Literature review –

a trauma-sensitive approach for children aged 0-8years

Contents

a trauma-sensitive approach to education and learning for children aged 0-8 years

Childcare centres, preschools and schools are designed to provide children with safe environments to learn, grow and develop. Unfortunately many children arrive carrying an overwhelming burden, which if not understood and managed, impairs their capacity to learn and to benefit from the rich possibilities that the environment can provide. Early childhood educators are increasingly aware of the complex and difficult life experiences that many of the children in their care may have faced. Some of these experiences like surviving a bushfire or arriving as a refugee may be obviously traumatic and readily apparent to early childhood educators. However, others, such as living with family violence may be hidden from view. In all cases, it can be challenging to know how to respond in a way that enhances the child's ability to learn and develop.

This review focuses on the impact of trauma and concepts from neurobiology. It is written for early childhood educators who encounter infants and children, from newborns to 8 year-olds, who have suffered the effects of significant trauma in their young lives. It aims to enhance existing knowledge of child development by focussing on those issues that are most relevant to understanding the impact of trauma. This is explored through concepts related to attachment, neurobiology and the impact of trauma on learning.

The review pays particular attention to family violence in recognition of the high prevalence of violence in Australia and the range of negative impacts on children. It provides an overview of the developmental impacts of trauma, explains the meaning behind some of the challenging and distressing behaviours seen in children with trauma and identifies the developments in theory and practice that are providing hope and guidance to those engaged in helping children with trauma to learn.

There are three sections in the review. The first provides a conceptual overview of the effects of trauma on childhood development, the second outlines emerging practices and programs and suggests ways early childhood educators may assist children with trauma to learn and the final section is a list of resources that will enable early childhood educators to continue to enhance their own learning in this important area.

a conceptual overview: trauma, neglect and the developing child

There is a vast amount of emerging research and clinical evidence that has radically improved our understanding of the physiological, emotional and psychological development of children and they way that trauma and neglect impact on normal developmental processes. In particular, new technologies and concepts that have allowed us to learn more about the operation and development of the brain have transformed our understanding of child development. It is now evident for example, that experiences that occur at developmentally sensitive times interact to form and alter the very structures of the brain. What Daniel Siegel (1999) calls the *neurobiology of interpersonal experience* has allowed us to understand the role of attachment and relationship in mediating trauma and pointed to ways children may be supported to optimise developmental opportunities and minimise adverse outcomes.

Social and emotional health in early childhood is defined as the 'developing capacity to form secure relationships, experience and regulate emotions, and explore and learn'. These in turn form the basis for the development of a range of behaviours required to learn and engage with others (CECMHC 2012, Tutorial 6.1). Without these capacities children cannot successfully participate in social interactions, manage conflict, form intimate connections, express empathy to others, and develop a positive sense of who they are.

All of these are needed by a child to successfully engage in an educational context and it is well established that problems in social health often lead to 'failure in school, inability to make and sustain friendships, and negative feelings about themselves' (CECMHC 2012, Tutorial 6.1). The early childhood years provide a window of opportunity to intervene during important phases of development, with research in the United States suggesting that success or failure in the first three years of school are critical to children's long term wellbeing and educational outcomes (Johnson & Knitzer 2005). Further to this, research shows that if the cumulative risks impacting on some children are not dealt with, the 'disparities widen and trajectories become more firmly established' (Walker et al. 2011, p.1325).

Trauma and neglect interfere with a child's capacity to successfully engage in learning – whether this is an infant learning how to feed and sleep, a toddler learning how to explore the world through play, or a child learning to read and relate to peers. This review explores the interconnected and critical importance of the attachment relationship, the development of the human brain, the differential impacts of trauma on children's social and emotional health and the importance of timing in developmental experiences.

trauma in the lives of children

There are a number of factors that influence children's development, including (but not limited to):

- the intrauterine environment during pregnancy like maternal nutrition, stress, and substance use

- endowments at birth, such as genetic makeup, temperament, health issues, disability

- the physical and cultural environment in which they grow and the presence of risk factors that impinge on optimal care, such as poverty or violence

- the quality and nature of the care they receive from the adults in their lives (Tronick 2007).

A child's development does not take the form of a series of sequential tasks to be mastered one by one, like stacking files in a cabinet until the cabinet is full and development has been achieved. Rather, physiological, cognitive, emotional and social development are integrated, cascading processes that interact in complex, dynamic ways, as they influence and are influenced by each other (Tronick 2007).

The extent to which the child is effected by trauma will similarly be dependent on a cascading interaction of complex factors including the age and developmental stage of the child, the nature of the trauma, whether it is a one-off event or a persistent part of life, whether it involved harm caused by another person or was a natural disaster, and whether there were caring, protective adults available to comfort and support the child before, during and after the trauma.

All children at some point face stressful situations, indeed learning to manage and master these situations builds resilience. Shonkoff (2009) differentiates between positive stress, which is short-term in nature and involves normative challenges (such as meeting new people), tolerable stress which is stronger and potentially overwhelming (such as a death of someone familiar) but which occurs within the context of a supportive relationship that facilitates coping and toxic stress that is prolonged, occurs without the scaffolding of adult support and overwhelms coping mechanisms. Traumatic experiences fall into the latter category:

> *A trauma is a psychologically distressing event that is outside the range of normal childhood experience and involves a sense of intense fear, terror and helplessness* (Perry 2002, p.23).

As is apparent in Shonkoff's comments, the presence of a supportive adult is central to an experience being tolerable, rather than toxic. Many children who experience trauma do not have the benefit of an adult to scaffold them. In some circumstances the adult may be the source of their trauma, such as an abusive parent, the adult may be traumatised by the circumstances and unable to comfort the child, such as during an incident of family violence or the adult may be absent or limited in their capacity to support due to disability or mental health problems. In other circumstances the child will be subject to chronic neglect, whereby the cascading nature of child development means the overwhelming nature of stressful experiences and the absence of developmentally enhancing experiences, combine to undermine the child's capacities on many levels.

Some children will experience a single traumatic event, such as an accident, the death of a loved one, or a natural disaster. If the other circumstances of their lives ensure them the presence of a caring and supportive adult, these children will still experience the event as traumatic, but will have greater capacity

to manage and overcome the trauma. However, for children who experience persistent trauma, it is less likely there is a capable adult who is not also traumatised by the circumstances and able to respond to the child's needs. In addition, children are impacted differently by trauma depending on their individual development. The first three years of life are a particularly vulnerable time period in which to experience trauma. The more persistent the trauma and the more pervasive other risk factors in the child's life such as poverty, homelessness, social and cultural alienation, inadequate nutrition, and neglect, the greater the cascading impact of the trauma on the child's development (Walker et al. 2011).

Chronic Neglect

Neglect is usually defined as the failure of a parent, guardian, or other caregiver to provide for a child's basic needs, which impacts on the child's development. Examples of neglect may include:

- Physical neglect such as poor hygiene, inadequate food or clothing, inadequate shelter. The latter may involve environmental neglect where the standards of living are unsafe or unhygienic.

- Medical neglect where the parent or carer fails to ensure basic health care.

- Supervisory neglect occurs when a responsible adult fails to ensure appropriate supervision for a child suitable to their age and development. This might include leaving the child unattended or leaving the child with an inappropriate person.

- Developmental neglect relates to a number of aspects of care that are required for stimulation and physical and social development. Neglect in these areas means a child is left without adequate stimulation or educational opportunity.

- Emotional neglect relates to the nature of the emotional relationship with the child, and a failure to meet the child's emotional needs (Frederico, Jackson & Jones 2006).

