A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other Adverse Childhood Experiences

Kaila Farmer

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A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other Adverse Childhood Experiences

by

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BS, University of Georgia

A Capstone Submitted to the Graduate Faculty of Georgia State University in Partial Fulfillment of the Requirements for the Degree

MASTER OF PUBLIC HEALTH

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A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other ACEs

APPROVAL PAGE

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Kaila Elyse Farmer
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Introduction

Child maltreatment and other Adverse Childhood Experiences (ACEs) are a persistent and significant problem that affects millions of families across the U.S every year. In 2019, 1,840 children in the U.S died as a result of child abuse and neglect. Adverse Childhood Experiences are arguably one of the most urgent public health crises, as ACEs are associated with five of the top ten leading causes of death in the U.S. While public health has increasingly focused on primary prevention efforts to address health outcomes, primary prevention research that focuses on child maltreatment as a major public health concern has largely been left unstudied. However, there are multiple well known risk factors associated with child maltreatment and ACEs that have been exhaustively studied as their own unique public health problem, such as parental substance abuse, depression, poverty, and the social determinants of health.

Evidence exists to support causal effects of household income on factors associated with children’s development, including maternal mental health, parenting behavior, and the home and family environment. Economic supports to address ACEs and child maltreatment have the potential to provide more stability within family relationships and environments, which is a core component of the Center for Disease Control and Prevention’s Essentials for Childhood Framework. Research suggests that the role of government in reducing and preventing ACEs should increasingly focus on primary prevention, and that public policy should facilitate opportunities for increased family resiliency and the promotion of protective factors against child maltreatment and other ACEs. Although the research behind ACEs originated from the public health, medical, and biological disciplines, with clear implications for population health, ACEs and their impact affect nearly every sector of society, from criminal justice, social service,
education, to business. To effectively address ACEs, strategies must consider both the risk factors for ACEs and the individual and societal level consequences as a result of ACEs.

From a public health perspective, macro-level interventions have the potential to reach many more families affected by child maltreatment and ACEs in comparison to community or interpersonal level interventions. While recent research points towards promising federal and state level economic interventions to improve population health, there is a lack of reviews that evaluate some of the larger economic policies and their impact on ACEs and child maltreatment rates. The purpose of this review is to evaluate and discuss potential policy levers, both at the federal and state level, that have the potential to reduce ACEs and child maltreatment by providing increased economic supports for families.

**Trauma and the Role of Safe, Stable, Nurturing Relationships and Environments**

The experience of childhood trauma, or Adverse Childhood Experiences (ACEs) can lead to toxic stress that induces the stress-response system, resulting in potential chronic and persistent deleterious effects on the brain and body that cause permanent changes in brain structure and function. ACEs are described as potentially traumatic events occurring in adolescence before age 17, and can include experiencing or witnessing violence, abuse, or neglect, living with a parent or caregiver who attempted or completed death by suicide, or living with parents or caregivers with substance abuse or mental health problems, or parent caregiver separation, or household members in jail or prison.

Exposure to ACEs can not only cause potential disruptions in healthy brain development, but can negatively impact social development, compromise immune systems, and can lead to
negative health-related behaviors that increase the risk for disease later in life.\textsuperscript{1,4} The later onset of ACE-related diseases can implicate the immune, endocrine, and nervous system, with the potential to alter DNA as far as the epigenetic level.\textsuperscript{1,11,12} These adverse events in childhood potentially have lasting effects on health, behaviors, and lifehood potential\textsuperscript{1}, and ACEs have been found to have a graded dose-response relationship associated with over forty health outcomes to date.\textsuperscript{1} The childhood years are a time of tremendous growth and development—and the experiences within those years largely shape behaviors, health status, adult relationships, and social outcomes.\textsuperscript{1} As children grow, so does the likelihood that children will experience multiple forms of ACEs.\textsuperscript{13}

Safe, stable, nurturing relationships and environments are essential to childhood development, established through relational health, which allows children to form secure and healthy attachments with others—usually their primary caregivers.\textsuperscript{14,15} Without safe, stable, and nurturing relationships and environments, children might not receive the necessary buffer against the effects of potential stressors that negatively impact brain development.\textsuperscript{7,11} When these relationships and environments generate circumstances where children have difficulty moderating their stress response, trauma can occur. Several factors can shape a child’s response to trauma, such as the nature, severity, and frequency of the traumatic event, a prior history of trauma, and available family and community support to help meet the needs of the child.\textsuperscript{1} These types of available supports protect against the impact of adverse childhood experiences and are especially important for all childhood growth and development.
In the 1980’s, Dr. Vincent Felitti managed a weight loss program at Kaiser Permanente San Diego that included supplemented fasting for obese patients.\cite{felitti1992,kaiserpermanente1990} Felitti and his team were surprised to find that some of their most successful patients unexpectedly dropped out of the program after significant weight loss. Through further investigation, the team found that for these patients, weight loss was physically or sexually threatening and that this sudden and extreme change in weight provoked a stress response that served as a solution to a problem that was often linked to early childhood adversity.\cite{felitti1992}

This observation led to the landmark Adverse Childhood Experiences Study\cite{acestudy1995} which was a joint effort between Kaiser Permanente’s Department of Preventative Medicine in San Diego and The Centers for Disease Control and Prevention in Atlanta, Georgia. The ACE Study assessed the long-term impact of abuse and household dysfunction during childhood on the following outcomes in adults: disease risk factors and incidence, quality of life, health care utilization, and mortality.\cite{acestudy1995} In the original ACEs study, five out of ten indicators for ACEs were events related to child maltreatment, which includes physical, emotional, and sexual abuse, as well as childhood neglect.\cite{acestudy2012}

The original ACE study was conducted between 1995 and 1997 with two waves of data collection, which included a questionnaire sent to 13,494 adult patients, 9,508 (70.5%) of whom responded.\cite{acestudy1995} At that time, a majority of Kaiser health plan patients were middle-class Americans, 80% of whom were White, 74% had attended college, with an average age of fifty-seven years.\cite{kaiserpermanente1992} Seven categories of ACEs were measured, which included psychological, physical, or sexual abuse, violence against mother, or living with members of the household who abused substances, who were mentally ill or suicidal, or ever incarcerated.\cite{acestudy1995}
More than half of the respondents reported at least one ACE, and one-fourth reported two or more discrete categories of childhood exposures. The results of the study found a graded relationship between the number of ACEs reported and each of the health risk factors and diseases serving as dependent variables. Adults with four or more ACEs had a four to twelve-fold increase in health risk factors for depression and suicide, and alcoholism and drug abuse, a two to four-fold increase in poor self-rated health, fifty or more sexual partners and sexually transmitted infections, and smoking. Researchers also found a graded relationship between ACEs and adult diseases and disorders, including ischemic heart disease, cancer, liver disease, and chronic lung disease, among others.

The original ACE study has transformed the landscape of child abuse and childhood trauma research – generating more than seventy distinct scientific papers and numerous conference presentations. The prevalence of ACEs is common across all populations, and this study and subsequent research laid the foundation for the design of many early-intervention programs and policies to prevent ACEs and the associated negative health outcomes as a result of childhood exposure.

Demographics and Prevalence of ACEs

While most children in the U.S have no reported ACEs (54%), 35% of children have experienced one to two ACEs, whereas 11% have experienced three or more, and more than half of children in at least sixteen states have experienced one or more ACEs. The most commonly reported ACEs are economic hardship, parental separation, alcohol abuse, and violence and mental illness, respectively. This paper provides evidence of several potential policy interventions to address economic hardship as a known risk factors for child maltreatment and
ACEs, and child maltreatment in general, are commonly found across all countries, and has become an intergenerational, global health issue. Previous research indicates that poverty and deprivation, and the associated impact on mental health contributing to psychological stress, plays a prominent role in ACEs and child maltreatment perpetrations.

The Centers for Disease Control and Prevention states that an estimated 62% of adults surveyed across 23 states have experienced at least one ACE during their childhood, and nearly one-quarter of those respondents indicated exposure to three or more ACEs. Recent estimates suggest that 172 million people living in North America could have a legacy of ACEs, with 103 million individuals experiencing more than one ACE. Women are at a greater risk for an ACE score of four or more, and for individuals who identify as black, Hispanic, or multiracial report a significantly higher exposure to ACEs. The 2018 study by Merrick and colleagues found that ACEs are found in, and are common in, all sociodemographic groups, but a heavier burden of ACEs exists in racial and sexual or gender minority groups. Using 2011-2014 Behavioral Risk Factor Surveillance System (BRFSS) data, the study found those with less than a high school diploma, those with less than $15,000 in yearly income, those who are unemployed or unable to work, and those identifying as gay, lesbian, or bisexual had much higher ACE scores in comparison to other demographic groups.

