

Chapter 3

Swimming Upstream: Preventing Adverse Childhood Experiences in Preparing Students for PK12



Glenn Albright and Nikita Khalid 

3.1 Background

Freud once made a statement that 90% of your personality is formed by age six. It's hard to imagine that 90% of who we are, the type of educator we become, the relationships we choose to be in, how we will bring up our children, and the hobbies we select are all influenced by the many subtle unconscious forces created in early childhood—experiences that we have little or no memory of. Freud made an unprovable assumption based on anecdotal clinical experiences, but none-the-less, he was one of the first to focus on the importance of early childhood development, attachment, and parenting.

Today, we know that early childhood experiences dramatically affect attachment and bonding to our primary caretaker(s), which in turn, will have a critical influence on brain development and ultimately how we navigate the educational system. Early childhood development has a direct impact on a student's cognitive, social, emotional, and even physical health. Those parents and educators and school personnel that create an atmosphere where the child feels safe, secure, understood, and loved will have a profound influence that facilitates curiosity, motivation to learn, empathy, emotional regulation, and socialization, which all together result from what is labeled as secure attachment. Secure attachment is the pre-cursor for a child thriving in PK12.

G. Albright (✉)

Department of Psychology, Baruch College, City University of New York,
New York, NY, USA

e-mail: Glenn.Albright@baruch.cuny.edu

N. Khalid

The Graduate Center, City University of New York, New York, NY, USA

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Switzerland AG 2020

E. Bradley (ed.), *Games and Simulations in Teacher Education*, Advances in Game-Based Learning, https://doi.org/10.1007/978-3-030-44526-3_3

3.2 What Are Adverse Childhood Experiences?

Adverse Childhood Experiences (ACE) are events that can produce trauma and occur during childhood and early adolescence. ACEs can be devastating for the PK12 student. They are measured by an ACE questionnaire, which includes 10 questions with yes or no answers that yield an ACE score by adding up the number of yeses. Items vary and include asking about whether a parent or other adult in the household swore at you, insulted you, put you down or humiliated you, or made you afraid that you would be physically hurt, or hit so hard it left marks. Other items address sexual abuse, or a household member being incarcerated, a problem drinker, divorced, mentally ill, or attempted suicide, etc.

For the PK12 students, high ACE scores can create a significant and devastating array of social, emotional, and physical consequences that can rob children of their ability to be successful. This has been demonstrated by dozens of ACE studies that not surprisingly show that high ACE scores can significantly affect a child's developing brain, resulting in their ability to function in school including: (1) executive functioning (e.g., follow directions, problem solving, etc.), (2) memory systems, (3) emotional regulation, (4) concentration/attention, (5) learning disabilities, and (6) social/behavioral problems (Litgen, 2013). On the other side of the coin, educators are on the front line in teaching and managing students who are struggling as the result of high ACE scores. This includes often feeling frustrated and overwhelmed due to lack of adequate support, classroom disruptions, and the time being taken away from other students. This contributes to teacher burnout and turnover.

In general, ACEs are surprisingly prevalent and a risk factor for a number of serious health conditions, even long into adulthood. One study found that 64% of the population reported having at least one ACE and, as the number of ACEs increases, so do the chances of a poor quality of life and a greater number of serious health conditions, such as ischemic heart disease, cancer, and chronic lung disease (Felitti et al., 1998). The process by which ACEs may lead to illness and earlier death in adulthood is still being investigated, but neuroscientists have found that experiencing any of the ACEs can lead to "toxic stress," which is a sustained state of the "flight, fight, or freeze" stress response that is normally activated only briefly in situations of perceived danger. Toxic stress may then cause unhealthy biological changes and impair social, emotional, and cognitive development, which can lead to behaviors that are a risk to health (McEwen, 2008; Shonkoff et al., 2012). Even if a child does not experience an ACE, their environment can cause toxic stress if the child is growing up in extreme poverty (Chen, Cohen, & Miller, 2010). Parenting doesn't have to be abusive to adversely affect a child's level of stress; when a child perceives low acceptance and affection from parents, the child exhibits more anxiety (Wei & Kendall, 2014).

Lastly, the cost of ACEs is staggering. Health-risk behaviors, illnesses, and shortened life spans associated with ACEs cost society years of lost productivity, in addition to costly targeted interventions after child abuse or neglect is reported. According to the Centers for Disease Control and Prevention, "The total lifetime estimated financial costs associated with just 1 year of confirmed cases of child

maltreatment (physical abuse, sexual abuse, psychological abuse, and neglect) is approximately \$124 billion” (Fang, Brown, Florence, & Mercy, 2012).

