

Chapter 9

Trauma-Informed Practices for K12 Schools



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9.1 Introduction

In August 2017, Hurricane Harvey devastated the Houston area just as schools were starting back. Anticipating the needs of schools to support over 250,000 children affected by the storm, Mental Health of America of Greater Houston and UNICEF USA worked with Kognito to create a simulation entitled *Trauma-Informed Practices for K12 Schools* to introduce the concepts of trauma-informed practice to help educators build the skills to support students affected by trauma and other acute or chronic adverse experiences.

This training could not have come at a better time, for across the globe, young people are experiencing extremely challenging situations. Some students grow up facing violence, abuse, or neglect at home; others struggle in the wake of natural disasters, war, famine, loss of a loved one and poverty (Chen, Cohen, & Miller, 2010; U.S. Administration for Children, & Families, Child Maltreatment, 2014). In many ways the COVID-19 pandemic mirrors a natural disaster, as students face unprecedented obstacles such as higher instances of physical and mental abuse, neglect, grief, loss and social isolation, all of which can affect mental health (Aber et al., 2011; Copeland et al., 2007; Cullen et al., 2020; Miller, 2020; Reger et al., 2020; Salerno et al., 2020). Additionally, as the pandemic disproportionately affects black and brown communities and those with low socioeconomic status, it is clear

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that the impact extends across education and health disparities (Chappell, 2020; Dunn et al., 2020; Phelps & Sperry, 2020). The list can seem endless and, for our students, may lead to a long-term impact on their cognitive abilities, emotional processing, and physical health. Thus, a student who is in distress or has been traumatized can easily feel overwhelmed, unable to cope, unsafe, and will not thrive in a classroom environment, virtual or in-person.

The statistics from both natural disasters like Hurricane Harvey and human-made disasters such as school shootings, child abuse, sexual assault, violence within the household, loss due to death, or witnessing a traumatic event are numbing. According to the 2016 National Survey of Children's Health, nearly 35 million children and teens in the United States have experienced at least one type of serious childhood trauma (Carroll, 2015; Sack & Murphey, 2018). According to the CDC (2019), up to two-thirds of US children have experienced at least one type of serious childhood trauma, such as abuse, neglect, natural disaster, or experiencing or witnessing violence. These statistics are undoubtedly higher due to COVID-19. Trauma is possibly the largest public health issue facing our children today. Childhood and adolescent psychological trauma, including those who have high adverse childhood experience scores, often have profound long-term consequences on psychological and physical well-being, including neurophysiological brain development (McEwen, 2008; Shonkoff et al., 2012). We know that early detection and intervention of trauma increases the likelihood of recovery; thus, K12 educators and staff are well-positioned to become effective gatekeepers by implementing trauma-informed practices in their teaching.

In an effort to support educators and school personnel and address their need to be better informed in trauma-informed teaching practices, Kognito developed the *Trauma-Informed Practices for K12 Schools* simulation. The process of creating the simulation involves a multi-disciplinary mode, also developed by Kognito (Albright et al., 2016) and includes the following:

Phase One: Design: This design phase begins with a comprehensive needs and user analysis. This interactive process draws upon secondary research from journals, interviews with nationally renowned subject-matter experts (SMEs), and end-user focus groups to develop a blueprint for the simulation. The key deliverables include the instructional design plan, simulation design document, content analysis, behavior change model that includes the integration of evidenced communication strategies mentioned in a previous chapter, virtual human profile(s), and user stories.

Phase Two: Development: This phase includes scripting of all simulation content, narration by professional voice actors, creating 3-D virtual humans to operate in dynamic and life-like virtual environments, and design and testing of simulation analytics. Throughout this iterative phase, Kognito collaborates with SMEs and conducts focus groups to ensure authenticity and accuracy of the learning experience. At the end of development, beta testing with SMEs and end-users allows for any final refinements.

Phase Three: Analytics: Tracking and analytics are integrated into the simulation engine, which allows for the utilization of a variety of data sets to assess learner

outcomes. These include users' actual decisions/behavior in the simulation as well as their self-reported data. The simulation is connected to an online data portal that provides clients and research partners with access to real-time usage tracking, a series of dashboards and analytics to gain insights into behavior change, and direct access to the actual data for analysis.

Phase Four: Delivery: Phase four includes making the simulation available to users and providing users' organizations with ongoing technical assistance, maintenance, roll-out support, and implementation strategies. The simulation can be delivered via Kognito's Learning Management System or integrated with the organization's own system or website.

