



## *Practice Perspectives*

### **Remember the ACES and PACES: Asset-based Assessment for Traumatized Children**


Paul Thomas Clements, PhD, RN, ANEF, DF-IAFN, DF-AFN<sup>1</sup>

Natalie Evenson MSN, RN, SANE-A, SANE-P<sup>2</sup>

Leah Rachael Helmbrecht, RN, BSN<sup>2</sup>

Received: October 31, 2023

Accepted: July 10, 2024

© Clements, P T. et al, 2024.  This is an Open Access article distributed under the terms of the Creative Commons-Attribution-Noncommercial-Share Alike License 4.0 International (<http://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly attributed, not used for commercial purposes, and, if transformed, the resulting work is redistributed under the same or similar license to this one.

*Corresponding author:* Dr. Paul Thomas Clements  
140 Double Crest Dr.  
Taylors, SC 29687  
[ptclements@tamu.edu](mailto:ptclements@tamu.edu)  
828-654-0006

*Affiliations:* 1- Clinical Professor, Center of Excellence in Forensic Nursing, Texas A&M University, College Station, TX; 2- SANE Program Coordinator, St Michael Medical Center, Silverdale, WA; 3-2- Forensic Nurse Examiner/Sexual Assault Nurse Examiner, Denver Health Hospital and Authority, Denver, CO.

---

### **Abstract**

While Adverse Childhood Experiences (ACEs) are well-established risk factors for mental illness, the protective factors that promote resilience are often less well-known nor, at times, highlighted at all. Protective and Compensatory Experiences (PACES) are positive experiences that can increase resilience and protect against mental and physical illness risk. PACES are powerful elements of everyday life that already exist or can be engineered to occur routinely and frequently and can be leveraged to support treatment goals and activities. Although it might never be possible to prevent ACEs from occurring in the lives of children, nurses can emphasize the value of PACES, healthy relationships, and resources to directly minimize the line between adverse childhood experiences and the sequelae of physical and psychological effects into adulthood. PACES are often-overlooked but powerful tools that can support therapeutic interventions and mental health throughout the life course.

*Keywords:* ACES, PACES, trauma, asset-based assessment

## **Remember the ACES and PACES: Asset-Based Assessment for Traumatized Children**

Research suggests that approximately 25% of American children will experience at least one traumatic event by the age of 16 (The National Child Traumatic Stress Network [NCTSN], 2023). Specifically, for many children who suffer from emotional trauma, it is not a single event; instead, it is often ongoing abuse or neglect. This could be violence at home or in their neighborhood, and the related trauma can affect childhood behavioral manifestations. Children who have endured trauma exert their best efforts to hide the guilt and shame often associated with violence at home, or the pain associated with appearing “different”; however, it still manages to come through in ways that look like misbehavior (Child Mind Institute, 2022).

According to the Substance Abuse and Mental Health Services Administration (SAMHSA, 2023),

- At least 1 in 7 children have experienced child abuse and/or neglect in 2022 and this was likely an underestimate.
- In 2019, 1,840 children died of abuse and neglect in the United States.
- Each day, more than 1,000 youth are treated in emergency departments for physical assault-related injuries.
- In 2019, about 1 in 5 high school students reported being bullied on school property.
- 8% of high school students had been in a physical fight on school property one or more times during the 12 months before the survey.
- Each day, about 14 youths die from homicide, and more than 1,300 are treated in emergency departments for violence-related injuries.

All nurses can benefit from ongoing enhancement of knowledge, experience, and confidence to provide care regarding most of these forensic issues and concepts because not all schools of nursing directly implement these concepts within their curricula (American Academy of Forensic Sciences [AAFS], 2022).

### **What are ACES?**

Adverse Childhood Experiences, or “ACES”, are potentially traumatic events occurring before a child has reached 18 years of age (Centers for Disease Control and Prevention [CDC], 2023a). ACEs may include witnessing or directly experiencing domestic or community violence, having a household member struggling with mental illness, substance abuse, incarceration, or being affected by a difficult divorce. Between 1995 and 1997, the CDC and Kaiser Permanente jointly performed one of the largest and seminal studies investigating the relationship between child abuse and neglect and long-term health outcomes (CDC, 2021). The 10 ACEs the researchers measured included:

1. Physical, sexual, and/or verbal abuse
2. Physical and emotional neglect
3. Witnessing a mother being abused
4. Losing a parent to separation, divorce or other reasons
5. A family member who is:
  - depressed or diagnosed with other mental illness

## ACES AND PACES

- addicted to alcohol or another substance
- in prison.