3.3 Why Are ACEs Occurring?

Children in PK12 who have high ACE scores are likely to be experiencing physical or emotional child abuse at home. ACEs that are often not intended can result from a loss of impulse control in the parent or caregiver (Pekarsky, 2014). They can also result from the parent or caregiver’s frustration and a lack of perceived alternatives. This is particularly true during the COVID-19 pandemic where the stress associated with social isolation, food insecurity, job loss and associated economic consequences can expose children to increased ACEs (Sanders, 2020). Physical punishments that parents engage in often have some effectiveness in the short term at producing a desired behavior in a child, which reinforces the parent to continue that type of punishment. But in the long term, it is ineffective and can lead to lower compliance by the child to requests and demands from the parent. The more a parent or ECE (early care educator) uses physical punishment, the more a child becomes aggressive over time, and this aggression from the child might then be punished by further physical punishment (Gershoff, 2002). The cycle often continues for parents, or ECEs become more frustrated and might then escalate the severity of physical punishment until it reaches a clear level of abuse (Gil, 1970; Felzen, 2002), which has a high probability of impacting the child’s behavior in the classroom.

Some families also have a cycle of harsh and abusive child-rearing that is perpetuated intergenerationally (Neppel, Conger, Scaramella, & Ontai, 2009). Parenting styles are often learned behaviors from their own experiences as a child, and some parenting techniques can be very unfamiliar to parents if they didn’t experience them in their own childhoods.

Lastly, parents may also have limited knowledge about child development and unrealistic expectations for their child. This can lead to parental stress and an escalation of punishments. For example, parents may mistake a toddler’s inability to understand instructions for defiance and punish them when it would have been more effective to model the desired behavior or to provide the instructions in a way that a child of that age can understand. Additionally, even if a child understands a rule, it does not mean the child will follow the rule. Focusing on positive behavior, rather than negative behavior, can be more effective in producing desired results.

3.4 Corporal Punishment

Corporal punishment is defined as the use of physical force with the intention of causing a child to experience pain so as to correct their misbehavior (Straus, 2001). Although corporal punishment can longer be used in US military training centers

(Department of Defense Education Activity, 2012), it can still be used in many U.S. schools. Corporal punishment is allowed in 35% of the world's countries (Global Initiative to End All Corporal Punishment of Children, 2016) and is still legal in two *industrialized* countries, which include the United States of America and the outback of Australia (McCarthy, 2005). In the United States, 19 states legally allow public schools to use corporal punishment as a means of correcting students' misbehavior (Center for Effective Discipline, 2015; US Department of Education, 2016). However, these "misbehaviors" are not solely meant to discipline students for serious issues, such as fighting on school grounds, but can include disciplining students for being late to class, using a cell phone, or violating a school policy (North Carolina Department of Public Instruction, 2015). The number of states that are able to use corporal punishment increases to 48 when including policies at private schools, which also do not report their student disciplinary action to the US Department of Education's Office of Civil Rights (Gershoff, 2017). Corporal punishment in schools can range from children being hit with a paddle to standing in painful positions for long periods of time and can legally be used in the select states any time from pre-school to high school graduation (Gershoff, 2017). Some states even have recommended types of paddles that teachers can use to hit their students. For example, in Alabama, the Pickens County Board of Education actually recommends the use of a "wooden paddle approximately 24 inches in length, 3 inches wide and ½ inch thick" (Gershoff & Font, 2016; Pickens County Board of Education, 2015). Most legal corporal punishment is predominantly located in the southern US states and disproportionately affects African American students, boys, and children with disabilities (Gershoff & Font, 2016).

The impact of corporal punishment on children and young adults can result in lower levels of academic performance, poor social competence, and decreased ability, or in other words, decreased self-confidence (Hyman, 1995). Children can develop feelings of inadequacy due to decreased self-efficacy brought on by poor disciplinary policies like corporal punishment. Inadequacy can also grow into feelings of anger or resentment (Hyman & Perone, 1998). Corporal punishment in schools is also not surprisingly related to higher rates of juvenile youth in line to receive capital punishment in the judicial system, more behavioral issues, and more crimes committed by young adults and children (Arcus, 2002; Hyman, 1995; Hyman & Perone, 1998).