9.2 Background to the Learning Experience

Statistically speaking, there is probably at least one student in every classroom who has been traumatized. Their experiences drive the way they act and making *small* adjustments involving the classroom, school cafeteria, gym, and playground, etc., can make a *big* difference for them.

In the simulation, the learner hears about a student named Casey who liked being the center of attention in class. One time he was asked to stop talking while the teacher was in the middle of a lesson, and he pushed over a desk and yelled, "this class is total BS!" and then stormed out of the room. The whole class was stunned, and no one could focus afterward.

Now take a second and ask yourself:

- How would you react if this happened in your classroom?
- How would you explain Casey's actions?
- What would you want to say to a student?

Understandably, many educators would take this personally, get upset, maybe lose their cool, yell, and seek disciplinary measures. However, by shifting to a trauma-informed approach (Walkley & Cox, 2013), which can be very challenging, one has an opportunity to retrain themselves to see students differently. Of course, not all disruptive behavior in the classroom is due to distress or trauma, but instead of seeing this as something that needs to be managed and discouraged, it might be a sign of distress or trauma and an opportunity to approach the student using trauma-informed communication strategies. For Casey, it turns out his dad drank a lot of alcohol and Casey never knew what to expect. His father could fly into a rage at any moment—throwing things, breaking furniture, and screaming at him and his mom. When his dad was calm, any little thing could set him off, so Casey lived in constant fear and was always hypervigilant. People at school who were trying to help Casey through the years focused on his challenges around paying attention in class, but they missed the root cause of these behaviors—his chaotic home life. Thus, Casey felt like no one was trying to help, no one could figure him out, and he was on his own. His feelings of fear, anger, despair, and powerlessness over his situation changed the way he viewed and responded to the people around him. Giving students like Casey

detentions or low grades doesn't make them feel safer or less overwhelmed, so it doesn't change their behavior in the classroom. However, recognizing Casey's disruptive behavior and that wanting attention was a cry for help makes it easier not to take a student's behavior personally and provides an opportunity to help him.

Students like Casey and others can show signs of distress and trauma in a number of different ways depending on whether the student is in elementary, middle, or high school. A comprehensive list of what you might observe in students who have been traumatized, as well as trauma facts and suggestions for educators can be found on the National Child Traumatic Stress Network (2008). Specifically, the simulation overviews:

- Inattention, social withdrawal, extreme fatigue, distractibility, hyperactivity, aggression, being prone to angry outbursts, general disengagement, headaches, and stomach cramps.
- Gender differences that involve boys being more likely to externalize their emotions or act out whereas girls are more likely to internalize their emotions or withdraw.
- Age differences that result in younger students usually showing how they are feeling more, whereas older students often don't want to be noticed or seen as "weak" and hide how they are feeling more; they can also cope with distress by doing dangerous things like driving too fast, using drugs, or getting into fights.

Not all students who exhibit these warning signs have experienced trauma and not all students who have experienced trauma will exhibit warning signs. No one expects teachers to diagnose students, but if you are an educator, staff member or administrator who aims to be trauma-informed, you can start by recognizing the warning signs, reaching out to struggling students to let them know you care, and helping them find more constructive ways to cope and succeed in case they actually *do* need support. So, if one notices that a student regularly seems anxious, depressed, socially isolated, or agitated, or observes indicators that they might be engaging in risky behavior, in addition to approaching them with compassion, one should strongly consider referring them to a mental health professional in the school or community. The interactive role-play simulation provides practice in managing such conversations.

9.3 Adverse Childhood Experiences

In a previous chapter, we reviewed what adverse childhood experiences (ACEs) are, their impact, and how parents of young children and early childhood educators can prevent ACEs when they are correcting children's misbehaviors.

Since it's important, let's briefly review. Some ACEs are single events—like a natural disaster, a violent attack, or the death of a loved one. Others, like abuse in the home, may be ongoing. Some of our students experience a mix of one-time and ongoing ACEs. No matter the specifics, all ACEs can significantly impact a child's

ability to learn. Think about if any students you know might have experienced ACEs as you look at this list:

Lived with a parent or guardian who:

1. Got divorced or separated
2. Served time in jail or prison
3. Was mentally ill, attempted suicide, or was depressed
4. Behaved violently
5. Had a problem with alcohol or drugs

Have experienced:

6. A parent or other adult in the household often pushing, grabbing, slapping or throwing something at them, or ever hit so hard that it left marks or resulted in an injury
7. Not having enough to eat, having to wear dirty clothes, and/or no one to protect them
8. No one in the family loved them or thought they were important or special
9. An adult touching or fondling them in a sexual way

About three in every five children in the United States experience one ACE by the time they turn 18 and as many as one in three children experience *two or more* ACEs before the age of 18 (Bethell et al., 2017; Sack & Murphey, 2018). We now know that students from under-resourced communities are even more likely to experience multiple ACEs but, in general, ACEs can happen to students of all backgrounds, of all ages, and from all parts of the world with significant consequences on physical and mental health as described in a previous chapter.