Subsequent to the ACEs Study, other ACE surveys have expanded the types of ACEs measured to include:

- racism
- gender discrimination
- witnessing a sibling being abused
- witnessing violence outside the home
- witnessing a father being abused by a mother
- being bullied by a peer or adult
- involvement with the foster care system
- living in a war zone
- living in an unsafe neighborhood
- losing a family member to deportation, etc.

Unfortunately, ACEs continue to be common. About 64% of U.S. adults report having experienced at least one type of ACE before age 18, and nearly 1 in 6 (17.3%) report having experienced four or more types of ACEs (CDC, 2023a). ACEs can have lasting, negative effects on health and well-being in childhood and, ultimately, life opportunities, such as education and job potential, well into adulthood. Research conducted across the globe and in many populations has consistently found that exposure to ACEs between birth and 18 years alters neurobiological adaptation to stress, increasing the likelihood of difficulties in emotion regulation, impulse control, attention, and social attachments, all of which contribute to mental health problems (Hays-Grudo & Morris, 2020; Webster, 2022). A cumulative ACE score of 4 or more increases the likelihood (using adjusted odds ratios) of panic reactions by 2.5 times, depression by 3.6 times, anxiety by 2.4 times, and hallucinations by 2.7 times (Anda, Felitti, et al., 2006; Morris & Hays-Grudo, 2023). These experiences can increase the risks of injury, sexually transmitted infections, maternal and child health problems (including teen pregnancy, pregnancy complications, and fetal death), involvement in sex trafficking, and a wide range of chronic diseases and leading causes of death, such as cancer, diabetes, heart disease, and suicide (CDC, 2023b, PACES Connection, 2023). ACEs fall into three large categories:

- *Adverse childhood household experiences* – e.g. abuse or neglect, parental mental illness, family member with alcohol or drug abuse, bullying, domestic violence or divorce.
- *Adverse community experiences* – e.g. discrimination or racism, violence, historical trauma, unemployment or underemployment, poor housing quality, poverty, poor education, lack of social capital or mobility, poor water or air quality.

*Adverse climate experiences* – e.g. climate crises (record heat/droughts, wildfires/smoke, record storms, rising sea level) or natural disasters (tornadoes/hurricanes, volcanic eruption, earthquakes or pandemics). ACEs and associated social determinants of health, such as living in under-resourced or racially segregated neighborhoods, can cause toxic stress (extended or prolonged stress).

Toxic stress from ACEs can negatively affect children's brain development, immune systems, and stress-response systems. These changes can affect children's attention, decision-making, and learning (Harvard University Center on the Developing Child, 2023; Office of Disease Prevention and Health Promotion, 2023).

Children growing up with toxic stress may have difficulty forming healthy and stable relationships. They may also have unstable work histories as adults and struggle with finances, jobs, and depression throughout life. These effects can also be passed on to their children. Some children may face further exposure to toxic stress from historical and ongoing traumas due to systemic racism or the impacts of poverty resulting from limited educational and economic opportunities. While ACEs can cause long-term adverse outcomes, they are not irreversible. Protective and Compensatory Childhood Experiences, or PACES, are positive relationships, experiences, and resources that build resilience and protect against the cumulative negative effects of ACEs (Morris, et al, 2021; Morris & Hays-Grudo, 2023).

### Remembering the PACES

While trauma and adversity (i.e., ACEs) are well-established risk factors for mental illness, the protective factors that promote resilience are often less well-known nor highlighted. Protective and compensatory experiences (PACES) are positive experiences that can increase resilience and protect against risk for mental and physical illness. Numerous studies indicate that positive experiences during childhood set the foundation for on-time growth and development and subsequent adaptive adult mental health. Morris and Hays-Grudo (2023) have identified ten specific protective and compensatory experiences (PACES) that promote positive outcomes in the face of adversity, as well as overall healthy development. Similarly, to ACEs, they assess PACES as experiences that occur prior to age 18. They have categorized PACES into two **domains**: supportive relationships and enriching resources.

