5-2023

Adverse Childhood Experiences (ACEs): Conceptualizations in Research and Policy

Allison Sarah Fischman
Bates College, afischma@bates.edu

Adverse Childhood Experiences (ACEs): Conceptualizations in Research and Policy

An Honors Thesis

Presented to

The Faculty of the Department of Sociology

Bates College

In partial fulfillment of the requirements for the

Degree of Bachelor of Arts

By

Allison Sarah Fischman

Lewiston, Maine

April 3, 2023

Acknowledgements

To my family: Mom and Dad – I am endlessly thankful for your support throughout my education. You've always been my champions and made it possible for me to be where I am now. Jonathan – thanks for stressing in solidarity and always having my back. I love you guys.

To my friends: On campus and off, I am so fortunate to have had such amazing people to count on through this journey. Thank you for the hugs and the pep talks. You are the best.

To Bonnie: I am so grateful to have met you and for the friendship and partnership we have built over the last four years. Your passion for transforming the lives of individuals and the community is endlessly inspiring. I will take all you have taught with me wherever I go, and I hope I can make a difference in people's lives the way you have for so many.

To Emily Adrion: Your mentorship and support over the last year have meant so much to me. Thank you for taking a chance on me. You gave me an incredible opportunity to stay in Edinburgh, taught me so much, and helped me build a home away from home. I will forever be thankful.

To Emily Kane: I am so lucky to have had such a wonderful advisor – from my very first day at Bates to my last and beyond. I cannot even begin to express how much of an impact you have had on me. Thank you for always lending an ear (and a box of Kleenex) and for believing in me when I couldn't believe in myself.

Abstract

Adverse Childhood Experiences (ACEs) is a framework developed by Felitti et al. (1998) that aims to understand the public health effects of childhood trauma more comprehensively. ACEs are strongly associated with chronic physical health issues, substance abuse, and mental illness later in life. Over time, the definition has shifted from individual household-level experiences to include community environmental factors, increasing resource mobilization to combat underlying social problems contributing to ACEs. However, ACEs remain inconsistently defined in the literature, and scholars debate if this undermines the value of the framework. Through content analysis of scholarly literature on ACEs and U.S. policies addressing childhood trauma, I explore which aspects of the framework established in the literature make their way into policy. A scoping review of peer-reviewed scholarly literature gathered through a systematic search of SocINDEX, PsycInfo, and PubMed was completed. A census of relevant federal policy documents was gathered by searching records on Congress.gov. Articles and policies meeting the inclusion criteria were coded to identify which factors from the original ACEs study and the expanded framework were included. I compared these inclusions in the literature and policy and analyzed the use of the ACEs terminology in policy over time. This analysis documents the contested nature of ACEs terminology, the implications of which I explore in relation to consistency in research and policy, as well as possible avenues for addressing childhood trauma and its public health impacts even more effectively.

Table of Contents

Introduction

In partnership with the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente, Vincent Felitti, Robert Anda, Dale Nordenberg, and colleagues conducted the first study focused on Adverse Childhood Experiences (ACEs) from 1995-1997. Publishing the results of the study in a paper called the "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study," they coined the ACEs term and demonstrated profound relationships between certain traumatic experiences in childhood and detrimental mental and physical health outcomes later in life (Felitti, Anda, Nordenberg et al. 1998). Since the foundational study, the ACEs framework has informed the study, prevention, and treatment of childhood trauma across the globe. According to a search of the title on Google Scholar, the 1998 article has been cited nearly 20,000 times.

The original ACEs framework included seven items: psychological, physical, or sexual abuse; violence against the mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned (Felitti et al. 1998:248). The second wave of the study added parental separation or divorce and physical and emotional neglect (Felitti and Anda 2010). Over time, the definition of ACEs has shifted from the original individual and household-level experiences to include more community-level and social-environmental factors, such as witnessing or experiencing community violence. Despite the apparent stability of the framework, many scholars define ACEs differently; some include only the original factors, while others add to the framework. As researchers continue advocating for new items to be added to the framework, many question if the ever-changing nature of the framework compromises its

value for monitoring, preventing, and treating ACEs (e.g., Kalmakis and Chandler 2014, Steptoe, Marteau, Fonagy et al. 2019).