Students can also experience distress or trauma which is a community-wide incident like a violent attack, hurricane (like Hurricane Harvey), earthquake, suicide, death of an important community member, and especially now, instances of prolonged trauma due to COVID-19. Many students will be affected and some will need long-term attention and support to recover. It's important to support each other after events like these and, thankfully, school can actually be a source of strength for students whose lives have been disrupted.

9.4 Trauma and Learning

A person's brain is in learning mode when they feel safe. They can predict what will happen in their environment and they have all their basic needs met. All of this really helps them to recognize and control their emotions and focus on learning. But when a person, especially a child, has experiences of an unsafe environment or intense danger, their brains are rewired to always be on guard for *more* harm or neglect. This ongoing vigilance makes the world (and school) feel unsafe and non-nurturing. In other words, it can be a *terrifying* place. Thus, when a child feels threatened or overwhelmed, or when something reminds them of a traumatic event,

their brains quickly go into a reactive mode (Herman, 2015). Their body is getting ready to respond in one of three ways: fight, flee, or freeze. Fighting means becoming physically or verbally hostile, like Casey, or maybe becoming the school bully. Fleeing can mean getting out of a physical or social situation, or avoiding it in the first place (again, like Casey). Freezing means becoming silent, unresponsive, or in a daze. Our brains have these evolutionarily driven instincts for a reason; they're a good way to respond to real danger, but are not practical in the K12 learning environment.

Because it is a quick, almost reflexive response, a student might not even realize what's happening or why they are fighting, fleeing, or freezing. So, it's important to try not to take those behaviors too personally, such as when a student refuses to do any work, won't stop talking to a friend, insults you or a classmate, makes fun of something you said, won't lift their head off the desk or even spits on your shoe, etc. This can be hard and requires one to step back, evaluate the situation, and if it's an opportunity to engage in trauma-informed teaching practices, be understanding, show compassion, and follow-up on an invitation to talk in a safe space. The word "safe" cannot be over-emphasized, for if the student feels judged, threatened with discipline, or not accepted, they might very well be triggered to activate the primitive and non-effective defenses they have relied upon in their past for their survival. Students must feel safe and supported before you can help them. One last thing, implementing trauma-informed practices does not mean changing the feelings that come up in dealing with difficult situations in the classroom. Instead, observe those feelings (such as anger, frustration, hopelessness, etc.), and at the same time, engage in trauma-informed practices. This will take practice, which is exactly what the role-play simulation will provide.

9.5 Teacher Burnout

The impact of distressed or traumatized students on teachers can be profound for there is only so much that teachers can do to keep themselves afloat. Teachers are struggling to balance overwhelming workloads and often do not feel that they are active participants in professional decisions that impact their daily lives. Unaddressed educator mental health isn't just a major public health concern for our teachers – it can also impact the quality of education that students receive from their teachers.

The National Commission on Teaching & America's Future found that high teacher turnover costs US schools about \$7.3 billion in losses annually (Carroll, 2015). Teacher turnover also tends to be higher in low-income neighborhoods, which already have limited resources due to poor funding and are more likely to have poorer academic performance that exacerbates issues such as generational poverty, which these communities are working so hard to resolve. Additionally, students in low-income neighborhoods have a variety of additional stressors that heavily influence mental health and student achievement (Evans & English, 2002; Morgan & Amerikaner, 2018; Ringel & Sturm, 2001).

Since teachers are already pushed to their limit, asking them to learn how to use trauma-informed practices in the classroom seems like adding another onerous layer of responsibility to what is already a job that is difficult to manage. Although teachers are not solely responsible for the mental health of their students, they are an important part of students' developmental years and can advocate for both emotional and academic student success. Teachers can and are an important part of mental health advocacy, just as parents, school counselors, the school administration, and the local community are. And, once learned, employing trauma-informed practices in the classroom provides the teacher with additional tools to help reduce the stress and frustration that comes with dealing with the consequences of distressed and traumatized students.

9.6 The Simulation

The learning objectives of *Trauma-Informed Practices for K12 Schools* include: (1) increasing knowledge and awareness about the types of experiences that can cause distress or trauma and how these relate to brain development, (2) recognizing when a student's behavior might be the result of trauma or distress, (3) talking with a student about how they might be feeling, (4) talking with a parent regarding your concern about their child, (5) problem-solving ways to adapt the classroom so that it can become a more comfortable place for students who have experienced trauma, (6) assessing the need for referral and motivating students to seek help when needed, and (7) considering educators' own needs for self-care.

