

## Short Commentary

### Adverse Childhood Experiences

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#### Abstract

This paper examines the role of Adverse Childhood Experiences on adolescent development. Adverse Childhood Experiences are significant early traumas that affect brain development and can lead to serious physical, mental and emotional issues if left unaddressed. Incorporating evidence from literature reviews, this study demonstrates that these issues can be addressed by nurturing resilience into the lives of children and adults.

**Keywords:** Adolescent development; Adverse childhood experiences; Resilience; Trauma

#### Dealing with ACEs: Prevention Efforts and Health Outcomes

Adverse childhood experiences can have a tremendous impact on lifelong health outcomes and fall into the following categories where recovery and healing are needed in adulthood. This is due to early life trauma in the following categories. Sexual abuse; Physical abuse; Emotional abuse; Physical neglect; Emotional neglect; Loss of a parent; Witnessing family violence; Incarceration of a family member; Mentally ill, depressed, or suicidal family member; Drug addicted or alcoholic family member.

Sexual abuse defined by an act of sexual nature where the child is used for sexual gratification including molestation, pornography, rape, prostitution, or other forms of sexual exploitation of children. Physical abuse is the result of non-accidental physical injuries including hitting, kicking, biting, or burning. Emotional abuse is defined as psychological or emotional harm resulting in a change in behavior and an emotional response such as anxiety, depression, anger or acting out. Physical neglect is the result of failure by the parent or

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caregiver to provide shelter, food, clothing, education, medical care regarding health and safety. Emotional neglect is defined as the failure of the parent or caregiver to provide emotional support, love, recognition, and empathy related to healthy development. Loss of a parent or caregiver because of abandonment, separation, divorce, or death. Witnessing or exposure to physical or emotional violence in the family. Incarceration of a family member in detention, jail, or long-term confinement. Mentally Ill, Depressed or Suicidal family member which can lead to fear, anxiety, depression, grief, and loss. Drug addicted or alcoholic family member which can impact family stability, safety, connectedness, and attachment. The American Psychiatric Association's Diagnostic and Statistical Manual [1] reports that ACEs and attachment styles are psychological risk factors for developing social anxiety disorders in adolescents.

Adverse Childhood Experiences (ACEs) are linked with substance use problems and mental, and physical conditions [2-5]. ACEs refers to ten highly stressful, and potentially traumatic events or situations or experiences that may occur in childhood or the adolescent period. The Adverse Childhood Experiences (ACEs) assessment is a ten-question assessment developed by the Centers for Disease Control and Prevention and Kaiser Permanente by collecting health information from over 17,000 members in Southern California from 1995 to 1997. By using this data, researchers were able to predict health outcomes based on the frequency of answers to the questions. Females represented 54% and males represented 46% of the sample. The ethnic breakdown was: White=74.8%; Black=4.5%; Asian/Pacific Islander=7.2%; Hispanic=11.2%; Other=2.3%. The educational data was as follows: No High School=7.2%; High School=17.6%; Some College=35.9%; College Graduate or Higher=39.3%. Eighty-six percent of the members were over 40 years old. A retrospective analysis showed that children with 3 or more ACEs are five times more likely to have school attendance issues, six times more likely to have behavioral problems and three times more likely to have experienced academic failure. In the study, two-thirds had at least one ACE and one-fifth had three or more ACEs (1998).

Current research into ACEs has targeted updating and changing what is considered ACEs and understanding how the data can be used. For example, some researchers want investigation of the other experiences such as poverty, gang engagement and violence, parental gambling, peer bullying, cyber bullying and intimate partner violence. While most of the research on ACEs and health use retrospective reports from adult populations on their current situations, research involving adolescents has shown that cumulative ACEs are related to increased risk of substance use, depression, and behavioral problems. These may include self-harm (cutting and burning), suicidal thoughts, anxiety, and other traumatic mental stressors.

A significant body of literature and research has shown that ACEs are related to an increased likelihood of substance use, particularly in adulthood [3]. The adolescent period of development is a crucial time in young lives when substance use may begin with experimentation and increased chances of dependency on alcohol, marijuana, nicotine, and prescription drugs. Vaping is on the rise as more adolescents are

using electronic products such as e-cigarettes, e-cigars, vape pipes and vaping pens. Additional research is needed into the relationship between ACEs and these various substances. There is also a need to examine Ecological Systems Theory which focuses on the individual, familial and social-environmental contexts within the overall culture and structural environment.