I was first introduced to the ACEs framework during my first semester at Bates when I began my community-engaged learning placement at the Center for Wisdom's Women in downtown Lewiston. There, I met Bonnie Bridgham, who had organized and run a trauma-informed yoga group at the Center for three years prior. Bonnie is a one-person organization and public speaker advocating trauma healing through the integration of alternative therapeutic modalities with typical trauma healing approaches in the medical field. She speaks about her personal trauma history and healing journey to help build a bridge between practitioners, different trauma-healing methods, and trauma survivors.

Bonnie and many of the other women at the Center I was lucky to build relationships with through my community engagement experiences are ACEs survivors. Throughout my time at the Center, the women told me about their experiences with childhood trauma and a range of mental and physical health impacts likely connected to those traumatic experiences. Seeing the benefits of trauma healing methods informed by the connection between ACEs and later-life health impacts first-hand enlightened me to the immense potential to prevent and heal trauma on a broad scale. I have been lucky to stay in touch with Bonnie since, and she and her work are without a doubt the primary inspiration for this thesis.

The following year, with an existing intrigue in ACEs and using frameworks to address social and public health issues, I took a course called Contemporary Social Problems. In this class, we had the opportunity to examine a social problem through the Social Problems Process, a social constructionist theory Joel Best discusses in his 2017 book *Social Problems* (Best 2017).

As I traced ACEs through the stages of claimsmaking, media attention, and policymaking, it became apparent that although the ACEs framework is salient in the academic literature, it may not make its way into the media, policy, and the public in ways I might have originally thought. This project piqued my interest in the effects of claimsmaking and framing social issues in a particular way on if and how they are addressed.

I knew of local efforts to bring the ACEs framework into organizational practice and public awareness, like Bonnie's work, and state-wide initiatives, such as the work of the Maine Resilience Building Network, which aims to foster resilience across communities by understanding the impacts of ACEs and building positive relationships (Maine Resilience Building Network 2022). In my research for Contemporary Social Problems, I found a number of state initiatives but an apparent lack of ACEs-driven efforts at the national level. Through my continued work with Bonnie and research on the social determinants of health, my interest in how ACEs are or are not addressed in U.S. policy grew. Driven by my principal interest in ACEs as a framework and secondary fascination with the broader process of connection between research and policy, I approach my thesis from a community-informed, albeit not directly community-engaged, lens. I aimed to answer one key question in my thesis: How does the conceptualization and framing of Adverse Childhood Experiences in the academic literature align with how childhood trauma is addressed in U.S. policy?

To answer my research question, this thesis continues through four chapters. In the following chapter, I explore the academic literature informing my research. I first describe the literature on the social construction of social problems. I then survey existing research on ACEs, including the history of the framework, health impacts and neurobiological mechanisms for those

impacts, critiques of the framework and revisions, and how ACEs might be addressed through policy, including previous policy efforts. Next, I explain my methodology, including how a scoping review was conducted to gather and sample data and how coding was completed using qualitative data analysis software. I also address generalizability, including some methodological limitations of this study.

In the third chapter, I provide details of my analysis, including analyses of the body of literature, the body of policies, and across the two sets of documents. This analysis documents the variability of the ACEs framework in literature and federal policy, and how the framings in each do not necessarily align. Which aspects of the framework are included versus which are not has direct implications for which experiences are validated and given attention and resources over others. In the concluding chapter, I summarize key findings, explore suggestions for future research, and consider implications of this research in a broader context.

