Balancing Adverse Childhood Experiences (ACEs) With HOPE*

New Insights into the Role of Positive Experience on Child and Family Development

*Health Outcomes of Positive Experience

Authors

Robert Sege, MD, PhD
Health Resources in Action, Boston, Massachusetts
& Center for the Study of Social Policy, Washington, DC

Christina Bethell, PhD, MBA, MPH
Child and Adolescent Health Measurement Initiative
Johns Hopkins Bloomberg School of Public Health
Baltimore, Maryland

Jeff Linkenbach, EdD
University of Montana – Mansfield Center, Missoula, Montana
& The Montana Institute, Bozeman, Montana

Jennifer A. Jones, MSW
Alliance for Strong Families and Communities
Milwaukee, Wisconsin

Bart Klika, PhD
University of Montana, Missoula, Montana
& Prevent Child Abuse America, Chicago, Illinois

Peter J. Pecora, PhD
Casey Family Programs
& School of Social Work, University of Washington
Seattle, Washington

Acknowledgments

Sponsorship

Sege, R., Bethell, C., Linkenbach, J., Jones, J., Klika, B. & Pecora, P.J. (2017). *Balancing adverse childhood experiences with HOPE: New insights into the role of positive experience on child and family development*. Boston: The Medical Foundation. Accessed at www.cssp.org

Contents

Abstract

This report presents evidence for HOPE (Health Outcomes of Positive Experiences) based on newly released, compelling data that reinforce the need to promote positive experiences for children and families in order to foster healthy childhood development despite the adversity common in so many families. These data:

1. Establish a spirit of hope and optimism and make the case that positive experiences have lasting impact on human development and functioning, without ignoring well-documented concerns related to toxic environments.

2. Demonstrate, through science, the powerful contribution of positive relationships and experiences to the development of healthy children and adults.

3. Describe actions related to current social norms regarding parenting practices, particularly those associated with healthy child development. These actions are based on data that suggest that American adults are willing to intervene personally to prevent child abuse and neglect.

4. Reflect upon the positive returns on investment that our society can expect as we make changes in policies, practices, and future research to support positive childhood environments that foster the healthy development of children.

Thus, this report contributes to a growing body of work – the Science of Thriving – that encourages us to better understand and support optimal child health and development.

Introduction

The future of our society is bright, and it rests with our children, who are the leaders, parents, citizens and workforce of the future. In turn, the well-being of our children is the responsibility of all of us. Current brain and social sciences have shed light on the impact of childhood adversity, risks, and toxic and negative factors impacting healthy child development. Yet this focus can only go so far in prescribing what is needed for a thriving society. The purpose of this report is to introduce the importance of HOPE – Health Outcomes of Positive Experiences, a framework that studies and promotes positive child and family well-being.[1]

In the following pages, we build on the foundation of existing research and present newly released, compelling data that reinforce the opportunity to support families and communities. We describe the current science concerning the key role that experience plays in child development, adding to our current understanding of the power of positive experiences to mitigate the negative role played by adverse childhood experiences (ACEs). While ACEs are important, an exclusive focus on adverse experiences risks labeling children and their families, and it neglects to turn attention toward the possibility for flourishing even in the face of adversity and the promotion of the positive experiences that children need. We explore here how positive experiences in the day-to-day relationships and interactions that children experience in childhood despite adversity have lasting impacts on adult health.

We then turn to needed actions based upon data about current family norms, as well as data about cultural norms indicating our societal readiness as adults to engage in ways to positively cultivate environments that prevent both explicit child abuse and foster the safe, stable, nurturing relationships and environments all children need.

We end with some critical reflections and suggestions about ways to ensure these experiences become part of the lives of every American child. While parents play the central role in their children's lives, policies can be enacted that make these experiences possible. This report establishes the HOPE framework and outlines some steps that can be taken today to improve policies and practices and guide future research. Adding this understanding of HOPE to existing knowledge can help ensure that all children benefit from positive relationships and environments essential to their healthy development.

Casey Family Programs collaborated on this report, which contributes to a growing body of work – the Science of Thriving – that encourages us to better understand and support optimal child health and development. These efforts will reduce the need for children to enter or remain in the care of state child welfare systems. The findings and recommendations reinforce Casey's commitment to strengthening communities and the broader field's understanding of the role of positive factors on child development, including resilience and recovery.

In this report, we use the term "parent" to signify the adults responsible for the care and upbringing of children; with that term, we mean to include biological, adoptive, and foster parents as well as grandparents and other family members. In other words, "parents" refers to the adults who parent a child.

Effects of Positive Experiences on Child Health: Broadening Our Understanding of Brain Development

Twenty-first-century neuroscience is further increasing our awareness of the implications of this more complete picture of early childhood development. For example, in the first 1,000 days following birth, brain connections form and brain cells are dramatically pruned, leaving an intricate structure of cells and connections that establish the foundation for lifelong development. The 2016 National Academies of Sciences report, Parenting Matters, provides a comprehensive review of the effects of parenting practices on child brain development.[2]

Children who grow up in safe, stable, nurturing relationships and environments that foster hope and resilience are better prepared for lifelong health and well-being. At the same time, the 1998 landmark Adverse Childhood Experiences (ACEs) Study demonstrated that many adults recall experiences—including abuse and neglect—that led to lifelong poor physical and emotional health.[3]

Exposure of the growing brain to unremitting and unbuffered stress (known as toxic stress) leads to changes in brain architecture, affecting executive functioning skills critical to parenting effectively. These changes appear to result, in part, from chronic activation of the hypothalamic-pituitary axis, the same system that supports the familiar instantaneous fight or flight response.[4] This special class of chronic, unbuffered, and unremitting adverse experiences has demonstrably harmful results because during each stage of development, particularly in the critical first three years of life and again during adolescence, the basic architecture of the growing child's brain is established.

Positive experiences and supportive relationships provide the buffering that allows children to withstand, or recover, from adverse experiences. Nurturing care and attention in infancy profoundly influence brain development and form the foundation of human development. Four broad categories of positive childhood experiences that encourage health, functioning, and quality of life outcomes have been identified: nurturing and supportive relationships; safe, stable, protective, and equitable environments in which to develop, play, and learn; constructive social engagement and connectedness; and social and emotional competencies.[5] When children are nurtured and free from harm, they are able to gain mastery across domains that establish the basis for future learning.[6]

Childhood experiences occur in the context of families. We now understand that brain development continues throughout our lives, providing later possibilities for changing neural pathways to develop healthier ones. Scientists are also now able to demonstrate important changes in the human brain when we become parents.

In particular, an extraordinary period of brain growth and remodeling occurs in mothers during the perinatal period. The metabolic and hormonal changes that support pregnancy and birth also affect the brain, and, as in all periods of brain growth, the mother's actual lived experience most likely influences this remodeling process. It is quite likely that support for mothers during this period of brain development may have lifelong implications for both mother and child.[7]

Perhaps even more surprising, the father's brain is also changed through caring for an infant. A 2014 report in the Proceedings of the National Academy of Sciences from the United States showed that mothers and fathers each demonstrated specific activation of relevant brain centers when exposed to videos of themselves interacting with their infants, providing "compelling evidence for brain malleability with caregiving experiences in human fathers."[8]

While parents mediate the childhood experiences that influence brain growth in their children, their ability to do so grows from cultural, policy, and environmental factors. Parenting practices develop in response to a series of larger social influences, ranging from social and cultural norms to policies that impact access to food, shelter, and warmth. Further, there is an intergenerational pattern of positive relationships. Parents often use parenting practices that are familiar, drawing on experiences from their own childhood. Parents whose own early relationships were nurturing, predictable, and safe are more likely to develop similar relationships with their own children.

This Report: Balancing ACEs with HOPE

The purpose of this report is to present newly released, compelling data that reinforce the need and amazing opportunity to support families and communities in the cultivation of relationships and environments that promote healthy childhood development. This approach, which adds to the growing body of work on the Science of Thriving, seeks to foster strong families and promote the prevention, mitigation, and healing from adversity. This report contains information derived from four recent population surveys to explore the role of positive experiences on child and adult health, and to assess the cultural and political readiness to support children and their families. Taken together, these data are consistent with the project's logic model (see Figure 1) and they:

Demonstrate the contribution of positive relationships and experiences to the development of healthy children and adults.

Describe current social norms regarding parenting practices, particularly those associated with healthy child development.

After we present these data, we look at population surveys that explore how the attitudes and experiences of parents in the United States regarding (1) selected parenting practices and (2) social policies intended to support the healthy development of children.

Figure 1. Balancing ACEs with HOPE Logic Model

Each of these factors influence parent and family beliefs and behaviors.

Source: Prevent Child Abuse America

Childhood experiences directly impact brain development.

Source: The Center on the Developing Child at Harvard University

Positive childhood experiences can impact adult health, even among adults who reported adverse childhood experiences.

Source: 2015 Wisconsin Behavioral Risk Factor Survey

Culture
Policy
Resources
Environment

Brain Development

Adult Health

Parent and Family

Physical health and behavioral outcomes

Positive experiences and social norms regarding parenting practices contribute to child development.

Sources: CDC Essentials for Childhood Program & Prevent Child Abuse America

Brain development and childhood experiences directly affect physical health and behavioral outcomes.

