become aware that minds and mental states are behind action and behaviours, leading to the development of emotional intelligence, emotional attunement, social cognition and interpersonal competence (Howe, 2006).

Cook et al. (2005) at the Trauma Centre in Boston describe sensory and emotional deprivation as having the greatest impact on cognitive development. Children demonstrate less creativity and flexibility in problem solving, significant delays in receptive and expressive language, and lower IQ scores (Cook et al. 2005; Marcus & Sanders-Reio, 2001). Children with secondary trauma issues, such as witnessing violence, also show deficits in abstract reasoning and executive functioning skills (Cook et al., 2005; Gabowitz et al., 2008). Van der Kolk (1989) describes learning disabilities that follow trauma in a Piagetian manner; trauma interferes with the ability to modulate affective responses to stimuli – this inability to modulate affect can interfere with the
capacity to assimilate and accommodate new information and can lead to cognitive disorganisation.

**Primary school context**

The consequences of child abuse on children’s adaptation to the school environment have not been extensively studied, but the limited research conducted has consistently linked physical abuse and neglect to academic and social difficulties (Daignault & Hebert, 2009). In the classroom, teachers and school counsellors may observe complex trauma symptoms beyond learning disabilities, including fear, hyperactivity, aggression, somatic problems in younger children and depression and self-harming behaviour in adolescents (Gabowitz et al., 2008). These children and adolescents are often diagnosed with attention deficit/hyperactivity disorder (AD/HD) and anxiety and mood disorders that target specific disorders but not the aetiology of complex trauma, resulting in missing information in the development of interventions (Gabowitz et al., 2008).

Marcus and Sanders-Reio (2001) found that attachment to teachers affected academic motivation, with research indicating that children who had low attachment scores felt that teachers were unfair to them and did not like them. Children with attachment disruptions or insecure attachments appear to expect to be ineffective with peers and teachers based on their previous experiences in relationships. When teachers were viewed as more caring, the drop-out rate of such children decreased. The main issue for children with attachment disorders is that the ‘substrate of classroom life is social and emotional’ (Marcus & Sanders-Reio, 2001), both areas of difficulty for children coping with the effects of attachment disorders and complex trauma.

Attachment is extremely important in reading acquisition, as students who have a challenging time attaching in their early years often experience difficulties in learning to read and write (Bus, 2001). Further, reading is a social activity, leaving children with complex trauma who find it almost impossible to bond with peers and adults without the direct and indirect modelling experience required to acquire vital language and reading skills (Dickinson & Sprague, 2001). In fact, Lynch (2007) argued that early social interactions and the formation of social bonds can make or break the acquired reading skills of all children, but especially of high-risk children. Reading is also based on trust so that the child believes that the teacher will serve his or her needs and the teacher believes that the child will be willing to try to the best of his or her ability. When a child comes to that relationship with either a lack of trust or a misguided sense of trust, he or she is not willing easily to trust the teacher to model appropriate reading habits and strategies (Lavoie, 2007). Attachment to a teacher is paramount for children to acquire necessary reading skills. The longer it takes for that attachment, the larger the gap could be in academic achievement (Neufeld & Maté, 2004).

Schwartz and Davis (2006) describe how children diagnosed with reactive attachment disorder (RAD), entering school with disrupted attachment and trauma experiences, bring behavioural, emotional, social and academic challenges with them. There is a correlation between children with major disruptions in caregiver relationships and involvement with both special education and serious emotional disturbance (SED) classes. The mission of schools is to educate children, yet children with RAD come to school primarily concerned with internal issues related to the need for trust, security and safety. These basic survival needs predominate, often leaving the children unable to profit from the learning environment.

Neufeld and Maté (2004) argued that situations in which a child cannot find someone by whom to orient (‘orienting voids’) are critical in the case of children who have experienced some level of complex trauma. In particular, students who are experiencing complex trauma are devoid of several or all forms of attachment. A child who is withdrawn from parents because of neglect, for instance, cannot sense (that is, see, smell or hear) his parents and becomes withdrawn as he is without an anchor. Children with ADD have a difficult time being the same as others and therefore have a difficult time attaching to their peers. A child suffering from abuse has no sense of belonging or loyalty as her understanding of attachment to a parent is distorted. Similarly, children who exhibit aggression in the primary classroom have a difficult time finding a sense of significance, that they matter to someone, and therefore attachment is challenging. Emotional intimacy is particularly difficult for children with complex trauma, as they find it insurmountable because they have had so many roadblocks to feeling anything towards anyone else. Lastly, children who are raised in verbally abusive homes often cannot attach psychologically to a caregiver as the trust relationship has been broken or violated.

In a study on short-term outcomes of child sexual abuse on academic, social and behavioural adaptation, Daignault and Hebert (2009) found that below-average cognitive functioning was the most common difficulty experienced by the children. This is consistent with other studies indicating that sexual abuse cases have the highest rate of diagnosis for learning disabilities (Jonson-Reid, Drake, Kim, Porterfield & Han, 2004). In a longitudinal study tracking children with abuse histories for involvement in the child welfare system and in special education, Jonson-Reid and colleagues (2004) found that even after controlling for other variables, abuse experience predated inclusion in special education classes. They also concluded that abuse impairs cognitive development, making it no surprise that children with abuse history have three times the drop-out rate of their peers (Cook et al., 2005). These results are found across trauma experiences and are not accounted for by psychosocial stress variables such as poverty (Cook et al., 2005).