Before continuing this thesis, I must acknowledge how I approach the topic and the research I have conducted. Though I have explored ACEs in-depth throughout my undergraduate career and built relationships with ACEs survivors, I am not an ACEs survivor myself. I have not lived the experience and consequence of these traumatic events. As such, I can approach this research from a more distant position, which is both a privilege and perhaps a detriment. While I cannot contribute the expertise of lived experience, I hope I can contribute in a small way to the understanding of childhood trauma and how we might best prevent, mitigate, and treat ACEs and their impact.

Literature Review

This study draws on several bodies of literature that provide context for the examination of the ACEs concept in research and policy. In this chapter, I will explore the social construction of social problems and the ACEs framework, including background on its development and an overview of policy efforts. Through the social problems process, claims made by experts influence how certain problems are viewed by the public, media, and policymakers. Choices to include certain aspects of childhood trauma and ACEs in policy have direct implications for the allocation of resources and the recognition and legitimization of certain experiences (and the experiences of certain groups of people) over others. As the conceptualization of ACEs in the academic literature may impact how childhood abuse and trauma are addressed in policy, it is crucial to understand how the ACEs concept frames childhood trauma.

The Social Construction of Social Problems

Social problems are defined as issues that harm individuals or society as a whole (Best 2017:3-4). They can also be demarcated by the "subjective sense that something is or isn't a problem" (Best 2017:8-9) or a disconnect "between what is and what people think ought to be" (Miller and Holstein 1993:7). On the other hand, many sociologists view social problems as being determined through iterative processes of definition (Blumer 1971). Preeminent social problems scholars Spector and Kitsuse (1987) conceptualize social problems as the outcome of an active process through which recognized and shared categorization systems are created. Social problems, they write, are "… the activities of individuals or groups making assertions of grievances and claims with respect to some putative conditions" (Spector and Kitsuse 1987:75). Through this definition, Spector and Kitsuse solidified the study of social problems through a constructionist perspective.

Social problems are socially constructed, meaning that people, whether academics, the general public, or both, "assign meaning" to conditions in society and deem them problematic (Best 2017:11). As social problems undergo a process of social construction, they "do not arise full-blown, commanding community attention and evoking adequate policies and machinery for their solution" (Fuller and Myers 1941:321). Rather, the collective definitional processes explained by Blumer (1971) "… determines whether social problems will arise, whether they become legitimated, how they are shaped in discussion, how they come to be addressed in official policy, and how they are reconstituted in putting planned action into effect" (Blumer 1971:298). This is especially important to consider in thinking about how frameworks and strategies addressing social problems, like ACEs, are shaped by processes of definition, which then might impact if and how these issues are addressed.

Through the social problems process, activists and experts make claims about social problems, and the rhetoric surrounding those claims establishes that a social problem "is a problem of a particular sort, and that specific action needs to be taken to deal with [the] problem" (Best 2017:25). Because claims are central to the social problems process, Spector and Kitsuse (1987) argue that social problems are claimsmaking activities. Claims establish how a social problem is framed and can vary in type and approach. They "… can describe a problematic condition, justify the need to do something, or specify conclusions or calls for action" (Archer 2015:46). Over time, "the creation, ownership, and processing of problems" change, and the "acts and interactions problem participants pursue … [and] the process of such activities" are negotiated and reconstructed (Schneider 1985:209). This process shapes how issues like ACEs are addressed in policy.

Adverse Childhood Experiences (ACEs)

Understanding how social factors shape health is critical to recognizing the impact of ACEs during childhood and throughout the life course. Dahlgren and Whitehead (1991:11) argue that the main determinants of health exist at four levels ranging from micro to macro: individual traits, such as age and sex/gender; lifestyle factors; community and social networks; and environmental, social, cultural, and economic conditions. The three levels beyond individual traits are influenced by social circumstances. The social determinants of health "include the conditions in which people are born, grow, live, work and age, and the fundamental drivers of these conditions: the distribution of power; money; and resources" (Marmot and Bell 2012:S4). These conditions include but are not limited to: transportation, healthcare quality and access, water and sanitation, food, (un)employment and working conditions, education, and living environment (Bambra, Gibson, Sowden et al. 2010:284). Some scholars consider social determinants of health to also include "nonmedical factors influencing health, including health-related knowledge, attitudes, beliefs, or behaviors …," all of which are impacted by social factors, like socioeconomic opportunities and living and working conditions (Braveman, Egerter and Williams 2011:383,89). Social determinants of health have a profound impact on life experiences and development in childhood, which later impacts adult health and the health and well-being of families.