Sources: The National Survey of Children's Health 2011-2012

As shown in the logic model, above, this report uses recently conducted population surveys to examine the role of positive experiences in child development. The brief review presented in the introduction provides the framework for viewing the importance of experiences – both positive and negative - on childhood development. This report adds to our understanding of the central role of development by describing survey results that support these theories:

1. Population surveys released for this report by the Centers for Disease Control and Prevention (CDC) Essentials for Childhood Program (EfC) and Prevent Child Abuse America (PCAA) demonstrate the social and political support for a positive approach to parenting. This support and these practices have been linked to reductions in certain adverse experiences – in particular, reductions in child neglect and physical abuse.

2. The basic description of brain development discussed earlier sets the stage for this extraordinary set of survey results. Taken together, these surveys provide a glimpse of the effects of positive childhood experiences, the key role that parents and caregivers play in promoting resilience, and the beliefs of parents in the United States that might be drawn upon to further those policies that favor optimal child development.

The implications for a better understanding of the factors that allow children and families to thrive are potentially game-changing. For example, we can reduce the need to place children in foster care if there are policies in place that address income and housing needs, treat mental illness, and support parents as they adopt positive parenting approaches. Family supports can come from many sectors, both formal and informal: friends, family, nonprofit social and human services organizations, child care providers, schools, and the health care, business, faith, and law enforcement communities. Foster parents can help children in their care thrive by extending their responsibility from simply ensuring physical safety to including those parenting approaches that allow children to have positive experiences.

Children can succeed in school, even with substantial adversity, when they develop executive functioning skills and use the relational supports that are known to promote resilience. Parents and families can manage their own stress better when they embrace nurturing communication and interaction styles.

The Effects of Positive Experiences on Child Development and Adult Health: Results from the National Survey of Children's Health

Study Overview

The science of child development reviewed in the introduction creates unprecedented opportunities to advance human health and well-being. Breakthrough findings in neuroscience, epigenetics, biology, psychology, sociology, and humanities point to a new Science of Thriving that illuminates largely untapped capacities for the promotion of healthy development and healing from adversity at the child, family, and community levels. Facilitating healthy relationships is the common denominator across all of these scientific arenas. To contribute to the knowledge base in this area, Bethell and colleagues analyzed National Survey of Children's Health data to (1) evaluate the prevalence and impact of adverse childhood experiences among children in the United States, (2) elucidate the prevalence of resilience and flourishing among children, and (3) examine relationship-centered factors that promote flourishing and mitigate the impact of adverse childhood experiences.[9]

Sponsored by the federal Maternal and Child Health Bureau, the National Survey of Children's Health (NSCH) includes items related to childhood health and functioning, adverse childhood experiences (ACEs), family relationships and parental health, school and neighborhood conditions, health care and related services, and childhood flourishing. (See www.childhealthdata.org.)

The 2011-12 NSCH data that was analyzed included a representative sample of non-institutionalized children 0-17 years at the national and state levels (n =95,677). The 2016 NSCH will be completed in spring 2017 and includes additional variables on family resilience and social and emotional well-being of young children.

For this report, the flourishing measure is an indicator that includes multiple attributes of children's well-being related to engagement in life, emotional balance, and self-efficacy. And resilience is assessed simply as children whose parents responded that their child is usually or always able to stay calm and in control when faced with a challenge. (See Appendix B for wording of 2011-12 NSCH items.)

Many other indicators are included in the NSCH that could also reflect flourishing. Measures of a child's home and neighborhood environment were constructed with a focus on factors minimally dependent upon household income (versus norms and behaviors more dependent on resources). Parents' overall mental and physical health status was assessed along with a variety of parenting stress, coping, and parent-child interaction and family behavioral norm variables, such as sharing meals, communicating about things that matter, and participating in the children's lives. (See www.childhealthdata.org/learn/NSCH.)

Several analyses in this report focus on associations with the cognitive, emotional, and behavioral health of children. Here a child was classified as having a cognitive, emotional, or behavioral problem if he or she had been diagnosed with attention deficit disorder, depression, or phobia/fears, and/or if the parent reported that the child had experienced anxiety, stress, bed wetting or daytime incontinence, or insomnia. To illustrate associations between flourishing and protective family relationship factors, the analyses focus on children who have or have not been exposed to ACEs who were assessed using the 10 item NSCH-ACEs measure. (See Appendix B for item wording.)

Findings

The analyses reported here show the interplay between ACEs and childhood resilience in association with certain child outcomes. Importantly, analysis of the NSCH data also adds to current research that confirms – at a population level – the profound impact that positive relationships and experiences have on promoting childhood resilience among children exposed to adversity. In particular, the 2011-12 NSCH found that childhood resilience was related to three parental attributes. After adjustment for other factors, children were more likely to demonstrate resilience when they and their parents could discuss things that mattered, when parents participated in their child's activities and knew their friends, and when parents managed their own stress around parenting. These results complement other information that suggests that certain parental patterns and parenting practices can promote childhood well-being.[10]

The link between childhood adversity and the mother's health was also extremely strong and pointed to the importance of two-generation approaches that support parental well-being. The 2011-12 NSCH showed that two-thirds of children with no ACEs had mothers who reported being in very good or excellent physical and mental health compared to approximately 1/3 (35.8%) of children with two or more ACEs.

Similar results pertained to the relationship between childhood outcomes and neighborhood factors: Children appeared more likely to flourish when they lived in a protective home environment (as defined by family norms related to sharing meals, spending time together and parents participating in child's activities, limiting television and household exposure to smoke, etc.), and when their neighborhoods and schools were reported as supportive and safe.

The results from these data were quite robust: they applied to normally developing children, to children with special health care needs, and to children with emotional, behavioral, or developmental issues. They applied to children under 6 years old and from 6-17. Although it is beyond the scope of this report, it is important to note that many children in the United States do not grow up in homes that are fully protective, do not experience a safe and supportive neighborhood, and do not think that their school is a safe school. Yet when they do, the positive effect is profound regardless of the other adversities the child experiences.

Analysis of the 2011-12 NSCH data illustrates how childhood resilience buffers the effects of ACEs. Figures 3 and 4 show that children experiencing ACEs had higher rates of physical, emotional, mental, and behavioral health issues and much lower rates of school engagement and flourishing. However, these effects were significantly reduced among children who were reported to be usually or always resilient.

Figure 2. Prevalence of School Success Factors among Children with Special Health Care Needs Who Had Two or More Adverse Childhood Experiences (ACEs) and Whether Child Demonstrates Resilience
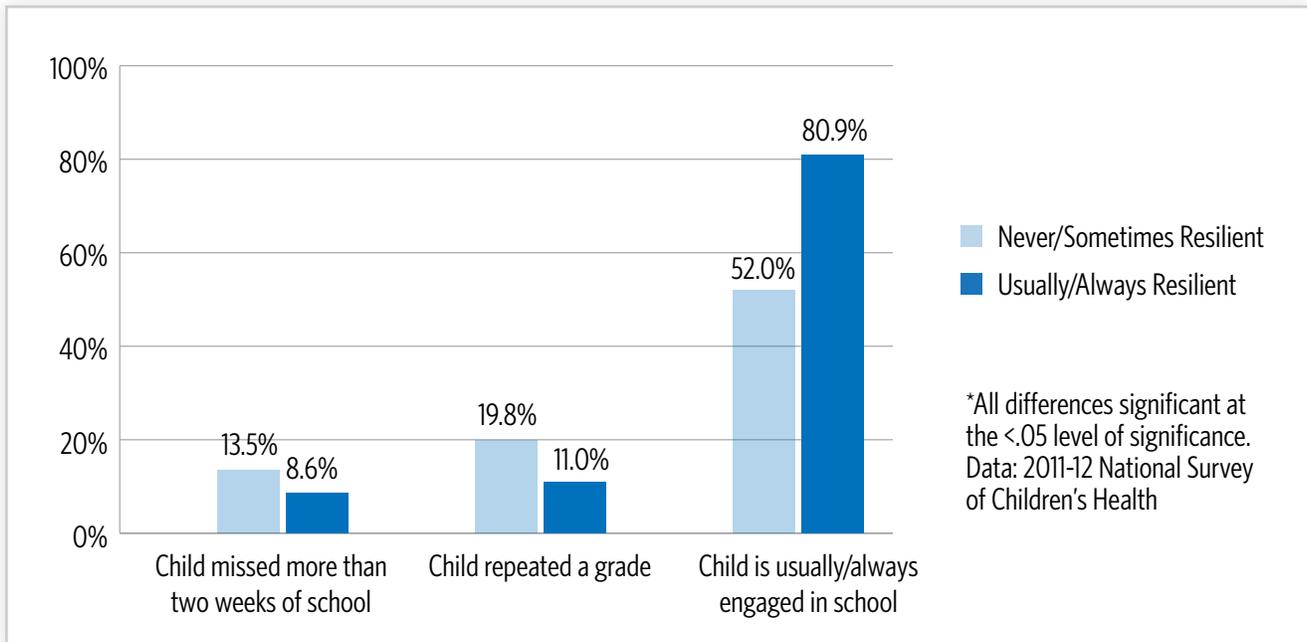
Source: Bethell, C. D., Newacheck, P., Hawes, E., & Halfon N. (2014). Adverse childhood experiences: Assessing the Impact on health and school engagement, and the mitigating role of resilience. *Health Affairs*, 33(12), 2106-2115. DOI: 10.1377/hlthaff.2014.09. Reprinted with permission.

