Evolving a More Nurturing Society to Prevent Adverse Childhood Experiences

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Conflict of Interest: The authors declare that they have no conflict of interest.
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Abstract

This article presents a framework for evolving a society that nurtures the health and well-being of its population. We review evidence that adverse social conditions, including poverty, conflict, discrimination, and other forms of social rejection, contribute immensely to our most ubiquitous psychological, behavioral, and health problems. We then enumerate the ways that effective family and school prevention programs could ameliorate much of the social adversity leading to these problems. The widespread and effective implementation of these programs—in primary care, social services, and education—must be a high priority. Beyond the implementation of specific programs, however, we must also make a more concerted effort to promote prosocial values that support nurturing families and schools. Our society's priorities must be to generate specific policies that reduce poverty and discrimination and, in so doing, reduce the risk for negative health-related outcomes.

Keywords: adverse childhood experiences; family; health; peer groups; prevention

Academic Pediatrics 2017;17:S150–S157

HERE WE PUT forward the changes our society needs if we are to significantly reduce the incidence of adverse childhood experiences (ACEs). Research has converged in showing that such experiences are a primary reason children and adolescents develop psychological, behavioral, and health problems, which often undermine their well-being throughout life.[1] We articulate a public health framework that can help us understand the social conditions that contribute to these experiences and the programs and policies that can reduce their occurrence in entire populations.

Adverse Childhood Experiences

Growing evidence indicates that we cannot achieve significant improvements in Americans' health until we learn to prevent the ACEs that play such a large role in the development of society's most prevalent health problems. Anda et al[2] discovered that adults who had faced multiple adverse experiences in childhood had significantly higher rates of a wide variety of physical illnesses. The adverse experiences included psychological, physical, or sexual abuse; emotional or physical neglect; family dysfunctions including alcohol or drug abuse in the home; divorce or loss of biological parent; depression or mental illness in the home; the mother being treated violently; or a household member being in prison. They also found that a wide variety of health behaviors and disease outcomes were more likely to occur as a function of the number of adverse experiences a person had been exposed to as a child. These negative outcomes included tobacco, alcohol, and other drug use; chronic depression; suicide attempts; anxiety disorders; hallucinations; problems staying employed; sexual promiscuity; and multiple marriages.

Exposure to ACEs has also shown a significantly greater likelihood of premature death due to physical illness, and research has discovered the physiologic pathways that undergird this relationship. Stressful family experiences are known to lead to lifelong changes in inflammatory processes associated with increased levels of heart disease, stroke, and tumor growth.[3–6] Research also finds, however, that maternal nurturance can attenuate the link between early childhood disadvantage and later metabolic syndrome,[7] which includes high blood pressure, impaired glucose control, abdominal adiposity, and lipid dysregulation, and is a precursor and contributor to many chronic diseases, including diabetes, heart disease, and stroke. In the same study, researchers found that simply escaping poverty during the life course did not attenuate this link, suggesting that early adverse social experiences, rather than poverty per se, lead to negative long-term health effects; and that a more nurturing social environment is the key to reducing risk for these negative effects. Clearly, reducing children's exposure to these adverse experiences must be a high priority for society.

Societal Conditions That Contribute to ACEs

The problem of ACEs needs to be analyzed within the context of the deterioration of our communities

over the last 50 years. Putnam[8] provides a thorough and carefully researched account of what has happened. The proportion of people living on middle-class incomes has declined by about 18% since 1971.[9] One in 5 children is living in poverty,[10] and nearly 50% are poor or near poor.[11] Twenty-two million Americans need drug abuse treatment, but only 2.5 million are receiving it,[12] and drug overdose deaths have increased dramatically in the past 15 years.[13] Additionally, family stability has declined. In 1971, 20% of children under age 7 lived with a single parent who lacked a high school diploma; now 60% of such children do.[8] In addition, lower income neighborhoods all over the country have lost the social cohesion and collective efficacy so important for successfully raising children.[14] Many of these conditions, such as drug abuse and single parenting, are among previously identified adverse experiences. Other conditions, such as poverty, contribute to child abuse, neglect, drug abuse, and mental illness.