Adverse Childhood Experiences (ACEs) is a term for a specific framing of multiple social problems that aims to "mov[e] toward understanding the public health implications of childhood maltreatment and related experiences" (Anda, Butchart, Felitti et al. 2010:93). These social problems encompass traumatic experiences during the first seventeen years of life that often also fall under categories like childhood trauma, abuse, neglect, or maltreatment. The

traumas include violence, substance misuse, or other instability in the household (Kalmakis and Chandler 2015:458). Studies have shown compelling "evidence that ACEs are interrelated rather than occurring independently" (Dong, Anda, Felitti et al. 2004). As such, assessing multiple forms of ACEs together allows for evaluating interactions between "childhood exposures and health and social outcomes" (Dong et al. 2004).

In 1998, in conjunction with the CDC and Kaiser Permanente, Felitti and colleagues published the first study focused on ACEs, "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study." They studied seven categories of ACEs: psychological, physical, or sexual abuse; violence against the mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned (Felitti, Anda, Nordenberg et al. 1998:248). The ACE Study questionnaire was constructed from questions used in previously published survey instruments (Felitti et al. 1998:247). Questions regarding ACEs factors were adapted from the Conflicts Tactics Scale (Straus and Gelles 1990), a survey of childhood contact sexual abuse (Wyatt 1985), and the 1988 National Health Interview Survey (Schoenborn 1991). Questions about health problems and behaviors were taken from the Behavioral Risk Factor Surveillance System (BRFSS) (Siegel, Frazier, Mariolis et al. 1992), the Third National Health and Nutrition Examination Survey (Crespo, Keteyian, Heath et al. 1996), and the Diagnostic Interview Schedule of the National Institute of Mental Health (NIMH) (Robins, Helzer, Croughan et al. 1981).

This research advanced the study of the social determinants of health, establishing ACEs as a categorization of experiences with significant impacts on adult health and well-being, thus

worth collectively investigating. Furthermore, while the first BRFSS survey was conducted in 1984, the 1998 study by Felitti and colleagues led to the development of a BRFSS ACEs module adapted from the original ACEs survey. The module has been included in at least one year of the BRFSS survey by 48 states and the District of Columbia since 2009 (Centers for Disease Control and Prevention 2014, National Center for Injury Prevention and Control 2020). Though most states do not conduct ACEs surveillance every year, the BRFSS ACE module has become a prominent tool for the assessment of ACEs nationwide. Many nations globally have also modeled their ACEs surveillance systems on the BRFSS (Centers for Disease Control and Prevention 2014).

Notwithstanding its influence, the CDC-Kaiser study had several demographic limitations. The majority of the study participants were middle class, educated, and white, so the study was not representative of the wide range of people who experience ACEs (Felitti and Anda 2010:78). Studies that have followed aim to be more conscious and representative of the diversity of those who experience ACEs, most notably the Philadelphia Urban ACE Survey (Public Health Management Corporation, Merritt MB, Cronholm P et al. 2013). Additionally, many recent studies consider a broader range of experiences, "… recogni[zing] … an integrated socio-ecological perspective … [and] examin[ing] ACEs from a broader systems perspective, including the relationship-, community-, and structural-level factors which are essential for the development of ACEs prevention strategies" (Struck, Stewart-Tufescu, Asmundson et al. 2021:7). As a result of these more recent studies, the definition of ACEs has expanded to also include community environmental factors like housing problems, a lack of resources, and witnessing violence (e.g., Anda et al. 2010:93, Kalmakis and Chandler 2014:1492).