It is obvious in looking at these examples that issues such as poverty play an important role in how able a parent is to ensure a child's needs are met. Being homeless or having inadequate financial resources do not in themselves constitute neglect. While they certainly have an impact on a child's wellbeing (Guarino & Bassuk 2010) this occurs despite the parent's best efforts. It is the pervasive nature of chronic neglect that is the focus of this review. Frederico, Jackson & Jones (2006) analysed a cohort of 10 cases of children suffering chronic neglect, who had died.[1] They defined chronic neglect:

> Episodic neglect can be characterised by one-off, occasional, infrequent episodes of neglect. Chronic neglect includes 'unremitting low level of care', pervasive, entrenched or ingrained patterns of inaction and hopelessness of the parents ... It can also include concepts related to chaos and multiple crises ... Chronic neglect incorporates frequent failure to meet the child's needs on many levels with or without respite ... (T)he likelihood of harm increases the more pervasive the neglect ... There is general consensus that neglect is more likely to be chronic than other forms of maltreatment (Frederico, Jackson & Jones 2006, p.3).

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1   The cases were known to Victorian child protection authorities and were reviewed by the Office of the Child Safety Commissioner for the Victorian Child Death Review Committee during 2004-2006.

Transgenerational disadvantage is also common in cases of chronic neglect, with one generation who experienced trauma parenting another. Indigenous families are over represented in child protection statistics nationally due to the transgenerational impacts of dispossession, the stolen generation, substance abuse and poverty (Stanley, Tomison & Pocock 2003, Frederico, Jackson & Jones 2006).

Early childhood services frequently work with children suffering chronic neglect. Together with child protection and family support services they provide opportunities for children to experience developmentally appropriate play and education, peer relations, hygiene and health. The consequences of chronic neglect can include:

- injury or death due to lack of supervision, food and fluid intake, or medical intervention

- poor physical health

- physical developmental delay due to failure to thrive and/or lack of stimulation

- neurological impairment related to poor attachment and lack of stimulation

- pervasive developmental delays associated with language, cognitive capacities, and emotions

- severe interpersonal difficulties, and problems with managing aggression, frustration and anger (Frederico, Jackson & Jones 2006, pp.4–5).

Trauma and chronic neglect are separate though sometimes overlapping experiences, with the same concepts useful in explaining their impact. Most children do not experience chronic neglect in early childhood, but many have a combination of adverse experiences that impact on attachment and self-regulation. And there is recognition that those children who are involved with the child protection system are increasingly likely to have suffered multiple disadvantage and trauma, including attachment disruption and neglect. Early childhood educators interact with these children through childcare and education services.

the neurobiology of attachment

The capacity and desire to form emotional relationships is related to the organization and functioning of specific parts of the human brain. Just as the brain allows us to see, smell, taste, think, talk and move, it is the organ that allows us to love … or not. The systems in the human brain that allow us to form and maintain emotional relationships develop during infancy and the first years of life. Experiences during this early vulnerable period of life are critical in shaping the capacity to form intimate and emotionally healthy relationships (Perry 2001, p.1).

The important role of the adult in scaffolding the child with trauma and ensuring optimum development, becomes obvious when we consider the fundamental principle of attachment theory that 'human relationships drive human development' (Willemsen & Marcel n.d., p.4). How this occurs has been made increasingly clear by our growing knowledge of the developing brain and the role that experience plays in brain structure and organisation.

Infants are genetically primed to attach to caregivers to ensure their survival. Attachment behaviours (such as smiling, crying, clinging, following), which are elicited when the child is alarmed or in need, invite the caregiver to respond with comfort and protection and ensure proximity to the primary caregiver. The response of the caregiver to the child's distress shapes the attachment behaviours, which form at around six months of age (Bowlby 1988).[2]

Secure attachment develops when a caregiver responds to an infant's cues in a consistent and nurturing way. However, the result of unpredictable or inconsistent parental response is not *no* attachment, but *insecure* attachment (Morton & Browne 1998). Attachment style is assessed by a structured observation of the responses of children to separation and reunion with the primary caregiver.

The four categories of childhood attachment are:[3]

- *Secure*, where children seek the attachment figure on reunion are easily soothed and comforted, and parents respond promptly and sensitively to the child's distress
- *Insecure* (avoidant) where the child shows little distress on separation and avoids the caregiver on reunion. Parents are characterised as angry, rejecting and intrusive
- *Insecure* (anxious/ambivalent) where the child shows a great deal of distress, but in response to the parent's withdrawal, lack of involvement or inconsistency, behaves in ambivalent ways
- *Insecure* (disorganised/disoriented) was identified in studies of maltreated children, whose parent exhibit frightened or frightening behaviour. This elicits a contradictory response on the part of the child, such as proximity seeking as well as avoidance, dazed expression and apprehension toward the parent (Morton & Browne 1998, Shapiro & Levendosky 1999).[4]

The attachment style developed in childhood is seen to be enduring and predictive of adult relationships.[5] This is explained by the concept of the 'internal working model' (Bowlby 1988). *When the infant and young child begins to explore her world, her first interest is in the interpersonal world … The infant discovers who she is … in the eyes, face, voice, gestures and touch of her mother and father* (Hughes 2006, p.2). This determines the child's (and adult's) view of herself as deserving of care and attention and of others as trustworthy or untrustworthy, reliable or rejecting, and the world as safe or frightening.

For healthy physical and psychological development children need to both explore their environment, and maintain close proximity to a caregiver for protection. The establishment of the secure attachment relationship with a caregiver ensures the child is free to safely explore while maintaining a 'secure base' (Bowlby 1988). Marvin et al. (2002, p.109) call this pattern of exploration and return the *Circle of Security*. They note that a child is only free to explore if he knows the attachment figure will 'watch over him to

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2   Attachment theory does not assume that the attachment figure is the mother. However, in most cases the primary caregiver will be the mother. Children are capable of forming secondary attachments to other significant family members but show a preference for the primary attachment figure.

3   Three attachment styles were initially identified but later research identified a fourth category. Ainsworth and colleagues 'strange situation' experiments are the standard method for assessing attachment and involve separating infants and children from mothers then noting their reunion behaviour (Bowlby, 1988).

4   Avoidant and resistant infants are not at increased risk of psychopathology, but disorganised attachment is associated with increased risk of a range of problems (Dozier et al. 2001).

5   In adulthood the four attachment styles translate as secure, dismissing (comparable to avoidant children), preoccupied (resistant) and fearful (disorganised).
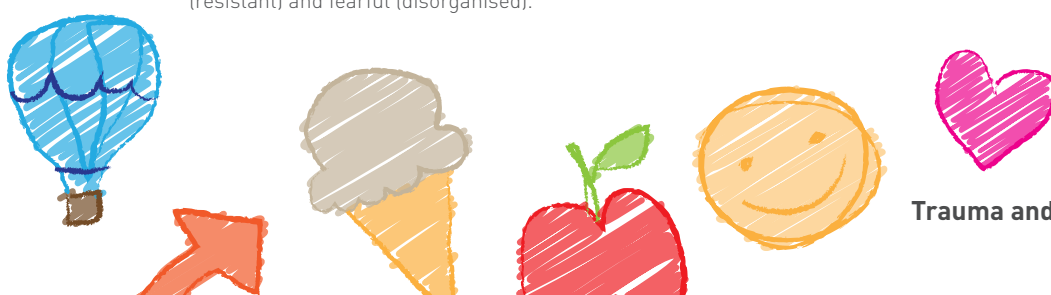
support, protect and enjoy' and will be there on return to 'comfort, delight, and to organize his feelings and behavior when they go beyond his own limits of self-organization'.

This is seen every day in playgrounds. Parents will be watching their children enjoy and experiment with the play, sometimes encouraging them to try something new, sometimes cautioning or assisting if a piece of equipment seems too difficult. They celebrate and enjoy with the children, pick them up and comfort them if they have a mishap, and help organise their feelings with words and actions that make meaning of the experience, 'That was fun', 'You hurt your knee when you fell', 'Did the dog give you a fright?'. For their part children will explore and play, returning each time to the parent, who provides their secure base, and makes the exploration possible and manageable for the child.

