

# Evaluating frameworks for practice in mainstream primary school classrooms catering for children with developmental trauma: an analysis of the literature

## Article

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## Abstract

Integral to the protection of children against ongoing abuse and neglect and trauma experiences are teachers and school-based staff. This paper aims to discuss and reflect on the practice frameworks, models, approaches and programs that exist in mainstream school contexts to address the developmental and learning needs of children in primary schools who have experienced trauma in their early childhood years. This paper explores the importance of enablers, finding exceptions to the practices that often limit the support of ongoing protection of children in schools and the importance of the willingness, confidence and capacity of school-based staff. This paper proposes areas of future research to address the identified gaps existing for children with developmental trauma trying to learn and exist in a schooling system that is struggling to meet their needs.

Throughout the past three decades, a richer understanding of the impact of early childhood abuse and neglect has infiltrated many social systems in modern society. Indeed, the adverse impact of developmental trauma experiences on the educational, physical, emotional and mental health of children is well established throughout the literature.

Mitchell et al. (2017) discussed the impact of developmental trauma on the social-behavioural success and academic capacity of students and the subsequent challenging behaviours they display, which then leads to these students experiencing exclusionary practices that interrupt their academic and social development. Children who grow up living in poverty will often attend school burdened with stressors that negatively impact their social and emotional development and, due to the trauma associated with poverty, display significant challenging behaviours. Within a schooling context, these behaviours can cause mental health concerns and affect their capacity to integrate successfully into classrooms and attend to their learning (Blitz et al., 2020).

Children who are deemed by state child protection services as being harmed or having an unacceptable risk of harm may be removed from their family of origin and placed into out-of-home care. Children who are deemed to be at risk of harm but are not removed from their family of origin will often be matched with a pre-statutory intervention service, such as an intensive family support (IFS) service. These cohorts of children are among the most educationally vulnerable in our communities.

An understanding of the effects of abuse and neglect rarely occurs as one subtype, with the impact being more severe for multi-trauma-type experiences based on the concept of cumulative harm, where the effects on the child can be seen as chronic, recurrent and prolonged (Walsh et al., 2019). Developmental trauma is defined as trauma experiences that are invasive, of an interpersonal nature, are sustained, and can occur in utero, during infancy or during early childhood. Traumatic events that can result in developmental trauma are influenced by a number of factors, including the age of the child, the nature of the maltreatment, the relationship between the child and the perpetrator, the balance of risk and the protective factors in the child's life.

The consequences of prolonged traumatic events may span multiple developmental domains and include negative changes to brain structure and functioning and undermine normal developmental processes (Bartlett et al., 2018). Complex trauma can include abuse and neglect and may affect a child's attachment with their caregivers, as well as their cognitive functioning, concept of self, social relationships and emotional regulation (Kisiel et al., 2013). This differs significantly to a traumatic event that is acute in nature but an isolated incident, such as a significant weather event or a car accident. Traumatic events that are not repetitive and prolonged rarely result in developmental trauma outcomes.

Gubi et al. (2019) described the single incident traumatic events that frequently dominate the media landscape (e.g. school shootings, kidnappings and natural disasters) as events that result

in more discrete and conditioned responses. These events can act as a reminder of previous trauma for individuals and are frequently captured in a diagnosis of post-traumatic stress disorder (PTSD). Children with developmental trauma experiences have endured complex trauma, which according to Briere and Lanktree (2012) is prolonged trauma of an interpersonal nature that most often occurs during childhood and involves extended abusive treatment at the hands of caregivers or other adults who should be a source of protection and security.

Children who have developmental trauma face challenges that hinder their academic success, school engagement, relationships and social and emotional development. Weitzman (2005) discussed how trauma inflicted during a child's earliest developmental period can have a substantially greater impact on their cognitive, social and emotional growth than it would on older children. As children age, they develop the capacity for self-soothing, emotional regulation and a more mature sense of self, which allows them to better cope with and recover from traumatic experiences compared to their younger counterparts (Brunzell et al., 2016).