ACEs and child maltreatment disproportionately affect lower socioeconomic families. In 1993, the median income for a family of four was $45,000, whereas the poverty threshold sat at roughly $15,000. During this time, findings indicated that physical neglect rates were four times higher for children in families making below $15,000 in comparison to families making $15,000 to $29,000, and nearly 50 times greater than families with incomes of $30,000 or
Sixty seven percent of child maltreatment cases in 1993 were from families with incomes below $15,000, and only 8% were from families making $30,000 or more.27

ACEs Definition Expands

The definition of ACEs has expanded to include potential new considerations as research continues to explore the relationship between toxic stress and early childhood development. ACEs are considered traumatic events, but the incidence of toxic stress response is not equal among all children, and largely depends upon the support available that can promote resiliency in the face of adversity. It is important to recognize that other potentially traumatic events in childhood, aside from the known ‘legacy’ ACEs, can also trigger a toxic stress response, which leads to an increase in stress-related diseases and cognitive impairment.10

A scoping review of the ACE literature determined that expansion of ACEs categories might include community and systemic dysfunction, such as exposure to community violence, economic hardship, bullying, absence or death of a parent or significant other(s), and discrimination, or a history of living in foster care.28,29 Alternatively, some research suggests that parental separation or divorce, one of the most prevalent legacy ACEs from the original study, might not have as strong an impact on childhood stress in comparison to other ACEs, due to divorce becoming less socially stigmatized in recent years in comparison to the earlier generations who participated in the original ACE study.30,31

Some children may face further exposure to toxic stress from historical and ongoing traumas due to systemic racism or the impacts of multigenerational poverty resulting from
limited educational and economic opportunities.\textsuperscript{1} Other considerations for ACEs include someone close to the child suffering from an accident or an illness, poor grades, caregiver or parent discord, and isolation from having or maintaining close friendships.\textsuperscript{32} The expansion of the definition of ACEs could better inform policy and practice to mitigate and prevent some of the well-known causes of ACEs both in families and communities. By expanding the original ACEs definition to include other known childhood stressors, researchers can advance the field of ACEs research to determine promising policy and practice recommendations.\textsuperscript{32}

Economic and Social Impact of ACEs

A meta-analysis conducted in 2019 estimated the annual health and financial costs associated with ACEs as 37.5 million Disability Adjusted Life Years (DALYs), and 1 to 3 trillion annually across both North America and Europe when factoring for four risk factors and six causes of ill health.\textsuperscript{25} For adults who report three or more adverse childhood experiences, there was an associated $311 in out-of-pocket medical costs in comparison to $184 for adults who report one to two adverse childhood experiences.\textsuperscript{33} There are clear economic implications for policy makers who wish to reduce the healthcare burden that could be exacerbated by even one additional adverse childhood experience.

ACEs are a possible determinant to the availability of and access to healthcare services and have been found to be associated with lower levels of health insurance rates in individuals who have experienced an ACE.\textsuperscript{34} The relationship between healthcare utilization and ACEs might be twofold—ACEs are associated with increased risky health behavior which could result in delaying or avoiding healthcare and can also be a function of poorer health resulting in increased use of healthcare services.\textsuperscript{34,35} Research finds an inverse relationship between ACE exposure and
receiving an annual checkup, another indicator that those who have experienced ACEs are not seeking routine medical care, and for those who have experienced childhood trauma who do seek care, can often result in mistrust of healthcare providers.\textsuperscript{34} Higher ACE scores in adolescence have found to be associated with increased time being unemployed as an adult compared to adolescents who experienced fewer adversities.\textsuperscript{36} Experiencing one additional ACE – on a scale that is bound between 0 and 6 – is associated with an earnings penalty of 9\%, and a significant increase in the probability of welfare dependence and subjective poverty by 25\% and 27\%, respectively.\textsuperscript{37} Research from the U.K finds that a one-unit increase in ACEs results in a 12.5\% net reduction in earnings at age fifty-five, and a 22\% reduction in earnings due to child neglect.\textsuperscript{37} Similarly, a one-unit increase in ACEs results in a 25\% increase in the probability of being welfare dependent, and childhood neglect was the strongest ACE predictor for being welfare dependent.\textsuperscript{37} While ACEs affect children from every socioeconomic background, research does suggest that ACEs most negatively affect children from low-income households.\textsuperscript{37}

\textbf{Broad Efforts to Address ACEs}

There are many individual- and group-based programs developed to address child maltreatment\textsuperscript{38} and its associate burden.\textsuperscript{39} Such programs focus on individual skills, though while important, do not address the extensive, and often entangled relationship between the societal-level risk factors that contribute to child maltreatment.\textsuperscript{18,40} Given the high prevalence of ACEs across multiple and diverse communities in the U.S, state policymakers have a vested interested in reducing not only the incidence of ACEs in their state, but also reducing the healthcare,
education, child welfare, and correctional systems burden of cost associated with managing ACEs at the state level.41

There are several federal programs that demonstrate effectiveness towards reducing poverty and improving household financial stability—large drivers for child maltreatment—that are known to be associated with behavioral, emotional, and mental disorders in youth.42,43 ACEs prevention has also become a priority at the state level. In March of 2017, the National Conference of State Legislatures found nearly 40 bills in 18 states that included ACE-specific language, and the scan also identified 20 approved statutes in 15 states that referenced both ACEs and trauma-informed policies and practices.44

At the federal level, the Trauma-Informed Care for Children and Families Act of 2017 was introduced “to address the psychological, developmental, social, and emotional needs of children, youth and families who have experienced trauma, and for other purposes.”45 The bill intended to create an inter-agency “task force to develop best practices for trauma-informed identification referral, and support”, and was to be comprised of federal employees from CDC’s National Center for Injury Prevention and Control, the Substance Abuse and Mental Health Services Administration, and the Administration on Children, Youth, and Families of the Administration for Children and Families, among other federally recognized institutions.45 Unfortunately, the bill died in congress—but it does show a promising trend towards implementing ACE-related legislature at the federal level.

Policies that promote awareness of ACEs and efforts to introduce trauma-informed care can result in improved health outcomes across the lifespan, but comprehensive, evidence-based policies have yet to be implemented on a national scale, and there is a dearth of research that examines the relationship between state-level economic policies and their influence on adverse
childhood experiences. Creating a measurable effect on reducing ACEs and child maltreatment prevalence and their associated negative health outcomes is more likely to be achieved through a commitment between comprehensive data, effective programmatic strategies, and policy approaches. Research has established a clear link between ACEs and childhood socioeconomic position, so policy approaches that fail to incorporate that context largely misses the opportunity to effectively address some of the chronic and persistent causes of ACEs.

Frameworks for Addressing ACEs

CDC’S Essentials for Childhood Framework

The Centers for Disease Control and Prevention developed an extensive technical package called Essentials for Childhood: Creating Safe, Stable, Nurturing Relationships and Environments for All Children. The approach emphasizes safety, stability, and nurturance, both in relationships and in context to the environment, which are critical for early childhood development. The CDC defines these three areas as follows:

- Safety: The extent to which a child is free from fear and secure from physical or psychological harm within their social and physical environment.
- Stability: The degree of predictability and consistency in a child’s social, emotional, and physical environment.
- Nurturing: The extent to which children’s physical, emotional, and developmental needs are sensitively and consistently met.

The Center for Disease Control and Prevention’s Essentials for Childhood consists of four goals that propose strategies to promote the type of relationships and environments that improve
healthy childhood development. This framework is intended to serve as a guide for communities, and for “anyone committed to the positive development of children and families, and specifically to the prevention of all forms of child abuse and neglect and other ACEs.”

These goals consist of:

1. Raise awareness and commitment to promote safe, stable, nurturing relationships and environments for all children.
2. Use data to inform actions.
3. Create the context for healthy children and families through norms change and programs.
4. Create the context for healthy children and families through policies.

To achieve the goal of creating policy that promotes healthy children and families, relevant community and governmental partners will have to assess which policies work, and under what circumstances, that will provide the most benefit to the populations affected, including decision makers and the broader community.

The Essentials for Childhood Framework can be addressed through multiple approaches, such as strengthening household financial security, and the implementation of family friendly work policies, among others.