3.5 Who Is This Problem Affecting?

Most directly, ACEs and toxic stress in the home are affecting children, which extend into the classroom and possibly long into adulthood in ways that are cutting their lives short. Improved parenting skills can help reduce some ACEs and also strengthen the relationship between parents and children, which is proven to protect children from the effects of toxic stress, possibly even reducing damaging effects on

health, learning, and behavior (Toxic Stress, 2015). Thus, reducing ACEs will more successfully prepare a child to easily navigate the educational system.

One last point, poor parenting techniques and ECE capital punishment in schools can also result in unnecessary stress for parents. Some common parenting techniques for instructing and disciplining children are not effective in producing desired behaviors in children. This ineffectiveness, and the continued undesired behavior, can be a source of great stress for parents (Neece, Green, & Baker, 2012), which Pre-K and elementary school educators can clearly detect when having conversations with parents about their children.

3.6 Understanding the Parents

Parents and ECEs sometimes have strong opinions that lie in opposition to some effective discipline techniques. Thus, they may be resistant to learning and practicing those techniques, because they believe that physical punishment is effective in the long term and even necessary for instilling discipline and character in children. This belief may be rooted in cultural norms, personal family history, or religious beliefs. Some studies have concluded that physical punishment can effectively improve behavior (Gershoff, 2002). However, this is not the prevailing view. Below are findings from the “Report on Physical Punishment in the United States: What Research Tells Us About Its Effects on Children,” a review of research on physical punishment published in the past century that draws from the fields of psychology, medicine, education, social work, and sociology, among others:

1. “There is little research evidence that physical punishment improves children’s behavior in the long term.
2. There is substantial research evidence that physical punishment makes it more, not less, likely that children will be defiant and aggressive in the future.
3. There is clear research evidence that physical punishment puts children at risk for negative outcomes, including increased mental health problems.
4. There is consistent evidence that children who are physically punished are at greater risk of serious injury and physical abuse” (Gershoff, 2008).

The report was endorsed by the American Academy of Pediatrics and the American Medical Association (Smith, 2012).

Parents and ECEs may also object to some effective parenting techniques, such as positive reinforcement of routine behaviors or inadequate behavior, because they believe these techniques will inadvertently reward and encourage less-than-ideal behavior. Parents may also believe that telling a child that a behavior is undesired should be enough for a child to cease that behavior. They may think that children don’t deserve positive reinforcement for following the rules or that their children

will be “spoiled,” overindulged, and self-centered. With a lot of conflicting parenting advice available, parents may be wary of the reliability of any advice, even if many studies have shown it to be effective.

3.7 Preventing ACEs: Solutions and Results

A number of non-profit organizations are addressing recent findings about ACEs, toxic stress, parenting techniques, and the protective effect of a supportive, responsive relationship with an adult. Such non-profit organizations include Healthy Families America, Family Connections, NJ, and Child First (Lowell, Carter, Godoy, Paulicin, & Briggs-Gowan, 2011). Depending on the specific family-support program, providers receive different types and lengths of training and are required to have appropriate levels of education. However, many family-support programs lack engaging and highly interactive materials about parenting skills to share with client’s families who have low literacy skills; thus, skills development can be compromised. Most mobile applications about parenting skills are largely text-based or are e-books with minimal interactivity that do not allow parents to practice parenting skills in the risk-free space of a computer application.

3.8 The Simulation: *Calm Parents, Healthy Kids*

Calm Parents, Healthy Kids is a virtual human role-play simulation developed by Kognito and designed to help parents to better manage their two to five-year-old child’s misbehaviors to reduce the risk of ACEs and promote attachment. This is accomplished by parents practicing role-playing with emotionally responsive virtual children that possess a personality and memory and will react like real children that are misbehaving. It is through practicing these role-plays, and receiving feedback from a virtual coach, that parents learn how to effectively manage their child’s misbehaviors in a way that prevents ACEs. The overall learning model is described by (Albright, Adam, Serri, Bleeker, & Goldman, 2016) and in the preceeding chapter entitled “Introduction to PK12 Professional Development Role-Play Simulation Technology.”