The Adverse Childhood Experiences Study (ACES), originally conducted by Felitti et al. (1998), demonstrated the relevance of risk factors for children who endure traumatic experiences in early childhood and later exhibit poor outcomes. The study highlighted the powerful linear relationship between the impact of trauma experiences, the number of adverse experiences and mental and physical health outcomes. For example, the study indicated that adverse experiences in childhood are linked to major causes of mortality, such as heart disease, obesity, substance misuse, suicide, depression, domestic abuse and sexual risk taking. The higher a person's ACE score, the more likely they are to experience poor educational outcomes, poor employment outcomes, relationship breakdowns and poorer life satisfaction (Felitti et al., 1998).

Children who have experienced trauma are often challenging to teach and/or establish a rapport with (Walsh et al., 2019). The consequences of developmental trauma are most clearly observed in children's impaired cognitive functioning, behavioural problems, poor social and emotional development and poor mental health (Maguire et al., 2015). The impact on teachers when managing children with complex trauma behaviours without the knowledge and skill base to address social-emotional health of students and not having an awareness of how trauma impacts the development of a child can lead to over-reactive responses by the teacher resulting in student noncompliance and social seclusion (Weed Phifer & Hull, 2016). Teachers are also experiencing vicarious trauma or Secondary Traumatic Stress (STS) when they are repeatedly exposed to the symptoms and stories of the child's trauma experiences. When teachers are well supported and equipped to respond to the ongoing complex trauma needs of their students this facilitates resilience and retainment ensuring the longevity of teachers in the profession (Bloom & Farragher, 2013).

Despite the well-documented evidence linking early childhood trauma with significant psychological distress (Maynard et al., 2019), developmental trauma has been excluded from the taxonomy in the Diagnostic and Statistical Manual of Mental Health Disorders (American Psychiatric Association, 2013). This poses difficulties when diagnosing children and young people and trying to ensure they receive the most appropriate treatment plan (Rahim, 2014). Although the number of PTSD clusters in the new DSM-5 increased from three to four, which means it captures more behavioural symptoms and is more developmentally sensitive (Grohol, 2012), the existing diagnosis of PTSD still does not

account for disturbances related to affect, attachment and somatic difficulties (Rahim, 2014).

Teachers and school-based staff are integral to the protection of children against maltreatment, trauma and ongoing abuse and neglect. This paper aims to discuss and reflect upon the frameworks that exist in mainstream school contexts to address the developmental and learning needs of children in primary schools who have experienced trauma. Further to this, an analysis of key theoretical components of Trauma-Informed Care (TIC) frameworks, whole of school multi-tiered approaches that integrate TIC principles and practices into TIC frameworks along with the impacts on students and teachers will be discussed.

## Trauma and educational settings

### *Developmental psychopathology framework*

Schools are fundamental for a timely response to the suspected harm of children (Hawtin & Wyse, 1988). Milner and Blyth (1988, p. 9) argued that, 'the pupil-teacher relationship is unique in the sense that no other adult in authority enjoys such an intense, continuous and private relationship with a child'. Throughout the literature, developmental psychopathology is discussed as an emerging integrative framework that assists with understanding the behaviours of children with developmental trauma and associated mental health concerns (Masten, 2003).

Developmental psychopathology is a systems framework that considers normal childhood developmental processes and then compares it to the abnormal development of a child to gain an understanding of the child's needs. This framework considers the origins and the developmental course of the disordered behaviour, along with the child's adaptation and competences. Within the context of developmental trauma in a classroom, this model could be useful if a teacher was able to understand the factors that impact the ACE score, such as the age of the child when the trauma occurred; the risk and protective factors in place; the harm caused; the relationship between the child and the perpetrators and the intensity, duration and frequency of the trauma.

The developmental psychopathology framework considers various pathways regarding how a child adapts to their circumstances, which provides information for interventions. For example, this framework lends itself well to applied behavioural analysis approaches based on the concept of causal factors to the disordered behaviour (Wicks-Nelson & Israel, 2016). Indeed, it is now often suggested that the developmental psychopathology framework be utilised within schooling contexts. This is supported by Weed Phifer and Hull (2016) who discuss the importance of classroom teachers collaborating with school and community-based mental health professionals to benefit from additional resources as a part of a mental health initiative to support children with trauma experiences in the classroom. As with many approaches, however, when this framework is implemented it conflicts with the traditional, mainstream modes of teaching and educational models, resulting in low levels of success for this cohort of our population (Weitzman, 2005).