## Addiction

Addiction is an incredibly complex issue, particularly for adolescents [6]. There is an abundance of evidence that adolescent addiction is impacted by several factors including biological, psychological, social, spiritual and cultural issues. Some of the most profound studies are the Adolescent Childhood Experiences (ACEs) study [2-5]. The ACEs study is a sweeping investigation of childhood abuse, neglect, and trauma. Adverse childhood experiences, or ACEs, are events that are potentially traumatic that take place in childhood (0-18 years). For instance, experiencing violence, abuse, or neglect, being a witness to violence in the home or neighborhood, or having a family member attempt or die by suicide. Other issues include growing up in a family where the environment is undermined by substance use, mental health issues, or instability due to parents separating or a household member going to jail or prison.

Adverse childhood experiences can lead to lasting negative effects on overall well-being and health as well as educational aspirations. ACEs can increase the propensity for injuries, sexual issues, and chronic diseases and can lead to major causes of death such as heart disease, cancer, diabetes, and suicide. ACEs and other social determinates of health can cause prolonged or toxic stress. ACEs can be impacted by living in a poor neighborhood, racially segregated housing, frequent moving, hunger, and lack of resources such as clothing, money, healthcare, good schools and unstable family relationships, and lack of employment and mental stress like anxiety and depression. Some children are also exposed to substance use, domestic violence, and poor parenting. Finkelhor [7], did a search of academic data bases by combining the term “trend” with a variety of terms referring to childhood adversities. Trend data on ACEs show multi-decade declines in parental illness and death, sibling death and poverty, but increases in in parental divorce, parental drug abuse and parental incarceration. Narayan, Lieberman and Masten [8] examined intergenerational transmission and prevention of Adverse Childhood Experiences (ACEs) and found that preventing intergenerational transmission of ACEs calls for attention to screening and assessment of the adverse and positive childhood experiences of parents as parents who have experienced childhood adversity have increased risk for post-traumatic stress disorder symptoms as well as additional victimization over the lifespan.

Screening and teaching social-emotional skills in school using the Screening, Brief Intervention and Referral to Treatment [9] or services as outlined in the piece, “Check Yourself Before You Wreck Yourself” [10] can lead to creating or strengthening safe and stable relationships at school and home. This strategy can serve to promote social-emotional learning, strengthen school-family relationships and prevent problem behaviors. The idea behind the screening tool is to promote a safe and nurturing school environment where youth feel secure in sharing their feelings, thoughts, and behaviors to a member of the school counseling team. In this manner, counselors can focus on risk and protective factors at school and at home. Hawkins, Catalano, and Miller [11]; Hawkins and Catalano, [12] have extensively written and researched risk and protective factors based on individual, family, media, community, and school influences.

Family risk factors include challenges related to special needs, youth who feel that they cannot talk to their parents or caregivers about their feelings; youth who start sexual activity; those who engage in delinquent behavior, those who are involved in neglectful or abusive situations, those living with families with low or limited income, single parents or grandparents raising children; parents with poor or limited understanding of child development; poor discipline and punishment; isolated parents and negative communication style; and families that accept violence and aggression.

A recent research study by Scheuer and others investigated parent-focused prevention of adolescent health risk behavior in a multisite cluster-randomized trial implemented in pediatric primary care. It has become clear that evidence-based parenting interventions can plan a significant role in reducing adolescent risk behaviors going beyond the “Check Yourself” tool [10]. Glowa et al., [13] sought to explore the feasibility of implementing the ACEs screening of adults during routine family medicine office visits. The 10-question ACE screen was used, and the results indicated that the risk of ACEs was present in 62% of 111 patients. The researchers concluded that primary care interventions are needed and that trauma experiences in early adolescence have lasting impacts. In another study, Metzler [14] and others examined data from 10 states and the District of Columbia that use the ACEs module in the 2010 Behavioral Risk Factor Surveillance System to review the connection between ACEs and adult education, employment, and income. They compared individuals who had ACEs scores with those with no ACEs. They found that those individuals with higher ACEs scores were more likely to report non-completion of high school, unemployment and low income. Tseshay and others [15] examined the role of childhood experience on depression symptom, prevalence and severity among school going adolescents and found that exposure to ACEs is related to an increased risk of depressive symptoms up to a decade later. Bae [16] studied the long-term effect of ACEs on school disengagement and reasons for leaving school. They found a relationship between delinquency in adolescents who drop out of school and a relationship between ACEs and lack of school engagement.