In May 2009, the CDC's National Center for Chronic Disease Prevention and Health Promotion and the World Health Organization (WHO) partnered to develop a public health surveillance framework to measure the global health burden of ACEs. This initiative included an expansion of ACEs from the seven categories in the original CDC-Kaiser ACEs study to include a more comprehensive set of ACEs occurring in developed and developing nations. Additional questions asked about forced marriage, witnessing criminal activity and violence in the community, early conscription, exposure to bullying, peer-to-peer violence, and sibling physical and emotional violence (Anda et al. 2010:93).

As the recommendations from the WHO-CDC conference suggest, ACEs affect a wide variety of people. However, certain demographics are likelier to experience them or experience more of them. Female-identified and BIPOC individuals are at greater risk for experiencing four or more different types of ACEs, a number of ACEs that have been shown to dramatically increase the risk for mental and physical health problems (Felitti et al. 1998:245, 51). Lower-income individuals and those with lower education levels are also more likely to report ACEs and have negative health consequences (Metzler, Merrick, Klevens et al. 2017:142). Many recent studies have focused specifically on certain populations that may be more vulnerable to ACEs, such as American Indian and Alaska Native (AI/AN) (e.g., Brockie, Dana-Sacco, Wallen et al. 2015, Burnette, Soonhee, Kyoung Hag et al. 2016), juvenile justice system-involved (e.g., Baglivio and Epps 2015, Craig, Trulson, DeLisi et al. 2020, Wolff, Cuevas, Intravia et al. 2018), military and veteran (e.g., Applewhite, Arincorayan and Adams 2016, Reed-Fitzke, Duncan, Wojciak et al. 2022), unhoused (e.g., Aykanian and Mammah 2022), and LGBTQIA+ individuals (e.g., Austin, Herrick and Proescholdbell 2016, Sutton, Edwards, Siller et al. 2021).

Because aspects of expanded ACEs frameworks highlight the experiences of marginalized groups, the inclusion or exclusion of these items may respectively draw attention to or obscure the experiences of the people most at risk of experiencing ACEs and health consequences. ACEs are also likely to persist across generations, as "researchers have previously documented the intergenerational continuity of child abuse and neglect" (Metzler et al. 2017:146). These effects also compound when we consider the neurobiological drivers of the negative health impacts of ACEs.

Health Impacts and Neurobiological Mechanisms

Research shows ACEs affect the likelihood of developing chronic physical health issues, substance abuse or misuse, and mental illness later in life (McEwen and McEwen 2017:448-49). Physical health issues associated with ACEs include cardiovascular disease, chronic lung disease, headaches, autoimmune disorders, sleep disturbances, early death, and obesity (Kalmakis and Chandler 2015:460). ACEs are also linked to a higher likelihood of engaging in risky sexual behaviors (Felitti and Anda 2010:82, Kalmakis and Chandler 2015, Zyromski, Dollarhide, Aras et al. 2018:162), smoking, binge drinking, and abuse of other substances (Kalmakis and Chandler 2015:461). Mental health issues associated with ACEs include depression, substance abuse disorders, and posttraumatic stress disorder (PTSD) (Kalmakis and Chandler 2015:461). Due to substantial physical and mental health impacts, ACEs are also linked to higher healthcare costs, healthcare utilization, and prescription use (Felitti and Anda 2010:83, Kalmakis and Chandler 2015:461).

ACEs contribute to these health issues through the effects of toxic stress, a neuroscientific theory of the biological mechanisms through which social experiences and

circumstances impact the development of the brain and body with subsequent consequences on health and occupational and educational achievement (McEwen and McEwen 2017:448). McEwen and McEwen (2017) write:

> Toxic stress involves the frequent or sustained activation of the biological stress system and is prompted by chronic social conditions and repeated or accumulating adverse events when social support systems are weak and when early-life experiences … have impaired the development of neural circuits involved in self-regulation of emotions and behavior (448).