Failure to provide safe, stable, nurturing relationships and environments can put children at risk for adverse childhood experiences (ACEs), resulting in detrimental, and often long-term adverse health outcomes. The Essentials for Childhood Framework states that data-driven programmatic and policy interventions are necessary in order to adequately address any public health issue. This data can inform sound public policy related to child maltreatment and other ACEs, however, the process to formulate and implement policy is often complex and requires collaboration among many partnerships.
Addressing the social and economic underpinnings of ACEs is critical to achieving lasting and sustainable effects.\(^1\) Public health has increasingly focused on the upstream drivers, or structural determinants, that influence health. It is these structural determinants that influence the social determinants that result in environments where adverse childhood experiences and child maltreatment are more likely to occur.

**Literature Review Methods**

While there are many promising policies at the state and local level than can address child maltreatment and ACEs, for the purposes of this literature review, I examine the potential impact of economic supports for families identified in CDC’s Essentials for Childhood Framework that address state macroeconomic policies and state labor market policies.\(^7,50\) The Essentials for Childhood Framework identifies family economic position, determined by education, occupation, and income, as a structural determinant that can influence child abuse and neglect and other ACEs.\(^7\) Public health efforts must address the often neglected but ubiquitous risk factors for child maltreatment and ACEs, such as poverty, which can increase the likelihood of child maltreatment.\(^51,52\) The policies included in this review can both directly and indirectly support greater financial stability for at-risk families.

I used PubMed, Google Scholar, and Galileo from Georgia State University’s library to find primary research on five different public policies that can support reductions in child maltreatment and ACEs. These five policies were chosen for their saliency and are supported by a growing body of evidence. Other public policies, such as the Supplemental Nutrition Assistance Program (SNAP) and Low-Income Housing Tax Credit (LIHTC) programs were considered, but ultimately not included in the review due to an existing paucity in the literature.
to support those policies. Future research should examine the relationship between child maltreatment and other ACEs with LIHTC, SNAP, and Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC).

When using search terms, I included the policy name, once in full (such as Earned Income Tax Credit) paired with Child Maltreatment, ACEs, and Child Neglect. I then used the abbreviated name of the policies (EITC), using the AND Boolean operator with the same search terms, all separately. This was done for both EITC and Temporary Assistance for Needy Families (TANF). Other policies were also paired with Child Maltreatment, ACEs, and Child Neglect, using the AND Boolean operator. For High Quality Child Care, I included Head Start and Early Head Start using the AND Boolean operator with Child Maltreatment, ACEs and Child Neglect. I primarily chose articles that had been published within the last ten years, although at least one of my primary articles was published in 2011. I heavily relied on reference mining to find both primary research and other reviews and meta-analyses, and used grey literature, including governmental and organizational white papers, to support the research in this literature review.

**Economic Supports for Preventing and Addressing ACEs**

Public health research and practice suggests that meaningful improvements in population health are often contingent upon understanding, and working towards preventing, ACEs and the environments that perpetuate them.\(^{53}\) Improvements in socioeconomic conditions can be achieved through the adoption of economic support policies—public policies that serve as a widespread intervention can reach many families and provide the opportunity for the adoption of more sustained effects on reducing child maltreatment and other ACEs.\(^{54,55}\)
While poverty can be associated with a greater risk for ACEs such as child maltreatment, particularly neglect, most children living in poverty are not maltreated. Yet, broad efforts to address ACEs and child maltreatment can focus on highly prevalent risk factors, such as poverty, to promote population health. Systematic reviews indicate economic supports for working families can work as protective factors against child maltreatment, yet there is often disparate access and utilization to these economic supports. In comparison to other developed nations, the United States has a much more administratively complex and conservative approach towards providing economic support for families. However, The Center on Budget and Policy Priorities (CBPP) estimates that the poverty rate has fallen by about half since 1967, largely due to economic support programs administered to families. There are various economic programs, both at the state and federal level, that help low-income families, which include tax refund programs, unemployment benefits, child care assistance, and food and nutrition assistance, among others.

The CDC’s Essentials for Childhood Framework identifies strengthening economic supports for families as an important and necessary strategy to prevent child maltreatment and to improve safe, stable, nurturing relationships and environments for children. Among these strategies include strengthening household financial stability, the implementation of family-friendly work policies, enriching early childhood education through family engagement, and improving quality of existing childcare through licensing and accreditation. But do these programs actually reduce ACEs beyond poverty? The following sections will examine the data on several policy level interventions that have been used to support families and improve the developmental trajectories of children. I will examine and summarize the evidence that these policies may impact ACEs and their negative impact.
EITC (Earned Income Tax Credit) and the Child Tax Credit (CTC)

The Earned Income Tax Credit, or EITC, is a tax refund credit administered at the federal level for working families with dependents whose income is below a certain established threshold for a designated year. As of 2020, families with one child have a maximum credit of $3584 and a $6660 maximum credit for families with three or more children. Research suggests that families who receive EITC typically use the credit to pay for necessities and other living expenses critical to maintaining a stable family environment. As of 2021, there are 28 states with a state-level EITC to supplement the federal EITC, which is in the form of either a refundable or non-refundable tax credit as a percentage of the federal credit. There are currently seven states with a non-refundable, state-level EITC. Refundable EITCs pay the difference back to the family as a refund when the receipt of credit exceeds the amount of taxes a family owes, whereas if a non-refundable credit exceeds the amount of taxes a family owes, then the excess credit is lost and the family receives no cash asset.

When given as a refundable credit, the EITC is essentially additional income for qualifying families. In 2015, the EITC lifted nearly 3.3 million children out of poverty. Between 1993 and 2010, for states that chose to supplement the federal EITC, there was an incremental cost-effectiveness of roughly $7,686/QALY (quality-adjusted life year) gained. EITC has been associated with reductions in infant mortality, maternal stress, foster care entry, and mental health problems, including a reduction in anxiety, depression, and other behavioral health problems in children whose family received the EITC. Additionally, as a program that incentivizes labor force participation, the EITC can positively influence caregiver health behaviors and self-efficacy, which may give caregivers more capacity to provide resources and
the time and attention necessary to provide adequate care for their dependent children.\textsuperscript{66} The EITC program has been lauded as a strong, bipartisan policy measure that addresses multiple stressors associated with health-related quality of life.\textsuperscript{56,62}

The EITC program is particularly helpful for low-income, single-mother families and larger families.\textsuperscript{67} In a 2016 paper (\textit{Article 1.1}) analyzing data from the Fragile Families and Child Wellbeing study, Berger and colleagues found that a $1,000 increase in EITC benefits roughly translates to a nearly $1,030 increase in income, and this increase is associated with a 3\% to 4\% decrease in behaviorally-approximated neglect and an 8\% to 10\% decrease in child protective services involvement in low-income, single-mother families.\textsuperscript{67} While child maltreatment was operationalized through behaviorally-approximated measures and mothers’ self-reported CPS investigations, these results indicate a strong association between income earned and both CPS involvement and child neglect.

Given the established relationship between foster care entry and child maltreatment, researchers examined the impact of state-level EITC receipt (\textit{Article 1.3}), including both refundable and non-refundable, on foster care entries.\textsuperscript{68} Using data from AFCARS (The Adoption and Foster Care Analysis and Reporting System) from 2006-2016, the authors compared foster care entry rates according to states EITC policies. The results indicated that state-level, refundable EITC policies were associated with an 11\% decrease in foster care entries.\textsuperscript{68} Specifically, rates of foster care entries in states without a state-level EITC were 4.50 per 1,000 children, as compared to 4.45 for states with a nonrefundable EITC, and 4.21 for states with a refundable EITC.\textsuperscript{68} These findings suggest that while refundable EITC have a positive impact on reducing foster care entries, nonrefundable EITC might have a null (or net negative)
impact, an important implication for policymakers looking to adopt, or expand EITC policy in their state.