In addition, a significant proportion of the population experiences discrimination, which is also a significant stressor for families. Landrine and Klonoff[15] found that 96% of a representative sample of African Americans in California had experienced discrimination in the past year, and 95% of them reported that it was stressful. Pascoe and Richman's[16] meta-analysis of 134 studies of the impact of discrimination showed that it was associated with higher rates of depression, anxiety, and schizophrenia, as well as poorer physical health and a greater number of unhealthful behaviors such as smoking and excessive drinking. These experiences are one reason why the life expectancy of African Americans is 3.7 years less than it is for white Americans.

Discrimination is not only an experience of minority group members. White people living in poverty are significantly more likely than affluent people to be seen as lazy, unpleasant, immoral, violent, mentally ill, abusive, alcoholic, unkind, inconsiderate, stupid, and dirty.[17]

All of these conditions make adverse experiences more likely. Nationwide, awareness of the problem of adverse experiences has increased, and treatment providers are increasingly being encouraged to screen for trauma and to provide treatment that will ameliorate the effects of past trauma.[2]

These steps are undoubtedly important. In addition to them, however, we believe that much more can be done to prevent adverse experiences from occurring in the first place. Prevention scientists have not only developed family, school, and community interventions that can prevent ACEs but they have also identified policies that can reverse the trends that have brought about the adverse social conditions that contribute to ACEs.

Social Processes Underpinning Adverse Social Experiences

Understanding the social conditions that contribute to adverse experiences and their physiologic effects shows us that we must prevent these experiences or ameliorate their impact, but it does not explain the social processes that underpin so many of the adverse experiences. To generate a population-level impact on public health, we must identify and address the social processes involved in adverse experiences. We describe 2 key sources here.

Family Coercion in Childhood

Patterson and colleagues[18–20] compared interactions in families with aggressive children to families without. They found that those with aggressive children had more interactions in which family members used coercive (ie, hostile, aggressive) measures to negotiate conflicts or disagreements. In families with aggressive children, family members frequently engaged in such social exchanges, which often continued until one person escalated the conflict by yelling, threatening, or hitting, which would effectively end the argument and bring a brief respite from the other's aversive behavior. Such families also demonstrated significantly fewer warm and reinforcing interactions that would promote or reward prosocial behavior. Longitudinal studies of children with this risk profile showed that coercive processes contribute to development of antisocial behavior,[21] substance use,[6] violence,[22] and depression,[23] all of which can contribute to later health problems. Additional research has shown that coercive processes are involved in most forms of social conflict.[24]

Peer Rejection in Adolescence

Peer rejection can be highly stressful, with negative implications for both mental and physical health; it is particularly likely among children exposed to adverse experiences at home.[25,26] For a number of reasons, adolescents are particularly susceptible to the effects of peer rejection. First, peers become increasingly important as a source of influence and affiliation during this developmental period. Adolescents tend to rely less often on their parents for social support, reducing parents' ability to serve as buffers against stress.[27–29] Additionally, brain development during this period makes social reward increasingly salient,[30,31] resulting in an elevated desire for peer group acceptance and making youth increasingly vigilant for signs of rejection. Finally, early adolescents may be particularly vulnerable to social stressors due to a developmental lag in self-regulatory capability.[32] Thus, early adolescence represents a developmental period of high risk for negative stress-related outcomes related to peer rejection. At the same time, early adolescents tend to experience more peer rejection, as a surge in aggressive and exclusionary behavior often accompanies the transition to middle school, a time when youth are renegotiating social structures.[33,34]

We have ample evidence that adverse social conditions in childhood contribute to the burden of ill health, not only through their impact on the development of psychological and behavioral problems that compromise health but also through direct impact on physiologic functioning. To achieve a population-level improvement in public health, we should provide services to remediate

ill health and we can, and should, prevent these adverse experiences from occurring in the first place.