Figure 3. Prevalence of Emotional, Mental, or Behavioral Conditions by Adverse Childhood Experience (ACE) Exposure and Resilience Status
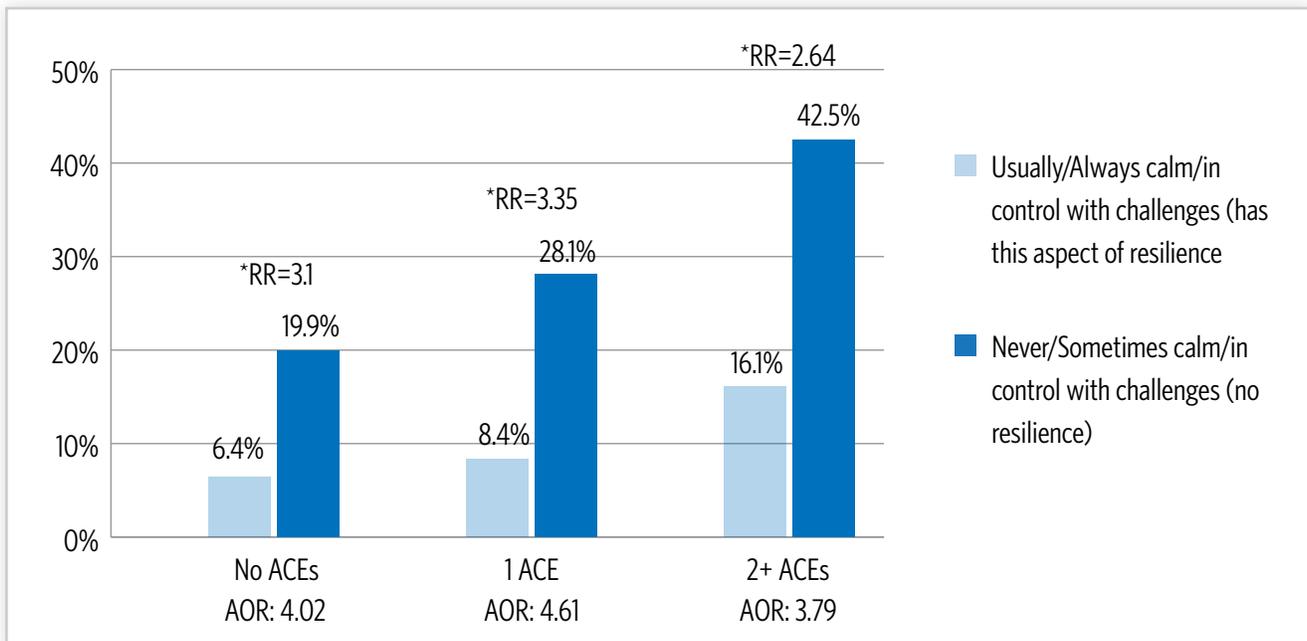
Source: Bethell, C., Gombojav, N., Solloway M., & Wissow, L. (2015). Adverse Childhood Experiences, resilience, and mindfulness-based approaches: Common denominator issues for children with emotional, mental, or behavioral problems. *Child & Adolescent Psychiatric Clinics of North America*.doi:10.1016/j.chc.2015.12.001. Reprinted with permission.

In summary, protective factors related to children's relationships and experiences with their parents and communities are strongly associated with resilience in children; resilient children – even those who have suffered four or more adverse experiences – have better functional (school) and health outcomes. These negative effects (emotional, mental, and behavioral) hold up across all income and race/ethnicity groups: At the same time, positive relationships and environment buffer the impact of ACEs across all levels of household income.[9]

This summary of research from a representative, population-based national survey of children and families has tested the logic model pathway hypothesis that parental attributes affect childhood resilience. This resilience, in turn, protects children against developing emotional, behavioral and mental health issues – with or without the presence of significant adverse experiences.

How Positive Childhood Experiences Affect Adult Well-Being: Results from the Modified 2015 Wisconsin Behavioral Risk Factor Survey

Study Overview

The Adverse Childhood Experiences (ACEs) Study established that there are long-term health consequences from childhood adversity. However, it also left open the broader question of interplay between a variety of childhood experiences on subsequent adult health. Do positive experiences, or the presence of promotive and preventive factors, also lead to lifelong health effects? Neal Halfon and colleagues' life course health development model explains the dynamic interplay between positive and risk factors and advances a focus on positive factors to alter a child's developmental trajectory across time and regardless of risks.[11]

The Wisconsin Behavioral Risk Factor Survey (BRFS) was expanded in 2014 and 2015 to include eight questions related to child poverty and neglect (2014) and six questions pertaining to factors promoting child and youth resilience.[12] (See Appendix A for the survey items.) The 2014 survey questions were created by a team of experts in poverty and early childhood adversity. The 2015 questions were adapted from the Child and Youth Resilience Measure developed by Dr. Michael Ungar at the Resilience Research Centre at Dalhousie University in Halifax, Nova Scotia.[13] Authors of this report were essential in getting the inclusion of these questions in the 2015 Wisconsin BRFS and conducted the analysis on these data, making this the first report on this important new information source; we report our initial findings here pending full publication.[14]

Findings

Analyses showed that despite adversity, positive childhood experiences appear to have long-lasting effects on adult health. While exposure to ACEs were higher for lower income and minority populations, the effect of positive experiences to attenuate poor health outcomes was similarly strong across income groups. The positive experiences with the greatest protective impact for those with four or more ACEs (the highest risk group) included feeling that your family stood by you in hard times and having someone to talk with about difficult feelings.

Figures 4-7 present a high-level summary of a more extensive empirical analysis conducted of the Wisconsin BRFS. These data, drawn from an extensive analysis of the survey data, illustrates the effects of key protective factors at several levels: family ("family stood by me"), friends and school, and community. Approximately 42% of adults experiencing more than three ACEs report a diagnosis of depression if they also reported that they did not feel their family stood by them in hard times during childhood; compared to 27% who did experience that protective factor. Half as many adults with four or more ACEs reported 11 or more poor mental health days if they experienced having someone to talk to about difficult feelings in their childhood (14.4%) compared to similar adults who did not have someone to talk with about their feelings (28.5%). Similar effects are observed when those with four or more ACEs experienced the support of friends.

According to our analysis, the positive childhood experiences with the greatest protective impact for those in the highest risk group (four or more ACEs) included feeling as a child that their family stood by them in hard times and that they had someone to talk with about difficult feelings. Feeling supported by friends during childhood was also strongly associated with fewer negative health and behavior outcomes for adults with more than three ACEs. Though further empirical evaluation is required, initial findings show that 27 of the 49 associations evaluated were statistically significant, and other findings were suggestive but did not achieve statistical significance due to technical factors. These findings confirm that positive childhood experiences impact adult health among adults exposed to childhood adversity.

Figure 4. Factors That Moderate the Effects of More Than 3 ACEs on Adult Depression
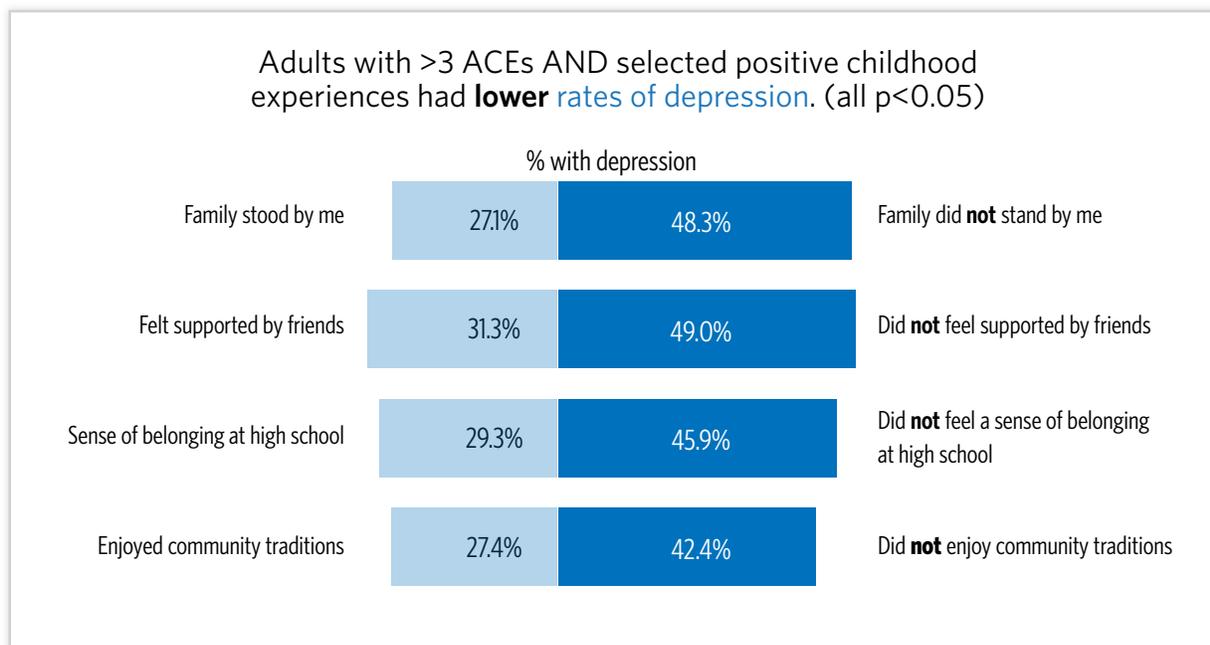
Adults with >3 ACEs AND selected positive childhood experiences had **lower** rates of depression. (all p<0.05)