### *Trauma-informed practice frameworks*

It is a commonly held idea throughout the literature that classroom teachers are well-placed to identify changes in a child's presentation or behaviour that may be a result of them experiencing harm (Bryce et al., 2019). The literature also clearly states that teachers are best placed to respond in a therapeutic manner to children who may exhibit behaviours indicative of developmental trauma. There

is disparity and confusion regarding how this occurs within the school context, however.

It is strongly acknowledged in the literature that schools play an important role in the protection of children and that when this protective factor is no longer active in a child's life, they become increasingly vulnerable (Powell & Davis, 2019). Indeed, children who do not attend school regularly or who engage in school refusal are often associated with other problems in the community, such as drug use, criminal behaviour and mental health concerns (Hurren et al., 2018). This is further reinforced by Wessells (2015) and Wessells et al. (2014, p. 9), who stated that, 'Participation in education frequently protects children from exposure to other harms such as child exploitation or drug abuse'.

The current rate of suspensions, expulsions and school refusals is indicative of an education system that is not catering to the 5%–10% of children who are demonstrating complex needs, including those who are struggling with trauma because of abuse and neglect (Morgan et al., 2015). This is further reinforced by Morgan (2017, p. 43), who argued that, 'suspension, expulsion or early school leaving, and subsequent disenfranchisement of young people may be indicative of a lack of a system to accommodate the diversity of students' life circumstances and learning needs'.

Morgan (2017) also stated that for successful outcomes to occur for children who have experienced developmental trauma, teachers need to alter their professional identity and become critically reflective regarding their teaching practice. Morgan proposed that teachers prioritise relationships and accept that children who have experienced trauma require a different mode of interaction with adults than what may have occurred historically in conventional public-school settings. Indeed, trauma-informed practice frameworks have generally been shown to make a significant difference to children who have experienced trauma, abuse and neglect (Perry, 2009).

TIC is becoming a prominent approach of many schools globally to help meet the needs of children they support who have experienced trauma (Christian-Brandt et al., 2020). Schools are in a prime position to implement school-wide TIC approaches which Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) defines as an approach that realises the impact of trauma on individuals, recognises the symptoms of trauma and responds by integrating knowledge about trauma policies and practices and seeks to reduce re-traumatisation of individuals (Weed Phifer & Hull, 2016). Throughout the literature it is evident that programs that are formed within the existing structures of a school community and implemented through a tiered approach are more likely to be successful (Thomas et al., 2019). According to Weed Phifer and Hull (2016) for schools to adopt a TIC approach, three essential factors are required to be embraced. These include teachers to engage in professional development and ongoing training, access to professional consultative services and ensuring direct clinical supports that use evidence-based therapeutic interventions. To accomplish this, Thomas et al. (2019) have identified that schools need support from education leadership to employ a systems-level change which can take significant time to implement and establish, however should be viewed as an investment rather than a roadblock (Weed Phifer & Hull, 2016). According to Thomas et al. (2019), essential factors in any framework that will support students with a trauma history include classroom practices that are trauma sensitive, relational and responsive, changes to school-wide policies and procedures, all of staff professional development and strong collaboration between

school staff and mental health professionals inside and outside the school setting and connections with expert trauma-informed consultancy services. Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) have also outlined six key principles that should guide a TIC approach: safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment and cultural, historical and gender issues (Christian-Brandt et al., 2020).

Chafouleas et al. (2016) posited that the six principles to a trauma-informed approach to care should include all practices focussed toward generating a positive environment, development of key relationships and encouraging individual competence for each student. This concept represents the first of the four 'R's' that Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) outline all practices should be grounded in. The four 'R's' include *realisation*, about trauma and its effects in individuals; *recognition*, of the signs and symptoms of trauma; *responses*, that appropriately embrace trauma understanding across the multiple tiers of service delivery and *resist*, practices that could inadvertently retraumatise individuals (Chafouleas et al., 2016; SAMHSA, 2014). By incorporating the four 'R's' into school-based TIC, the proposed outcomes of this approach, which include preventing adverse events and experiences from occurring, building self-regulation capacity in students and teachers, assisting students and teachers showing adverse effects in returning to prior functioning and avoiding retraumatizing students and teachers who have experienced adverse events (Chafouleas et al., 2016; SAMHSA, 2014), are likely to be achieved.