Anda et al., [17] found that the ACEs score increased the risk of Chronic Obstructive Pulmonary Diseases (COPD), and Anda, Tietjen, Schulan, Felitti and Croft [18] found that each of the ACEs score was associated with increased prevalence and risk of frequent headaches. Barile et al., [19] in their study had findings that suggested that intervention efforts designed to provide positive emotional supports for adults who have experienced ACEs and may prevent health issues during adulthood. Brown et al., [20] found a relationship between ACEs and the risk of lung cancer in adulthood; Campbell et al., [21] found associations between ACEs and morbidity in adulthood; Corso et al., [22] determined that health-related quality of life among adults was related to ACEs; Cunningham et al., [23] discovered sex-specific relationships between ACEs and chronic obstructive pulmonary diseases in five states; Dong et al., [24] found a connection between ACEs and liver diseases; Edwards et al., [25] evaluated wide-ranging health consequences of ACEs; Foege [26] reviewed ACEs from a public health perspective; Metzler et. al., [14] examined life opportunities and ACEs; Port et al., [27] studied the relationship between ACEs and suicide risk and Rose et. al., examined ACEs and disability in adults. Barile and colleagues [19] examined the associations among county-level social determinations of health, child malnutrition, and emotional support on health-related quality of life in adulthood and found that ACEs were related to low emotional support, physical and

mental functioning. Berger and others [28] conducted a review of interventions for mental health and substance use service delivery to youth and found substantial gaps in service delivery to youth.

Community risk factors include high rates of crime and violence, high rates of poverty and limited educational and economic options, high rates of unemployment, easy availability of alcohol and other substances, low community involvement, limited community activities for youth, unstable housing and frequent moves for families, hunger, and elevated levels of social disorder. All these factors are related to ACEs and understanding trauma [29]. Protective factors for youth and young adults include those families that establish stable and safe relationships, have caring adults who are able to take care of basic needs like clothes, food, and shelter, provide supervision and monitoring, problem-solving, and support school requirement and engage in fun and enjoyable activities as a family. Additional research is needed on parent-focused prevention of adolescent risk behavior linked to the impact of ACEs as well as risk and protective factors.

### Washington Health Youth Survey (HYS) Adverse Childhood Experiences (WAH-ACEs)

Adverse Childhood Experiences (ACEs) are markers of serious stressors that take place during childhood, typically the first 18 years of life. Numerous studies have shown that adverse childhood experiences influence mental, social, physical and behavioral health during the lifespan [30]. In 2021, the Washington State HYS started assessing eleven childhood experiences that youth report. These results can be used to understand the levels of exposure to adversity in childhood and the relationship between these experiences and other questions on the survey related to behavioral health. Although very informative, ACEs do not measure the impact of racism, poverty, and discrimination on the individual. Fourteen percent (14%) of 10<sup>th</sup> graders reported more than four adverse experiences on the 2021 HYS.

### Prevention Strategies

As mentioned, adverse childhood experiences can have long-lasting effects on youth. However, these experiences are preventable if there is an opportunity to address risk and protective factors in childhood. The Centers for Disease Control and Prevention (CDC) has produced a resource, Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence [31]. The strategies and their approaches are listed in the table 1 below.

Teach life skills to elementary and middle school youth (self-image, making decisions, substance use disorders, advertising and marketing, violence and the media, social skills, communication skills) an evidence-based program.	<ul style="list-style-type: none"> <li>• Social emotional learning</li> <li>• Safe dating and healthy relationship skill programs</li> <li>• Parenting skills and family relationship approaches</li> </ul>
Connect youth to caring adults and activities through mentoring programs.	<ul style="list-style-type: none"> <li>• Mentoring programs</li> <li>• After school programs</li> </ul>

**Table 1:** Strategies and approaches.

### Statewide Results

Statewide results of the Washington Healthy Youth Survey-ACEs data indicate some significant patterns among students that also match the research literature. Several studies indicate that students who report more adverse experiences (four or more) also tend to report other negative experiences and outcomes. These adverse experiences do not necessarily cause these other experiences to happen, but they can show up together in the same young person, making them more likely to experience poor behavioral outcomes.

Statewide, more 10<sup>th</sup> grade students who felt sad or depressed for at least two weeks in the past year reported higher ACEs scores. Also, more 10<sup>th</sup> grade students who reported thinking about suicide reported higher ACEs scores than those who did not think about suicide. Students who reported more hope (the belief that the future can be better than the past) tended to have lower ACEs scores.