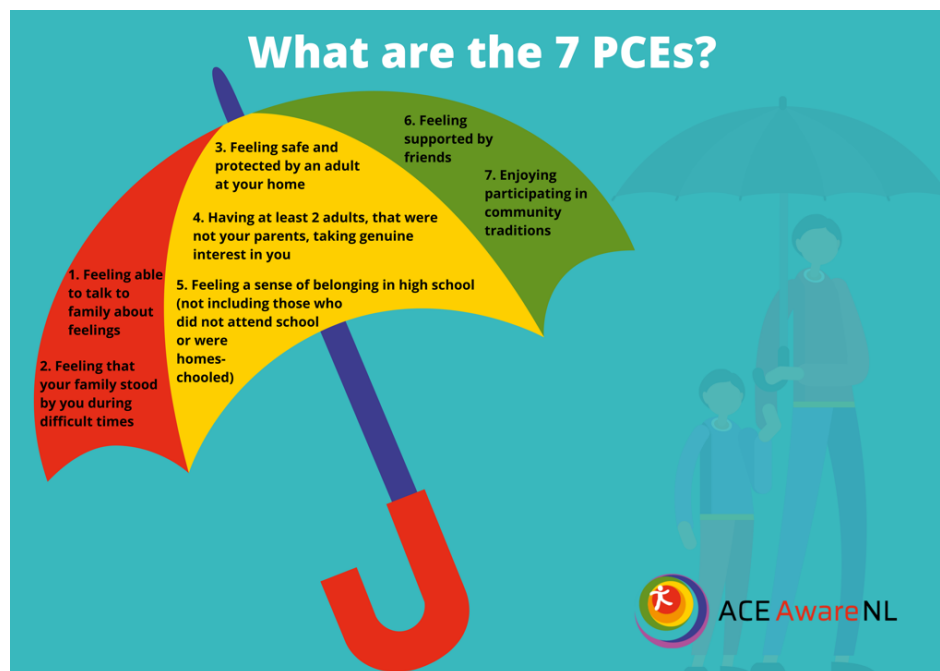
The first domain, **supportive relationships**, includes unconditional love from a caregiver; having a best friend; volunteering in the community; being part of a group; and having a mentor. Positive parenting, social support, and belongingness have been found to facilitate the development of children's empathy, self-regulation, and social skills. The second domain, **enriching resources**, includes living in a safe home where needs are met; getting a quality education; having a hobby; being physically active; and having rules and routines.

Research and anecdotal reporting are increasingly demonstrating that Protective and Compensatory Childhood Experiences (PACES) are vital to the well-being and health of every person, especially those who experience high numbers of Adverse Childhood Experiences (ACES). If PACES are so important, why has there been so much focus on the ACEs and ongoing overlook of the PACES? These authors are expressing the importance of combating the negative impact that ACEs can have on school-aged children's physical and mental growth into adulthood and stressing that nurses in all settings should also equally, if not more actively, look at the protective measures that can build resiliency in a child's life. Specifically, according to the National Institutes of Health (NIH), positive experiences during childhood set the foundation for adaptive adult mental health, and action steps using identification of ACEs and related trauma-informed care (PACES) to build greater capacity for self-regulation can be completed by providers understanding a model for facilitating resiliency (Leitch, 2017).

To evaluate the effect that Positive Childhood Experiences (PCEs) have in mitigating the effects of ACEs and in building resilience, researchers from the Johns Hopkins University defined the following and conducted a large-scale research study. Seven PCEs were researched. The first three focus on the child's family environment, and the rest focus on the child's friends and community. The PCEs are shown in Figure 1.

**Figure 1:**

*The 7 Positive Childhood Experiences (PCEs) from the Johns Hopkins University Research Study*



Used with permission: ACE Aware NL <https://aceaware.nl/en/2021/06/04/positive-childhood-experiences-building-resilience-and-mitigating-toxic-stress-through-safety-and-connection-2/>

The PCEs are further described as follows:

1. ***Feeling able to talk to your family about your feelings***

Sharing feelings and emotions to give you a sense of belonging and feeling understood. It is also an important, meaningful way to coregulate and bring down stress levels, which, in turn, helps to prevent them from becoming toxic. It is also a great opportunity for parents and caregivers to help children build emotional intelligence by coaching them through their feelings.

2. ***Feeling that your family stood by you during difficult times***

The adult's presence can have a buffering effect when the child is going through difficult times or experiencing stress that could become toxic without that buffering. Their presence, their soothing words, and their holding space can help children feel supported and comforted. It drives home the all-important message that they are not alone, that they are respected in their uniqueness and their emotions.