The general learning objectives involve parents and ECEs learning to:

1. Prepare for situations that are likely to involve parent–child and ECE–child conflict
2. Acknowledge your emotions toward the child to respond appropriately
3. Limit consequences to those that focus on the child’s behavior and their sense of safety or self-esteem
4. De-escalate situations and draw attention to the desired behavior instead of the undesired

3.9 Components of the Simulation

The simulation begins by the parent being introduced to their virtual coach Jessica (seen Fig. 3.1). Jessica has worked with families as a certified parent educator for the past 10 years and has a Bachelor of Science degree in early childhood development. She is a 38-year-old mother, with a 10-year-old son and a 4-year-old daughter. She doesn't expect anyone to be a "perfect" parent and believes every parent should explore what works best for them and for each of their children. She'll note that parents with more than one child have already noticed how each child is different and that what works with one child may not necessarily work with another, but it's worth trying new techniques and trying them more than once.

The learner then chooses from scenarios to play through that include:

1. A child interrupting a parent on the phone
2. Emotion coaching an upset child who hit another child on the playground
3. Reducing the frequency of tantrums by preparing for situations in which they occur
4. Prompting a child to get ready to leave home

These scenarios are common challenges or concerns for parents, and they are opportunities to develop the skills the simulation is targeting.

Each scenario will take 3–5 min each and begin with a backstory explaining events leading up to the interaction, some tips about how to handle such a scenario, and a description of the user's goals in the scenario. Assuming the role of the parent

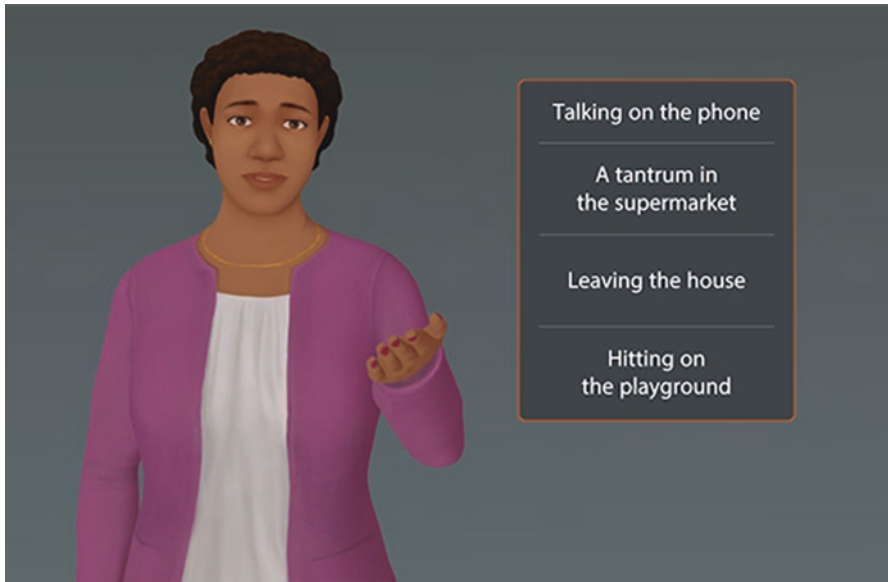


Fig. 3.1 Virtual coach Jessica

character, learners will choose from a set of more helpful and less helpful conversation options of what to say or do. Then, they will see their choice play out as evidenced by the child’s verbal and non-verbal responses before being presented with the next set of options of what to say or do, until the scenario is finished (see the previous chapter entitled “Introduction to PK12 Professional Development Role-Play Simulation Technology” for the learning model).

3.10 Prompting a Child to Get Ready to Leave Home

Four-year-old Sophia has been getting upset and been uncooperative whenever it’s time to leave the house (see Fig. 3.2). The parent is frustrated because they need to leave to pick up her sister or they will be late. The coach will point out that children will often be uncooperative or upset during transitions, because they feel like they are happening very suddenly. Young children also don’t yet have a sense of time, so they might be surprised that it’s time to go even if they have already been told once to get ready to leave after a certain time. Children might not understand (or hear) the first time and will need several warnings and help getting ready to go. If the parent is consistent in preparing the child to transition, the child will learn to transition easier.