EVIDENCE-BASED INTERVENTIONS TO PREVENT ADVERSE EXPERIENCES

Over the past 30 years, prevention scientists have accumulated numerous interventions with proven benefit in preventing most family conditions involved in ACEs. Here we describe a sample of these interventions in the hope of making the case that many more resources should be put into making these interventions widely available.

FAMILY-BASED PREVENTION

Perhaps the most obvious step in addressing the problem of ACEs is to ensure that health care providers screen for risky or maladaptive family conditions and intervene with families as needed. Several of the articles in this special issue focus on how health care providers can improve their screening and intervention procedures,[35–38] which have proven benefit in helping families become less coercive and more nurturing.[39] Family-based programs focus on providing education to families, improving the quality of family relationships, and teaching key family management skills. The goal of these programs is to transform the way parents manage and monitor child behavior, how the family negotiates conflicts and solves problems, and the affective quality of the family environment. These programs view the family as the most influential and malleable context from which to promote long-lasting behavioral and emotional adjustment among children and youth.

Several systematic reviews and meta-analyses have found family-based programs to be effective at preventing or reducing a wide range of behavioral problems among children, including externalizing and disruptive behavior, attention-deficit/hyperactivity disorder, and oppositional defiant disorder, while also promoting social competencies and academic performance.[40–45] Reviewers have drawn similar conclusions with regard to adolescents, finding significant reductions in behavioral problems such as delinquency, violence, substance abuse, depression/anxiety, and HIV risk and noting enhancements to family and peer relations.[46–53]

These evidence-based programs have such effects because they promote a wide range of effective parent behaviors[44,45,51,54] and diminish child maltreatment and harsh and inconsistent discipline.[55–57] They have proven benefit in preventing many of the psychological and behavioral problems known to predict the most common and costly physical illnesses, especially cardiovascular disease and cancer. Moreover, initial evidence indicates that nurturing family processes can directly prevent development of inflammatory processes that contribute to these diseases.[58] In one study,[59] researchers examined the effects of a family-based program on low-grade inflammation, a process that underlies many health problems to which low-socioeconomic status youth are vulnerable. Eight years after a randomized trial of the program ended, youth who participated had significantly less inflammation than controls did. In another example, Brody et al[60] found that a family-based prevention program had salutary effects on adolescent telomere length, an indicator of general systemic aging, with diminished telomere length associated with several chronic diseases of aging and heightened mortality risk.

Many examples of family-based prevention programs have demonstrated benefits in reducing ACEs and promoting nurturing family environments. The edited volume by Van Ryzin et al[39] includes several prominent examples, including the Family Check-Up (FCU), Parent Management Training – the Oregon Model (PMTO), Triple-P, and Treatment Foster Care Oregon (TFCO). These programs are often delivered in community settings but increasingly are available through health care providers.[61]

SCHOOL-BASED PREVENTION

Various programs have arisen in an attempt to transform schools into more nurturing environments for children. Many of them focus on social–emotional learning (SEL). A recent report showed that the United States is lowest among 32 high-resource countries in SEL in schools.[62] Yet programs promoting SEL can provide explicit instruction in positive social interactions and effective problem solving.[63] These programs are effective at promoting social–emotional skills, reducing problem behavior, and enhancing academic achievement.[61,64]

The Good Behavior Game (GBG) represents a somewhat different approach to establishing nurturing school environments.[65] GBG is a teaching strategy rather than a curriculum, operating on principles of social reinforcement of on-task and prosocial behavior. Children in GBG classrooms learn to inhibit impulses to act with aggression, disruption, and off-task behavior. They learn instead to regulate emotions and monitor their classmates' behavior in a gamelike setting. More specifically, GBG and related group- or team-based instructional approaches such as cooperative learning[66] emphasize the establishment of "positive interdependence" in classrooms, which implies that individuals attain their goals only if others around them also achieve theirs.