% with depression

Family stood by me	27.1% — 48.3%	Family did **not** stand by me
Felt supported by friends	31.3% — 49.0%	Did **not** feel supported by friends
Sense of belonging at high school	29.3% — 45.9%	Did **not** feel a sense of belonging at high school
Enjoyed community traditions	27.4% — 42.4%	Did **not** enjoy community traditions

Source: Jones, J., Bethell, C.D., Linkenbach, J. & Sege, R. (2017). Health effects of ACEs mitigated by positive childhood experiences.(manuscript in preparation).[14]

FIGURE 5. FACTORS THAT MODERATE THE EFFECTS
OF MORE THAN 3 ACEs ON ADULT HEALTH
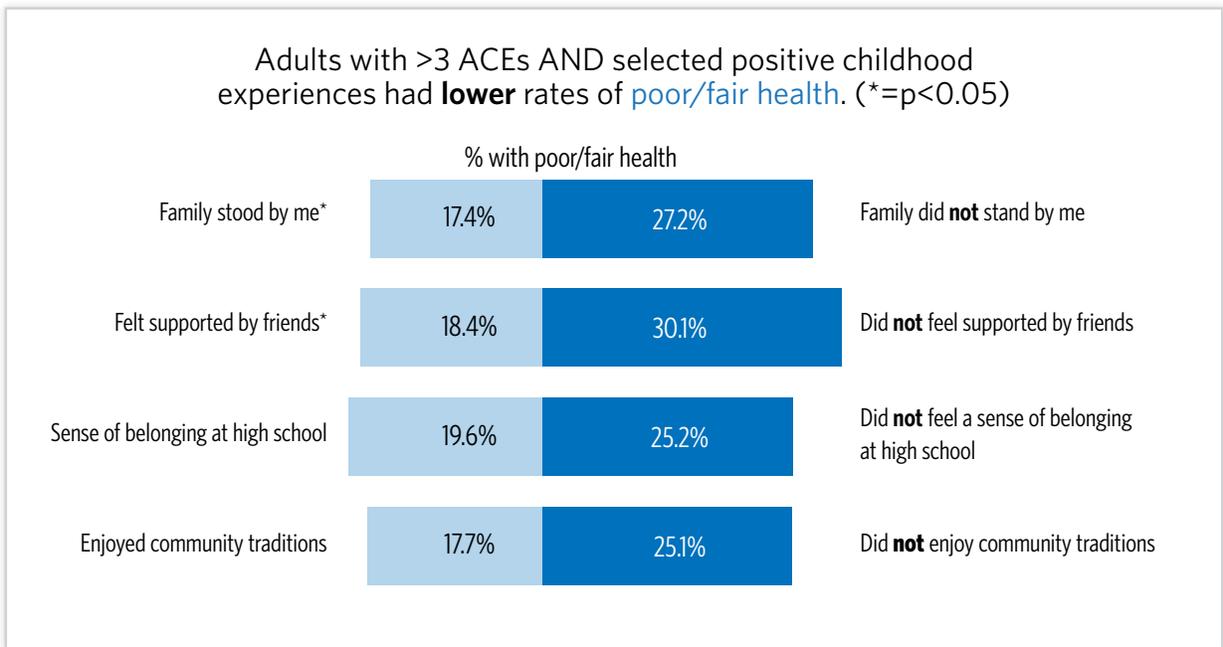
Adults with >3 ACEs AND selected positive childhood experiences had lower rates of poor/fair health. (*=p<0.05)

% with poor/fair health

Family stood by me*	17.4%	27.2%	Family did **not** stand by me
Felt supported by friends*	18.4%	30.1%	Did **not** feel supported by friends
Sense of belonging at high school	19.6%	25.2%	Did **not** feel a sense of belonging at high school
Enjoyed community traditions	17.7%	25.1%	Did **not** enjoy community traditions

Source: Jones, J., Bethell, C.D., Linkenbach, J. & Sege, R. (2017). Health effects of ACEs mitigated by positive childhood experiences.(manuscript in preparation).[14]

FIGURE 6. FACTORS THAT MODERATE THE EFFECTS OF MORE THAN
3 ACEs ON ADULT RATES OF OBESITY
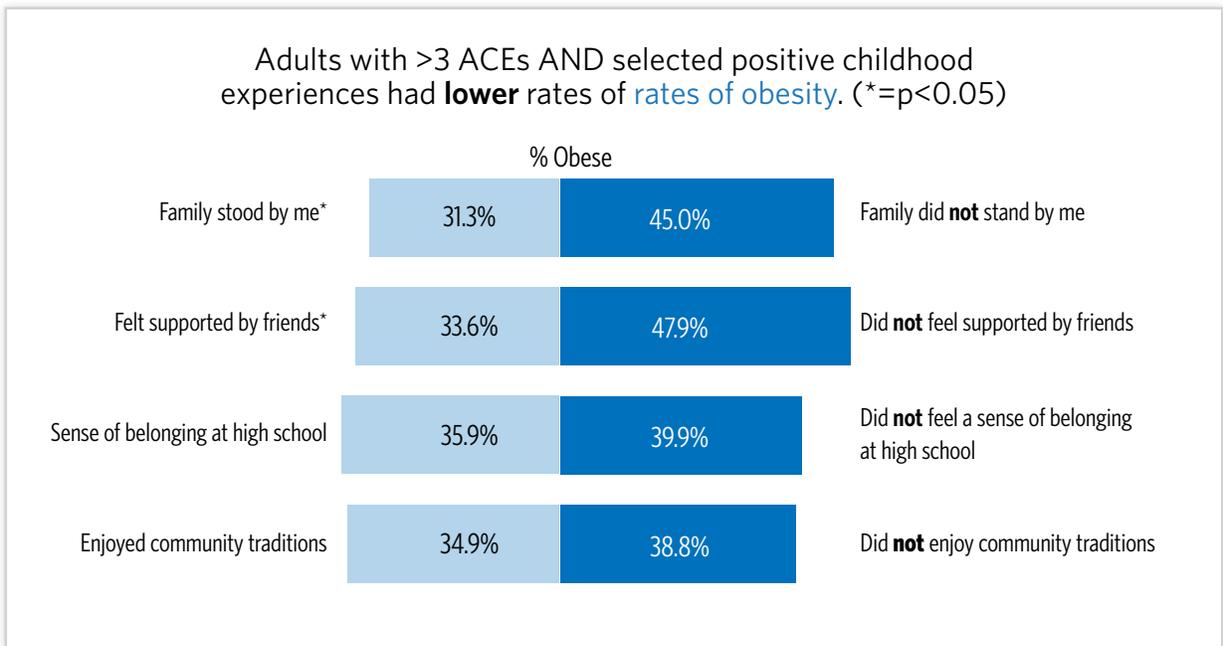
Adults with >3 ACEs AND selected positive childhood experiences had lower rates of rates of obesity. (*=p<0.05)

% Obese

Family stood by me*	31.3%	45.0%	Family did **not** stand by me
Felt supported by friends*	33.6%	47.9%	Did **not** feel supported by friends
Sense of belonging at high school	35.9%	39.9%	Did **not** feel a sense of belonging at high school
Enjoyed community traditions	34.9%	38.8%	Did **not** enjoy community traditions

Source: Jones, J., Bethell, C.D., Linkenbach, J. & Sege, R. (2017). Health effects of ACEs mitigated by positive childhood experiences.(manuscript in preparation).[14]

Figure 7. Factors That Moderate the Effects of More Than 3 ACEs on Adult Smoking
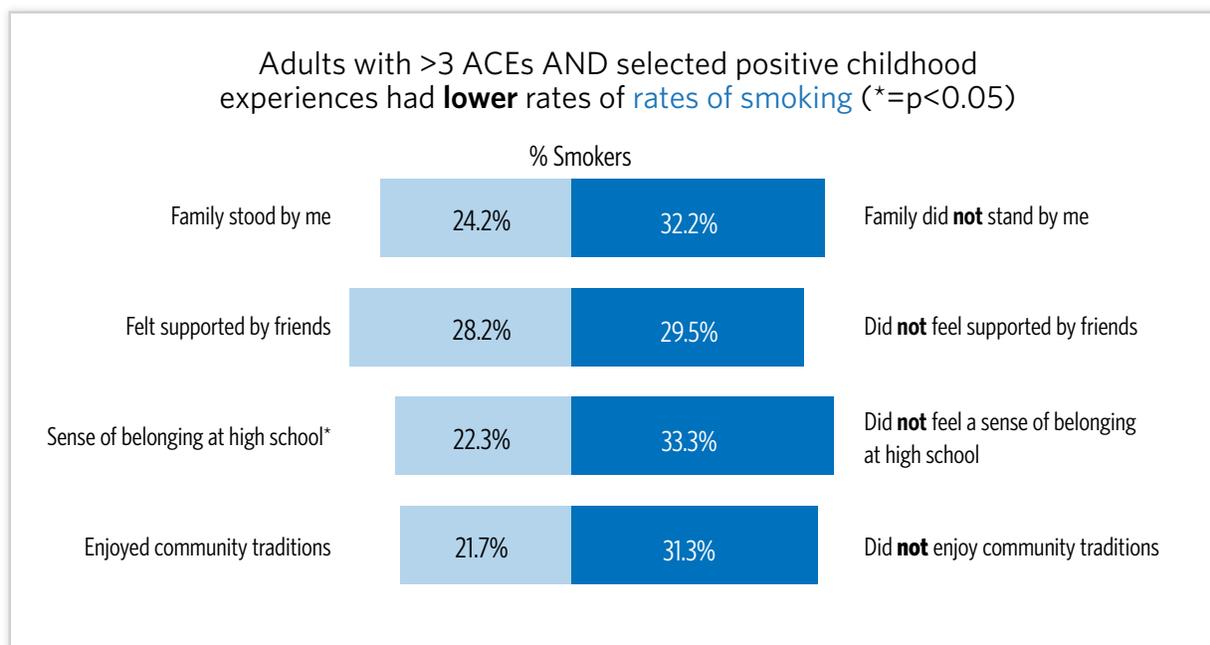
Adults with >3 ACEs AND selected positive childhood experiences had lower rates of rates of smoking (*=p<0.05)