The development of secure attachment is not without stress to an infant, since no parent is attuned and available every minute of every day. Seminal research on normal mother-infant interaction (Tronick & Gianino 1986) demonstrated that there are frequent periods where they are not in synchrony and there is a 'mismatch' between the expectations and behaviours of the parent and infant. These moments cause stress for the infant, but also assist in building resilience since the experience of repairing these mismatches assists the infant in developing mastery and enhances coping mechanisms.

In healthy infant development, 'normal infants and their mothers are constantly moving into mismatch states and are then successfully repairing them' (Tronick & Gianino 1986, p.4). If the process of relationship repair does not occur or the stress is persistent or toxic the infant is overwhelmed. 'The infant who employs his coping strategies unsuccessfully and repeatedly fails to repair mismatches begins to feel helpless. The infant eventually gives up attempting to repair the mismatches ... and internalises a pattern of coping that limits engagement with the social environment and establishes a negative affective core' (Tronick & Gianino 1986, p.2).

It has been noted that securely attached children are more flexible in the extent to which they 'up-date' their models depending on experiences. In contrast, the models of insecurely attached children persist even when they are no longer treated in the way that elicited the model in the first place (Bowlby 1988). The persistence of the internal working model means parents' attachment behaviours are repeated with their own children and in their relationships with partners (Main & Goldwyn 1984, Bowlby 1988).

Current research and developments in neurobiology have greatly enhanced our understanding of attachment processes. It is now understood that not only are basic needs for food, warmth and shelter assured by consistent attuned parenting, but neural pathways are also activated in the child's brain, which stimulate growth and development. Secure attachment facilitates development of neural pathways that build the child's capacity to manage stress and to regulate his own emotions through self-soothing. The child learns ways to manage distress, to find comfort and to re-set his arousal to a state of calm (Perry 2006). Trauma and neglect undermine the development of fundamental coping systems, leading to problems with emotional regulation, sense of self and interpersonal relations (Stein & Kendall 2004), which all impinge on the capacity to explore, and tolerate new situations and learn.

The importance of secure attachment for children with trauma cannot be overestimated. There is considerable evidence that the child's attachment experience mediates trauma. While the subjective experience of a traumatic event may be very distressing, securely attached children are more able to be

comforted and to reset to a non-fear driven response. When the trauma involves sexual abuse, securely attached children may be less vulnerable to grooming by perpetrators as they are more likely to have close and nurturing relationships with other adults. They are also more likely to have internalised a working model that they are good and cared for and this assists in challenging the self-blaming and denigrating messages that frequently accompany trauma – 'I'm bad, I'm weak, no one will help me' (Lindstrom 1999). In addition, securely attached children are more likely to be met with appropriate, attuned responses after a trauma if the parent is sufficiently supported in managing their own distress.

Anything that threatens the development of secure attachment in young children therefore interferes with neurological development and the building blocks of a range of personal and interpersonal capacities. The impact of violence on a child's primary caregiver has significant and long lasting consequences for children themselves, since the caregiver is usually the child's primary attachment figure. A parent who is fearful or overwhelmed may have much greater difficulty providing attuned care to a child with trauma. In this way family violence is an attack on both the mother and on the relationship with her child (Humpreys & Stanley 2006).[6]
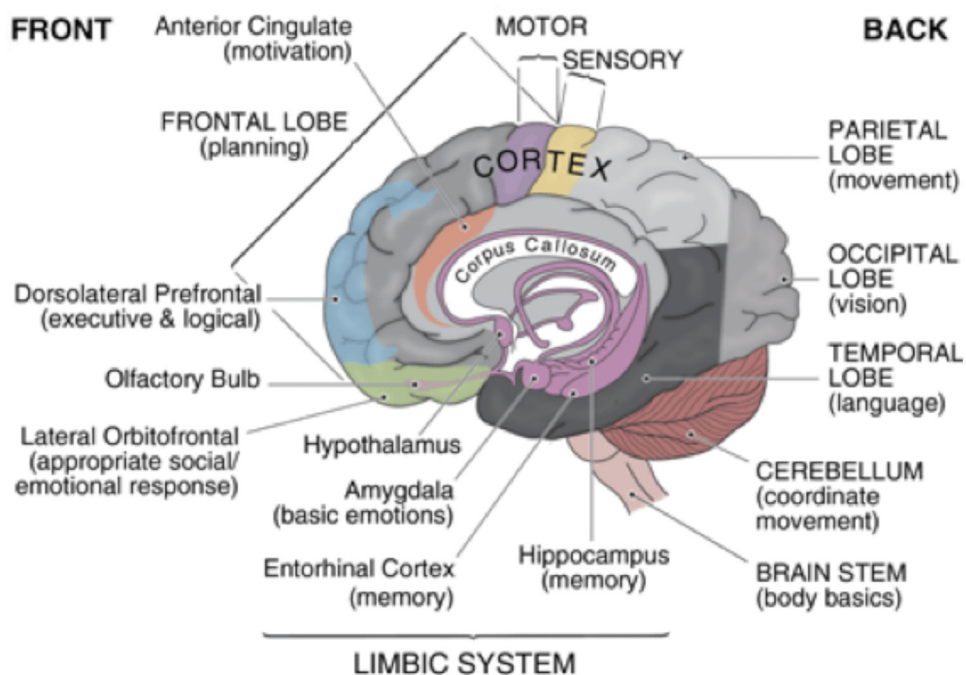
the developing brain

> The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood. Early experiences affect the quality of that architecture by establishing either a sturdy or a fragile foundation for the learning, health and behaviour that follow (Shonkoff 2009, p.1).

Through the sensory systems of the body and interpreted through the brain, the child derives meaning from her complex world (Robinson 2008). The importance of the brain in child development cannot be overestimated. In 1997 Bruce Perry published his influential article *'Incubated in Terror: Neurodevelopmental factors in the 'cycle of violence'* (Perry 1997) which described the emerging research into the neurological effects of infant exposure to violence. Since that time there has been a growing body of research evidence about the impacts of traumatic experience on the developing brain. There is also an increasing understanding that those in the best position to positively impact on children's development and assist them to overcome the adverse impact of these experiences, are the people who care for them day-to-day – parents, caregivers and early childhood educators (Dwyer et al. 2010).

There are several fundamental concepts related to brain development that can assist early childhood educators to better understand their role in helping children with trauma, in particular, understanding how children's brain development impacts on their response to threat.

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6   Conversely there is substantial evidence that many women succeed in establishing a secure attachment relationship with their children despite the violence and that this mediates the experience for the child. Levendosky (2003, cited in Edelson 2006) found that some women became better parents in their attempts to compensate for the violence and Radford & Hester (2006) noted the many ways women resist the violence to reassure and protect their children.

FRONT
Anterior Cingulate (motivation)
MOTOR
SENSORY
BACK
FRONTAL LOBE (planning)
CORTEX
PARIETAL LOBE (movement)
Corpus Callosum
Dorsolateral Prefrontal (executive & logical)
OCCIPITAL LOBE (vision)
Olfactory Bulb
TEMPORAL LOBE (language)
Lateral Orbitofrontal (appropriate social/ emotional response)
Hypothalamus
CEREBELLUM (coordinate movement)
Amygdala (basic emotions)
Entorhinal Cortex (memory)
Hippocampus (memory)
BRAIN STEM (body basics)
LIMBIC SYSTEM

Source: The Brainwaves Center, http://www.brainwaves.com

hierarchical nature of brain development

The brain is made up of billions of neurons and glial cells that communicate, divide and interact to form the structures of the developing brain, which begins *in utero* and continues maturing to the early 20's. Different parts of the brain mature at different rates depending on which areas are required for normative developmental tasks (Tronick 2007).

The brain stem, which is the most primitive part of the brain with fewest brain cells, is the first to develop, followed by the diencephalon.[1] These lower parts of the brain regulate basic functions related to arousal such as heart rate, body temperature and blood pressure.