Toxic stress associated with ACEs modulates the architecture of certain brain regions like the amygdala and hippocampus as they develop, which negatively impacts functions like stress response, memory, learning new skills, attention, and planning. Furthermore, these structural changes to the brain can also "contribute to dysregulation of inflammatory response systems that can lead to a chronic 'wear and tear' effect on multiple organ systems" (Metzler et al. 2017:142).

Emerging research in epidemiology indicates that genotypes and genomic expression (epigenetics) "can modify sensitivity to environmental adversity" (Anda et al. 2010:96). These changes have been associated with partial heritability of experiencing maltreatment in childhood, as these genetic changes may be passed down to children (Pittner, Bakermans-Kranenburg, Alink et al. 2020:294). Toxic stress can affect individuals throughout their lifetime, but "its effects during early development are particularly profound" (McEwen and McEwen 2017:448). McEwen and McEwen (2017) explain, "Rather than weakening sociological explanations, … biological mechanisms relating to toxic stress strengthens these explanations by recognizing biological processes … through which social inequalities become embodied, especially in the

early-childhood years" (447). Additionally, understanding interactions between social and biological mechanisms through the ACEs framework can help inform prevention and treatment strategies. For example, from a health policy perspective, to reduce widespread financial and personnel costs to the healthcare system.

Critiques and Revisions

Following the original ACEs study, the term ACEs provided a new avenue through which the effects of a broad set of traumatic childhood experiences could be addressed. Kalmakis and Chandler (2014) explain: "The concept of adverse childhood experiences represents a larger, more overarching concept than the terms child abuse, neglect and maltreatment. Adverse childhood experiences encompass not only harmful acts to a child or neglect of a child's needs, but also familial and social-environmental influence" (1493). Furthermore, the ACEs framework provides an avenue through which these issues can be addressed through policy and community initiatives, despite few ACEs-focused publications centering prevention and treatment strategies (Struck et al. 2021).

Throughout the literature, though, the ACEs framework consistently includes both child maltreatment (i.e., physical, psychological, and sexual abuse) and household challenges (i.e., substance abuse, mental illness, and incarceration) factors (Afifi, Salmon, Garcés et al. 2020, Hughes and Tucker 2018). As previously noted, the Philadelphia Urban ACE Survey served as a significant turning point in the trajectory of the ACEs framework. Many studies now recognize experiences like racial discrimination (e.g., Balistreri 2015, Cprek, Williamson, McDaniel et al. 2019, Hinojosa, Hinojosa, Bright et al. 2019), community violence (e.g., Davis, Ports, Basile et al. 2019, Ronnenberg, Conrad, Wojciak et al. 2020), bullying (e.g., Cho, Son, Jisuk et al. 2021,

LaBrenz, Baiden, Findley et al. 2021), and foster care (e.g., Boch, Warren and Ford 2019, King 2020, LaBrenz et al. 2021) as ACEs with significant adult health impacts. Moreover, the addition of factors like community violence, peer victimization, and low socioeconomic status to the original ACEs items has been found to strengthen the association of ACEs items with detrimental mental and physical health impacts (e.g., Finkelhor, Shattuck, Turner et al. 2013, Finkelhor, Shattuck, Turner et al. 2015, Karatekin and Hill 2019).

Researchers across fields studying ACEs, however, debate what factors should be included in the ACEs framework. The increasingly all-embracing nature of the ACEs term has been criticized by some scholars and activists who argue that it obscures individual experiences and makes it difficult to address them (e.g., Kelly-Irving and Delpierre 2019, White, Edwards, Gillies et al. 2019). Kelly-Irving and Delpierre (2019) write, "As a probabilistic and population-level tool, [the ACEs framework] is not adapted to diagnose individual-level vulnerabilities, an approach which could ultimately exacerbate inequalities" (445). Despite disagreement on the expansion of the ACEs term, much scholarship continues to add additional factors to the framework.