Under positive interdependence, within-group peer interaction, which previously may have been indifferent or even actively antagonistic, tends to promote the achievement of others through mutual assistance and resource sharing.[67,68] These positive social interactions in turn increase interpersonal attraction and acceptance, support development of new friendships, and, in an educational context, promote academic engagement and achievement.[69,70] In fact, Bierman[71] suggests that gains in social skills alone are not sufficient to reduce social isolation and rejection; instead, positive interdependence is required to motivate youth to reevaluate previous conclusions regarding the social desirability of others.

As social learning–based strategies, GBG, cooperative learning, and similar programs increase the likelihood that teachers and peers appropriately prompt and reward

students' newly acquired social skills. The continual practice of inhibitory control and social reinforcement of prosocial behavior can serve to sharpen self-regulatory skills and enhance social competence. Research indicates that the GBG can reduce aggressive, disruptive, and off-task behaviors,[72,73] later substance abuse, antisocial personality disorder,[74] use of mental health services,[75] and criminal behavior.[76] Robust empirical evidence also documents the significant positive effects of cooperative learning on interpersonal attraction, social acceptance, and academic achievement, along with reductions in social rejection and exclusion.[77–80]

PREVENTION PROGRAMMING IN MEDICAL SETTINGS

The evidence on ACEs has already influenced a movement to increase screening and intervention to prevent ACEs and treat the consequences of exposure to adverse experiences.[81–83] However, existing evidence indicates that despite most pediatricians' awareness of ACEs and the effect they have on children, the majority of pediatricians do not screen to detect ACEs. One reason may be that they cannot bill for these services.

Thus, a specific step in public policy is crucial: delivering prevention programming must become billable in medical settings. Pediatric and family practice physicians are trusted advisers to parents on all aspects of their children's health.[84] Yet current insurance and reimbursement policies discourage primary health care providers from implementing these tested and effective programs. The cost of not receiving these programs is high: behavioral health issues cost America $247 billion per year.[85]

Numerous barriers restrict the reach of effective family-focused programs in preventing behavioral health problems. One is the stigma associated with attending parenting workshops. Providing family-focused preventive services through primary health care settings could eliminate this stigma. If primary health care providers offer these programs, parents will see the value to their children's optimal health. The perceived stigma would fade and the number of families attending would increase.[61] Implementation and adherence would likely increase as parents begin to follow advice from their child's primary health care provider to ensure their child's health.

Recent changes within health care make primary care settings an increasingly favorable home for family-focused prevention and suggest possibilities for sustainable funding of family-focused prevention programs.[86] To address children's problems, fewer reimbursement systems require a diagnostic code for diseases or disorders. Under current policy, the US Preventive Services Task Force has identified clinical preventive services that must be provided without deductible or copay. Accountable care organizations focused on reducing later health care costs are encouraged to promote population health through prevention and intervention programs. Unfortunately, most currently funded innovative health research does not consider the multiple long-term beneficial outcomes for children in diverse arenas of life (ie, education, physical and mental health, employment, economic success, and criminal involvement) that result from parental participation in effective prevention programs. In fact, 10 of the 16 Blueprints-approved, family-focused prevention programs have undergone rigorous benefit–cost analyses.[87] Eight of the 10 programs produced more economic benefits to society than they cost because of their effects in preventing future behavioral health problems, including depression, violence, crime, and drug abuse.

EVOLVING A MORE NURTURING SOCIETY

Given the influence of poverty, discrimination, and economic inequality on ACEs, an exhaustive public health approach to preventing ACEs needs to address these problems and try to reach individual families and children with evidence-based programs.

The increases in poverty, discrimination, and inequality that have occurred over the last 50 years are due at least in part to a well-documented advocacy for free-market economics. Over the past half century, advocates for free markets have promoted a set of values and beliefs that led to policies that have undermined the middle class.[88] Advocacy for free markets was based on considerable evidence that market systems foster the selection of innovative and more efficient products and services that generally benefit everyone.[89] In this view, government programs were seen as less likely to contribute to well-being than unregulated free market activities would.