The limbic system, in the midbrain, matures next and is often called the *emotional brain* (Stein & Kendall 2004). It is comprised of structures that provide an early warning system for danger and together constitute a primitive memory system that stores memories of emotion and sensation and trauma. One of these structures, the hypothalamus, has a critical role in regulating the pituitary gland, key to the release of stress hormones and another, the hippocampus, is central to memory and learning.

The most complex and last area to mature is the neocortex, or the *thinking brain* (Stein & Kendall 2004). This area is involved with complex cognitive processes, reasoning and abstract thought. By four years of age it is already functioning but does not fully mature until very early adulthood (Tsujimoto 2008).

This process of development of the brain from primitive to complex function means that young children's understanding of the world is organised through the most primitive parts of the brain that are highly sensitive to stress.

use dependent development

- Neural networks develop based on repetitive use. 'If the developing child is spoken to, the neural systems mediating speech and language will receive sufficient stimulation to organise and function normally. A child who does not hear words will not have this capacity expressed. This is true for any part of the developing brain' (Perry 2006, p.36).

- Repetitive provision of comfort to a child when aroused (rhythmic rocking, soothing touch, comforting sounds) stimulates the development of neural pathways that assist the child to self-regulate and calm physiological arousal.

- On the other hand, 'Chaotic, episodic experiences that are *out of sync* with a child's developmental stage create chaotic, developmentally delayed dysfunctional organization' (Perry 2006, p.36).

• The connections the brain makes as neural pathways develop become *hard wired*. Chronic neglect in the early years, including the lack of persistent patterned processes of stimulation and absent, inconsistent or unpredictable emotional attunement, leads to a disorganised and structurally underdeveloped brain.

The table below shows the structure and development of the brain in relation to chronological age. However, Perry (2006, p.41) emphasises that chronological age may not represent the child's developmental age across the capacities associated with brain development.

sequential neurodevelopment

age of most active growth	'sensitive' brain area	critical functions being organised	primary developmental goal
0–9 months	Brainstem	Regulation of arousal, sleep and fear states	State regulation, primary attachment, flexible stress response, resilience
6 months–2 years	Diencephalon	Integration of multiple sensory inputs	Sensory integration, motor control, relational flexibility, attunement
1–4 years	Limbic system	Emotional states, social language, interpretation of nonverbal information	Emotional regulation, empathy, affiliation, tolerance
3–6 years	Cortex	Abstract cognitive functions, socio-emotional integration	Abstract reasoning, creativity, respect, moral and spiritual foundations

Source: Perry 2006, p.41.

Information Processing and the Threat Response

- Sensory information received by the brain (sound, touch, smell, sight, taste) passes through these lower parts of the brain and is stored in areas associated with those senses. Over time, the brain makes associations between sensory information that occur together (for example a particular smell associated with gentle or frightening touch).

- New information creates a cascade of neural activity that begins in the brain stem and moves through the diencephalon and limbic system. Information which is associated with a previous threat activates what Perry (2006) calls the *alarm system* which includes release of stress hormones such as cortisol and adrenalin, and activation of the fight, flight, freeze response – an evolutionary response that ensured the species was able to instantaneously react to a threat.

- This is characterised by changes to heart rate, feelings of impending harm, and preparation of the body to flee or fight. The possibility of fighting or fleeing may not be available to young children or in some kinds of traumatic events. Dissociation (or freezing) is an alternative psychological response to overwhelming threat.

- Trauma in infancy and childhood leads to neural pathways being established in the brain that are highly responsive to threat. As a consequence children will be aroused by the perception of threat, but since the neocortex is not fully developed, will not be able to make sense of it. In addition, they will not be able to calm or soothe themselves.

- Chronic neglect results in *cumulative harm* (DHS 2008) – the infant and young child does not receive assistance to manage inevitably overwhelming experiences which, for other children may be, in Shonkoff's (2009) terms *stressful* or *tolerable*, but not toxic. Neurological development that would assist in managing stress is likely to be impaired by the lack of stimulation on many levels and a secure attachment relationship is not formed.

Perry (2006, p.32) explains the physiological response to threat:

> *Children exposed to significant threat will 'reset' their baseline state of arousal, such that even at baseline – when no external threats or demands are present – they will be in a physiological state of persisting alarm.*

Judith Herman eloquently describes this:

> *Adaptation to this climate of constant danger requires a state of constant alertness. Children in an abusive environment develop extraordinary abilities to scan for warning signs of attack. They become minutely attuned to their abusers' inner states. They learn to recognize subtle changes in facial expression, voice, and body language as signals of anger, sexual arousal, intoxication, or dissociation. This nonverbal communication becomes highly automatic and occurs for the most part outside of conscious awareness. Child victims learn to respond without being able to name or identify the danger signals that evoked their alarm.* (Herman 1997, p.99 cited in Cole et al. 2005 p.16)

Most children use a combination of hyperarousal and dissociation in response to perceived threat. It is important to remember that it is the *perception* of threat that induces the response, not the *actual* threat. The source of the threat can be *internal* (a feeling like anxiety or powerlessness, a thought such as 'I'm alone'), or *external* (e.g. a verbal or physical cue that an adult is angry or a sound or smell that reminds the child of the trauma). In other contexts when stressors are introduced, such as concentrating or dealing with interpersonal conflict, children in a state of hyperarousal will react as though under threat.

responses to threat – the arousal continuum					
threat response continuum	**Calm**	**arousal**	**alarm**	**fear**	**terror**
Hyperarousal	The 'fight, flight' reaction. The activation of the limbic system and the perception of degree of threat will determine how aroused the child becomes. When the brain perceives a serious threat the child's response moves further along the arousal continuum, with increased focus on survival and decreased cognitive capacity. The more primitive parts of the brain drive the process and the child's subjective experience moves along the continuum from fear to terror. Arousal behaviours can look like agitation, hyperactivity, defiance, aggression.				
hyperarousal continuum	**rest**	**vigilance**	**resistance (crying)**	**defiance (tantrums)**	**aggression**
Dissociation	Sometimes called the 'freeze' response. This means a shutting down, a feeling of detachment or of being removed from the event and watching from a distance. The intensity of dissociation varies depending on the duration of the event and intensity of fear. From the outside, dissociative children may look like they are simply concentrating, day-dreaming or detached.				
dissociative continuum	**rest**	**avoidance**	**compliance (robotic/ detached)**	**dissociation fetal rocking**	**fainting**

Source: Adapted from Child Trauma Academy, 2006, Lesson 2: pp.1–5.

the importance of time and timing

Chronological time is an important component in child development since certain levels of maturation are required for optimal development of some tasks. But just as important is the timing of experiences, since the infant and child is impacted differently by adverse and optimal experiences depending on the age of the child and the phase of maturation within their brain and there appear to be 'sensitive periods' for aspects of development, both in terms of vulnerability and intervention (Robinson 2008). In summary, 'Timing is everything' (Perry 2001, p.3).

The structural maturation of the brain during childhood is a critical time for development of the prefrontal cortex, which is central to cognitive development. 'It is important for a wide range of cognitive functions, such as language comprehension, reasoning and learning, ... inhibitory control, the ability to suppress information and actions that are inappropriate ...' (Tsujimoto 2008, p.347). Research relating to children 4-8 years has demonstrated that there are changes to the structure of the prefrontal cortex during this period and also improved cognitive functioning of working memory and inhibitory control improves over four years of age (Tsujimoto 2008).

While the brain is malleable as it grows and develops, some systems within the brain are more difficult to change as the child matures. Perry (2006, p.43) warns that, 'Once an area of the brain is organized it is much less responsive to the environment: in other words it is less plastic.' Therefore after age three, when the areas of the brain regulating arousal are organised, it is much harder to change those responses. Shonkoff (2009) also cautions that the opportunity to positively impact on brain development becomes more difficult over time and while the capacity for adaptation may continue for many years, it is more difficult to do so with age. To do so requires 'sufficient repetitive patterned experiences' provided in a relationally rich environment with attuned adults (Perry 2006, p.46).