### Guiding Good Choices

The Guiding Good Choices (GGC) curriculum is a five-session program that teaches parents of children ages 9-14 (in general, grades 4-8) how to reduce the risk that their children will develop substance use problems that include tobacco, marijuana, alcohol, and all mind-altering substances. The GGC curriculum is based on research conducted by Dr. J. David Hawkins and Dr. Richard Catalano of the University of Washington [12]. After a review of over thirty years of research, they have identified 20 factors that increase the risk of youth in developing problems with substance use and other risk factors that include mental stress, violence, delinquency, school problems, family issues and teen pregnancy.

The program consists of five 2 to 2 ½-hour interactive sessions usually held one evening per week over five weeks. The sessions cover:

- Getting Started: How to Prevent Substance Use in Your Family
- Setting Guidelines: How to Develop Healthy Beliefs and Clear Standards
- Avoiding Trouble: How to Say No to Drugs
- Managing Conflict: How to Control and Express Your Anger Constructively. (Parent and Youth Session)
- Involving Everyone: How to Strengthen Family Bonds

The GGC has been implemented in all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands and Canada with approximately 260,000 families served. There is clear research that parent-child relationships, family values and beliefs, and parent/

Strategy	Approach
Strengthen economic supports to families by teaching job seeking skills and providing employment opportunities	<ul style="list-style-type: none"> <li>• Strengthening household financial security by teaching budgeting and money management skills.</li> <li>• Family-friendly work policies</li> </ul>
Promote social norm campaigns that protect against violence and adversity in the family unit. Expose families and youth to “Most Steer Clear” social norms, an evidence-based program.	<ul style="list-style-type: none"> <li>• Public education campaigns</li> <li>• Legislative approaches to reduce corporal punishments.</li> <li>• Bystander approaches</li> <li>• Men and boys as allies in prevention</li> </ul>
Ensure a strong start for children by teaching “Guiding Good Choices” an evidence-based program.	<ul style="list-style-type: none"> <li>• Early childhood home visitation</li> <li>• High quality childcare</li> <li>• Preschool enrichment with family engagement</li> </ul>

caregiver behavior influence whether young people will use substances. The evidence supports the importance of involving parents in prevention efforts. GCC is not an intervention program and children who have a substance use problem should be referred to professional intervention and treatment services.

## Life Skills Training

The Botvin Life Skills Training (LST) program [32] has been designed for use with middle/high school students. The program consists of 12 units (class period) that are designed to be taught in sequence. Each unit contains measurable student objectives, content, and classroom activities. The program can be integrated into any subject area, although health education and science are usually considered the most appropriate. The major units are, Self-Image, Making Decisions, Smoking: Myths and Realities, Smoking and Biofeedback, Alcohol: Myths and Realities, Marijuana: Myths and Realities, Advertising, Violence and the Media, Coping with Anxiety, Coping with Anger, Communication Skills, Social Skills (A), Social Skills (B), Assertiveness, and Resolving Conflicts. The Life Skills Program supplies the learners with appropriate ways in which to handle situations, provides documents and lessons for later use, and allows one-on-one attention to the individuals taking the course. Life skills has been selected as an exemplary, research-based prevention program. The results of over a dozen studies show the effectiveness of the Life Skills Program in reducing drug use and risky behaviors.

## Conclusion

In conclusion, these findings help our understanding of the complexity and the intersection between adverse childhood experiences and behavioral health outcomes. The results of many studies have indicated that adverse childhood experiences can have a negative impact on psychological, social, emotional, cultural and spiritual later life outcomes. However, those who experience adverse childhood experiences and overcome the negative impact have at least several external and internal factors at work. Several external factors include family support from non-abusers, at least one role model in the family, unconditional love and family-focused belief in God or a strong faith tradition. Internal factors include a resistant and resilient personality. Oral and others [33] advanced the notion that Adverse Childhood Experiences (ACEs) are related to short-term and long-term negative physical and mental health consequences among children and adults. They indicate that studies over the past three decades on ACEs and mental stress disorders have emphasized the importance of preventing and addressing trauma in early childhood. Petruccioli and colleagues conducted a systematic review of the association between the CDC-Kaiser ACE scale and health outcomes and found support for associating ACEs with poor health outcomes and increased risks.

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