% Smokers

Family stood by me	24.2% / 32.2%	Family did **not** stand by me
Felt supported by friends	28.2% / 29.5%	Did **not** feel supported by friends
Sense of belonging at high school*	22.3% / 33.3%	Did **not** feel a sense of belonging at high school
Enjoyed community traditions	21.7% / 31.3%	Did **not** enjoy community traditions

Source: Jones, J., Bethell, C.D., Linkenbach, J. & Sege, R. (2017). Health effects of ACEs mitigated by positive childhood experiences.(manuscript in preparation).[14]

The Science of the Positive: Exploring Positive Community Norms

Further exploration of the HOPE framework is informed by surveys based on the Science of the Positive – a process for studying and measuring how positive factors impact culture and experience, and how to strengthen these factors in ourselves, our families, our workplaces, and our communities.[15] A primary application of this approach to growing the positive is the Positive Community Norms (PCN) framework, used to increase protective factors and reduce risks related to child well-being and maltreatment.[16] The PCN framework identifies the role of social factors such as how individual behaviors and attitudes are influenced by our perceptions of the normative (majority) behaviors and attitudes of others. The more accurately individuals perceive the positive norms of their peers and other important referent groups, the more likely they are to behave in positive, healthy, and pro-social ways.[17]

The PCN framework focuses on increasing the positive by cultivating both change and transformation across different levels of the social ecology through four key skill areas: (1) transformational leadership, (2) norms communications, (3) portfolio integration, and (4) structured reflection. The PCN framework has been identified by the Centers for Disease Control and Prevention (CDC) as one of four key strategies for promoting safe, stable nurturing relationships and environments as part of the Essentials for Childhood Framework.[18]

The CDC Essentials for Childhood framework seeks to prevent child abuse and neglect by providing guidance to state and local agencies about how to develop cross-sector partnerships and make data-informed decisions that promote positive community norms, evidence-based practices, and family-friendly policies encouraging safe, stable, nurturing relationships and environments for all children. Our knowledge and practice of positive child developmental models is growing, reinforced by changing social norms.

Current Norms Supporting Positive Parenting Practices: Results of Opinion Surveys of Adults in the United States

Study Overview: Yougov.com Essentials for Childhood Baseline Survey

In a survey conducted by the organization yougov.com, and using data purchased by the CDC, 2,500 Americans were asked about their practices and beliefs concerning parenting. The survey used a social norms approach. Respondents with children under age 5 years in the home were asked about their own parenting practices, and all respondents were asked about how other parents in their state raised their children. These questions were designed to elicit three types of social norms: descriptions of actual practice, perceptions of what others do, and norms concerning what one is supposed to do. (See Figure 8.)

Figure 8. Definition of Norms

SOCIAL NORMS: Behaviors or attitudes reported by the majority of people in a community or group. If most people in a community do not smoke cigarettes, then not smoking is the norm. If most people do not approve of others smoking, this too is a norm. Not smoking is normal and perhaps even expected in this population.

PERCEPTIONS OF NORMS: Peoples' beliefs about the norms of different referent groups. Perceptions of norms play an important role in shaping our attitudes and behavior.

MISPERCEPTIONS OF NORMS: The gaps or discrepancies between peoples' perceptions of norms and the actual norms of a group.

CONSEQUENCES OF MISPERCEPTIONS OF NORMS: The impact of misperceptions of norms. People tend to behave in ways that they believe are normative among those people that matter to them. It is human nature to want to fit in with the group. When people misperceive the norm, as is often the case with high-risk behaviors, they are more likely to engage in non-normative, dangerous behaviors or may fail to engage in normative protective behaviors such as intervention.

DESCRIPTIVE NORMS: These reflect how the majority of a group actually behaves.

INJUNCTIVE NORMS: These are attitudinal norms or commonly held expectations. This type of norm reflects what the majority of a group believes to be acceptable or unacceptable, or what they think that people they admire or trust would do. For example, if most American adults think it is wrong to drive drunk, this is an injunctive norm.

Source: Linkenbach, J. W. (2017). *An introduction to positive community norms.* Bozeman, MT: The Montana Institute. (http://www.montanainstitute.com/publications).

Findings

Most Americans endorse the use of seven specific positive parenting practices, with the sole exception that relatively few parents seek help raising their children every day or nearly every day. The data suggest that the practices that parents with young children endorse using in the home are shared across large groups of Americans, with only small differences observed based on gender, age, or race. Data also show that parents may be reluctant to seek support and may underestimate their need for support and the role of the community in healthy parenting. (See Figure 9.)

Figure 9. Positive Parenting Practices by Race and Ethnicity in the Yougov.com Survey
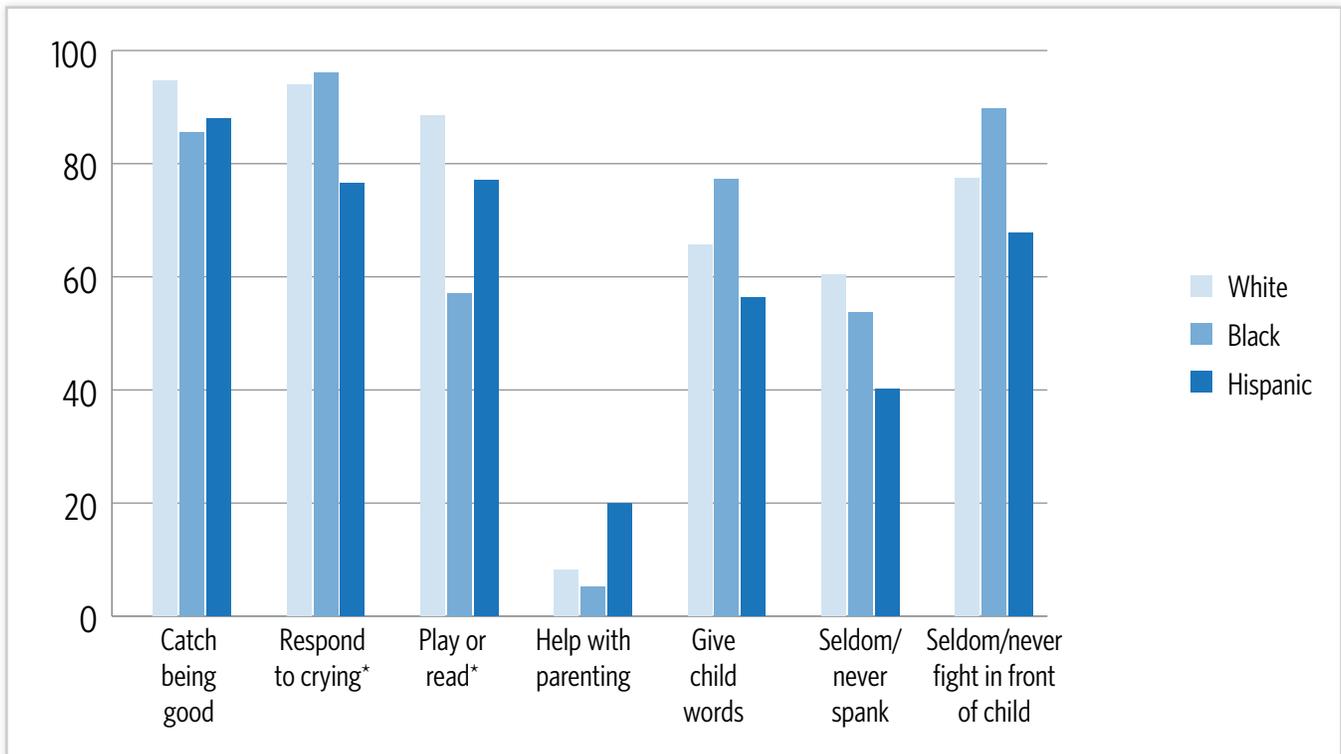
In a survey of 2,500 American adults conducted by yougov.com, respondents with children under 5 years at home (n=416) were asked about a series of positive parenting practices. As shown above, other than for Hispanic parents in some areas, the response patterns were quite similar across racial and ethnic groups.

Most of us think that we are doing a good job raising our children, but we aren't so sure about our neighbors. Figure 10 offers a comparison between how respondents viewed themselves ("me"), people they trust ("people I trust"), and "other adults in my state." Respondents with children under 5 at home endorsed a median of 5.5 of the practices, similar to the median of five practices attributed to those they trusted. However, they also thought that other parents used a median of only three practices.