Summary of features of brain development and attachment

The brain is organised and matures in a hierarchical fashion from primitive to complex.

Neural development is use dependent. Repetitive experiences result in the development of neural pathways and the function of key structures in the brain.

Reliable, consistent caregiving contributes to the developing child's capacity to regulate arousal.

Trauma and neglect contribute to disorganisation and an inability to regulate arousal.

The limbic system is the early warning system for the brain and 'remembers' information it associates with threat. Because higher order cognitive functions are not involved in the threat response, the brain responds with alarm if it picks up signals that resemble the traumatic information.

The fight, flight and freeze responses in children are the activation of the threat response but can be mistaken for a range of behavioural problems.

Provision of a safe environment, attuned, reliable and consistent care and a patterned, repetitive response is the best approach to optimising children's development.

The first three years are a particularly sensitive time for brain development.

the trauma of family violence

It is estimated that more than a million children in Australia are living with the impact of family violence (Australian Domestic & Family Violence Clearinghouse 2011). It may therefore be the most commonly experienced trauma for Australian children. Violence may permeate children's lives in a myriad of ways including:

- Hearing or observing acts of violence against their mother, siblings, pets or extended family.
- Being directly assaulted or threatened with violence or death to themselves or others.
- Living in an atmosphere pervaded by overwhelming fear and stress, even if the violent parent is no longer present.
- Having their possessions destroyed.
- Being locked in or out, having their own lives regimented and controlled and being forced to keep silent.
- Observing and attending to injuries in the aftermath of assault and taking responsibility to call police, ambulance or other sources of help.
- Disruption to home, school and family in attempts to escape the violence.
- Being cared for by an adult who is a victim of violence and may be suffering their own acute or chronic impacts.
- Being parented by someone who is a perpetrator of violence.
- Managing complex, often ambivalent feelings about the perpetrator.
- As a result of assault on a pregnant woman, infants may be exposed *in utero* to the risk of injury or death, or to elevated stress hormones in the mother that may impact on foetal development (Houghton 2008).

Children's direct exposure to violence can vary widely, even within the same family – the younger the child the more likely that she will have been present during the violence (Edelson 2006). However, children describe equally intense fear when they are not directly present but hear the violence and can only imagine what is happening. The following description of violence by a nine year old girl shows the fear and helplessness of hearing her mother assaulted:

> *He could have stuck a knife in her for all I know, with the door shut. And the worst thing for me was actually not knowing what was going to happen next ...* (Girl aged 9) (McGee 2000, p.107 cited in Houghton 2008, p.35).

behavioral and developmental problems seen in children with trauma

The specific symptoms or physical signs a child develops following maltreatment or trauma will reflect the history of neural activation – or, in the case of neglect, the history of inactivation (Perry 2006, p.36).

Children are not little adults so the kinds of events that children find traumatising may be different from adults. For example, depending on age, supports and developmental capacities, children can find separation from a primary caregiver, or being left alone, traumatising experiences. Graham-Bermann et al. (2008) investigated the kinds of trauma experienced by preschoolers from low-income families in the United States through interviews with educators and mothers. There were several points of interest in this research, including that educators were relatively uninformed abut the traumatic experiences of the children they worked with. 93% of mothers reported traumatic experiences for the children that caused the child to be upset or overwhelmed. In contrast only 29% of educators reported these events. The kinds of traumatic events identified by mothers included death of someone the child knew (23%), other traumatic loss of a family member such as foster care or a father in prison (18%), high conflict divorce or separation (17%), family violence (16%), and accident or injury (12%).

The way children of different ages show their distress will vary depending on age, gender and developmental capacities (Graham-Bermann et al. 2008). This means there can be significant differences between children. For example girls and very young children are more likely to freeze/dissociate, while older children and boys might become aggressive or hypervigilant. *The Child Development and Trauma Guide* (DHS 2007) summarises the symptoms of trauma in children including:

- In infants and young children:
  - regression and loss of recently acquired skills
  - disturbance to sleep and feeding
  - clinginess, indiscriminate attachment
  - fussiness, difficulty in soothing, hyperactivity, withdrawal and lack of responsiveness
  - developmentally inappropriate sexualised behaviour.
- In older children:
  - sleep disturbance, nightmares
  - difficulty in seeking or accepting comfort
  - regression
  - loss of self-esteem and confidence
  - aggression
  - problems with anxiety and fearfulness
  - poorer academic performance
  - developmentally inappropriate sexualised play or behaviour.

There are a number of debates in the research literature about how to assess trauma symptoms in children. Research tends to focus on post-traumatic stress disorder (PTSD) which includes:

- symptoms of re-experiencing thoughts and feelings related to the trauma
- avoiding people and situations that may remind them of the trauma
- hyperarousal
- staying vigilant to potential threat, including elevated physiological arousal.[7]

These may be visible in children through:

- re-enacting the trauma through play or drawing
- talking about the event, worrying about siblings or a parent
- hyperactivity, aggression
- loss of skills that they had previously mastered.

Not all children will experience PTSD but the younger the child the more likely they are to meet this diagnostic criteria, with 27% of adolescents, 33% of primary school aged children and 39% of preschoolers showing PTSD following trauma (Fletcher 2003). However, children may show some of the symptoms, even if they do not meet the criteria for full PTSD e.g. 26% of a sample of children aged 7–12 who witnessed family violence met the PTSD criteria, but 52% suffered intrusive remembering and 42% experienced traumatic arousal symptoms (Graham-Bermann & Levendosky 1998).

PTSD is a more common response to isolated experiences of trauma, whereas the pervasive developmental impacts described in this review are more common with children who face ongoing traumatic events:

> *The traumatic stress field has adopted the term Complex Trauma to describe the experience of multiple and/or chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature (e.g. sexual or physical abuse, war, community violence) and early-life onset. These exposures often occur within the child's caregiving system and include physical, emotional, and educational neglect and child maltreatment beginning in early childhood …* (van der Kolk n.d., p.2)

Children with complex trauma show a range of problematic behaviours. These are due to the immediate consequences of being in state of persistent alarm, the disruption to living and family relationships, as well as the way the trauma (and neglect) interferes with normal development processes.[8] An example of the subtle and powerful way that these developmental impacts of trauma effect children's learning is apparent in this description of language difficulties:

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7   This criteria for PTSD was based on studies of adolescents and adults and some researchers have argued the criteria is not developmentally appropriate. However, a number of studies have found a broad consistency in children's symptoms, with children expressing these in their own developmental ways.

8   Though these are enduring impacts, Robinson (2008) suggests that failing to attain a particular developmental skill at the optimum time may not mean it is never attained, but it may be diminished in potential.

Research suggests that communicative development is influenced by the interactive styles and social context in which early language is established … Coster and Cicchetti explain that when a caregiver's primary interactions with a child are focused on controlling the child's behavior rather than on responding to thoughts and feelings, the child may acquire a predominantly instrumental understanding of language … When this pattern of using language … persists throughout the preschool years, the child may have difficulty 'use[ing] language to articulate needs and feelings, which has been suggested as an important step toward development of appropriate cognitive and behavioral controls.' According to Coster and Cicchetti, using language in a predominantly instrumental way leads to difficulty with 'the ability to convey abstractions, which has been suggested as a critical transition in the acquisition of literacy skills.' It can also hamper 'the ability to sustain coherent narrative and dialogue, which is a key competence for social exchange with both peer and adult figures' (Cole et al. 2005, p.24).