3. ***Feeling safe and protected by an adult at your home***

Feeling safe and protected is a basic human need; in fact, if you do not feel safe, other functions in your body might stop working properly until you have found safety again. There are many ways in which an adult can make a child feel safe and protected, like taking care of them physically by responding to their needs or talking them through overwhelming experiences and helping them coregulate after a stressful experience.

4. ***Having at least two adults, who are not your parents, taking genuine interest in you***  
Supportive adults with whom a child can form healthy attachments and whom they can turn to, besides their parents, are very important for children. These adults are even more important if the child's parents have difficulty providing the aforementioned safety and support. They can be extended family members, neighbors, teachers, coaches, counsellors – it can be the most unexpected person, as long as they have a role in the child's life that allows for moments of connection and experiencing a safe haven in the midst of chaos and overwhelm.
5. ***Feeling a sense of belonging in high school (not including those who did not attend school or were homeschooled)***  
Feeling a sense of belonging in school can help you build more resilience against adversity. Children who engage with others and in activities in school have higher rates of resilience and lower rates of chronic disease in childhood. Addressing childhood trauma in school settings deserves to be high on the agenda of national and local policies to mitigate the effects of toxic stress and ACEs.
6. ***Feeling supported by friends***  
Knowing that you have friends to turn to, people who listen to you, who have your back and who will stand tall for you, who laugh and cry with you and understand what you need, are a wealth of support. Again, it is the nurturing, strong, and healthy relationships that will help you through the storms by means of the coregulation they have to offer.
7. ***Enjoying participating in community traditions***  
Traditions help us feel part of a whole. They can help connect extended families, bring people together, and have them participate in traditions. They can help you find a sense of connectedness and purpose. There are lots of examples of communities, for example a neighborhood, a school, a town or a district, a support group for people with the lived experience of a certain difficulty or disability, a group that is formed to raise awareness about a certain issue, a group around a hobby, and more.

### **Asset-Based Assessment and Care**

Discussions of healthcare typically surround levels of prevention. The National Children's Alliance (2023) estimated that 618,000 children experienced abuse and neglect in 2020. With so many children at risk for experiencing a wide range of ACEs, it is difficult to intervene and impossible to prevent all adverse childhood experiences. However, it can be easy to focus on fixing what is wrong versus being vocal about what is right: PACES. Specifically, although it might never be possible to prevent ACEs from occurring in the lives of children, nurses can emphasize the value of PACES, healthy relationships, and resources and directly minimize the line between adverse childhood experiences and the sequelae of physical and psychological effects into adulthood. One way to prevent and mitigate the impact of ACEs is to educate and address protective factors to create a safe and supportive environment for all children. **Strengthening Families™** is one research-informed approach to increase family strengths, enhance child development, and reduce the likelihood of child abuse and neglect. It is based on engaging families, programs, and communities in building five key protective factors. Specifically, this *protective factors* framework is an organized set of strengths-based ideas that

are used to guide programs, services, supports, and interventions aimed at preventing child maltreatment and promoting healthy outcomes. **Table 1** reviews these five key protective factors and the corresponding clinical strategies for resiliency.

**Table 1:**  
*About Strengthening Families™ and the Protective Factors Framework*

<b>Key Protective Factor</b>	<b>Clinical Strategies for Resiliency</b>
<b>Parental resilience</b>	Managing stress and functioning well when faced with challenges, adversity, and trauma
<b>Social Connections</b>	Positive relationships that provide emotional, informational, instrumental, and spiritual support
<b>Knowledge of parenting and child development</b>	Understanding child development and parenting strategies that support physical, cognitive, language, social, and emotional development
<b>Concrete support in times of need</b>	Access to concrete support and services that address a family’s needs and help minimize stress caused by challenges
<b>Social and emotional competence of children</b>	Family and child interactions help children develop the ability to communicate clearly, recognize and regulate their emotions, and establish and maintain relationships

(Adapted from: Center for the Study of Social Policy [n.d.]. *About Strengthening Families™ and the Protective Factors Framework*. <https://cssp.org/wp-content/uploads/2018/11/About-Strengthening-Families.pdf> )

### **Conclusion**

PACEs are often-overlooked but powerful tools that can support therapeutic interventions and mental health throughout life. What is lacking from many trauma-focused interventions is an acknowledgment that PACEs are powerful elements of everyday life that already exist or can be engineered to occur routinely and frequently and can be leveraged to support treatment goals and activities. Specifically, protective factors should be seen and sought out as characteristics or strengths of individuals, families, and communities that act to mitigate risks and promote positive well-being and healthy development for children. When seen as attributes that help children to navigate difficult situations successfully, the impact toward mitigating ACEs can be significant and beneficial.

