



ACEs and Healthcare: Creating a Positive Future

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ACEs Defined

The adverse childhood experiences (ACEs) study represents a landmark in medical research which linked childhood experiences of abuse, neglect, and household dysfunction to future health outcomes. (Cronholm, Forke, Wade, Bair-Merritt, Davis, Harkins-Schwarz, Pachter & Fein, 2015). Felitti and colleagues (1998) conducted the original ACEs study in a primary care

setting between 1995-1997 at a Kaiser Permanente clinic where thousands of participants revealed they had adverse childhood experiences (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, & Marks, 1998). This original study found a strong dose response relationship between the extent of exposure to abuse or household dysfunction during childhood and multiple risk factors for several leading causes of death in adults. These conditions included: ischemic heart disease, cancer, chronic lung disease, fractures, liver disease as well as poor self-rated health (Felitti et al, 1998). Felitti et al, (1998) suggested ACEs and adult health status is strong and cumulative. They further asserted that abuse and other potentially damaging childhood experiences contribute to the development of risk factors leading to health behaviors and lifestyle factors that affect morbidity and mortality. These behaviors they allege are the “actual” cause of death (Felitti et al, 1998).

Purpose

We have combed recent research to explore what new evidence is available in understanding the nature of adversity that children face and the impact on future health. We also sought to discover the latest guidance available for practitioners who encounter children and adults. Integrating this concept into assessment will increase knowledge of trauma-informed care (TIC) with the intention of building resiliency in children and adults. Our goal is to keep the conversation about adverse childhood experiences current and ongoing by elevating the awareness of the impact of adversity in childhood, stressing the vitality and long-term consequences, and highlighting the possible positive outcomes when children and adults have adequate support for overcoming and coping with challenges.

Implications of ACEs

When individuals are exposed an adverse childhood experiences, they can be impacted in a variety of ways including health risks, threats to safety, and community-level adverse experiences.

Health Issues

How are ACEs linked to these health risk behaviors and adult disease? The original researchers felt this centered on behaviors such as smoking, alcohol/drug abuse, overeating or sexual behaviors. These may be consciously or unconsciously used because they have an immediate pharmacologic or psychological benefit as coping devices when stressors of abuse, domestic violence, and family/household dysfunction are experienced (Felitti et al, 1998). High levels of exposure to ACEs would expectedly produce anxiety, anger, and depression in children (Felitti et al, 1998). These authors used the example of nicotine which has beneficial psychoactive effects that regulate mood. Persons who are depressed may smoke and thus, persons exposed to ACEs may benefit from any ‘drug’ such as nicotine to regulate their mood (Felitti et al, 1998).

Perception of Safety

Recent research conducted by Duke (2019) sought to compare the associations between conventional ACEs, as defined in the original research and current guidance from the American Academy of Pediatrics, and the expanded measures for ACE with a positive Patient Health Questionnaire-2 (PHQ-2), a validated initial screener for depression in adults and adolescents. Conventional ACEs included questions addressing abuse, household dysfunction, food insecurity, and housing stability. Expanded measures focused questions on perceived threats to safety and past-month experiences of bullying and harassment. Survey respondents included students in 8th, 9th, and 11th grade participating in the 2016 Minnesota Student Survey. Of the 126,868 participants, one in five had a positive PHQ-2 score with larger percentage of females meeting criteria than male students. All conventional measures as well as expanded measures of ACEs were associated with increase odds of a positive PHQ-2 score, with verbal/emotional abuse by a household adult being the most predictive among conventional measures and feeling unsafe at home as most predictive of the expanded measures and overall. Other notable links included food insecurity with 2 or more conventional experiences, feeling unsafe going to and from school, and bullying and harassment for identifying as or being perceived as gay or lesbian with 2 or more expanded types of experiences. These findings highlight the need to continue expanding our concepts of adverse events beyond the household. Children can encounter significant threats to their physical and psychological safety in their neighborhoods and schools as well.