Many well-known theoretical bases for intervention are the foundations for discussions regarding the development and implementation of models and programs, including developmental systems theory (Ford & Lerner, 1992), resilience theory (Luther, 2003), ecological systems theory (Bronfenbrenner, 1979) and systems-informed positive psychology (Seligman, 2014). A notable barrier to the effective implementation of many of these approaches is the differences in practice when enacting education models, mental health models and social work models within the same context (Masten 2003). The disparities between the professional frameworks and the associated professional conflict that often arises does not allow for the effective implementation of change processes for children with developmental trauma (Beddoe, 2018).

There is an approach used in an independent school based in Brisbane, Australia, that caters to a diverse multi-cultural population and students who have developmental trauma or complicating factors that may impact their schooling (O'Gorman, 2017). The school employs a child and family therapist to help students and families and support teachers and school staff in addressing the trauma-based presentations of their students. This approach is based on systems theory, whereby the paradigm for practice is to move from working with the student as an individual to the family as a system (O'Gorman, 2017).

Although this approach has been reported as being effective, there is yet to be any research that supports this claim. There are also a number of barriers associated with this approach, such as parents being unwilling to engage in family therapy sessions within a school context and school staff not understanding the social work constructs that form the therapeutic framework used by the child and family therapist. Other areas of concern include the capacity of the therapist to develop a relationship with the parents when they are based within a school and the role does not facilitate them working within a home context.

The approach of multisystem models of human development, cognition and learning and psychopathology is being trialled in a number of contexts across the globe. Furthermore, there is a practice framework in New Zealand called 'Social Workers in Schools' that began 30 years ago. A recent qualitative evaluation by Beddoe (2018), however, found that although the program was beneficial for identifying and responding to child abuse and neglect within a school context, the education staff not understanding the social work framework was a significant barrier. The study identified how adversarial relationships can occur when the different frameworks are not understood by the professionals operating within the same context (Beddoe, 2018).

#### *Evaluating trauma-informed approaches from an ecological systems perspective*

The 'Social Workers in Schools' program uses an ecological framework focussed on addressing the needs of families who have children who are at risk or who have experienced abuse and neglect. The role provides cultural support and resources to families and teachers, educates staff about child abuse and neglect and forms a bridge between the school and the child protection authorities to reduce their long-standing adversarial relationship (Beddoe, 2018).

This program has been operational for the past 30 years and a qualitative study conducted in 2018 revealed it had significant limitations that impacted the outcomes for children. These limitations were summarised by Beddoe (2018) and included teachers having a lack of opportunities to consult with social workers when they were concerned about a child being potentially harmed, resistance from education staff regarding parents being in the school, a lack of cultural competency within the practice, teachers requiring more professional development to understand and respond in a timely manner to child abuse and neglect and social workers being spread thinly across multiple school sites and having inadequate resources to support schools with the need that is present. These limitations presented significant barriers when addressing developmental trauma in children in a mainstream schooling context.

Bronfenbrenner (1979) proposed the ecological systems theory of human development, a multilevel and transactional framework, to explain the many influences and competing demands on a child or young person. This theoretical framework can be applied to a school-wide and community system to explain the ecological impacts on a child who has experienced developmental trauma. The cylindrical model begins with a core circle that highlights the child and the impact their caregivers and their caregivers' history of abuse and neglect have on them (Belsky 1982, as cited in Tillbury et al., 2007). The second circle draws attention to family, siblings and (within a schooling context) the classroom teacher and the relationships the child has with these key people.

This second circle is the micro-system, which is focussed on the interactions between the child and the teacher and examines how the child, their peers and the teacher perceive and respond to each other (Scannapieco & Connell-Carrick, 2005). It is here, in this micro-system, where trauma-informed pedagogy can be enacted by the classroom teacher. Positive relationships or teachers being relational with students have been shown to lead to more positive outcomes and greater academic success, and trauma-informed practice frameworks have made a significant difference to children who have experienced trauma, abuse and neglect (Perry, 2009).