In a recent study (Article 1.4) by Kovski, et al⁶⁹, the authors examined the relationship between state level EITC and reported child maltreatment using the NCANDS (National Child Abuse and Neglect Data System) data which includes all substantiated reports of child maltreatment reported to state and local child protective service agencies in the U.S. Annual child maltreatment rates were codified as children experiencing multiple child welfare investigations in a given year. Six hundred eighty-nine state-year observations were included from over 42,000,000 million reports of child maltreatment from 2004 to 2017. For states that had adopted state-level EITC policy, there were fewer reports of child maltreatment for children ages zero to seventeen, but this effect was only observed among states that had adopted a more generous EITC. Among states with a less generous EITC, no effect of the EITC was found.⁶⁹ Furthermore, in states with a more generous EITC policy, there was significant reduction in both mental health episodes and poor physical health among adult recipients—which could translate to decreases in parental stress associated with compromising child safety, such as increased substance abuse and other maladaptive coping strategies.⁶⁸

A study (Article 1.2) conducted by Biehl and Hill in 2017 examined the effect of EITC on foster care entry between 2004 and 2014 by analyzing variations between state-level EITC programs, based on the percentage of the federal credit and whether the state had a refundable or nonrefundable EITC, or an EITC program at all.⁷⁰ After a federal expansion of EITC in 2009, states that had implemented their own EITC had a decrease in foster care entry rates by an overall 7.43% in comparison to states without a state-level EITC.⁷⁰ This translates to reduction of foster care entry rates by 12.4% and 17.39% for children ages eleven to fifteen, and ages sixteen
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to twenty, respectively, but the study’s authors did not find a statistically significant relationship between state EITCs and foster care entry rates for children ages zero to five.\textsuperscript{70}

The relationship between childhood poverty and ACEs has been clearly established.\textsuperscript{71} Emerging research indicates that an increase in cash liquidity for low-income mothers with children in their first year may change infant brain activity that is associated with development of cognitive ability and skills.\textsuperscript{72} While direct cash assistance does not negate the necessity for other infant and child health services necessary for healthy development, it does show a potential causal link that additional resources, particularly in the form of income, can positively impact brain development, especially in the first few years.\textsuperscript{72}

One study found that for children whose mothers received a partially refundable federal child tax credit, there were fewer incidents of injuries requiring medical attention and fewer behavioral problems.\textsuperscript{71} Similar to research on poverty and the size of state-level EITC, increasing the refundable amount allowed under the child tax credit can be a promising policy that allows families to become more economically self-sufficient, resulting in less prevalence of childhood poverty, and theoretically reducing incidents of child maltreatment related to economic hardship and marital discord or separation.\textsuperscript{71,73}

\textit{Table 1. EITC Studies}

<table>
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<tr>
<td>(1.1)</td>
<td>2016</td>
<td>Berger, L. Font, S. Slack, K. Waldfogel, J.</td>
<td>Income and Child Maltreatment in Unmarried Families: Evidence from the Earned Income Tax Credit\textsuperscript{67}</td>
<td>Estimated pooled and fixed effects with a two-stage equation to measure the effect of EITC on net income, and the effect of net income on the FFCW (Fragile Families and Child Wellbeing Study) data from 4,898 children born between 1998 and 2000, in 20 U.S cities with populations</td>
<td>Behaviorally approximated child maltreatment, and mothers’ self-reports that they had been investigated by CPS, with post-EITC benefit was found to be most beneficial for single-mother and larger families, indicating a strong association between income and both behaviorally approximated neglect and CS involvement. A</td>
</tr>
<tr>
<td>(1.2) 2017</td>
<td>Foster Care and the Earned Income Tax Credit$^{70}$</td>
<td>Difference-in difference analysis that exploited variables in state-level EITC programs.</td>
<td>Panel of state data from 2004-2014 collected from Adoption and Foster Care Analysis and Reporting System (AFCARS), data is aggregated to the state-level and reported by the National Kids Count Data Center.</td>
<td>Examining effects of EITC on foster care entry by measuring the effects of variations in state-level EITC policy.</td>
<td>Overall reduction in foster care entry rates by 7.43% per year in states with their own state-level EITC, compared to states without. The 2009 federal EITC expansion had different effects on foster care entry based on age—with a 12% decrease in foster care entry rates for children ages 11-15 and 17% for children ages 16-20 in states with a state-level EITC program.</td>
</tr>
<tr>
<td>(1.3) 2020</td>
<td>Reducing the Number of Children Entering Foster Care: Effects of State Earned Income Tax Credits$^{68}$</td>
<td>Analyzed variations in refund status and timing of states’ adoption of EITCs to examine effect on state foster care entry rates, while controlling for year- and state-fixed effects.</td>
<td>Annual numbers from 50 states and D.C with 867 observations between 2000-2016.</td>
<td>State-level foster care entry rates per 1,000 children under 18.</td>
<td>Foster care entries slightly less for refundable EITC states, and no significant effect for nonrefundable EITCs on foster care entry rate. If states without state-level EITC adopted a refundable EITC, 668 fewer children might enter foster care per state per year on average.</td>
</tr>
<tr>
<td>(1.4) 2021</td>
<td>Association of State-Level Earned Income Tax Credits With Rates of Reported Child Maltreatment, 2004–2017$^{69}$</td>
<td>Captured EITC policy variation across/within states over time, applying two-way fixed effects models to state-level data. Controlled for</td>
<td>State panel dataset containing all screened-in reports of child maltreatment to state and local CPS agencies across U.S.</td>
<td>Annual overall child maltreatment rate, annual child maltreatment report rate by 1 of 4 types of maltreatment</td>
<td>10-percentage point increase in percentage of federal EITC offered at state level associated with 220 fewer overall reports of child maltreatment per 100,000 children.</td>
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</table>
temporal changes that occurred nationwide and time-invariant differences in state characteristics, controlled for gradual changes within states correlated with both changes in child maltreatment rate and state EITC policy.

(neglect, physical abuse, emotional abuse, and sexual abuse), presence of state-level EITC and continuous variable for percentage of federal EITC state offered (generosity).

Increase of all state-level EITC to 18% of federal credit estimates 177,444 fewer reports of maltreatment nationwide in 2017.

TANF (Temporary Assistance for Needy Families)

Temporary Assistance for Needy Families, or TANF, was enacted in 1996 to replace Aid to Families with Dependent Children, or AFDC, and the program provides approximately $16.5 billion to the states, D.C. and U.S territories. Through these federal grants, states and territories provide monthly cash assistance to eligible, low-income families with dependents, with the intention of addressing one or more of TANF’s goals of:

1. Providing assistance to needy families so that children can be cared for in their own home or in the homes of relatives
2. End the dependence of needy parents on government benefits by promoting job preparation, work, and marriage
3. Prevent and reduce the incidence of out-of-wedlock pregnancies
4. Encourage the formation and maintenance of two-parent families.
States have been able to leverage these funds to aid in a variety of services and resources for families, including child care, education and job training, transportation, aid to children at risk for child maltreatment, and income assistance, among other services. TANF serves to offset the cost of providing and meeting the basic needs for children, an important implication for child maltreatment as a majority of substantiated child maltreatment cases (60.8%) stem from neglect. However, as of 2019, only 23 percent of families eligible for TANF actually received assistance.

While funding for TANF is administered through the federal government, individual states determine how TANF receipts are distributed. For example, there are states with more strict work requirements for TANF, which could put an undue burden on caregivers by increasing stress and affect a caregiver’s ability to adequately care for their child. In addition, the sometimes inflexible requirement of employment in TANF receipt and generosity could also reduce caregiver supervision, as caregivers are required to work more hours without necessarily having the opportunity to access appropriate childcare.

Cash benefits has previously demonstrated as an important intervention for child maltreatment, yet states only spend 21% of federal and state TANF funds on cash assistance for families. In a longitudinal cohort study (Article 2.3) of over 2457 primary caregiving mothers from the Fragile Families and Child Well-being study, researchers found that a $100 increase in TANF benefits was associated with an average of 1.8 fewer physical abuse events per family in the study population, whereas when a time-sensitive TANF receipt was imposed, there was an increase of an average 2.3 reports of physical abuse events per family. Mothers self-reported any acts of abuse within the last 12 months, on a scale from 0 (this never happened) to 20 or
more times. Given these results, an increase in TANF receipt and a decrease in conditions for eligibility might be a suitable economic intervention to prevent child maltreatment.

For states with more stringent sanctions on TANF in comparison to less strict states, 2017 research from Ginther and Johnson-Motoyama (Article 2.2) has found an increase in victims of child maltreatment, as well as increased foster care placements. Specifically, when states reported a loss of benefit as the most severe sanction for not working, there was a 12% increase in child maltreatment victims, with 23.3% of that increase constituting as child neglect. TANF restrictions that lead toward involuntary exit of the program are also associated with child maltreatment. In a 2011 study (Article 2.1), Beimers and Coulton examined the influence of employment and the type of exit from TANF on child maltreatment victimization. The study included a sample size of 18,023 female-headed households exiting TANF between 1999 and 2022, and found that there was a 26% increased risk for substantiated child maltreatment for families who had an involuntary exit from TANF in comparison to those families who left voluntarily.