Figure 10. The Proportion of Parents Endorsing a Certain Number of Positive Parenting Practices
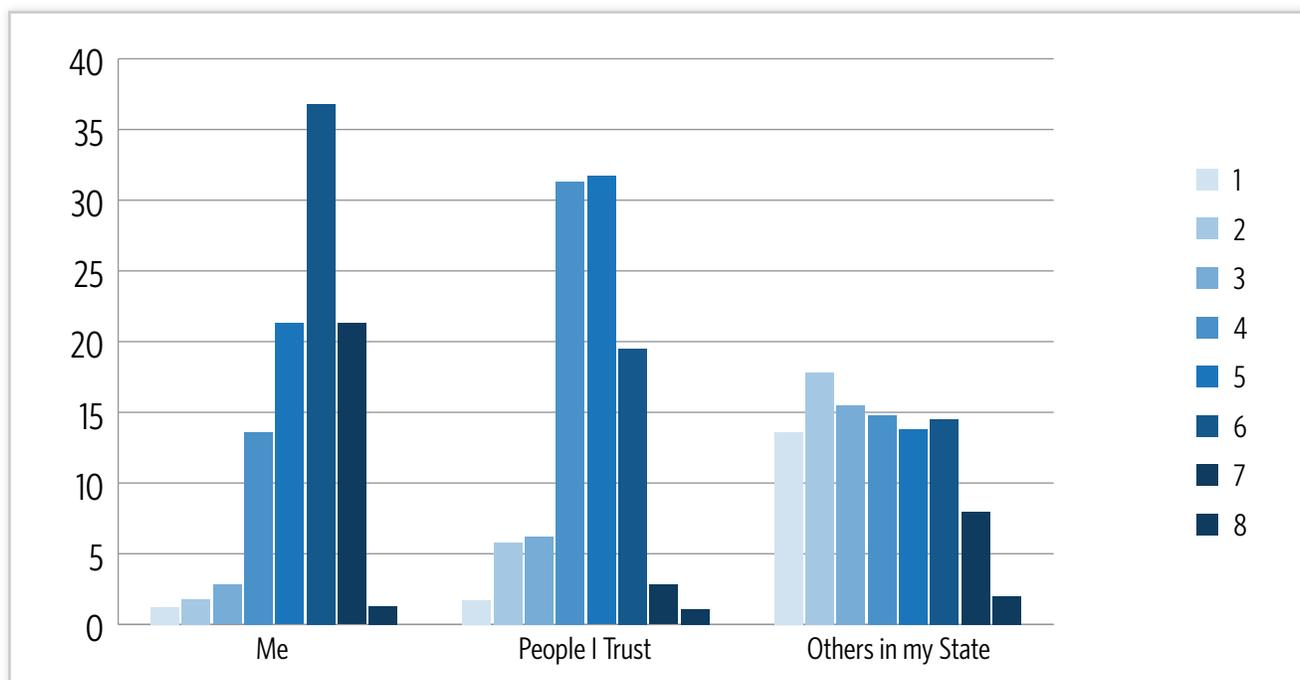
In a survey of 2,500 American adults conducted by yougov.com, respondents with children under age 5 years at home (n=416) were asked about a series of eight positive parenting practices (the seven practices listed in Figure 9 plus "mentoring an unrelated child"). For each practice, they were asked to describe their own behavior with their children, what people they trust to advise them did with their children, and their impressions of the behaviors of others in their states. The various histogram bars represent the number of parenting practices endorsed by a parents in each category.

Altogether, all respondents, regardless of race or ethnicity, expressed general agreement about how to raise children. In this survey, questions about the opinions of those they trusted served to explore beliefs about best parenting practices (injunctive norms). Consistent with other studies, there were some important differences across parents from different demographic groups (e.g., income, race or ethnicity). This study found:

- Household income was associated with reporting that people they trusted would think it was important for them to let their children know when they like what they are doing ("Catch them being good!"). Respondents with annual household incomes over $80,000 (the top one-third of United States household income) were more likely to endorse this practice, and respondents with household incomes less than $20,000 per year (bottom one-sixth) were less likely to endorse it. No differences based on race or ethnicity were noted.

- Overall, black respondents were less likely to believe that those whose advice they trusted thought that children should be spanked infrequently or not at all. This was not a uniform result: black respondents and younger respondents (under age 25) were much more likely to hold this belief than older respondents.

- Hispanic or Latino respondents were more likely to ask for help with parenting when needed. Respondents without children were less likely to endorse this norm, as were respondents under 25 years old. No significant trends were seen by income category, and non-Hispanic black and white respondents offered similar responses.

In summary, although the United States is increasingly diverse, the survey data suggest that there are on the whole few differences along racial and ethnic lines regarding parents' endorsement of healthy parenting practices. These results suggest that younger respondents and parents of younger children held particularly similar views of social norms. Of particular note, racial differences in support of corporal punishment appears to be much weaker in younger respondents, suggesting the possibility that a generational shift in social norms may be taking place.

The Norms of American Adults Regarding Their Readiness to Address Child Maltreatment: The Prevent Child Abuse America – The Montana Institute Surveys

Study Overview

Americans are ready and willing to act in ways that support young children, their families, and their communities. This is a major narrative that came out of two recent surveys funded by Prevent Child Abuse America (PCAA) and conducted by The Montana Institute. Both surveys were developed based on PCAA's interest in doing national research using the PCN framework. These surveys demonstrate that while many Americans already work to support families in their communities, relatively few link these actions to the prevention of abuse and neglect. These results illustrate the importance of making the link between promoting positive experiences with the prevention of child abuse and neglect.

Findings from the PCAA Surveys

PCAA contracted with The Montana Institute to conduct a nationwide PCN telephone poll of 1,000 American adults in November 2014. Subsequently, PCAA asked The Montana Institute to conduct a second national telephone survey of 500 American adults in November and December 2015. Participants were asked to respond to questions regarding self-reported actual norms and perceived norms related to child maltreatment and its prevention.

The results of these surveys can be distilled into four key areas: awareness, readiness, knowledge gaps, and barriers to action. Overall, Americans are aware that child abuse and neglect is a serious problem and they are ready to act. This readiness is hampered by knowledge gaps and specific barriers to action.

Awareness: In the 2014 survey, 87% of survey participants reported they think that child abuse and neglect is a serious problem in this country. (See Table 1.) Seventy-five percent accurately perceived that most American adults also believe child abuse is a serious problem. The high level of congruence between self-reports and perception shows there is little need for further education in the United States about the severity of child abuse and neglect, and that campaigns with this message focusing on the seriousness and severity of abuse are not likely to contribute new information to the national conversation. However, it is possible that further education is needed to advance awareness on the impact and importance of seemingly "less severe" childhood adversities, such as emotional neglect and other experiences included in the ACEs Survey.

Table 1. Actual and Perceived Norms
(The Montana Institute 2014 Survey)

QUESTION	PERCENTAGE
Child abuse and neglect is a serious problem.	87%
Most adults think that child abuse and neglect is a serious problem.	75%
Child abuse and neglect is preventable.	87%
Most adults think that child abuse and neglect is preventable.	74%
Would take action if suspected child abuse and neglect.	97%
Most adults would take action if suspected child abuse and neglect.	87%
Should take action if suspected child abuse and neglect.	98%
Most adults believe that they should take action if suspected child abuse and neglect.	91%

Note: Perceived norms are italicized.

Readiness: American adults are optimistic about the prevention of child abuse and willing to engage in prevention efforts. In the 2014 survey, 87% of respondents reported they believed that child abuse and neglect are preventable, and 74% accurately perceived that most others felt the same way. These findings show a strong attitude of hope about the utility of child abuse prevention efforts and suggest that most Americans do not perceive child abuse as an intractable problem.

Respondents believed that they would and should take action if they suspected a child was being abused or neglected, and that most others felt the same. Ninety-seven percent said they would act if they suspected a child was being abused or neglected and 87% thought most other adults would act as well. Ninety-eight percent felt they should act if they suspected a child was being abused or neglected; 91% thought most others would agree. This congruity between self-report and perceptions of others shows readiness for action and suggests perceived support for bystander interventions. When people know their beliefs and actions are supported by the majority, they are more likely to act in pro-social ways.

Gaps in Knowledge: While there is a great deal of congruence between actual and perceived norms related to American adults' readiness and willingness to act on behalf of child victims, a few results pointed to misperceptions. Respondents understood that directly intervening when a child is in danger is important, but they don't appear to connect efforts to support families and communities as instrumental in preventing maltreatment. They may also not know how to intervene in cases where the abuse or neglect is hidden or subtler but potentially just as damaging to a child's well-being and development.

In the 2014 survey, 27% of respondents reported having suspected child abuse, and 75% of these same respondents reported acting. In the 2015 survey, 49% of respondents said they had been in such a situation, and a majority (57%) of these reported acting on behalf of the child victim. In contrast, in the 2015 survey, most (79%) respondents underestimated how many adults would act when they suspected abuse. This shows that significant misperceptions exist about the frequency with which people intervene when they suspect child abuse or neglect.

Perceptions matter: Those respondents who accurately perceive how often American adults act to protect children are two times more likely to act to protect children than those who underestimate rates of intervention (odds ratio of 2.03).

In addition, respondents reported that they routinely engage in the types of community activities that alleviate family stress and reduce the likelihood of child abuse and neglect, but they did not label these activities as child abuse prevention.[19] When asked whether they were engaged in any child abuse prevention activities, only one in four (27%) respondents reported that they engaged in child abuse prevention. However, when asked about their specific actions and behaviors, 80% reported donating goods, money, or time to an organization supporting children and families; 70% had volunteered with children through places of worship, schools, sports, or clubs; and 56% had provided mentorship to a child in their family, neighborhood, or community. (See Table 2.)

These respondents engaged in activities that support the overall well-being of families yet did not perceive their actions as contributing to the prevention of child abuse. This exposes an important knowledge gap that can be closed by educating the public that acting as role models and providing volunteer and other support to children and families is a means of prevention. These kinds of interventions lead to positive experiences that help keep kids safe.