The third circle is the exosystem, which includes the entire school as an influential social structure, for example, the school leadership, other teachers, teacher aides and administrative and auxiliary staff. This is the system that is grounded in the concept

of TIC. The model of care that a school embraces has a significant influence on the practices of the classroom teacher and filters down to the child and their family (Childs, 2014). The exosystem, wherein the school climate and culture are determined, can include expectations of teachers' professional development priorities and classroom practices.

Several schools in Queensland have adopted a school-wide positive behaviour support (PBS) framework that adopts a three-tier prevention and intervention method to support all students. As of 2010, it is believed that 80% of students can comfortably navigate their education and remain in the green zone (Tier 1). Crone et al. (2015) claimed that observations of a function should be applied at all levels of this tiered model and argued that the Tier 1 approach, if explicit at this entry level, would lessen the need for interventions at Tiers 2 and 3. They also argued that at the Tier 1 level, the establishment of consistent consequences and expectations would dampen rule infractions.

If the targeted social skills instruction recommended by both Crone et al. (2015) and Fabiano and Pyle (2019) is not offered to Tier 1, however, a greater number of students will move into Tier 2. The yellow band (Tier 2) percentage currently sits at 15%. It is vital to accept that there is a correlation between disengaged students who may have experienced trauma and the approaches to social and emotional learning (SEL) programs in education (Cannon et al., 2013). The remaining 5% are in the red or high-risk zone (Tier 3), which is for candidates who require functional behavioural analysis and behaviour support plan interventions. Most of this group will have experienced some type of childhood trauma. Research has shown that PBS has been related to positive outcomes for both students and teachers (McIntosh et al., 2016), including increased emotional regulation in students (Bradshaw et al., 2015), reduced problem behaviours in students (Bradshaw et al., 2010; Kelm et al., 2014) and increases in teacher morale, efficacy and job satisfaction, leading to teacher longevity (Bradshaw et al., 2008; Kelm et al., 2014; Ross et al., 2012). In their review of the overall effectiveness of PBS, Horner et al. (2010) found the framework to have 'sufficient experimental documentation' (p. 11) to be considered an evidence-based framework and that this warrants the framework to be implemented across education systems on a larger scale.

The exosystem is influenced by the largest circle in the model, known as the macrosystem. The concentric layering of the circles highlights the connections between individual students, families and the broader social, cultural and community context. It is the macrosystem that dictates and influences what the community expects of a school, and this is then highlighted in the other systems. If a community expects a nurturing, positive approach that is student-centred and involves an atmosphere of engagement and opportunity, this may guide the school (exosystem) into becoming a PBS school. This may then impact a teacher at the micro-system level and cause them to become relational and engage in trauma-informed pedagogy, which would benefit all students in their classroom.

Conversely, the expectation in some communities (macrosystem) is that there should be a zero-tolerance approach to non-compliance, aggression and the emotional and social challenges that result in challenging and disruptive behaviours, as discussed in the literature pertaining to the school-to-prison pipeline phenomenon (Elias, 2013). This results in the exosystem (school community) using more punitive responses, such as suspensions and expulsions and in more severe cases, students being arrested at school (Elias, 2013). This then leads to high rates of student non-engagement and more at-risk students entering the justice system (Heitzeg, 2009). An approach like



this flows through to the micro-system and influences how classroom teachers respond to challenging behaviours, which can stimulate a threat response from a child with a trauma background. This threat response may then result in a punitive response by the teacher and school administrator, increasing the impact of the child's trauma.

This theoretical multidimensional framework promotes a holistic analysis, demonstrating the impact of many systems on the teacher, and ultimately, the child. It also highlights the differences between TIC (exosystem) and trauma-informed pedagogy (micro-system), with the latter involving the classroom teacher utilising relational practices that focus on enhancing child development and classroom learning through healing, growth and achievement. The strategies that are embraced when engaging in trauma-informed pedagogy are strength-based, therapeutic and focussed on relationships, language and modelling.