Commonly included factors not identified by the Philadelphia Urban ACE Survey or the WHO-CDC recommendations are the death of a parent/guardian or immediate family member (e.g., Liming 2018, Mosley-Johnson, Garacci, Wagner et al. 2018) and economic hardship (e.g., Brindle, Pearson and Ginty 2022, Holman, Ports, Buchanan et al. 2016, Kim, Kim, Chartier et al. 2019). Less common additions to the framework in recent studies include but are not limited to deportation (e.g., Freeny, Peskin, Schick et al. 2021, Oh, Jerman, Silvério Marques et al. 2018), personal or familial serious illness/injury (e.g., Boch et al. 2019, Freeny et al. 2021), and

historical loss associated with AI/AN populations (e.g., Brockie et al. 2015). Some scholars argue that race/racial discrimination and poverty/socioeconomic status are confounding variables rather than ACEs themselves (e.g., Slack, Font and Jones 2016). Others recognize that these factors, namely racism, can be "an ACE exposure risk factor, a distinct ACE category, and a determinant of post-ACE mental health outcomes" (Bernard, Calhoun, Banks et al. 2021). It is critical to approach the study, prevention, and treatment of ACEs through an intersectional lens, as ACEs factors, whether distinct categories, risk factors, or both, are complexly interrelated and have serious implications for remedying or exacerbating systemic inequities.

The measurement of ACEs is also point of contention amongst scholars. ACEs screening tools have the potential to "inform and guide medical practice and policy as they relate to delivering trauma-informed care" (Dube 2018). However, retrospective self-reports are not always reliable, so the public health burden of ACEs might be misrepresented due to errors in measurement (Anda et al. 2010:95). Furthermore, the definition of ACEs is inconsistent and unclear (Kalmakis and Chandler 2014:1490, Steptoe, Marteau, Fonagy et al. 2019:416). This "… weakens the claim that adverse childhood experiences are associated with negative physical, psychiatric and developmental health outcomes because evidence is weak when built on inconsistent use of a concept" (Kalmakis and Chandler 2014:1490). Clear evidence has shown that trauma and toxic stress lead to negative health outcomes, but claiming that ACEs are universally associated with these negative health outcomes when ACEs are inconsistently defined is problematic.

Another conceptual issue is that the ACEs identified by studies have "come to stand for all childhood adversities" even though these experiences are by no means representative of all

adverse experiences one can undergo in childhood (McEwen and McEwen 2017:455). The definition has been expanded over time, but as more experiences are added, the clear connections between ACEs as a set of experiences and negative health outcomes become ambiguous. While ACEs are an important concept in the public health policy sphere for emphasizing the long-term health cost of childhood trauma, this connection may be obscured in the debate over the framework. This is not to say that ACEs are not a valuable concept. Rather, it indicates the need for investigation into how ACEs are defined to understand how shifting conceptualizations might affect how these experiences are addressed; this thesis begins to delve into this question.

Policy

Understanding how policymakers may or may not pay attention to and craft policies based on expert claimsmaking surrounding ACEs requires an examination of the factors and competing interests influencing policymakers. Laws enacted by Congress shape the lives "of all Americans" and as such, Congress "is intended to serve as the voice of the people" (U.S. Capitol Visitor Center N.d.). While research shows that public opinion and advocacy (i.e., lobbying) often have very little influence on members of congress, information, such as Congressional hearings, especially about the potential impact of legislation, have more influence on the creation of policy (Burstein 2014). Kingdon (1984) explores how three different information streams impact which policies and issues reach Congressional legislative agendas: the problem recognition stream, the policy proposal stream, and the political stream. The problem recognition stream is the claiming and framing of social problems previously discussed in this chapter. The policy proposal stream includes specific recommendations for crafting solutions to these problems. Lastly, the political stream captures the ideologies of policymakers and the interests

they represent. When these streams converge, Best (2017) notes, policy proposals are more likely to gain traction (207).

Policymaking arenas exist at the local, state, and federal levels, as well as in the private sector (Best 2017:214-15). Congress, as the United States federal legislative body, is a valuable case to observe the social problems process at a macro level – a large policymaking body with authority over the American populace and the abundant resources to implement those policies, at least in theory. As Congress is responsible for "funding government functions and programs," the issues that reach Congress through these streams of information, and the ways these issues are framed, significantly influence if and how federal policy addresses social problems (U.S. Capitol Visitor Center N.d.).