Table 2. TANF Studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Study</th>
<th>Methods</th>
<th>Sample</th>
<th>Key Outcomes</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2.1)</td>
<td>2011 Beimers, D. Coulton, C.</td>
<td>Do Employment and Type of Exit Influence Child Maltreatment Among Families Leaving Temporary Assistance for</td>
<td>18,023 female-headed households exiting TANF between 1999-2002 with a child under 10 years of age at time of exit.</td>
<td>Examining the type of exit from TANF (voluntary vs. involuntary) and the relationship to incidences of child maltreatment, and the relationship between employment and employment.</td>
<td>Involuntary exit from TANF was associated with an increase in hazard that family would have substantiated or indicated report of child maltreatment, translating to a 26% higher risk of substantiated child maltreatment in</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Methodology</td>
<td>Findings</td>
<td>Notes</td>
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<tr>
<td>A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other ACEs</td>
<td>Needy Families?(^{80})</td>
<td>the number of cases at risk of experiencing child maltreatment, given by the period of time as the total number of cases in the risk set.</td>
<td>income and the risk of child maltreatment for families exiting TANF.</td>
<td>comparison to families who left voluntarily.</td>
<td></td>
</tr>
<tr>
<td>Do State TANF Policies Affect Child Abuse and Neglect(^{79})</td>
<td>Ginther, D. Johnson-Motoyama, M.</td>
<td>Differences-in-differences estimates using NCANDS and AFCARS data and Welfare Rules Database between 1999-205, and identified and coded TANF policy changes.</td>
<td>Impact of TANF policies, related to work and TANF reform, on child abuse caseloads.</td>
<td>None of TANF policies had significant impact on number of children reported as victims, but for states that imposed a total benefit loss as the most severe sanction for caregivers not working, had a 12% increase in child maltreatment victims, and a 23.3% increase in neglect victims, specifically.</td>
<td></td>
</tr>
<tr>
<td>Association Between Temporary Assistance for Needy Families (TANF) and Child Maltreatment Among a Cohort of Fragile Families(^{78})</td>
<td>Spencer, et al.</td>
<td>Difference-in-difference analysis to estimate overall and race-specific effects of TANF policies related to caregivers’ self-report of child neglect, physical, and psychological abuse.</td>
<td>Outcomes are self-reported rates of neglect and physical abuse by primary caregivers in the last 12 months. TANF policy data served as independent variable, coded to represent TANF generosity, which includes cash benefits, time limits, sanction time, among others.</td>
<td>$100 increase in TANF benefits associated with a decrease of 1.8 reports of physical abuse (out of a scale of 20+). Time limits (reduction in generosity) was associated with an increase of 2.3 reports of physical abuse.</td>
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</table>
Child Care Subsidies and High-Quality Child Care

The Child Care Development Fund is the largest existing federal program offering childcare subsidies to eligible families through state partnership, helping to reduce out-of-pocket expenses for families who have children ages zero to thirteen. Each month, the CCDF funds childcare assistance for over 1.4 million children, and the states use these funds to invest in workforce development for teachers, supporting higher standards for childcare programs, and providing education to families on child care that can meet the needs of the family. Childcare subsidies are intended to provide support to low-income families who utilize childcare services. Low-income families receiving a childcare subsidy are more likely to experience continuity of care—that is, stable childcare arrangements, which have been linked to positive developmental outcomes in attachment and cognition. States are given a wide berth of flexibility when administering benefits to families, and studies indicate that those states that are most accommodating in terms of eligibility, copays, and requirements, have a significant reduction in children removed from their homes in comparison to states with less flexibility.

For low-income families receiving subsidized childcare, parents and caregivers are given more options as to where, and who, provides childcare for the family, resulting in more reliable and high-quality childcare providers. A 2019 study conducted by Maguire-Jack and colleagues indicates that, for mothers receiving childcare subsidies, there was a lower rate of supervisory neglect—meaning a child was left alone in instances where they should have been under the care or supervision of an adult. However, the results of the study did not find sufficient support for a relationship between child care subsidy and a basic needs neglect, possibly due to the sample or the amount of funding received for childcare.
To note, there have been mixed results in research showing the relationship between child maltreatment and childcare subsidies. In a 2019 study (Article 3.4) examining the relationship between childcare subsidy receipt and investigations into child maltreatment, Yang and colleagues found reduced rates of reported physical abuse and neglect, as a function of the number of months childcare was received within the last year. The provision of accessible childcare, in theory, would allow a working parent more opportunities to work and draw an income, thereby potentially reducing financial stress that can lead to multiple ACEs, such as neglect, marital discord and separation, and poverty. Childcare subsidies can also alleviate stressful work-family imbalances, giving working mothers more flexibility.

Low-income, working mothers are especially susceptible to disruptions at work related to securing and maintaining childcare and the accompanying stress that can lead to potential child maltreatment. In a 2015 study from Yoonsook, Collins, and Martino (Article 3.2), data collected from the Fragile Families and Child Well-being Study found a relationship between the instability of childcare arrangements and a mothers’ physical and psychological aggression. Specifically, a higher change in the number of childcare providers since a child’s first birthday led to increased maternal aggression, and increases in out-of-pocket cost of child care relative to family income were related to maternal psychological aggression.

Some social safety net programs, such as the EITC, require workforce participation—but many caregivers enter the workforce without the promise of additional income to provide reliable and high-quality childcare. High-quality childcare can afford parents and caregivers more opportunities to find stable work if they receive consistent childcare, allowing them to contribute to the local economy. Considering poverty and financial stress are the most prevalent ACEs, this presents an enormous protective factor against potential child
maltreatment. Higher levels of parental stress have been associated with lower levels of parental affection and responsiveness, which can negatively affect child development and predict future ACE exposure. High quality childcare is a promising resource for children to access early learning opportunities that have the potential to increase a child’s resilience, and as a potential buffer towards negative impacts associated with adverse childhood experiences.

Early Head Start, first established in 1995 as grant program distributed to help pregnant, low-income women and children ages zero to three, is the most universal and accessible public childcare programs available. In a quasi-experimental study from Green and colleagues (Article 3.1), the authors assessed maltreatment outcomes in a total of 1247 young children and their families from the Early Head Start Research and Evaluation Project, finding that children in EHS had significantly fewer child welfare encounters between the ages of five and nine years than did children in the control group, and that EHS slowed the rate of subsequent encounters. Adjusted odds ratio were used to examine the likelihood of Early Head Start children, compared to controls, of having at least one child welfare encounter, stratified by age groups. Compared to children in the control group, children in EHS were less likely to have a substantiated report of physical or sexual abuse.

Table 3. Child Care Subsidies and High-Quality Child Care

<table>
<thead>
<tr>
<th>Author</th>
<th>Study</th>
<th>Methods</th>
<th>Sample</th>
<th>Key Outcomes</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green, B., et al</td>
<td>The Effect of Early Head Start on Child Welfare System Involvement: A First Look at Longitudinal</td>
<td>Retrospective analysis to identify child welfare involvement, using an intent-to-treat design where all participants randomly</td>
<td>(n= 1247) Young children and their families in ‘Early Head Start Research and Evaluation Project’ (EHSREP) who</td>
<td>Number and date of substantiated child maltreatment reports and maltreatment type of each substantiated report, number, and</td>
<td>Children between 5 and 9 years of age who participated in EHS were less likely to have child welfare encounter, and fewer total number of</td>
</tr>
</tbody>
</table>
## A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other ACEs

