



ADVANCING HEALTH EDUCATION & RESEARCH

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AVA Research Review

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Review Title: Adverse Childhood Experiences: Assessing the Impact on Health and School Engagement and the Mitigating Role of Resilience.

Reviewer: Thomas F. Boat, MD, Professor of Pediatrics and Dean Emeritus, University of Cincinnati College of Medicine and Cincinnati Children's Hospital Medical Center

Article: Bethell CD, Newacheck P, Hawes E, Halfon N. Health Affairs (Millwood) 2014, 33:2106-15

Introduction:

Unmitigated adverse childhood experiences (ACE) are increasingly recognized as risk factors for poor health in adult life. The pioneering work in the Kaiser Permanente Health System by Felitti and colleagues (1) defined a set of adverse early life encounters and has demonstrated their

dose-dependent role in promoting many chronic diseases of later life, as well as truncation of longevity. Subsequently Finkelhor and colleagues (2) reported behavioral health outcomes of concern for a sample of 2030 adolescents who responded to an expanded set of childhood adverse experiences. The adversities from the original ACE scale items were associated with mental health symptoms among the participants, but the association was significantly improved by removing some of the original ACE scale items and adding others in the domains of peer rejection, peer victimization, community violence exposure, school performance, and socioeconomic status.

Article Summary:

A recent paper which serves as the subject of this review used data from the 2011-12 National Survey of Children's Health

(NSCH) and found higher rates of chronic disease and lower rates of school engagement for children, starting as early as 6 years of age, who by parent report were exposed to one or more of a set of 9 ACE which were thoughtfully selected by survey developers. The 9 ACE questions used in this study adapted the Felitti ACE by adding elements such as economic hardship and social discrimination. The survey reached at least 1800 families in each of the 50 states. Data analysis was carried out in the Johns Hopkins School of Public Health.

As in previous studies of the impact of ACE, the effect was dose related to a substantial number of outcomes across 0, 1, and 2 or more tiers of ACE exposure. Childhood outcomes showing a dose related effect included overall health status, special health care needs, developmental delays, and behavioral disorders including ADHD and autism spectrum disorders, as well as asthma and obesity. Even though health care needs were greater, children with more Adverse Childhood Experiences were less likely to be cared for within a medical home which provided continuity of care and care coordination. Other concerning outcomes included more school absenteeism, grade repetition, and less child engagement in school.

New questions addressed in this study context included assessment of parent reported child resilience, which was reduced in children with adverse experiences, but which turned out to partially mitigate some of the poor health and educational outcomes when present. Resilience was defined as staying calm and in control when faced with a challenge. In the realm of new information, this large data collection spanning the nation found that 23 % of children experienced 2 or more ACEs. The prevalence varied by state within a range of 16% (New Jersey) to 33% (Arizona).

Reviewer's Comments:

A limitation of this study is the reliance in the National Survey of Children's Health on parent report alone, which may or may not be congruent with professional observation or assessment. Another limitation of this study is its cross-sectional format. The need to assess whether the negative health outcomes owing to early ACE scores are growing or receding will become increasingly important. As recognition of the imperative to screen and intervene in child health care grows, ability to monitor state-by-state outcomes longitudinally will allow determination of broad and more local recognition and appropriate response aimed at

improving outcomes. Surveys such as the NSCH will be important complements to randomized controlled trials of interventions and, hopefully, powerful influences on early childhood public policy agendas.

Perhaps the greatest contribution of this paper is the documentation of proximate poorer health outcomes (e.g. in the first decade of life) for children experiencing ACEs. This paper should make a strong argument within child health care settings to screen and provide appropriate interventions as a routine component of pediatric practice. Integration of medical, behavioral and social health care will become mandatory. Support of this mode of care organization will require attention from health systems, training programs and both public and private payers.

References:

1. Felitti V J, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. 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, 1998.

2. Finkelhor D, Shattuck A, Turner H, Hamby S. Improving the adverse childhood experiences study scale. *Arch Pediatr Adolesc Med*. Published online November 26, 2012. doi: 10.1001/jamapediatrics.2013.420