The components of the *Trauma-Informed Practices for K12 Schools* simulation include:

1. Introduction: When users first enter the simulation, they meet their virtual coach, Jackie Torres, and begin to learn how to use trauma-informed practices to support their students. Ms. Torres provides an overview of conversation challenges: spotting warning signs, talking with a struggling student to improve their experience in class, and referring a student who is experiencing psychological distress or trauma.
2. Virtual role plays: The introduction is followed by three role-play challenges, one for either elementary, middle, or high school educators. These include conversations with:
 - (a) Noah, who is a junior in high school. Recently his grades have dropped, and he has been getting into some heated exchanges with other students. Noah has been checking in frequently to see if his papers or tests have been graded and if he can do anything to bring up his grades. Lately, he's seemed really tired and has been falling asleep in class. During class, he has been biting his nails, sometimes so much that his fingers bleed. Noah's brother, who was a highly recognized star athlete in school who Noah idolized, became a marine and was killed in action overseas. The learner is tasked with building trust



Fig. 9.1 Role-play conversation with Noah

and encouraging him to share, brainstorming solutions to any problems he identifies, and determining if he needs a referral to the school counselor (see Fig. 9.1).

- (b) Charlie, who is in the seventh grade, recently stopped participating in class discussions, sometimes not responding to her teacher or peers at all. Occasionally when called on, Charlie had no idea what the class had been discussing. She cried when asked about a recent drop in her participation grade and pleaded to be able to stay in “honors” the following year. There were multiple times when she was little that her dad abused the family dog and it is unclear if she may have been abused. Charlie got triggered when reading an assigned book about a dog that got hurt. Your first goal is to check in with Charlie. There’s a lot you don’t know, like why she’s spacing out. The learner will need to build trust and encourage her to share by asking open-ended questions, expressing empathy, and making specific observations (see Fig. 9.2.)
- (c) Lucas, a third-grader who seems tired and distracted, has been increasingly absent from school since a fire damaged his home and he has to live with extended family across town. Because of the loud noises in the house, he can’t sleep, and it now takes 1½ h to get to and from school. The learner needs to talk with Lucas using open-ended questions and reflections to encourage him to open-up about his situation (see Fig. 9.3).



Fig. 9.2 Role-play conversation with Charlie

3. At the end of each conversation challenge, users view a Performance Dashboard which contains a detailed analysis of their performance and how well they did in achieving their goals.
4. Student self-regulation exercises, which include class activities that help students learn to better manage their feelings. This can include breathing and being still exercises, observing thoughts and feelings, etc.
5. Conclusion: The virtual coach explores ways to support students who are not exhibiting warning signs. She summarizes learning objectives and reiterates how using a trauma-informed approach can improve self-esteem, confidence, resilience, and achievement for students and the user themselves.
6. Customized html page that provides school-specific referral information and other relevant resources.

9.7 The Study

Method: A total of 773 participants from Texas completed one of three *Trauma-Informed Practices for K12 Schools* simulations that contained a role-play trauma conversation for either an elementary, middle, or high school educator. To review the learning experience, participants role-played with emotionally responsive



Fig. 9.3 Role-play conversation with Lucas

virtual students that have memory and personality and react like real students who are experiencing psychological distress or trauma. It is by practicing these role-plays, and receiving ongoing feedback from the virtual coach, that participants learn how to use evidenced-based communications strategies such as motivational interviewing to approach, talk to and, if necessary, refer a student who is in distress or has been traumatized. All participants completed a pre-survey (baseline), then the simulation followed by a post-survey, and 2 months later, a follow-up survey.

9.8 Results

9.8.1 Demographics

- 80% of participants were female, 19% male and 1% other.
- Race/ethnicity data show that 47% were White, 28% Black, 3% American Indian, 1% Hawaiian/Pacific Islander, 5% Asian, and 15% Hispanic.
- Roles included 65% teachers, 4% administrators, 5% health/mental health specialists, 6% staff, 1% school resource officers, and 19% other.
- Average age was 45.

- Average years of experience in education was 14 years.
- 80% reported that they have a mental health professional at their school.
- 41% did not know whether that mental health professional was being adequately used.

9.8.2 Satisfaction

- 92% of participants rated the simulation good to excellent.
- 94% would recommend it to their colleagues.
- 95% said that the simulation had scenarios that were relevant to their daily interactions with students.