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Title</th>
<th>Authors</th>
<th>Research Design and Methodology</th>
<th>Results and Findings</th>
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<tbody>
<tr>
<td>(3.2) 2015</td>
<td>Child Care Burden and the Risk of Child Maltreatment Among Low-Income Working Families</td>
<td>Yoonsook, H., et al.</td>
<td>Data from 3-year follow-up interviews from mothers who participated in Fragile Families and Child Wellbeing Study, a longitudinal birth cohort study. Current study obtained information on both childcare and parental physical and psychological aggression, and neglectful behaviors towards children.</td>
<td>Initial cohort of 4898 births between 1998 and 2000, selected from large U.S cities and randomly sampled to increase economic and policy variation across cities. Oversampled families with unwed parents. Sample of current study included others who completed both the 3-year follow-up and in-home interview (n=1045) after exclusion. Mother’s neglectful behavior, and association between childcare burden and risk of physical and/or psychological abuse and neglect. Identified positive relationship between instability in childcare arrangements and maternal physical and/or psychological aggression towards children.</td>
</tr>
<tr>
<td>(3.3) 2018</td>
<td>Preventive Benefits of U.S Childcare Subsidies in Supervisory Child Neglect</td>
<td>Maguire-Jack, K., et al.</td>
<td>Data from Fragile Families and Child Wellbeing longitudinal birth cohort study. Dichotomous variable created to compare the state of Sample of mothers participating in third wave of study, cases selected if mother eligible for childcare subsidy Neglect, assessed by maternal self-report items from Parent-Child Conflict Tactics Scales. Covariates included economic hardship, maternal</td>
<td>Receipt of childcare associated with lower rates of supervisory neglect.</td>
</tr>
</tbody>
</table>
A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other ACEs

| (3.4) 2019 Yang, M., et al | Child Care Subsidy and Child Maltreatment$^3$ | Illinois Family Study, longitudinal study design that collects information of family characteristics, wellbeing, financial hardship, and resources of families with welfare receipt. Survey data linked to administrative data using matching algorithm using identifying information and linked with childcare subsidy receipt data and child maltreatment report data. | (n = 2250) and had full information on study variables (n=1179). Direct and indirect paths from receipt of childcare subsidies to physical abuse and/or neglect through mediators such as working hours, household income, childcare concerns, and parenting stress. Childcare subsidy received in previous year was associated with decreased likelihood of investigated physical abuse and neglect reports, suggesting protective effect. |
| | | 1,899 selected sample from survey, 1,362 adults responded (72% response rate), 1,260 agreed to link survey data to administrative data. No significant difference between those who consented to link and those who did not consent, except for the number of children. Consenting parents had larger number of children (2.46) than nonconsenting participants (2.18). Majority sample African American (79.7%) and single (80.5%). | Education, maternal marital status, and maternal depression. |

**Family-Friendly Work Policies and Increases in Minimum Wage**

Nearly half of U.S workers are not eligible for paid-family leave under the 1993 Family Medical and Leave Act (FMLA), and the U.S is the only developed nation without a paid family leave policy.$^{98,99}$ Paid leave allows workers to meet their personal and health needs without risk

[34]
of losing wages or employment, but under the FMLA employers are only required to provide workers with unpaid family leave. In Germany and Canada, new and expectant mothers can take up to twelve months leave with a percentage of their wage supplemented. In the U.S., low-skilled, low-income women are less likely to work for an employer that offers family-friendly policies at work.

Increases in paid-family leave are associated with increased child and infant health, including in California where it was found that paid family leave policies resulted in a decreased prevalence of hospitalization of infants admitted for preventable infections and illnesses, which is a strong indicator of potential child maltreatment. When controlling for unemployment and percentage of adult caregivers with less than a high school diploma, a 2016 study from Klevens and colleagues (Article 4.1) found that abusive head trauma decreased significantly when paid family leave policies were implemented—there was a decrease of over 5 admissions per 100,000 infants less than one years of age. Fatal, abusive head trauma is the main source of child maltreatment resulting in death.

An increase in minimum wage has been associated with fewer reports of child maltreatment, but the evidence is mixed. In a study conducted by Raissian and Bullinger in 2017 (Article 4.2), results indicated that a one dollar increase in the real minimum wage would decrease reports of neglect by nearly 68 reports per 100,00 children, this is a 9.6% decline in child neglect reports. Subsequent research finds little effect on child maltreatment outcomes affected by minimum wage increase, but does find that when controlling for state-specific time trends, a $1 increase in the minimum wage resulted in .28 fewer events of child neglect.

More research into the effects of minimum wage increases is needed, and would be supported by the large body of research that links poverty and socioeconomic status to child
maltreatment reports. \textsuperscript{103} As of January 1\textsuperscript{st}, 2022, 21 states increased their minimum wage, ranging from a $0.22 adjusted for inflation increase, to a $1.50 per hour raise, with these increases translating to anywhere between $458 to $3,120 real dollar increase for full-time workers in these states. \textsuperscript{104} Subsequent research examining the effects of these wage increases using a difference-in-differences analysis would provide evidence of minimum wage increases’ effect on child maltreatment and other ACEs.

**Table 4. Family Friendly Work Policies and Minimum Wage Increase Studies**

<table>
<thead>
<tr>
<th>Author</th>
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<th>Sample</th>
<th>Key Outcomes</th>
<th>Results</th>
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<tbody>
<tr>
<td>(4.1) 2016</td>
<td>Klevens, J., et al. Paid Family Leave’s Effect on Hospital Admissions for Pediatric Abusive Head Trauma\textsuperscript{54}</td>
<td>Difference-in-differences analyses using a panel data set including California and 7 comparison states.</td>
<td>State-level data from 1995-2011 of population rate of AHT (abusive head trauma) hospital admissions in California, vs. other states with no changes in paid family leave policy before and after the policy change.</td>
<td>Dependent variable was AHT hospital admission rates per 100,000 in California population, vs. compared states. Unadjusted model includes PFL policy variable, adjusted model includes unemployment rate and % of adults with less than high school education as two additional variables.</td>
<td>Increase in AHT admission rates in comparison states from 2007 – 2009, while California’s rates remained stable. PFL policy in California was significantly associated with a decrease of 5.8 in the AHT admissions per 100,000 children in California in less than one year.</td>
</tr>
<tr>
<td>(4.2) 2017</td>
<td>Money Matters: Does the Minimum Money Matters: Does the Minimum</td>
<td>Aggregated data from NCANDS and minimum wage</td>
<td>2004 – 2013 NCANDS Child File, includes All child maltreatment reports made</td>
<td>$1 increase in real minimum wage (16% increase in current costs).</td>
<td>$1 increase in real minimum wage (16% increase in current costs).</td>
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</table>
A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other ACEs

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Methods</th>
<th>Data Source</th>
<th>Results</th>
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<tbody>
<tr>
<td>Raissian, K. Bullinger, L.</td>
<td>Wage Affect Child Maltreatment Rates?</td>
<td>Increases, to construct state-level panel with quarterly time periods.</td>
<td>Includes minimum wage variable, and information on effective date of minimum wage.</td>
<td>Results in decreased neglect reports by about 68 per 100,000 children. All study coefficients were negative, indicating an increase in minimum wage is inversely associated with child maltreatment reports.</td>
</tr>
<tr>
<td>Livingston, M.</td>
<td>Association of State Minimum Wage Increases with Child Maltreatment</td>
<td>Difference-in-differences analysis to estimate series of two-way fixed effects, controlling for covariates. Separate models created to assess child maltreatment for specific domains.</td>
<td>Data from FFCWS (Fragile Families and Child Wellbeing Study) of cohort of 4898 children born between 1998 – 2000. Families sampled in 15 states across 20 cities.</td>
<td>Changes in the number of reported child maltreatment cases in response to state-level minimum wage increases. Estimates show little difference in reduction of child maltreatment influenced by increases in minimum wage, though when controlling for state-specific time trends, a $1 increase in minimum wage resulted in a decrease of .28 events of child neglect. For families in the lowest income, no statistically significant association.</td>
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**Medicaid Expansion**

Medicaid, a partnership between the states and federal government, provides health insurance for more than 74.5 million low-income individuals, children, their parents, individuals living with disabilities, and older adults. As of 2022, 38 states have chosen to expand Medicaid through federal funds under the Affordable Care Act. All states currently have a Medicaid program, although the program is still optional. Given this, there is a wide range of
eligibility, reimbursement, and allowable benefits and services that vary from state to state, and
because Medicaid is associated with a reduction in financial hardship and increased access and
utilization of mental health and substance abuse services, Medicaid can potentially influence
child maltreatment and ACEs incidence rates.\textsuperscript{107}

There is growing evidence that Medicaid expansion is associated with a reduction in the
potential risk factors for child maltreatment, but the direct effects of Medicaid expansion and
child maltreatment are less understood.\textsuperscript{108} Data suggests that adults who participated in the
Medicaid program in early childhood had an improvement in long term health, an increase in
utilization of health services, and reduced medical debt in adulthood.\textsuperscript{108} These results are likely
beneficial due to improving an adult’s familiarity with and ability to navigate healthcare systems
both for themselves later in life and for their children.