Trauma-Informed Positive Behaviour Support (TIPBS) is a program that integrates TIC principles and practices into the PBS framework to support the implementation of TIC within schools. TIPBS is based on elements of Attachment Theory (Bowlby, 1969) and Developmental Traumatology (De Bellis, 2001) and provides students with a process of social-emotional support and teaching with the aims of reducing challenging or dys-regulated behaviours, while supporting the development of pro-social behaviours and self-regulating capacity of the student who has experienced developmental trauma. TIPBS aims to assist teachers and all school staff to become trauma-informed, realising that students presenting with challenging behaviours may be as a result of trauma, often from child maltreatment. It then aims for schools to become trauma responsive, ensuring proactive evidence-based interventions are planned to manage and engage students who may present with developmental trauma. The TIPBS program also aims to assist teachers in providing mutual support, increasing self-efficacy in working with students on the trauma continuum and promote the idea of self-care.

### *Ecological systems theory and the barriers to developing shared frameworks for trauma-informed care*

According to the ecological systems framework, teachers may be affected by a number of barriers at different levels of the system that influence their decision to engage with trauma-based professional development and training. The macrosystem and exosystem can significantly affect a teacher's views, perceptions and practices in a classroom setting.

An intervention implemented in a midwestern residential centre in America has been proposed as being suitable for implementation in schools as part of a wraparound holistic approach to supporting the healing and behavioural change of children with developmental trauma (Purvis *et al.*, 2014). This approach is known as trust-based relational intervention (TBRI) and is described as an attachment-based intervention for children from hard places that shares with trauma-informed interventions and has a focus on safety, connection and regulation. The program focusses on caregiving rather than on a clinical model and has been found to be successful in residential facilities (Purvis *et al.*, 2014). It is yet to be implemented in mainstream schools, however, and while the principles of empowering, connecting and correcting are transferable to a school setting, being able to provide the resources needed to support the program in its entirety is questionable due to the intensity of the intervention.

A common theme throughout the literature is the desire for schools to become trauma aware and to implement trauma-informed

practice through relational pedagogical approaches across the school. The literature embraces this approach, which is based on attachment theory and suggested for use with children who exhibit a spectrum of trauma-based behaviours, including school refusal, disengagement, opposition and defiance, violence, non-compliance, bullying and self-injurious behaviours (Morgan, 2017). Relational pedagogical approaches, which are focussed on the teacher developing trusting relationships with the student that are proactive rather than reactive, are prominent throughout the literature when discussing this framework of practice. Morgan (2017) stated that teachers need to redefine their professional identity as being more relational and prioritise the student-teacher relationship over the academic aspects of their work to address the relational poverty in children's lives who have experienced developmental trauma.

### **Barriers to practice frameworks working within schools**

Although the idea of schools becoming trauma aware and implementing trauma-informed practices is gathering momentum, there is limited research on the outcomes for trauma-informed schools (Wiest-Stevenson & Lee, 2016). The concept of teachers becoming relational in their practice has proven successful in alternative education settings (Morgan, 2017), but there is little research that suggests that this approach within a trauma-informed attachment-based framework has been implemented or measured within mainstream schools.

Several consultative roles exist within the Australian state-based education system. School-based guidance officers are generally stretched between multiple school sites and often focus on diagnostic assessments rather than supporting teachers and students in a mentoring and counselling roles due to time and capacity limitations (Campbell & Colmar, 2014). When considering the measurable impact of school-based guidance officers, Australia lacks published reports detailing the effectiveness of this school-based counselling role (O'Gorman, 2017).

There are also officers known as principal advisors based regionally across Queensland. These officers are tasked with the specific mandate of consulting with schools on issues like integration, child protection, autism and disabilities and re-engagement. They generally have a massive geographical distance to cover and multiple schools to consult with, which significantly limits their effectiveness. This scenario possibly limits capacity for systematic influence, better outcomes for students and families as these officers are tasked with consulting and working collaboratively with schools rather than within schools (Campbell & Colmar, 2014).

Raver (2013) discussed the current emphasis on children's academic preparedness and how it continues to overshadow how important children's social and emotional development is to their school engagement and readiness (Raver & Zigler, 1997). Research indicates that young children's emotional adjustment matters, however, and that children who are emotionally well-adjusted have a significantly greater chance of early school success, whereas children who experience serious emotional difficulties are at risk of early school difficulties.