Community-level Adverse Experiences and Racial Disparities

Thurston, Bell, and Induni (2018) aimed to identify the prevalence of community-level adverse experiences and intended to describe whether a difference could be noted based on racial identity. A cross sectional analysis of children aged six to 17 within a National Survey of Children's Health (NSCH, 2011-2012), data show non-Hispanic white children to have the lowest exposure to community adverse experiences, namely unfair treatment due to race/ethnicity and witnessed neighborhood violence, as well as household ACEs, such as poverty, loss of a caregiver through death or incarceration, or witnessed domestic violence.

The second question of the study sought to understand the relationship between these events, the demographics of those surveyed, and indicators of emotional regulation. The findings indicated racism has the strongest association on the reduced likelihood of emotional regulation when the child has experienced both community and household adverse experiences. A positive association with emotional regulation was found with the covariate measure of child/parent relationship and female gender. Ages under 15 years were also inversely related to emotional regulation. A statistically significant negative relationship was found with covariates two parent step parent family composition and Black non-Hispanic race/ethnicity.

Community level adverse events appear to impact minorities with greater frequency and to a great extent, especially when household adverse experiences are also present. Acknowledging the impact of racism on health risks and disparities is important for both prevention and effective intervention. Early and family-based interventions may be more effective in building positive

emotional regulation in children who experience adverse events in the community and household.

Positive Future

Trauma Informed Care Defined

In 2014, the Substance Abuse Mental Health Services Administration (SAMHSA) released Tip 57: Trauma Informed Care in Behavioral Health Services (Dube, 2018). This was a result from the original ACEs study and the science behind the findings. Within the trauma informed care (TIC) principles lie an understanding of the widespread problem of trauma, its symptoms, and how to respond without further escalation and re-traumatization (Dube, 2018).

For example, Mollard and Hudson (2016) proposed that nurses who work in correctional settings implement the trauma-informed 4 E's which aimed to: **educate** staff on the effects of trauma; **empathize** with the woman/situation; **explain** behaviors that can be traumatizing; and to **empower** women to become responsible and take control of their future health and recovery. With Dube (2018) purporting that there is currently a public health crisis for which there is no vaccine or medication and that problem is trauma and stress, implementing trauma informed care services has the potential to not only change correctional settings, but any setting in which healthcare is provided.

Trauma-Informed Care in Curriculum for Health Care Professionals

In order to implement, trauma-informed care practices, nurses should be educated on how to obtain a history that inquires about ACEs and to show sensitivity and empathy (Kalmakis & Chandler, 2015). To that end, Strait and Bolman (2017) set out to design a curriculum to help nursing students become comfortable addressing typically uncomfortable topics such as ACEs and to practice listening and collaboration skills. The authors sought to ultimately establish confidence in graduate health care practitioners and to increase their knowledge of ACEs and Trauma-Informed care in clinical practice.

Strait and Bolman's (2017) study had three objectives:

1. To implement a trauma-informed curriculum for multiple graduate programs.
2. To determine student understanding of, and willingness to address, ACEs.
3. Assess the relationship between students voluntarily evaluating their own individual ACE score and their own attitude toward ACE and trauma-informed care.

The authors hypothesized that the healthcare practitioner students would be more confident in understanding the clinical importance of ACEs and trauma-informed care as they assessed their

own score. They recruited 967 students from graduate health programs on two campuses: Pomona, California and Lebanon, Oregon. The professions included the following program: Doctor of Osteopathy, Doctor of Podiatry, Doctor of Optometry, Doctor of Dental Medicine, Doctor of Physical Therapy, Doctor of Veterinary Medicine, Doctor of Pharmacy, Masters of Science in Nursing, and a Masters of Physician Assistant. The participants attended three, two-hour sessions, conducted with a proctor and divided into groups of nine. The sessions were held every other week and on the off weeks, the participants were required to perform research regarding ACEs topics. The authors used a multi-question digital survey administered before and after the curriculum to assess the students understanding of ACEs and trauma-informed care. The participant's awareness of personal ACEs and willingness to incorporate trauma-informed care in practice was tantamount to the outcome of their study.