Fig. 3.2 Four-year-old Sophia does not want to leave the house

3.11 Temper Tantrums: Reducing the Frequency

Users assume the role of a mother and help prepare her 2-year old Jayden for a grocery trip where he is likely to have a temper tantrum (see Fig. 3.3). Users learn how to handle temper tantrums without getting angry or giving in. The simulation starts off with a backstory showing a mother taking her two-year-old child to the supermarket while the coach normalizes tantrums as a part of a child’s development. The learner sees a tantrum start when a mother tells the child he cannot get the candy he wants. The coach continues to normalize tantrums: “This is a phase children go through. Toddlers have their own mind and willpower, but not the ability to communicate. This will get better; they’ll get through it and learn to talk better. The only way not to have tantrums would be not to have children.” The learner can click on the mother’s thought bubble to hear how she is “embarrassed” and “wants to shut the child up” or “wants to run away and hide.” Then, the coach tells the learner that there isn’t much to do but make sure the child is safe and let the tantrum play out.

3.12 Handling a Child Interrupting a Parent on the Phone

This conversation begins with a backstory about a two-year-old Jayden who has been interrupting almost every phone call his mother makes (see Fig. 3.4). The child has not learned to entertain themselves during the mother’s phone calls, during



Fig. 3.3 Jayden is going to have a temper tantrum in the grocery store



Fig. 3.4 Jayden is interrupting almost every phone call his mother makes

which he usually makes requests, asks questions, makes noise, or whines loudly. Some of these phone calls are urgent and after the mother has already had a long, stressful day. The user will learn how to prepare the child for calls, and during the call, will have the opportunity to either praise the child for not interrupting or watch the mother's stress level rise as the child does begin to interrupt. These mid-call praises can be small, quick, and non-verbal (thumbs-up, smile, high-five, etc.). If the learner doesn't do a feelings check, the mother's response to the child will be one of anger. If the learner does a feelings check, the mother can respond to the child momentarily and in a calm, controlled manner.

3.13 Hit Another Child on the Playground: Emotional Coaching an Upset Child

Users assume the role of a father and help calm and discipline his 2–3-year-old Jayden, or 4–5-year-old Matthew, who has just hit another boy on the playground and is still upset and angry (see Fig. 3.5). Learners role play practicing talking to a child about the upsetting incident that occurred. The coach will talk about the development of a child's emotional vocabulary and self-regulation and a parent's role in that development. In addition, the coach will point out that a situation like this, though upsetting, is also a great opportunity for emotion coaching. This scenario focuses on techniques for helping toddlers understand and control their feelings.



Fig. 3.5 Jayden has just hit another boy on the playground and is still upset and angry

The simulation *Calm Parents, Healthy Kids* and the pilot study describe below was funded by the Robert Wood Johnson Foundation and is freely available at www.conversationsforhealth.org. To conclude this chapter, the results of a pilot study that examined the impact of *Calm Parents, Healthy Kids* will be presented. This will include a methods section, followed by the results and conclusion.

3.14 Methods

The aim of this study was to measure the impact of the *Calm Parents, Healthy Kids* simulation in teaching parents to: (1) adjust their parenting techniques to match realistic expectations of a child's developmental capabilities, (2) manage parental stress and be able to appropriately respond to a child rather than react emotionally in a way that is confusing to the child or harmful to their relationship, and (3) teach a child (and parent) how to cope with negative feelings (agitation, anger, aggressiveness, etc.) in a healthy and adaptive manner by labeling emotions.

Fourteen parents from Family Connections of New Jersey, a nonprofit organization that offers services to children, adults, and families that comprise low-income minority populations volunteered for this study. To qualify, parents needed to have children between the ages of two and five and be socially or socio-economically disadvantaged: low income, low education, and/or live in an impoverished or

otherwise deprived neighborhood. All these risk factors have been shown to increase the likelihood of the use of physical punishment.

Measures included demographics, how satisfied were parents with the learning experience, and validated subscales from the: (1) Parent and Family Adjustment Scale assessing parenting practices and parent/family adjustment, (2) Parent–Child Relationship Inventory assessing parents’ attitudes toward parenting and their children, (3) Confidence in Handling Specific Parenting Situations to assess the effect of the simulation on parent’s perception of their ability to manage specific situations that are addressed in the simulation, and (4) Confidence in Parenting Skills Inventory, which was developed for this study for there are no known validated measures that tap into a parent’s self-efficacy or confidence in their ability to manage their child’s misbehaviors.