COMMON behavioural problems in children with trauma	
Difficulties with regulation	A state of hyperarousal or dissociation due to children misreading cues and being quickly triggered into a fear response. This often presents as aggression and disobedience or being withdrawn and dreamy. This also impacts children's ability to know which information is important to pay attention to and which is not.
Impaired cognitive capacities	Reduced cognitive abilities due to neglect and/or hyperarousal, or difficulty concentrating. Difficulties in problem solving and organising narrative materials.
Developmental delays	Delays in language, social skills and motor skills – which impact directly on learning, comprehension and expression. When children have grown up with violence they may have been restricted in play and exploration and subject to excessive control. They may have an inability to understand cause and effect and to see themselves as capable of achieving goals.
Peer relationships	Difficulties with managing strong feelings and the consequent social problems with peers and adults. With a distorted sense of self due to violence or neglect a child can have problems in taking another child's perspective and developing empathy.
Difficulties in relationships with adults	Severe disruptions to attachment that make it difficult for children to form trusting relationships with adults. Children may be 'indiscriminate' appearing to make strong connections to strangers. However these behaviours are usually designed to seek safety for the child. On the other hand children may be suspicious, rejecting and independent, resisting attempts to form a bond.

COMMON behavioural problems in children with trauma	
Anxiety, fear	Instability and disruption to living and care arrangements that contribute to a sense of fear and uncertainty. New situations, unpredictability, changes in routine, educator or environment can all increase a child's anxious preoccupation with threat.
Eating, sleeping, toileting	Problems with eating are common in children with chronic neglect – gorging or hoarding food, problems swallowing or chewing, throwing up. Children show disturbed sleep patterns and may become hyperaroused at sleep time. This may be due to night-time being associated with danger, fewer distractions and more intrusive thoughts or feelings, and/or an underdeveloped capacity to regulate sleep. Bedwetting and other toileting problems are also common.
Self-soothing strategies	Children may have problems with self-soothing and resort to 'bizarre' or regressed behaviours. These can include rocking, scratching or biting themselves (such as picking at sores or biting lips), head banging, chanting.
Executive functions of goal-setting, planning and anticipating consequences	Children may have an internalised sense of self that expects failure, does not foresee a hopeful future and has difficulty making and carrying out plans. All of these are important to formal learning.

Sources: Perry 2001, pp.6-8; Cole et al. 2005; Child Trauma Academy 2006; Downey 2007.

trauma-sensitive approaches to early Learning

School is a place where it is possible for traumatized children to forge strong relationships with caring adults and learn in a supportive, predictable, and safe environment. These are factors that can help protect children from, or at least ameliorate, some of the effects of exposure to family violence … and give teachers the support they need to teach children how to regulate or calm their emotions and behavior … Teachers can play an important role in connecting traumatized children to a safe and predictable school community and enabling them to become competent learners. To accomplish this goal, policy makers must provide schools with the tools they need to help all children learn (Cole et al. 2005, p.6).

Recognition of the vulnerability and opportunity that exist in the early childhood years has led to a range of policy and practice responses. Increasingly it is understood that therapeutic responses to children with trauma need to occur in every aspect of their lives and that ensuring an attuned, consistent and patterned response by the adults who care for them in formal and informal ways provides the best intervention (Dwyer et al. 2010). This includes the central importance of early childhood education and the opportunities it provides to intervene in helpful ways.

Cole et al. (2005, p.55) note three important ways that educational institutions can contribute to children's recovery from trauma:

Partner with families and strengthen traumatised children's relationships with adults in and out of school

Help children to modulate and self-regulate their emotions and behaviors

Enable children to develop their academic potential.

Evidence based educational models and resources include:

- *Pyramid Model for Supporting Social-Emotional Competence in Infants and Young Children* (Fox et al. 2003, Hunter & Hemeter 2009), a framework that focuses specifically on children in the first three years of life.
- *Trauma and Learning Policy Initiative* (TLPI) focuses on primary and secondary schools and was developed specifically for children living with family violence (Cole et al. 2005)
- *Calmer Classrooms* resource booklet developed by the Office of the Child Safety Commissioner (Downey 2007).
- A model designed to assist refugee children in schools (Foundation House 2011).

While the teaching mechanisms and developmental issues are different for very young children and primary school children, there is a consistency across models – they all share a multi-level approach and

a focus on the development of *trauma-sensitive* schools and services. This review draws on a number of approaches in highlighting their common characteristics:

- a whole-of-school/service approach
- a supported and effective workforce
- relationship-based practice
- provision of a safe environment
- social and emotional educating strategies
- intensive intervention
- staff self-care and wellbeing.

a whole-of-school/service approach

Trauma-sensitive approaches to early learning advocate for a whole-of-system response. This means ensuring schools and services are trauma sensitive (Cole et al. 2005) in every area:

- the school/service organisation, ethos and environment
- policies and practices
- partnerships with agencies
- partnerships with parents and carers, and
- curriculum, teaching and learning (Foundation House 2011, p.52).

Cole et al. (2005) argue that educational settings need to address barriers to a trauma-sensitive approach, such as beliefs that trauma is a home problem not a school problem, blaming parents or children, practices that are not based on an understanding of trauma and lack of resources for managing trauma. This does not mean that the whole school/service and every educator needs to be delivering an integrated approach from day one. It means that there needs to be leadership and a willingness to attend to barriers to a trauma sensitive approach and a commitment to enhancing responses at each level of the system.

a supported and effective workforce

> *With new perspectives, skills and strategies, caregivers can promote early childhood social-emotional functioning and address and solve current problems as well as future concerns....* (Perry et al. 2011, p.9).

All models begin with the foundation of an effective workforce. Staff need to be trauma and development informed, and familiar with the concepts discussed in this review. However, this is not without recognition that teaching children with trauma can be enormously challenging for staff, other children and families, and the children themselves. Educators report feeling under-equipped to deal with the children and often feel torn between the needs of the child with trauma, and other children. However, providing a trauma sensitive environment will assist all children (Cole et al. 2005).

Staff development and training can assist educators to:

- become familiar with the range of experiences effecting the children in their care

- have appropriate cultural awareness

- have strategies to help engage, calm and contain children with trauma

- have the capacity to manage themselves in purposeful and emotionally intelligent ways.

This can appear demanding and overwhelming but many of these individual skills are ones that effective early childhood educators already possess. These skills and strategies can be used in a conscious and concerted way to provide a trauma-sensitive approach. This means attending to the underlying trauma and ensuring interventions are developmentally fine-tuned, not based only on a child's chronological age. To ensure this staff need adequate professional development, specific assistance in relation to difficult issues, and leadership within their organisations.

Relationship-based practices

> ... as adults build positive relationships with children, their potential influence on children's behaviour grows significantly – that is, children notice responsive, caring adults. Children pay particular attention to what such a teacher says and does, and they seek out ways to ensure even more positive attention from the teacher (Fox et al. 2003, p.2).

This review has demonstrated that child development is relationship dependent. All aspects of a child's social, emotional and even physical development rely on the quality of relationship he has with the adults in his life. For many children, early learning services and schools connect them to the community outside of their home and enhance their opportunities directly through education and indirectly through supporting parents in their efforts to meet their child's needs.

Trauma-sensitive approaches acknowledge that children also learn about relationships from observing those around them – the relationships between staff, with staff and parents, between staff and children. Providing clear communication with families, treating each child and family as unique, keeping staff changes and turnover to a minimum and including families in the community of the school/service help to contribute to an effective relationship.

Robinson (2008, p.5) argues that for adults to respond appropriately to children's behaviours they need to know:

- the child's history

- the developmental capacity of the child to understand and manage their own emotions

- the meaning of a particular context for the child

- their own role as an adult in containing the child's feelings.

It is not always possible to know all of a child's history. However it is important to understand what may be impacting on the child's behaviour, or the behaviour may be misunderstood and therefore mismanaged (Perry 2002). Educators working with very young children need to provide relationship-based care that approximates that provided by an attuned parent.
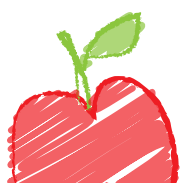
Strategies for relationship-based practices for very young children and families	
With very young children directly	**With families of young children**
Maintaining eye contact and using frequent physical touch such as holding, rocking, sitting near to them	Ask about the child's needs, preferences, interests
	Talk with parents about their child and caregiving practices at home
Acknowledging children's efforts, providing praise and encouragement to the children and parents	When possible speak in their language
	Welcome families and encourage them to stay and participate
Smiling and interacting warmly	Develop 'pick up' and 'drop off' rituals
Responding to the child's attempts at communication	Encourage breast feeding in private comfortable spaces
Holding infants while bottle feeding them	Conduct home visits
Spending time on the floor with them.	