Other considerations that impact the decisions of educators include recognising that a student's developmental trauma may present in the form of a mental health diagnosis, such as PTSD or as complex behavioural patterns. This can impact teachers through experiences of uncertainty, lack of competence and self-confidence, vicarious trauma symptoms through interactions with traumatised students, lack of self-efficacy and poor levels of optimism (Berger, 2019). Teachers are in a prime position to

experience and suffer from STS as they respond to the effects of trauma in children. When teachers experience STS their reflective capacity or their ability to learn from their own experience become more aware of their own classroom interactions and their outlook of student's with trauma diminishes (Fox et al., 2019).

An important aspect to protect against STS and ensure longevity of teachers in the profession is that of prevention or early intervention of STS. Self-care or activities done with the intention of improving or restoring health and well-being (Hydon et al., 2015) such as hobbies, watching movies, exercise, spirituality or religious activities, meditation, using jokes and humour, gardening, camping, hiking, deep breathing and talking with a counsellor or psychologist have been identified as potential protective factors that help safeguard against STS (Caringi et al., 2015). Other protective factors against STS are reported to be support from colleagues, the opportunity to connect with peers and access to additional resources from external sources, such as mental health services (Caringi et al., 2015). Self-care needs to be a deliberate and intentional action on behalf of the individual for it to be successful, although it is important to recognise that the systems that employ and support people who may experience STS also have a role to play in providing self-care strategies and ensuring those affected are well supported from the organisation (Bloom & Farragher, 2013).

### Moving forward in research and practice

The literature suggests that teachers are overwhelmed, time-poor and focussed on the curriculum-based demands of the system rather than on the social and emotional needs of children with complex trauma backgrounds (Quin, 2017). The literature highlights the need for educators to think reflectively to address the threat to students' academic functioning and achievement posed by the impact of developmental trauma. In the context of the ecological systems framework discussed in this paper and the multi-tiered approaches to TIC in schools, the complexity of the factors affecting educators who embrace trauma-informed pedagogies can be better understood. According to Chafouleas et al. (2016), there is an increasing demand for trauma-sensitive schools and yet there exists a lack of empirical evidence to evaluate what specific elements of a trauma-informed school have contributed to improved outcomes for trauma-affected students.

These factors, coupled with the complexities associated with individual schools choosing to embrace TIC at the ecosystem level of the ecological systems framework, such as the multi-tiered PBS system and the broader social, cultural and community expectations of how challenging behaviour should be managed whether or not teachers decide to embrace trauma-informed pedagogy at the micro-system or classroom level. Not only do the administrators or principals need to commit to a school-wide TIC approach but also research has shown that teachers also require a level of buy-in to be committed to change and learning for a TIC approach to prove successful (Christian-Brandt et al., 2020; Pinkelman et al., 2015). The impact of these multi-layered systems on whether or not teachers decide to engage in the training and development of trauma-informed classroom practices is a significant area of proposed research.

Future areas of consideration for bridging the gap between research and practice may include the coordination and planning of factors. This includes school staff, social workers and mental health practitioners working collaboratively and developing an understanding and appreciation of alternative models, and the importance of working simultaneously within a common context. It is proposed that

this fits best within an ecological systems framework with a multi-tiered approach to TIC within the school context (Berger, 2019).

Questioning if the support, advocacy and intervention afforded to children with developmental trauma should sit with teaching and school-based staff only is a worthy conversation. Proposals for practitioners from varying sectors, including social workers, family specialists and mental health workers, being given important roles within the schooling context need to be considered for future models of practice to meet the needs of children with developmental trauma. The efficacy of having staff from sectors other than education who are able to work within schooling contexts and in the home to address concerns that are attributed to developmental trauma is yet to be measured, but the idea is worthy of consideration and an area of research for future studies.

The gaps that exist regarding the support being offered to students and families within the schooling context to address any trauma that is negatively affecting children's learning, school attendance, retention and readiness are evident. Addressing these gaps requires significant focus and a collaborative and coordinated approach by all sectors involved with working with children at risk of developmental trauma.

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