TABLE 2. ENGAGEMENT IN ACTIVITIES THAT SUPPORT CHILDREN AND FAMILIES (THE MONTANA INSTITUTE 2015 SURVEY)

QUESTION	PERCENTAGE
Engaged in any prevention activities.	27%
Donated goods, money, or time to an organization supporting children and families.	80%
Volunteered with children through places of worship, school, sports, or clubs.	70%
Provided mentorship to a child in family, neighborhood, or community.	56%

Barriers to Action: While survey results report extremely strong attitudinal norms for intervention in a suspected child abuse situation, they also reveal a significant gap between those who think they would and should take action and those who actually do. Respondents in the 2014 survey were asked about potential reasons for inaction when they suspected child abuse. The largest percentage (65%) were concerned about making the situation worse for the child victim; 37% expressed concerns about personal safety; 36% were fearful of retaliation by the perpetrator; and 32% indicated a lack of knowledge regarding how to intervene.

Only 3% of respondents said that they believed it was not their responsibility to get involved. The fear that people have both for themselves and for children is very real, and it may require creative strategies to provide them with the knowledge and skills they need to intervene on behalf of children. These findings suggest that educational and norms-based messaging could be created to give individuals better tools and support for intervention.

Discussion and Recommendations

Summary of Findings

This report highlights recent progress being made towards a more balanced understanding of the role of relational and other kinds of experience in the development of children and families. It deepens our understanding of the role of positive relationships and experiences on child development, and we can begin to use this awareness to support young children and their families. This change in orientation naturally leads to an improved knowledge of our national collective responsibility to create the conditions that promote these experiences.

The report presents data, some for the first time, that provide a balanced perspective on the roles of positive and adverse child and family experiences on child development and subsequent health. For example, the National Survey of Children's Health demonstrated that childhood resilience promotes thriving child health and modifies the effects of adversity. Further, parenting characteristics and strategies directly support childhood resiliency. In addition, the Wisconsin Behavioral Risk Factor Survey demonstrated the lifelong benefits of these protective factors. The presence of childhood protective factors decreases the well-known effects of child adversity.

Much of this perspective has already been incorporated into public consciousness and parenting practices. For example, data from the yougov.com Essentials for Childhood national survey shows that most American adults endorse positive parenting. This survey found that, especially among adults of parenting age, there is strong national consensus about these social norms across racial and ethnic groups.

Policymakers often wonder whether ordinary citizens might support actions to change policy. Surveys conducted on behalf of Prevent Child Abuse America answer this question with a resounding "yes." Notably, most respondents already participate in community activities that support young families, although it appears that few identify these activities as important means for preventing child abuse and neglect.

HOPE – The Health Outcomes of Positive Experiences

In summary, this report adds new data to decades of research showing that healthy child development and family well-being depend on a full spectrum of positive experiences in their primary relationships and environments. Positive experiences, ranging from infant attachment to mentoring for adolescents, are essential to children's well-being and to their development into mentally, emotionally, and physically healthy adults. This appreciation of the need for positive relationships and experiences builds from our prior understanding about the impact of adversity on child development. All together, we are now beginning to appreciate the power of positive relationships and experience on human brain development and function.

We know how to create community and family contexts that build a strong foundation for lifelong health and learning, how adversity disrupts healthy development, and how the building blocks of positive experiences and influences help health and development, including enabling individuals to overcome the effects of adversity.[20] Now putting this knowledge to work in policies, practices, and systems is critical. Based on the data and surveys described in this report, we make the following recommendations:

1. **Advance a positive construct of health and HOPE** to promote the benefits of positive relationships and experiences. Strategies to promote positive health and well-being should be implemented for use at the individual, family, and community levels. This report highlights the child and adult health benefits of these experiences and relationships, and it can add another dimension to the many trauma-informed efforts underway to prevent and mitigate adverse childhood experiences (ACEs). "Child development requires the affirmative presence of positive experiences, including safe, stable, and nurturing environments. The simple prevention or mitigation of adverse experiences cannot itself foster normal child development."[21]

2. **Invest in science-aligned interventions** that support positive parenting practices to promote healthy child development and multi-generational approaches that build the essential social, emotional, and executive functioning skills in children and adults that are critical to well-being and successful parenting and workforce engagement. The population surveys described in this report suggest that public opinion will strongly support these investments, as they conform to both existing social norms and popular readiness for action. The recently released 4th edition of the Bright Futures guidelines emphasizes the importance of proactively promoting positive experiences and health among children and families.[22]

3. **Specify, develop, and deploy a common set of positive experiences** and health metrics that are integrated with existing health risks, social determinants of health, and systems performance factors in practice, policy, and research contexts. Trauma-informed policies and practices should be balanced with HOPE-informed measures to create a more even approach to working with children and families.[23]

   It should be noted that the studies in this report used different yet aligned metrics. Common metrics for positive health and well-being need to be integrated into and aligned across performance and accountability systems and in population-based survey platforms. Suitable validated measures will support both the general advancement of knowledge and the ability to improve the effectiveness of efforts to promote intergenerational health, interrupt the transmission of ACEs and trauma, and promote resilience and well-being across the life course.

4. **Establish policies to generate opportunities** for parents, communities, and society to advance positive experiences for all children. All policies should be grounded in the latest evidence, not just informed by it.

   This paper adds to the body of evidence regarding the immediate and long-term benefits of positive experiences; current positive social norms among parents suggest that they are ready to act. From a policy perspective, research shows that policies like paid or partially-paid parental leave help promote healthy development through a child's early years, creating a foundation for later school achievement, economic productivity, responsive citizenship, and successful parenting. Based on this research, paid leave should be universal for all parents and other caregivers in the United States.

5. **Enable innovation and implementation of best practices** by setting in place concrete supports to facilitate the widespread innovation and learning required to translate and tailor messages, interventions, and systems change approaches to promote positive relationships, positive parenting, and positive health and well-being among children and families.

Much work needs to be done to close the gaps between research and practice, and practical knowledge, public health, and clinical and educational approaches. Future progress will require building on a foundational understanding that supporting children and families means promoting positive relationships and experiences as well as reducing abuse, neglect, and other forms of adversity. At the same time, we have access now to significant research and knowledge to develop more effective approaches, which will support stronger foundations for early and lifelong health for children and families in the United States. Such approaches are fundamental to the construction and health of the human brain and the ability of individuals, families, and communities to exhibit much improved social, emotional, and cognitive health and well-being. The data presented here and elsewhere provide a glimpse of the potential of a more balanced approach – and of our ability to radically improve the health and well-being of all children and the adults that care for them. The quotation below from the Alliance for Strong Families and Communities' Change in Mind Initiative underscores this perspective:

> *We urge support for research and development activities that provide opportunities for innovations and which involve parents, communities and researchers in the design and testing of new strategies that can show intended effects. Policymakers at all levels have unprecedented and unlimited avenues to use public and private resources more effectively to support interventions and policies that will advance our progress toward a more healthy society, based on the best available evidence to date.*[25]

Appendices

Appendix A: 2015 Wisconsin Behavioral Risk Factor Survey Questions

The 2015 Wisconsin Behavioral Risk Factor Survey data had a 45% response rate and a completed sample of approximately 5,000. The ACEs questions were recoded into eight categories and a cumulative ACEs score was created (0-8)—along with four composite score groups (0 ACEs, 1 ACE, 2-3 ACEs, and 4+ ACEs) (n=4,942). The poverty and neglect and factors promoting resilience were similarly coded, and associations with ACEs and adult health outcomes were assessed.

Measures of Positive Family Relationship Experiences:

These questions refer to the time before you were 18 years of age.

- How often did you feel your family stood by you during difficult times? Would you say never, rarely, sometimes, often, or very often?

- How often did you feel that you were able to talk to your family about your feelings? Would you say never, rarely, sometimes, often, or very often?

- For how much of your childhood was there an adult in your household who made you feel safe and protected? Would you say never, a little of the time, some of the time, most of the time, or all of the time?

- How often did you enjoy participating in your community's traditions? Would you say never, rarely, sometimes, often, or very often?

Measures of Positive Relationship with Friends and Other Adults:

These questions refer to the time before you were 18 years of age.

- How often did you feel supported by your friends? Would you say never, rarely, sometimes, often, or very often?

- How often did you feel that you belonged at your high school? Would you say never, rarely, sometimes, often, or very often?

- How often were there at least two adults, other than your parents, who took a genuine interest in you? Would you say never, rarely, sometimes, often, or very often?

ACEs items:

All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18:

- Did you live with anyone who was depressed, mentally ill, or suicidal?

- Did you live with anyone who was a problem drinker or alcoholic?

- Did you live with anyone who used illegal street drugs or who abused prescription medications?

- Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?

- Were your parents separated or divorced?

- How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up? Never, once, or more than once?

- Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking. Never, once, or more than once?

- How often did a parent or adult in your home ever swear at you, insult you, or put you down? Never, once, or more than once?

- How often did anyone at least 5 years older than you, or an adult, touch you sexually? Never, once, or more than once?

- How often did anyone at least 5 years older than you, or an adult, try to make you touch them sexually? Never, once, or more than once?

- How often did anyone at least 5 years older than you, or an adult, force you to have sex?

Appendix B: 2011-12 National Survey of Children's Health Items

Adverse Childhood Experience Items

1. Since [CHILD'S NAME] was born, how often has it been very hard to get by on your family's income – hard to cover the basics like food or housing? Would you say very often, somewhat often, often, rarely, or never?