However, although advocacy for free markets has probably contributed useful adjustments to some government practices, it became exaggerated to such an extent that *any* pursuit of wealth and income came to be seen by many people as inherently beneficial to all. One result was that American society evolved toward greater materialism and lower levels of prosocial and communitarian values.[90] Another was that we abandoned necessary components of financial regulation, which led to the collapse of our economic system in 2008.[91] These developments contributed to the hollowing out of the middle class that Putnam[8] documented.

Fortunately, a nascent and growing movement is countering the view that the unfettered pursuit of wealth benefits everyone. Considerable criticism of free-market thinking has come to light in recent years.[92–95] The ACEs movement has made a significant contribution to redirecting societal values to support nurturing the well-being of every child. Research on ACEs has found a set of interrelated adverse conditions that affect a wide set of outcomes. These findings underscore the need to persuade all sectors of society to work together to increase nurturance.

The work on ACEs is bolstered by growing evidence that people are most likely to thrive in conditions that minimize toxic social and biological influences, richly reinforce diverse forms of resilient and prosocial behavior, and limit

opportunities and influences on problem behavior.[96,97] It is further supported by evidence on the influence of adverse conditions on inflammatory processes,[3] evidence from evolutionary analyses of the pivotal role of prosociality in human evolution,[98–101] and the burgeoning research in clinical psychology on the value of compassion, mindfulness, and action in the pursuit of prosocial values (National Prevention Science Coalition, http://www.npscoalition.org/).[102–104] Increasingly, these and many other efforts (eg, His Holiness the 14th Dalai Lama of Tibet; http://www.dalailama.com/) are forging a network with the potential to create a society with the fundamental value of nurturing the well-being of every person rather than pursuing individual wealth.

The Research We Need

Research must now painstakingly examine the influence of each sector of society on family and school conditions that directly influence development. For example, until recently, the deleterious effects on families of the criminal justice system's overly punitive practices[105] have been overlooked. Research that further documents how incarceration undermines family economic well-being and stability will be important in developing policies advocating for criminal justice to assess policies that harm families and to modify practices in light of the evidence. Similarly, research on the impact of workplace conditions on the quality of parenting and the economic well-being of families could help to support policies that reduce the harmful effects of working conditions on young people's development.

Research must also explore how to adapt evidence-based family and school interventions so that health care providers can efficiently and effectively deliver those interventions. For example, recent studies are examining whether effective family interventions can be delivered by health care providers via technology-based approaches.[106]

Finally, we need research on how to influence the adoption of public policies that improve children's chances of developing successfully. For example, Komro et al[107] identified 46 policies that have consistently demonstrated beneficial effects on child well-being. Yet we know little about how to be effective in getting such policies adopted.

The Society We Could Have

The impact of adverse social conditions on human well-being is sufficiently clear to make it imperative that we evolve a health care system—indeed, a society—that makes preventing these conditions paramount. We have numerous tested and effective interventions to prevent or ameliorate adverse conditions. Now we must evolve the existing health care and human services systems to ensure wide, effective implementation of these interventions. Simultaneously, we must promote prosocial values and goals that support efforts to implement programs, policies, and cultural practices to increase the proportion of families, schools, and communities that nurture the well-being of every person. As the 2009 Institute of Medicine report on prevention noted, the foundation exists to achieve a society in which nearly every young person arrives at adulthood with the skills, interests, values, and health habits to lead a productive life in caring relationships with others.[108]

Acknowledgments

The National Institute on Alcohol Abuse and Alcoholism (R01AA021726-01A1) provided financial support for the completion of the work. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Alcohol Abuse and Alcoholism or the National Institutes of Health.

Financial disclosure: Publication of this article was supported by the Promoting Early and Lifelong Health: From the Challenge of Adverse Childhood Experiences (ACEs) to the Promise of Resilience and Achieving Child Wellbeing project, a partnership between the Child and Adolescent Health Measurement Initiative (CAHMI) and Academy-Health, with support from the Robert Wood Johnson Foundation (#72512).

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