Strait and Bolman (2017) concluded that the future health care practitioner students who voluntarily assessed their own ACE score were significantly more likely to understand scientific and clinical findings to implement trauma-informed care in practice. Strait and Bolman proposed to formulate a method of instructing the next generation of health care providers on ways to prevent, recognize, and address unresolved childhood trauma (ACE's) and to inspire other training programs to do the same. Strait and Bolman (2017) challenged health care providers to see patients for who they really are – just like ourselves- a composite of several different circumstances.

Trauma-Informed Care in Primary Care Settings

As more nursing students and practicing nurses increase their knowledge about trauma-informed care practices, more implementation of these practices need to occur in primary care settings. Purkey, Patel, Beckett, and Mathieu (2018) set out to understand the primary care experience of women with a history of childhood trauma (ACEs) and chronic disease. Their design was a qualitative study using directed content analysis to study 26 women that were recruited from an Academic Family Health team in Ontario, Canada. The participants were > 21 years of age and had two or more non-psychiatric diagnoses. The 26 participants had an average ACE score of 7.2/10 and were high users of the health care system, seeing a provider on an average of 12 times a year (Purkey et al., 2018).

Six themes emerged as a result of this study that can be beneficial for the health care provider working with female patients with a high ACE score. Theme one was the importance of continuity of care as the participants shared it is hard to repeat their story over and over. Theme two was provider awareness of abuse as the participants thought the providers were too busy to listen to their experiences and therefore have an awareness of their trauma. Theme three revolved around the challenges of family medicine residents as the participants felt they were using them as practice patients. Theme four was central to the distress of triggering events as the participants may react to particular treatments or interventions such as pap smears or touching. Theme five described the characteristics of clinical staff and the office space as the participants were sensitive to the environment and whether it was welcoming or if, for example, the chairs were

too close together. The sixth theme highlighted engagement in care plans and the participants were somewhat divided regarding their active participation in care and their perceptions.

Purkey et al. (2018) concluded that understanding the effects of ACEs on women's health is vital. Incorporating trauma-informed care approaches by physicians can be beneficial and enrich the patient's experience and ultimately their future health. Esden (2018) sees the importance of identifying ACEs as an important step in providing primary care. She encouraged nurse practitioners (NP) to implement trauma-informed primary care as a way to illustrate the positive effects that are gained by administering the ACEs questionnaire to all patients.

Evidence linked ACEs to numerous health outcomes in a dose dependent relationship (Esden, 2018). Evidence revealed toxic stress during childhood disrupts the nervous system development and stunts growth in the brains regions responsible for problem solving, impulse control, mood regulation, learning, and memory (Esden, 2018).

Esden (2018) provided implications for practice. The first suggestion is interventions that focus on the primary prevention of ACEs are likely to have the greatest effect in reducing the detrimental effects of childhood trauma on families and communities. The second implication suggested that NPs who care for adults also have the opportunity to make a significant impact in mitigating the mental and physical health effects of ACEs. Lastly, NPS, who are trauma informed, should routinely screen patients for ACEs and recognize the role of the childhood trauma has in the development of health risk behaviors and illness and use a patient centered approach that empowers patients to reach health goals and achieve wellness. ACEs has lifelong ramifications that can be alleviated with proper treatment, trusting relationships, and by NPs utilizing the 4E's of trauma informed primary care (Esden, 2018).

Conclusion

Where do we in the health care community go from here? According to the 2010 Morbidity & Mortality Weekly Report by the Centers for Disease Control (CDC), the prevalence of ACEs in the United States is estimated to be 60% of the population. These statistics are alarming and challenging. Kalmakis and Chandler (2015) and Esden (2018) suggested that the lack of knowledge about how ACEs contributes many years later to disease represents a gap in knowledge that challenges researchers and practitioners. Kalmakis and Chandler (2015) discovered there are currently no guidelines for addressing ACEs in primary care; however, such guidelines would prove beneficial for nurse practitioners (and other healthcare providers) as a whole. Nurse practitioners that are aware of the consequences of ACEs should use this evidence in their practice to screen patients with a history of ACEs, incorporate trauma informed care practices, and create an individual plan of care to follow (Kalmakis & Chandler, 2015). Nurses are in a position to provide patients an opportunity to tell their story so they can partner with them and develop a plan of care that addresses the past so as to positively affect the patient's future (Kalmakis & Chandler, 2015).

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