2. Did [CHILD'S NAME] ever live with a parent or guardian who got divorced or separated after [CHILD'S NAME] was born?

3. Did [CHILD'S NAME] ever live with a parent or guardian who died?

4. Did [CHILD'S NAME] ever live with a parent or guardian who served time in jail or prison after [CHILD'S NAME] was born?

5. Did [CHILD'S NAME] ever see or hear any parents or adults in (his/her) home slap, hit, kick, punch, or beat each other up?

6. Was [CHILD'S NAME] ever the victim of violence or witness any violence in (his/her) neighborhood?

7. Did [CHILD'S NAME] ever live with anyone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks?

8. Did [CHILD'S NAME] ever live with anyone who had a problem with alcohol or drugs?

9. Was [CHILD'S NAME] ever treated or judged unfairly because of (his/her) race or ethnic group?

10. During the past year, how often was [CHILD'S NAME] treated or judged unfairly? Would you say very often, somewhat often, rarely, or never?

Sources: *http://www.childhealthdata.org/browse/survey/results?q=2257&r=1*
http://www.childhealthdata.org/browse/survey?q=2257&r=1

Resilience and Flourishing Items (6-17 years)

I am going to read a list of items that sometimes describe children. For each item, please tell me how often this was true for [CHILD'S NAME] during the past month:

1. [He/She] stays calm and in control when faced with a challenge.

2. He/She] finishes the tasks [he/she] starts and follows through with what [he/she] says [he'll/she'll] do.

3. [He/She] shows interest and curiosity in learning new things.

Sources: *http://www.childhealthdata.org/browse/survey/results?q=2595&r=1*
http://www.childhealthdata.org/browse/survey/results?q=2480&r=1

Protective Factors Items

1. Other than adults in your home or [CHILD'S NAME]'s parents, is there at least one other adult in [CHILD'S NAME]'s school, neighborhood, or community who knows [CHILD'S NAME] well and who (he/she) can rely on for advice or guidance? ["Adult mentor" item, 6-17 years]

2. How well can you and [CHILD'S NAME] share ideas or talk about things that really matter? ["Sharing ideas with child" item, 6-17 years]

3. In general, how well do you feel you are coping with the day-to-day demands of (parenthood/ raising children)? ["Parent copes with stress of parenting" item]

4. During the past month, how often have you felt [CHILD'S NAME] is much harder to care for than most children (his/her) age?

5. During the past month, how often have you felt (he/she) does things that really bother you a lot?

6. During the past month, how often have you felt angry with (him/her)?

7. [Items 4-6: "Parental aggravation/stress"]

Source: *http://www.childhealthdata.org/browse/survey?q=2595&r=1*

School Engagement Items (6-17 years)

I am going to read a list of items that sometimes describe children. For each item, please tell me how often this was true for [CHILD'S NAME] during the past month:

1. [He/She] cares about doing well in school.

2. [He/She] does all required homework.

Sources: *http://www.childhealthdata.org/browse/survey/results?q=2516&r=1*
http://www.childhealthdata.org/browse/survey?q=2257&r=1

References

1 Sege, R., & Harper-Brown, C. (In press). Responding to ACES with HOPE. *Academic Pediatrics*.

2 National Academies of Sciences. (2016). Parenting matters: Supporting parents of children ages 0-8. Retrieved from https://www.nap.edu/catalog/21868/parenting-matters-supporting-parents-of-children-ages-0-8

3 For more information about ACEs, see:

- Bethell, C.D., Newacheck, P., Hawes, E., & Halfon, N. (2014). *Adverse childhood experiences: Assessing the impact on health and school engagement and the mitigating role of resilience. Health Affairs*, 33(12), 2106-2115. doi: 10.1377/hlthaff.2014.0914.

- *Centers for Disease Control*. (No date). *Current CDC resources on the ACES results*. Retrieved from https://www.cdc.gov/violenceprevention/acestudy/

- Felitti, V.J., Anda, R.F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V., Koss, M.P., & Marks, J.S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACEs) study. *Am J Prev Med, 14*, 245-258.

4 Johnson, E.O., Kamilaris, T.C., Chrousos,, G.P. & Gold, P.H. (1992). Mechanisms of stress: A dynamic overview of hormonal and behavioral homeostasis. *Neuroscience & Biobehavioral Reviews, 16*(2), 115-130. Also see Pilyoung Kim, P., & Watamura, S.E. (undated). *Two open windows: Infant and parent neurobiologic change.* Washington: DC: The Aspen Institute. Retrieved http://b.3cdn.net/ascend/4b320cff0e86d8fb51_gqm6btprv.pdf

5 Sege, R., & Harper-Brown, C. (In Press).

6 Masten, A.S. (2014). Global perspectives on resilience in children and youth. *Child Development, 85*(1), 6-20.

7 Hoekzema, E., et al. (2016). Pregnancy leads to long-lasting changes in human brain structure. *Nature Neuroscience*. Retrieved from doi:10.1038/nn.4458

8 Abraham, E., Hendler, T., Shapira-Lichter, I., Kana-Maymon, Y., Zagoory-Sharon, O., & Feldman, R. (2014). Father's brain is sensitive to childcare experiences. *Proceedings of the National Academy of Sciences,111*(27), 9792-9797. http://dx.doi.org/10.1073/pnas.1402569111

9 Bethell C., Gombojav N., Solloway M., & Wissow L. (2015). *Adverse childhood experiences, resilience and mindfulness-based approaches: Common denominator issues for children with emotional, mental, or behavioral problems. Child Adolescent Psychiatric Clinic North Amc* doi:10.1016/j.chc.2015.12.001

Bethell C.D., Newacheck P., Hawes E., & Halfon N. (2014). *Adverse childhood experiences: Assessing the impact on health and school. engagement and the mitigating role of resilience. Health Affairs*, 33, (12), 2106-2115. doi: 10.1377/hlthaff.2014.0914

10 National Academies of Science (2016) and Masten (2014).

11 Halfon, N., & Hochstein, M. (2002). Life course health development: An integrated framework for developing health, policy, and research. *Milbank Quarterly, 80*(3):433-479.

12 Silva, N.M. (2014). The Behavioral Risk Factor Surveillance System. *International Journal of Aging and Human and Development; 79*(4):336-338.

13 Ungar, M., Liebenberg, L., Boothroyd Larte, R., Man Kwong, W. Tak Yan Lee, T., J Leblanc, J. & Makhnach, A. (2008). The study of youth resilience across cultures: Lessons from a pilot study of measurement development. *Research in Human Development, 5*(3), 166-180.

14 Jones, J., Bethell, C.D., Linkenbach, J. & Sege, R. (2017).Health effects of ACEs mitigated by positive childhood experiences.(manuscript in preparation).

[15] Linkenbach, J. W. (2016a). Applying the Science of the Positive to health and safety. Rep. The Montana Institute. Bozeman: The Montana Institute. Retrieved from http://www.montanainstitute.com/publications

[16] Linkenbach, J. (2016b). *The Positive Community Norms Guidebook*. A Bozeman: The Montana Institute. Available at www.MontanaInstitute.com

[17] Perkins, H. W. (Ed). (2003).*The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians*. San Francisco, CA: Jossey-Bass.

[18] Linkenbach, J., & Otto, J. (2014). *Promoting positive community norms: A supplement to CDC's Essentials for Childhood: Steps to create safe, stable, nurturing relationships and environments*. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/violenceprevention/pdf/efc-promoting-positive-community-norms.pdf.pdf

[19] Most of the activities have been have been researched as important. See:

- Biglan, A. (2015). *THE NURTURE EFFECT: How the science of human behavior can improve our lives and our world*. Oakland, CA: New Harbinger.

- Kerr, D.C.R., Capaldi, D.M. Pears, K.C., & Owen, L.D. (2009). A prospective three-generational study of fathers' constructive parenting: Influences from family of origin, adolescent adjustment, and offspring temperament. *Developmental Psychology*, 45(5), 1257-1275. Retrieved from http://dx.doi.org/10.1037/a0015863

[20] Center on the Developing Child at Harvard University (2016). *Applying the science of child development in child welfare systems*. Retrieved from http://www.developingchild.harvard.edu As cited in Alliance for Strong Families and Communities and the Palix Foundation. (2016). *Using a brain science-infused lens for policy development: Achieving healthier outcomes for children and families*. Retreived from http://www.alliance1.org/change-in-mind, p. 3.

[21] Child and Adolescent Health Measurement Initiative. (2016). *Summary proceedings: HOPE and the Science of Thriving Summit to build the field of positive health and nurturance*. Retrieved from http://childhealthdata.org/docs/default-source/MCH-MRN/cahmi-positive-health-and-nurturance-summit-proceedings---10-18-16-full.pdf?sfvrsn=2

[22] Hagan J.F., Shaw, J.S., & Duncan, P.M., (Eds.) (2017) *Bright futures: Guidelines for health supervision of infants, children, and adolescents* (4th ed.). Elk Grove Village, IL: American Academy of Pediatrics.

[23] Moore, K.A., Bethell, C.D., Murphy, D., et al. (2017) *Flourishing from the start: What it is and how it can be measured*. Washington, DC: Child Trends. Retrieved from https://www.childtrends.org/publications/flourishing-start-can-measured/

[24] Alliance for Strong Families and Communities & the Palix Foundation. (2016). *Using a brain science-infused lens for policy development. Achieving healthier outcomes for children and families*, p. 4. Retrieved from: http://www.alliance1.org/change-in-mind