Source: Hunter & Hemmeter (2009).

Older children and their families need strategies tailored to the developmental capacity (not just chronological age) of the child. Strategies designed to enhance parent-child attachment are readily able to be adapted to the educational setting, where educators become a secondary attachment figure and provide a secure base for learning. The advice to parents in the *Circle of Security* program (Cooper et al. 2000) is sound advice to an early educator too – always be *Bigger, Stronger, Wiser and Kind*. If these qualities are always present and practiced in an integrated manner, the relationship between the educator and child can grow to provide a base for learning and development.[9]

Relationship repair

Central to this approach is the notion of relationship repair, where children and educators will have times of 'getting it wrong' or 'being out of synch' and it is essential for children that these inevitable times are followed by a process that rebuilds and repairs the relationship. The *Circle of Security* approach suggests some helpful steps after an incident of problem behaviour, based on understanding that it is the relationship that will assist a child to learn and develop, and it is the educator's task to take the lead:

• Stay calm or take time out to get calm.

• Calm the child. Stay connected to the child until she is calm – where possible practice 'time in', not 'time out'. Help the child organise their feelings by acknowledging and expressing feelings e.g. 'Are you sad/afraid/angry?', 'When you did that I felt …'

• Repair the relationship. Talk about what happened in a non-blaming way. Plan for what will happen next time. (Cassidy et al. 2000).

9   See the *Circle of Security* website in the resource section for educational handouts.

Clear boundaries

Children with disordered attachment will not be well equipped to set relationship boundaries themselves. Setting appropriate boundaries that are warm, supportive and have clear expectations will assist children by ensuring predictable, safe, responsive care. Traumatised children have often been rejected and abandoned, or betrayed and violated and will need guidance in understanding appropriate dynamics in adult-child relationships. It is important that educators do not move too far outside their role to be therapists or carers. Providing relationship-based teaching is part of the therapeutic contribution to the child's development and wellbeing (Downey 2007).

Partnering parents in schools

In families who have suffered trauma across generations, many traumatised children will have parents who have had their own unsatisfactory experiences at school. Learning for many of these parents was often a shaming experience and they may not at first feel confident about their ability to assist their children's learning or participate in the school community. Some may be illiterate or not comfortable participating in classroom activities, but may be happy to join in with sports or other opportunities for involvement. All trauma-sensitive models see the relationship with the parent as an essential part of the approach. The relationship between parents and educators may also need 'relationship repair' in the process of building trust.

Strategies for relationship-based practices with primary school children and families	
Understand the child's chronological age and development age may be at odds	Partner with parents and earn their trust
Understand the 'good intention of the child even if behaviour may not be ideal'	Be mindful of the risk of shaming experiences
Notice things the child does well and build on these	Keeping parents informed
Set and maintain appropriate boundaries.	Welcome parental involvement and create opportunities for this to occur
View discipline as a 'learning moment as opposed to a punitive moment'	Be respectful of parents, carers and family
Provide consequences, not punishment	Become culturally informed and sensitive
Use praise and acknowledge good choices and behaviours	Use liaison workers and cultural consultants to engage indigenous families and get to know them
Always be 'Bigger, Stronger, Wiser and Kind'	Provide opportunities to repair relationships
Practice 'time in'	Provide opportunities to repair relationships

Source: adapted from Downey 2007; Cole et al. 2005; Cooper et al. 2000, Foundation House 2011.
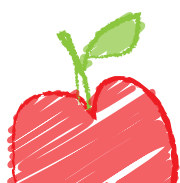
a high quality, safe teaching environment

Children can only learn if they are in an emotionally, physically, psychologically and culturally safe environment. In addition, children will need adequate space, developmentally appropriate materials and opportunities to explore and learn as well as teaching strategies that reflect the developmental capacities and special needs of children with trauma.

The National Safe Schools Framework (2011, p.2) says:

In a safe and supportive school, the risk from all types of harm is minimised, diversity is valued and all members of the school community feel respected and included and can be confident that they will receive support in the face of any threats to their safety or wellbeing.

Foundation House (2011) provides an audit tool that helps schools/services to consider the strengths and challenges in providing a trauma-sensitive environment that ensures safety. Safety can be created in the following ways:

- building alliances at the personal level in the way the educator relates to children, parents and carers.
- using practices that ensure sensitivity, predictability and consistency.
- adopting policies, programs and strategies to manage behaviour and create a culture that is trauma-sensitive.
- ensuring inclusiveness.

Ways of establishing and maintaining a safe environment include:

- planning for challenging incidents (Downey 2007). Many 'crises' will be predictable, since it is obvious that times of transition, change, loss, heightened activity or stress will be more challenging for traumatised children.
- maintaining a safe and predictable, 'child-centered classroom environment that promotes developing independence and success in learning' (Fox & Lentini 2006, p.2).
- clear, appropriate rules and expectations and clear consequences for behaviour that assists children work within achievable limits.
- ensuring that transition times at the beginning and end of the day, during recess and change of activities are well planned and managed (Cole et al. 2005).
- building on existing strengths of children and families.

Australia is a multicultural country comprised of a rich and diverse number of ethnic and cultural groups. Schools/services need to be aware of and familiar with the cultures and experiences of families and how this may impact on the engagement. Participation of children with trauma from diverse backgrounds can be enhanced by employment of staff reflective of this diversity, welcoming environments and inclusion of significant cultural events and practices.

New beginnings in unfamiliar surroundings are always stressful for children but particularly for children with trauma. In addition families and children with trauma, especially those from diverse cultures, may not

be familiar with early childhood services. Safety can be enhanced through:

- preparation e.g. creating opportunities to learn about the child, plan for beginnings
- smooth transfers e.g. visits, a buddy system, meeting the child in the previous setting
- welcome and induction e.g. arrival needs to be a welcoming experience, and one where they are scaffolded while they become oriented to the routines, activities and layout of the new environment (adapted from Foundation House 2011).

social and emotional teaching strategies

> School provides an important opportunity to teach children how to calm their anxieties and modulate their behaviors. Because we know that mastering both academic and social skills are key to the healing process, the aim is to increase teaching and learning time and reduce time spent on discipline. The ultimate goal is to help all traumatized students become successful members of their school communities (Cole et al. 2005, p.6).

Early childhood educators are experts at using interactions with children and families as opportunities to learn. Teaching children with trauma can be enhanced by specific focus on those skills and capacities that the children are lacking – self-soothing, verbal communication, and helping to organise feeling states. Educators can be key in helping children learn and develop skills that assist them to self-regulate, by teaching social skills, and by 'helping children become self-aware and more mindful of their feelings and the impact that that has on their behavior' (Cole & Rustuccia 2011, p.22).

Just as children need to learn to read and write, they also need to be *emotionally literate*, to be able to 'identify feelings in themselves and others and respond appropriately' (Cole & Rustuccia 2011, p.2). Fox & Lentini (2006) approached the issue of problem behaviour in children with trauma by drawing on a range of teaching resources based on educational models that target skill acquisition. The following table draws together some of those strategies.