**Pedagogical implications**

Addressing the needs of primary school pupils with complex trauma is a challenge but certainly feasible. These students require, first and foremost, a trusting relationship and one in which attachment to a caring person is paramount. A safe environment is critical for children with complex trauma
reactions, with the establishment of safety being the first stage of all trauma work (Aideuis, 2007; Courtois, 2008; Herman, 1997). For children who now see the world in a negative light and do not trust others, interventions can only succeed in a safe environment where self-efficacy and a sense of mastery are fostered (Faust & Katchen, 2004). They also need structure and guidance from the teacher so that they can follow what is needed. Lastly, they require information to be given in shorter units, such as step-by-step instructions.

Children who are experiencing complex trauma live in the moment. It is too difficult to remember the past and too threatening to look to the future. To this end, they need a classroom to be a ‘safe’ place where they can enjoy relationships, engage in appropriate activities that stimulate their brains such as play or music, and feel like they can succeed in the tasks presented to them. In short, teachers need to know the student and know what his or her triggers are and, most importantly, what the student’s needs and abilities are.

Teachers need to understand that traumatised children have a very difficult time with modulating their levels of arousal and might exhibit unregulated flight, fight or freeze reactions. An unaware teacher might infer that the child is being defiant and might mete out appropriate discipline; however, an aware teacher would recognise the behaviour and take appropriate action to ameliorate it. For instance, the teacher could encourage the student to walk around the room for a few minutes, which would have the dual benefit of regulating the arousal levels in the brain through physical activity and defusing any potential outbursts.

Step-by-step instruction is definitely needed for the primary school pupil with complex trauma. This approach of stepping into the activities serves a clear purpose, as the student can achieve one task at a time that will increase competence for larger tasks. Neurologically, this paced approach stimulates the regions of the brain – most notably, the cerebral cortex – that deal with arousal and related emotions and responses to novel situations.

In the school counselling environment, work on relational repair in therapeutic relationships where counsellors help the child or adolescent with affect regulation, interpersonal skills, self-capacity and reducing self-harming behaviours is the basis for improvement (Pearlman & Courtois, 2005). Affective treatment requires a highly individualised, multimodal and transtheoretical approach due to the multiplicity of biopsychosocial issues (Courtois, 2008). Many of the behaviours exhibited by children and adolescents with complex trauma and attachment disruption are viewed as emotional regulation strategies used to avoid or convert unbearable affect, so treatment needs to address dysregulated affect and survival mechanisms (Schore, 2009). The goals of counselling and support include helping the child live a life less affected by trauma through the identification of emotions, emotional and self-regulation, relational skill building and improved problem-solving and decision-making abilities (Aideuis, 2007; Courtois, 2008; Ford & Cloitre, 2009). These increased skills help the child develop a coherent personal narrative that acknowledges the effects of the trauma, integrating separations and traumas while identifying the child’s increasing personal and relational skills (Aideuis, 2007; Ford & Cloitre, 2009).

Teachers, school counsellors and caregivers may benefit from the use of a PACE stance (Hughes, 2007) when engaging with such children, a general approach consisting of playfulness, acceptance, curiosity and empathy. Specific techniques such as eye movement desensitisation reprocessing (EMDR) and trauma focused cognitive-behavioural therapy (TF-CBT) may assist traumatised children in the development of their new narrative through strengthening positive cognitions and feelings and increasing relaxation skills for self-soothing (Aideuis, 2007; Ford & Cloitre, 2009). The Attachment, Self-regulation and Competency (ARC) strengths-based model developed by Kinniburgh and Blaustein (2005) is a components-based framework informed by attachment and traumatic stress theories. With a focus on the rebuilding or building of safe relational systems, the model incorporates enhancement of regulatory capacity, skill building and stabilising distress in children and their caregivers.

As we re-examine the six-year-old boy described earlier, we see a change. After repeated attempts to be fully integrated in the classroom, the six-year-old is assigned a teaching assistant and a school counsellor. He spends the majority of his first year of school outside the classroom, sitting close to his teaching assistant who reads him hundreds of books as she builds a trusting relationship with him. His counsellor works with him on developing an emotional vocabulary, using visual cues. She introduces him to one playmate each lunch hour, modelling the interaction for him. Assessing his strengths, she brings building materials to each session where he creates various structures while chatting about his day.

Concluding thoughts
Child abuse, neglect, disrupted attachment and other traumatic experiences come from a dark world, a world that requires attention and research in order to lessen the number of children affected and to provide appropriate help and interventions to those children who have survived such experiences. Briere and Scott (2006) describe complex trauma as relating back to one’s earliest life experiences and reaching forward to embrace lifelong exposure to trauma.

As counsellors and as an elementary teacher who have worked with traumatised children in the school setting, we believe that teachers and school counsellors would benefit from training on the consequences of childhood trauma and attachment disruption. Kagan (2004) suggests that children have tremendous capacity for self-healing and children who present with trauma-related symptoms are attempting internally to resolve distressing feelings, thoughts and memories. Herman (1997) describes the situation of children facing trauma as one where the child is forced to compensate for
the failure of caregivers’ protection through ‘an immature system of psychological defenses’. As the research summarised in this article indicates, immature psychological defences are linked to impairment of attachment and neurobiological integrity.

Briere (2005) suggests that, when facing issues of complex trauma, practitioners have a desire to find simple answers, but simple answers will never address the complexity found in relationship issues. From the literature summarised here, we are left pondering the implications of molar behaviour related to attachment disruptions, complex trauma and learning for children. In the intimate dance between body and mind, early childhood experiences of abuse and neglect lead to neurobiological changes – an adaptation to a specific environment. The brain is not what it might have been if this environment had been different. The child’s ability to learn, across the lifespan, will inevitably be effected.

Though it is often difficult to accept that a child’s possibilities for the future are definitively limited by past experiences, this information also allows teachers, school counsellors and practitioners who work with children and families to develop interventions that will be effective and to identify what types of behaviours children can control and those they cannot.

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