Participants first completed a baseline survey, then the *Calm Parents, Healthy Kids* simulation, followed by a one-month follow-up survey. The 45–60-minute simulation involves parents engaging in four conversations with intelligent and emotionally responsive virtual children modeling human behaviors that parents often find frustrating and difficult to handle (e.g., temper tantrum in the grocery store, misbehaving at home and on the playground). The virtual children are coded with emotions, personality, and memory and will react exactly like two to five-year-old children who are being punished. It is by practicing these role-plays where learners observe and experience the impact of the strategies they employ to correct the virtual child’s misbehaviors, and receiving on-going feedback from a virtual coach, that parents learn to apply best practices and avoid ineffective communication strategies in order to prevent ACEs.

3.15 Results

Overall, parents found the simulation to be very effective, with 86% stating it was very good or excellent and 100% recommending the simulation to other parents. Additionally, there was a significant increase ($p < 0.01$) in parental adjustment, indicating at follow-up that parents were less worried or sad and felt more satisfied with their life and able to cope with the emotional demands of being a parent. Additionally, there was a non-significant decrease ($p < 0.06$) in parents losing their temper with their child, threatening to punish their child, and reporting that their child is out of control much of the time as well as giving in to their child to avoid a tantrum. Lastly, there was a non-significant decrease ($p < 0.08$) in corporal punishment (spanking) and a significant increase ($p < 0.04$) in being consistent in punishment for misbehavior emerged at follow-up.

3.16 Conclusions

To conclude, it is encouraging that, even with small sample size, it appears that the simulation had a positive impact on parents that are socially or socio-economically disadvantaged: low income, low education, and/or live in an impoverished or otherwise deprived neighborhood, which are all known risk factors shown to increase the likelihood of the use of physical punishment. Thus, the implications for this pilot study could be far reaching. First, the use of new role-play simulation technology that has the potential to help mitigate the frequency and/or intensity of ACEs could have a tremendous impact on PK12 youth's physical and mental health. This in turn can have direct consequences on students' academic performance, their ability to form social relationships and "have fun" in PK12. Additionally, the impact on teachers in terms of ameliorating burnout and increasing satisfaction is a reasonable conclusion.

Lastly, ACEs and toxic stress in the home and ECE learning environments can affect children, possibly long into adulthood in ways that compromise the quality of their lives and even cut them short. Improved parenting and ECE's skills can help reduce some ACEs and also strengthen the relationship (attachment) between parents/ECEs and children, which is proven to protect children from the effects of toxic stress, possibly even reducing damaging effects on health, learning, and behavior, including suicide risk. Poor parenting and ECE corrective techniques can also result in unnecessary stress for parents and ECEs. Also, some current parenting techniques for instructing and disciplining children are not effective in producing desired behaviors in children; thus, undesired behaviors continue, which can be a source of great stress for parents.

The advantages of using game-based virtual human role-play simulations are numerous including being online and easily available to geographically dispersed populations 24/7 in the convenience and privacy of one's home. Lastly, role-playing with virtual humans reduces the anxiety that is often experienced in face-to-face role-plays, and users often report feeling safer, less judged, and more willing to open up. Altogether, this holds promise in providing an upstream learning modality in preparing children for a more successful PK12 experience.

References

- Albright, G., Adam, C., Serri, D., Bleeker, S., & Goldman, R. (2016). Harnessing the power of conversations with virtual humans to change health behaviors. *mHealth*, 2(11), 1–13. <https://doi.org/10.21037/mhealth.2016.11.02>
- Arcus, D. (2002). School shooting fatalities and school corporal punishment: A look at the states. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 28(3), 173–183.
- Center for Effective Discipline. (2015). *Discipline and the law: State laws*. Retrieved from: <http://www.gundersenhealth.org/nctpc/center-for-effective-discipline/discipline-and-the-law/state-laws>