'you got it!' addressing challenging behaviours	
educator's action/question	child's behaviour/educator's responses
Reframe problem behaviour	Challenging behaviour
What need is the child trying to meet?	Challenging behaviour is a skill learning issue and is a child's attempt met a need

| 'You got it!' addressing challenging behaviours	
educator's action/question	child's behaviour/educator's responses
Define essential skills for the child's successful participation in education: Which skill area is the child lacking?	Following rules, routines and directions Identifying feelings in oneself and others Controlling anger and impulses Problem solving Suggesting play themes and activities to peers Sharing toys and other materials Taking turns Helping adults and peers Giving compliments Understanding how and when to apologise Empathising with others Recognising that anger can interfere with problem solving Learning how to recognize anger in oneself and others Learning how to calm Understanding appropriate ways to express anger
Use Stages of Learning[2] to teach social skills: Stage 1: Skill acquisition Stage 2: Skill fluency Stage 3: Skill maintenance and generalisation Which stage of learning is the child at?	Explain the new skill, demonstrate when it is used and what it is e.g. 'When you see your friends playing with a toy you want, you can watch them play, you can wait your turn or you can ask them for a turn.' Demonstrate e.g. show the correct way and incorrect way Give positive feedback e.g. 'Well done, you did it.' Provide opportunities for practice in daily activities e.g. modelling skills, using peers to practice, singing, playing and reading books Build fluency through repeated opportunities to practice. Repetition is the basis of neural development and new skills need practice Promote maintenance and generalisation e.g. 'You got it!'

Source: developed from Fox & Lentini (2006, pp.3-7) based on The Pyramid Model (Hunter & Hemmeter 2009).
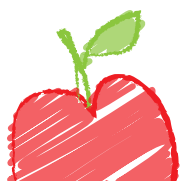
There are some universal teaching strategies that contribute to an optimum environment and benefit all children and there are others that are directed at meeting the developmental challenges facing children with trauma. The research evidence suggests:

> … an effective approach to addressing problem behaviour is the adoption of a model that focuses on promoting social-emotional development, providing support for children's appropriate behaviour, and preventing challenging behaviour (Sugai et al. cited in Fox et al. n.d., p.1).

Intensive individual interventions

Some children will require intensive individual management plans. This may include the use of a multi-disciplinary team. All models of trauma sensitive education advocate partnerships with families and local specialist services to best meet the needs of children. Children and educators benefit from the use of additional expertise to help assess underlying issues, develop intervention and management strategies, implement plans and monitor progress. Individual plans should be based on observations, interviews and appropriate assessments of children. Plans should include prevention strategies, and where possible, should be implemented across all arenas of the child's life (Hunter & Hemmeter 2009).
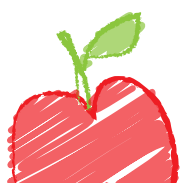
Practicing self-care

Working with children with trauma is uniquely rewarding and challenging. It requires early childhood educators to use their unique personal qualities as they forge purposeful relationships as the forming of a relationship with the child and family is the base for all intervention. Those working closely working with children with trauma may be at risk of 'vicarious trauma' or 'compassion fatigue' (Figley 1995; Pearlman 1999). This is sometimes called the *cost of caring*, and refers to the cumulative impact of witnessing the impact of trauma, or sometimes, to symptoms that may be similar to the person with trauma, such as intrusive thoughts. This may particularly be the case if an educator has had traumatic experiences in their own life, such as violence or abuse. Foundation House (2011 p.55) warns that educators may experience a range of feelings such as helplessness, guilt, anger, fear, or avoidance reactions. However, research on professionals such as child protection workers, suggests that most workers do not develop these negative effects, continue to have fulfilling and satisfying jobs and to operate effectively. Many develop and demonstrate resilience in the face of the adversity they witness (Russ, Lonne & Darlington 2009).
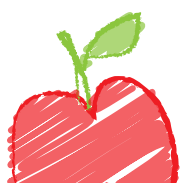
Protective measures include:

- Ensuring your school/service provides adequate support, supervision and guidance
- Talking to colleagues and sharing your feelings
- Practicing self-care strategies
- Seeking professional development
- Knowing your limits and seeking supports.

For most people, working with children with trauma and contributing to their learning and development will be a rewarding and fulfilling experience.
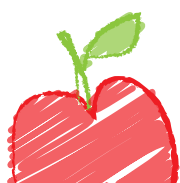
useful resources

author/organisation	description
American Academy of Experts in Traumatic Stress http://www.aaets.org	Articles and audio resources discussing the types of trauma and its impact on children
Australian Centre for Posttraumatic Mental Health, University of Melbourne http://www.acpmh.unimelb.edu.au/ (Search: children and trauma)	Fact sheets
Australian Child and Adolescent Trauma, Loss and Grief Network, Australian National University http://www.earlytraumagrief.anu.edu.au/resource_hubs	Information, videos and podcasts including *How children and young people experience and react to traumatic events* (a booklet produced for the Victorian Bushfire Support and Training for Affected Schools Project, May 2010)
Australian Childhood Foundation www.childhood.org.au	Online training
Bouverie Centre www.bouverie.org.au	Provides specialist family sensitive and family therapy services to Victoria's Public Mental Health Services
Centre for Early Childhood Mental Health Consultation http://www.ecmhc.org/tutorials/strengthening/index.html	Online training
Centre for National Research on Disability and Rehabilitation Medicine, University of Queensland www.uq.edu.au	*Childhood Reactions to Trauma: A Guide for Teachers from Preschool to Year 12*
Child Safety Commissioner http://www.ocsc.vic.gov.au	*Calmer Classrooms: A Guide to Working with Traumatized Children* *From Isolation to Connection: A guide to understanding and working with traumatised children and young people*

author/organisation	description
Child Trauma Academy Dr. Bruce Perry) **www.childtrauma.org**	Range of publications on brain development, neglect, child development and trauma
Child Welfare Information Gateway, US Department of Health and Human Services **http://www.childwelfare.gov.au**	Clearinghouse with range of resources including *Understanding the Effects of Maltreatment on Brain Development*
Department of Human Services, Victoria **http://www.dhs.vic.gov.au/for-service-providers/children,-youth-and-families**	Child development and trauma resources
Early Childhood Australia **www.earlychildhoodaustralia.org.au**	Range of publications
Jasper Mountain (Dr. Dave Ziegler) **http://www.jaspermountain.org**	Range of publications including *Optimum Learning Environments for Traumatized Children: How Abused Children Learn Best in School and Understanding and Helping Children who have been Traumatized*
Massachusetts Advocates for Children **http:// www.massadvocates.org**	*Helping Traumatized Children Learn*
National Child Traumatic Stress Network **http://www.nctsnet.org**	*Child Trauma Toolkit for Educators*
National Scientific Council on the Developing Child, Harvard University **www.developingchild.net**	Articles, videos and research reports
Professional Quality of Life **http://proqol.org/**	Professional self-care resources

author/organisation	description
Royal Children's Hospital Melbourne **www.rch.org.au/mhs/afvp** or **www.mcauleycsw.org.au**	*Refuge for Babies in Crisis*
Sanctuary Model **http://www.sanctuaryweb.com**	Articles about attachment and trauma theory, creating safe learning/service environments for learning
State of Washington, Office of the Superintendent of Public Instruction **http://k12.wa.us/ CompassionateSchools**	*The Heart of Learning: Compassion, Resiliency and Academic Success*
Teaching Strategies for Early Childhood **http://www.teachingstrategies.com/ page/AU_HurricianeRelief.cfm**	*Helping Young Children Rebound After a Natural Disaster*
Technical Assistance Centre on Social Emotional Intervention **http://www.challengingbehavior.org**	Research reports, webinar and guides e.g. the Pyramid Model
UCLA, Center for Mental Health in Schools **http://www.smhp.psych.ucla.edu**	Clearinghouse for resources and educator interchange
Western Reserve Public Media **http://westernreservepublicmedia. org/trauma/**	Stories, videos and reference materials
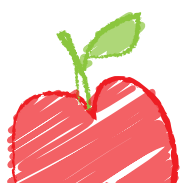
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(Footnotes)

1   These are also primitive in an evolutionary sense.

2   Several specific strategies are provided in Fox & Lentini (2006) available at http://www.naeyc.org/filesyc/files/200611/BTJFoxLentini.pdf

Notes

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