Roughly 64\% of children enrolled in Medicaid have experienced one or more ACEs.\textsuperscript{109}
Research has looked towards Medicaid expansion as a promising policy intervention to reduce
child maltreatment, and Brown and colleagues (\textit{Article 5.1}) found that in states that expanded
Medicaid when compared to states that did not expand during the same time period, there were
422 fewer cases of reported neglect per 100,000 children under six years of age.\textsuperscript{18} Most recently,
McGinty and colleagues (\textit{Article 5.4}) found that in Medicaid expansion states, the average rate of
child neglect in ages 0-5 resulted in a 13.4\% reduction in comparison to non-expansion states,
and a 17.3\% reduction in rates of first-time reported neglect among the same age group.\textsuperscript{110} Using
a difference-in-differences approach to integrate staggered policy implementation temporally, the
analysis included 20 newly-expanded Medicaid states in 2014, and 18 states that did not expand
Medicaid from 2008 to 2018, showing evidence that the expansion of Medicaid for low-income
families has the potential to reduce child neglect.\textsuperscript{110}
Puls and Colleagues (Article 5.2) conducted a cross-sectional study of the U.S and found that increases in healthcare coverage lead to an increase in reporting of child maltreatment by healthcare providers, which may be a protective factor against subsequent reports of child maltreatment in families with a history of substantiated reports.\textsuperscript{111} For every one percentage increase in counties’ percent of insured children, there was an associated 2\% increase in child maltreatment reported by healthcare providers.\textsuperscript{111} Results indicate that increasing population-level health insurance coverage gives healthcare providers more opportunities to report potential child maltreatment at the population-level.\textsuperscript{111}

Subsequent research from Berland and colleagues (Article 5.3) finds that Medicaid expansions are associated with a 17.2\% reduction in foster care admissions in states that expanded Medicaid after the implementation of the ACA, mostly due to reports of child neglect, which accounts for 70\% of child maltreatment reports.\textsuperscript{112} There was also a 32\% reduction in neglect-related foster care admissions, holding constant across different age groups and genders.\textsuperscript{112} Means to increase accessibility of public health insurance is an important policy lever towards decreasing foster care entry rates, and child neglect in general.

Table 5. Medicaid Expansion Studies

<table>
<thead>
<tr>
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<th>Results</th>
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<tr>
<td>Brown, E., et al</td>
<td>Assessment of Rates of Child Maltreatment in States with Medicaid Expansion vs States Without Medicaid Expansion\textsuperscript{18}</td>
<td>Ecological study to examine associations of policy shift at the state level. Comparison of baseline characteristics of expansion vs non expansion states, with a demographic and maltreatment data from NCANDS, including child-level data for all child maltreatment reports in U.S</td>
<td>Exposure was whether a state expanded Medicaid on or after January 1\textsuperscript{st}, 2014. Primary outcome was incidence rate of screened-in referrals for physical abuse or neglect per 100,000 children younger than 6 years, reported each year (with adjustments for confounders) for comparison of post expansion and pre-expansion rates in states that expanded</td>
<td>422 out of 100,000 cases of neglect in children younger than 6 years, reported each year (with adjustments for confounders) for comparison of post expansion and pre-expansion rates in states that expanded</td>
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</tr>
<tr>
<td>Study (Year)</td>
<td>Title and Authors</td>
<td>Methodology</td>
<td>Results</td>
<td>Summary</td>
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<tr>
<td>2020 (5.2) Puls, H., et al</td>
<td>Insurance Coverage for Children Impacts Reporting of Child Maltreatment by Healthcare Professionals&lt;sup&gt;111&lt;/sup&gt;</td>
<td>Cross-sectional study of U.S counties (2008-2015).</td>
<td>Using data from U.S Census Bureau’s Small Area Health Insurance Estimates, National Center for Health Statistics, and NCANDS.</td>
<td>Primary predictor was counties’ percent of children insured, and primary outcome was rate of child maltreatment reporting from healthcare providers. For every 1 percentage point increase in counties’ percent of children insured, there was an associated 2% increase in child maltreatment reports initiated by healthcare providers. If there was an increase in one percentage point in 2015 of counties’ percentage of uninsured children, there was a predicted 5620 additional reports of child maltreatment initiated.</td>
<td></td>
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<tr>
<td>2021 (5.3) Beland, L., et al</td>
<td>The Effect of Affordable Care Act Medicaid Expansions on Foster Care Admissions&lt;sup&gt;112&lt;/sup&gt;</td>
<td>Estimating the impact of Medicaid expansions using difference-in-difference analysis, based on states’ decision to expand Medicaid coverage, using aggregate data at the state level.</td>
<td>Data from AFCARS Foster Care File ( adoption and Foster Care Analysis and Reporting System) from 2010 – 2017, including child demographic information such as gender and age.</td>
<td>Main outcome variables are foster care admissions, readmissions, and exits per 100,000 children in state and year. Independent variable is Medicaid expansion in states that expanded after implementation of the ACA. Medicaid expansion led to decrease in total foster care admissions by 17.5% and suggest a 32% reduction in foster care admissions for child neglect. Based on Brown, et al (2019) research, results indicate that Medicaid expansions are associated with a decrease in foster care admissions due in large part to a decrease in neglect incidents.</td>
<td></td>
</tr>
</tbody>
</table>
Discussion

The purpose of this review was to critically evaluate the existing literature on multiple economic policies that have demonstrated promising outcomes on the future of child maltreatment and ACEs prevention. Although the literature is limited, there are several studies that suggest that policy measures are associated with a reduction in ACEs and child maltreatment. These include cash assistance programs in the form of a tax receipt such as the Earned-Income Tax Credit and the Child Tax Credit, and broader economic supports such as TANF, high-quality childcare and childcare subsidies, and Medicaid expansion. While there are many opportunities to apply ACEs and child maltreatment interventions in a clinical, interpersonal, or even community-level setting, public policy changes have the potential to create a larger impact and affect many more individuals at a population level.

An important caveat of implementing economic policies to address ACEs and child maltreatment is that these policies have the potential to create systemic, and unintentional, change in other “wicked problem” areas. It is often unknown how certain policies or program
interact with one another, as studies to determine these types of causal interactions are limited or non-existent.\textsuperscript{113} The concept of Wicked Problems was first introduced in Rittel and Webber’s seminal 1973 article “Dilemmas in a General Theory of Planning.” Therein, they describe that policy problems (and their solutions) are not clear-cut, and although well intentioned, are often accompanied by unintended consequences and implicated in other socioeconomic issues.\textsuperscript{114,115} Whereas traditionally scientific problems are rooted in knowledge, social problems tend to be tied to values.\textsuperscript{114} The causal relationship between economic policies and their impact on child maltreatment and ACEs is not yet well understood. It is important to recognize that only a subset of families eligible for certain economic supports apply for, receive, or use these benefits.\textsuperscript{42} Interventions designed to facilitate outreach and increase access and utilization of services provided by these policies should also be considered.

Additionally, these studies have not been evaluated for their effects on other policies or programs related to child maltreatment and ACEs, and they do not adequately capture the multiple variables at the individual, community, or societal level that could confound these results.\textsuperscript{42} Research has demonstrated that during the Great Recession, some states saw an increase in TANF caseloads alongside increases in child neglect cases, whereas in other states, there was an inverse relationship between TANF caseloads and child neglect cases, suggesting that economic policies should be considered more narrowly in a regional context to provide more equitable support where it is most needed.\textsuperscript{116} Therefore, it is essential that the implementation of policy in response to social ailments is grounded in the best available evidence, and that policy makers are able to identify approaches that are adaptable and best suited to address these types of social problems.
Because of a lack rigorous studies that appropriately evaluate the broader impact of potential economic interventions to reduce or prevent ACEs, there continues to be a gap in evidence-based policy. Relevant and timely data will be critical towards identifying these policy gaps, making recommendations based on the best available evidence, and understanding how policy can and should be modified to adapt to specific contexts. While addressing potential policy gaps, researchers, advocates, and policy makers should consider the impact of multiple programs, activities, and policies that can work in tandem with one another to achieve the best possible outcome for children and families. It has been consistently demonstrated that safe, stable, nurturing relationships and environments contribute to positive childhood experiences and mitigate the impacts and risk factors associated with ACEs and maltreatment, so public policy should be drafted and implemented in such a way that it makes these types of environments more accessible and impactful.