### **References**

American Academy of Forensic Sciences (2022). *Presidential spotlight on the forensic nursing science section*. <https://www.aafs.org/article/presidential-spotlight-forensic-nursing-science-section>

Anda, R.F., Felitti, V.J., Bremner, J.D., et al. (2006). *European Archives of Psychiatry and Clinical Neuroscience*, 256:174-86 doi.org/10.1007/s00406-005-0624-4

Bryant-Genevier, J., Rao C. Y., Lopes-Cardozo B., Kone A., Rose C., Thomas I., Orquiola D.,Lynfield R., Shah D., Freeman, L., Becker, S., Williams A., Gould D. W., Tiesman H., Lloyd G., Hill L., Byrkit R. (2021). Symptoms of depression, anxiety, post-traumatic, stress disorder, and suicidal ideation among state, tribal, local, and territorial public health workers during the COVID-19 pandemic-United States, March-April 2021. *MMWR*.

- Morbidity and Mortality Weekly Report*, 70(48), 1680-1685.  
<https://doi.org/10.15585/mmwr.mm7048a6>
- Centers for Disease Control and Prevention (2021). *About the CDC-Kaiser ACE Study*.  
<https://www.cdc.gov/violenceprevention/aces/about.html>
- Centers for Disease Control and Prevention (2023a). *Fast facts: Preventing adverse childhood experiences*. <https://www.cdc.gov/violenceprevention/aces/fastfact.html>
- Centers for Disease Control and Prevention (2023b). *Teen newsletter: Adverse childhood experiences (ACEs)*.  
<https://www.cdc.gov/museum/education/newsletter/2023/mar/index.html>
- Center for Social Policy. (2014). *The Strengthening Families Approach and Protective Factors Framework*. <https://cssp.org/our-work/projects/protective-factors-framework/>
- Child Mind Institute (2022). How trauma affects kids in school: Signs of trauma and tips for helping kids who've been traumatized. <https://childmind.org/article/how-trauma-affects-kids-school/>
- Harvard University Center on the Developing Child (2023). ACEs and toxic stress: Frequently asked questions. <https://developingchild.harvard.edu/resources/aces-and-toxic-stress-frequently-asked-questions/>
- Hays-Grudo, J., & Morris, A.S. (2020). *Adverse and protective childhood experiences: A developmental perspective*. Washington: American Psychological Association.
- Leitch L. (2017). Action steps using ACEs and trauma-informed care: A resilience model. *Health Justice*, 5(1):5. doi: 10.1186/s40352-017-0050-5.
- Morris, A.S., Hays-Grudo, J., Zapata, M.I., Treat, A., & Kerr, K.L. (2021). Adverse and protective childhood experiences and parenting attitudes: The role of cumulative protection in understanding resilience. *Adversity and Resilience Science*, 2(3):181-192. doi: 10.1007/s42844-021-00036-8.
- Morris, A.S., & Hays-Grudo, J. (2023). Protective and compensatory childhood experiences and their impact on adult mental health. *World Psychiatry*, 22(1):150-151. doi:10.1002/wps.21042 .
- National Children's Alliance (2023). National statistics on child abuse.  
<https://www.nationalchildrensalliance.org/media-room/national-statistics-on-child-abuse/#:~:text=More%20than%20600%2C000%20children%20are,which%20there%20is%20national%20data.>
- Office of Disease Prevention and Health Promotion (2023). Social determinants of health.  
<https://health.gov/healthypeople/priority-areas/social-determinants-health#:~:text=What%20are%20social%20determinants%20of,of%20life%20outcomes%20and%20risks.>
- PACES Connection. (2023). *3 Realms of ACEs*.  
[https://www.pacesconnection.com/ws/Handouts\\_3RealmsACEs\\_EN.pdf](https://www.pacesconnection.com/ws/Handouts_3RealmsACEs_EN.pdf)
- Substance Abuse and Mental Health Services Administration (2023). Understanding child trauma.  
<https://www.samhsa.gov/child-trauma/understanding-child-trauma>



## ACES AND PACES

The National Child Traumatic Stress Network (2023). School personnel.

<https://www.nctsn.org/audiences/school-personnel>

Webster, E.M. (2022). The impact of adverse childhood experiences on health and development in young children. *Global Pediatric Health*, 26 (9) doi: 10.1177/2333794X221078708