- Chen, E., Cohen, S., & Miller, G. E. (2010). How low socioeconomic status affects 2-year hormonal trajectories in children. *Psychological Science, 21*(1), 31–37.
- Department of Defense Education Activity. (2012). *Regulation: Disciplinary rules and procedures*. Retrieved from: https://www.dodea.edu/Offices/PolicyAndLegislation/upload/DoDEA-Regulation-2051_1a.pdf
- Fang, X., Brown, D. S., Florence, C. S., & Mercy, J. A. (2012). The economic burden of child maltreatment in the United States and implications for prevention. *Child Abuse & Neglect, 36*(2), 156–165.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., ... Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine, 14*, 245–258.
- Felzen Johnson, C. (2002). Child maltreatment 2002: recognition, reporting and risk. *Pediatrics International, 44*(5), 554–560.
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin, 128*(4), 539.
- Gershoff, E. T. (2008). *Report on physical punishment in the United States: What research tells us about its effects on children*. Columbus, OH: Center for Effective Discipline.
- Gershoff, E. T. (2017). School corporal punishment in global perspective: Prevalence, outcomes, and efforts at intervention. *Psychology, Health & Medicine, 22*(sup1), 224–239.
- Gershoff, E. T., & Font, S. A. (2016). Corporal punishment in US public schools: Prevalence, disparities in use, and status in state and federal policy. *Social Policy Report, 30*, 1.
- Gil, D. G. (1970). *Violence against children: Physical child abuse in the United States*. Cambridge, MA: Harvard University Press.
- Global Initiative to End All Corporal Punishment of Children. (2016). *Global progress towards prohibiting all corporal punishment*. Retrieved from: <http://endcorporalpunishment.org/assets/pdfs/legality-tables/Global%20progress%20table%20with%20terrs%20%28alphabetical%29.pdf>. [Ref list].
- Hyman, I. A. (1995). Corporal punishment, psychological maltreatment, violence, and punitiveness in America: Research, advocacy, and public policy. *Applied and Preventive Psychology, 4*(2), 113–130.
- Hyman, I. A., & Perone, D. C. (1998). The other side of school violence: Educator policies and practices that may contribute to student misbehavior. *Journal of School Psychology, 36*(1), 7–27.
- Litgen, M. (2013). *Education brief: ACEs for educators and stakeholders (pp. 1–13, issue brief)*. Chicago, IL: Health & Medicine Policy Research Group.
- Lowell, D. I., Carter, A. S., Godoy, L., Paulicin, B., & Briggs-Gowan, M. J. (2011). A randomized controlled trial of child first: A comprehensive, home-based intervention translating research into early childhood practice. *Child Development, 82*(1), 193–208.
- McCarthy, M. M. (2005). Corporal punishment in public schools: Is the United States out of step? *Educational HORIZONS, 83*(4), 235–240.
- McEwen, B. S. (2008). Central effects of stress hormones in health and disease: Understanding the protective and damaging effects of stress and stress mediators. *European Journal of Pharmacology, 583*(2), 174–185.
- Neece, C. L., Green, S. A., & Baker, B. L. (2012). Parenting stress and child behavior problems: A transactional relationship across time. *American Journal on Intellectual and Developmental Disabilities, 117*(1), 48–66.
- Neppel, T. K., Conger, R. D., Scaramella, L. V., & Ontai, L. L. (2009). Intergenerational continuity in parenting behavior: Mediating pathways and child effects. *Developmental Psychology, 45*(5), 1241.
- North Carolina Department of Public Instruction. (2015). *Consolidated data report, 2013–2014*. State Board of Education, Public Schools of North Carolina. Retrieved from: <http://www>.

- npublicschools.org/docs/research/discipline/reports/consolidated/2013-14/consolidated-report.pdf
- Pekarsky, A. R. (2014). Overview of child maltreatment. *Child Maltreatment*. Merck Manuals. Web. 12 Mar. 2015.
- Pickens County Board of Education. (2015). *The Pickens County Board of Education Board policy manual*. Retrieved from: <http://www.pickenscountyschools.net/?DivisionID=11923&DepartmentID=12384>
- Sanders L. M. (2020). Is COVID-19 an adverse childhood experience (ACE): Implications for screening for primary care. *The Journal of Pediatrics*, 222, 4–6. <https://doi.org/10.1016/j.jpeds.2020.05.064>.
- Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., ... Wood, D. L. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232–e246.
- Smith, B. L. (2012, April). “The case against spanking.” *American Psychological Association*. American Psychological Association, Web. 11 Feb. 2015.
- Straus, M. A. (2001). *Beating the devil out of them: Corporal punishment in American families and its effects on children*. New Brunswick, NJ: Transaction Publishers.
- Toxic Stress. (2015). *Key concepts: Toxic stress*. Cambridge, MA: Harvard University. Web. 12 Mar. 2015.
- U.S. Department of Education. (2016). *Civil rights data collection for the 2013-14 school year*. Retrieved from: www2.ed.gov/about/offices/list/ocr/docs/crdc-2013-14.html
- Wei, C., & Kendall, P. C. (2014). Child perceived parenting behavior: Childhood anxiety and related symptoms. *Child & Family Behavior Therapy*, 36(1), 1–18.