**Limitations and Implications**

It is unclear what effect these economic policies have on other ACEs not related to child maltreatment and abuse, other than demonstrating an effect on reducing poverty, which is a major risk factor for ACEs, and child neglect, specifically. At the state level, there are wide variations in economic support for families that would benefit, such as generosity, eligibility, and other work or time-related requirements. Because of these differences, and the lack of heterogeneity in income, demographics, age, and potential risk factors across states, some characteristics of a policy might be inapplicable in certain contexts, demonstrating mixed results in comparative populations. This literature review recognizes that a larger body of literature on various economic policies to reduce and prevent ACEs and child maltreatment is still emerging.
but does suggest that certain changes in economic policies at the federal and state-level can reduce child maltreatment and other ACEs.

While this review provides some evidence of the effectiveness of economic policies to reduce and prevent child maltreatment and ACEs, economic policies must also support, and work with, a broad range of other evidence-based preventative services, such as home visitation programs, access to health services, promotion of healthy community norms, and other evidenced-based programs for parents and caregivers. However, broader economic policies can reinforce emerging efforts to improve population health equity and the social determinants of health.

As mentioned, not every eligible family for these economic benefits applies for or receives them. In 2020, for every 100 families in poverty across the U.S, only 21% received TANF cash assistance, currently the lowest “TANF-to-poverty” ratio since the beginning of the program. Access to programs like TANF and EITC vary greatly across states, and is largely dependent on where people live. States have leverage to create barriers to accessing TANF, and there are no federal minimum eligibility requirements. Currently, the federal government, 30 states, and the District of Columbia have their own EITC, but some states have a refundable credit, whereas others have a nonrefundable credit. There are also large differences in the percent of the federal EITC that states provide, ranging from 55% in D.C to 3% in Montana. Additionally, 12 states have not yet adopted Medicaid, although expansion is associated with reductions in reported child neglect. Positive health outcomes as a result of these economic policies are largely contingent on the access and utilization of eligible policy recipients.

In 2019, Bellis and colleagues approximated that a 10% reduction in the prevalence of ACEs could equate to a savings equal to three million DALYs, or $105 billion across both
A Review of Economic Policies to Reduce and Prevent Child Maltreatment and Other ACEs

Continents. In North America, ACEs cost $748 billion annually, which is almost 4% of the North American gross domestic product. ACEs are linked to adult health-related quality of life, with an estimated 2.76 times higher rate of developing any disease before the age of seventy for those with 4 or more ACEs. Child maltreatment and ACEs, as an almost exclusively preventable public health problem, should be of first concern, and policy, not just traditionally health-related policy, should reflect that. Since the causes of ACEs and child maltreatment are multifactorial, solutions must come from sectors other than just healthcare and public health. A concerted effort to reduce ACEs and child maltreatment by identifying and mitigating associated risk factors, such as poverty, has the potential to create significant and sustained benefits for society.

Gaps in the literature still exist, and there is mixed evidence on the efficacy and cost-effectiveness of some economic policies. Strong, methodically rigorous research should form the backbone of any state or federal economic policy implementation on ACEs and child maltreatment prevention. When funding and implementing complex economic policies, there should be demonstrated, positive results that sufficiently support the policy with health equity in mind. Despite this review’s limitations, it provides strong support for federal and state-level economic policies to prevent and mitigate adverse childhood experiences in the U.S.
Eligibility Requirements and Benefits

The eligibility requirements and benefits associated with each economic policy are provided in tables below. Apart from the EITC program table and the minimum wage figure, all other economic policies reflect Georgia’s eligibility and requirements and receipt of benefits. Georgia does not currently have a state-level EITC program, and Georgia’s minimum wage rate for 2022 is $5.15 per hour, except for employers subject to the Fair Labor Standards Act who must pay the $7.25 Federal minimum wage. Georgia was chosen as an example because the criteria for eligibility requirements and benefits differ by state for each program.
**EITC Table**
Federal 2019 Earned Income Tax Credit Parameters (filing single)\(^{56}\)

State-level EITC eligibility and benefits vary.

<table>
<thead>
<tr>
<th>Category</th>
<th>Phase-in</th>
<th>Maximum Credit Amount</th>
<th>Phase-out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childless</td>
<td>$6,920</td>
<td>$529</td>
<td>$15,570</td>
</tr>
<tr>
<td>1 Child</td>
<td>$10,370</td>
<td>$3,526</td>
<td>$41,094</td>
</tr>
<tr>
<td>2 Children</td>
<td>$14,570</td>
<td>$5,828</td>
<td>$46,703</td>
</tr>
<tr>
<td>&gt;2 Children</td>
<td>$14,570</td>
<td>$6,557</td>
<td>$50,162</td>
</tr>
</tbody>
</table>
**TANF**

**TANF Eligibility in Georgia**

<table>
<thead>
<tr>
<th><strong>Age</strong></th>
<th>Child less than 18 years of age, or 19 years if they are a full-time student.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application for Other Benefits</strong></td>
<td>TANF recipient must apply for and accept other benefits for which they are eligible, such as Supplemental Security Insurance (SSI) or Child Support</td>
</tr>
<tr>
<td><strong>Citizenship</strong></td>
<td>Recipient must be U.S citizen or lawful resident alien</td>
</tr>
<tr>
<td><strong>Deprivation</strong></td>
<td>Child must be deprived due to: (1) continued absence of at least one parent from the home (2) physical or mental incapacity of at least one parent (3) death of a parent</td>
</tr>
<tr>
<td><strong>Enumeration</strong></td>
<td>All “assistance unit members” must have or apply for a Social Security number</td>
</tr>
<tr>
<td><strong>School Attendance</strong></td>
<td>Children ages 6-17 who have not previously graduated from high school or who have not received a certificate of high school equivalency must attend school with satisfactory attendance</td>
</tr>
<tr>
<td><strong>Immunized</strong></td>
<td>All preschool children must be immunized</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>Net income must be below certain established limits, adjusted for “assistance unit members”</td>
</tr>
<tr>
<td><strong>Lifetime Limits</strong></td>
<td>Limited to 48 months in a lifetime, and can be extended if justified due to certain hardships such as domestic violence or mental incapacity</td>
</tr>
<tr>
<td><strong>Paternity</strong></td>
<td>Assistance unit members must establish paternity—paternity of child established at application, and whenever a child is added to an active case</td>
</tr>
<tr>
<td><strong>Work Requirement</strong></td>
<td>All adult recipients have a work requirement, required to participate in work-related activities or training for at least 30 hours weekly</td>
</tr>
</tbody>
</table>
### Head Start and Early Head Start

#### Eligibility in Georgia

<table>
<thead>
<tr>
<th>Eligibility Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ages 0-5</td>
</tr>
<tr>
<td>• Low-income families</td>
</tr>
<tr>
<td>• Children in foster care, homeless children, children receiving TANF are also eligible for Head Start, regardless of income</td>
</tr>
<tr>
<td>• Children may be enrolled from families about the Poverty Guidelines in certain cases</td>
</tr>
<tr>
<td>• Pregnant women may also be eligible for Early Head Start</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income Requirements per individuals in a household (before taxes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*For households with more than eight people, an additional $4,720 is added.</td>
</tr>
<tr>
<td>1 member: $13,590</td>
</tr>
<tr>
<td>2 members: $18,310</td>
</tr>
<tr>
<td>3 members: $23,030</td>
</tr>
<tr>
<td>4 members: $27,750</td>
</tr>
<tr>
<td>5 members: $32,470</td>
</tr>
</tbody>
</table>
U.S Minimum Wage Increases - 2022

https://www.epi.org/blog/states-minimum-wage-increases-jan-2022
Medicaid Eligibility in Georgia, 2022

<table>
<thead>
<tr>
<th>Eligibility Requirements in Georgia</th>
<th>1 member: $33,568</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident of the state of Georgia and a U.S national citizen, permanent resident, or legal alien in need of healthcare and insurance assistance with low or very low-income. <strong>You must also be one of the following:</strong></td>
<td></td>
</tr>
<tr>
<td>Pregnant, or</td>
<td></td>
</tr>
<tr>
<td>Responsible for a child 18 years or younger, or</td>
<td></td>
</tr>
<tr>
<td>Blind, or</td>
<td></td>
</tr>
<tr>
<td>Have a disability or family member in household with disability.</td>
<td></td>
</tr>
<tr>
<td>Be 65 years of age or older.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income Limits (annual household income before taxes)</th>
<th>2 members: $45,226</th>
</tr>
</thead>
<tbody>
<tr>
<td>*For households with more than eight people, an additional $11,659 is added.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 members: $56,885</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 members: $68,543</td>
</tr>
<tr>
<td>5 members: $80,201</td>
</tr>
</tbody>
</table>
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References


[52]


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