9.8.3 Knowledge and Ability

When comparing the pre-survey (baseline) to post-simulation survey responses, all items that measured knowledge and perceived ability significantly increased ($p < 0.01$) for educators and school personnel (see Fig. 9.4). This includes participants learning:

- How to recognize warning signs of psychological distress or trauma in students.
- Communication strategies to help a distressed student feel safe.
- How to talk with a distressed student about mental health support services (for middle and high school only).
- How to teach students activities to manage their stress and emotions.

Participants also reported a significant increase ($p < 0.01$) in understanding trauma-informed approaches in teaching.

Elementary educators reported significant increases ($p < 0.01$) in:

- Knowing communication strategies to use in discussions with parents.
- Ability to discuss concerns about a student's possible distress or trauma with their parents.
- Ability to inform parents about the availability of mental health support services for their child.
- Knowing where to take a student if they have been traumatized.

9.9 Beliefs Regarding Disruptive Students

An aspect of teaching that does not go unnoticed is the impact of students on their teachers. It can be difficult to teach students who act impulsively or are disruptive due to psychological distress or trauma. After taking the simulation, educators

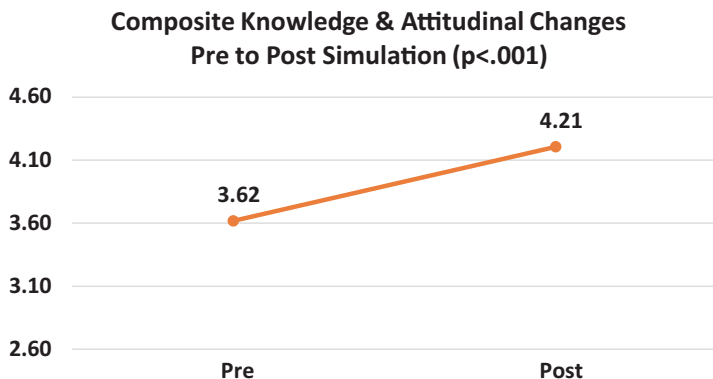


Fig. 9.4 Composite scores for the four knowledge and attitudinal changes as a result of the simulation. (Based on a five-point Likert scale)

showed significant increases ($p < 0.05$) in not taking it personally when a student makes a disparaging remark toward them. They also collectively decreased in their belief that students who disrupt their class do not care about learning. This type of attitude change is crucial for educators to better support students with mental illness or trauma as a way to step into their students' shoes, rather than instinctively reacting to correct disruptive behavior. It may also have an impact on teacher self-care, for they are not taking disruptive behavior as personally.

9.10 Impact on Behavior

Lastly, 2 months after completing the simulation, elementary, middle, and high school participants either agreed or strongly agreed that, as a result of the simulation, there have been increases in the number of:

- Students identified who might have been traumatized – 35%
- Students talked to regarding concerns that they may have been traumatized – 36%
- Students who were either referred or discussed a referral to support services – 30%
- Parents talked to regarding signs their child may have been traumatized (elementary educators only) – 25%
- Conversation with other teachers/staff about trauma-informed teaching – 46%

9.11 Discussion and Conclusion

The results show that the *Trauma-Informed Practices for K12 Schools* simulation had a positive impact on knowledge, and perceived ability to identify, talk to, and refer students who are experiencing distress or trauma. Additionally, there was an increased understanding of what trauma-informed practices are and how to implement them. Lastly, as a result of the simulation, participants reported increases in the number of students identified, talked to, and referred for the middle and high school settings and an increase in the number of parents talked to regarding concerns that their child is manifesting signs of distress or trauma.

The use of virtual human simulations to teach K12 educators, staff, and administrators to engage in trauma-informed practices holds tremendous potential in helping the significant number of students experiencing psychological distress or trauma. Recent advances in simulation and gaming technology offer unique advantages to the learner, many of which are discussed in previous chapters. It's important to reiterate that when learners role-play with virtual humans, they often report feeling less judged, safer, and more likely to be themselves, as opposed to face-to-face role-play conversations of a similar nature. Lastly, these types of online simulations also have the advantage of cost-effectively reaching geographically diverse populations in the privacy of their homes or offices 24/7.

To conclude, in this study, 46% of participants reported increases in conversations they had with other teachers/staff/administrators about trauma-informed teaching due to what they learned in the simulation. Therefore, as the number of K12 educators trained in trauma-informed practices increases, so will discussions with colleagues. This holds great promise for supporting public health initiatives aimed at shifting the mental health culture within schools, communities, and districts to increase support for recognizing, understanding, and referring students who are struggling with psychological distress, trauma, and other mental health issues.

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