In setting the stage for the analysis of ACEs and childhood trauma and abuse-focused federal policies, I will briefly explore the overarching rhetoric surrounding policies centered on children and childhood. In the mid-to-late 20th Century, claimsmakers argued that policymakers had a duty to help children, who were seen as vulnerable and helpless, and to secure equal opportunity for all citizens (Gormley and Brookings 2012). More recently, rather than focusing on moral obligation, "policy debates tend to feature economic arguments … emphasiz[ing] that the benefits of the proposed policy will outweigh its costs, that the costs of prevention are less than the costs of fixing what could have been prevented, or that investing in children in wise" (Best 2017:217). This rhetorical shift has been seen both in statements by claimsmakers, like testimony before Congress, and in statements by policymakers about child-centered policy. Increased availability of social scientific data, such as ACEs research, may account for at least part of this change (Best 2017:217).

Over the approximately 25 years since the CDC-Kaiser ACE Study, expert and activist claimsmakers have established ACES as a social problem and shifted ACEs from a focus on individual households to also encompass a wider community-level issue (McEwen and McEwen 2017:455). These claimsmakers have also established the high costs in adult health outcomes associated with ACEs, offering justification for greater investment in ACEs prevention (e.g., Felitti and Anda 2010, Loxton, Townsend, Dolja-Gore et al. 2019). This has garnered financial and other support from the community and the government focused on mental health resources, combatting violence, better housing policies, and lessening food insecurity.

The framing of ACEs as a community issue seems to have allowed activists to gain even wider-spread resources and attention. In this way, changing ACEs framing has led to greater resource mobilization to help combat the underlying social problems (Bethell, Solloway, Guinosso et al. 2017b). That said, policy efforts may not necessarily embrace the ACEs framework, especially considering the substantial scholarly debate on included categories and measurement. Best writes, "Laws define what is and is not legitimate within a particular jurisdiction" (Best 2017:199). Which aspects of the framework appear in policy and which do not has significant implications for what is validated as trauma, consequently garnering resources and attention for particular experiences over others.

Bills introduced at the federal level addressing childhood trauma have largely focused on funding to increase trauma-informed professionals in communities, especially in schools. One bill that received a lot of media attention was the Resilience, Investment, Support, and Expansion (RISE) from Trauma Act, though it did not make it past being introduced in Congress. The Act prioritized resilience and early intervention, including mentoring programs (RISE from Trauma

Act 2021e). However, not only did the RISE from Trauma Act not use the ACEs framework, it did not define what constitutes childhood trauma. When considering whether and how the ACEs framework makes its way into policy, it is necessary to consider that although the framework has become well-established in the academic literature, this may not translate to policy efforts at the federal level.

A 2019 study by Purtle and colleagues looks at the recognition of the ACEs framework and opinions on it from state legislators from across the country. They note that "State legislators are an important audience to target with evidence about ACEs because they make policy decisions that can prevent ACE exposure and enhance resilience" (Purtle, Lê-Scherban, Wang et al. 2019:1). This survey of 475 state legislators found that recognition of the ACEs framing was quite low, but that the legislators could answer questions on specific experiences that fall under ACEs. Purtle et. al. explain, "The proportion of legislators who identified each adverse childhood experience (ACE) as a major risk factor for adult behavioral health conditions was significantly higher among Democrats than among Republicans, among liberals than among conservatives, and among women than among men" (1). To date, no similar study has been conducted at the federal level. More progress needs to be made to "broaden public and professional understanding (i.e., the narrative) of the links between early adversity and poverty" to create effective policies addressing the root causes of ACEs and their long-term effects (Metzler et al. 2017:141).

Since the late 1990s, with the publishing of the first CDC-Kaiser ACE study, ACEs terminology has increasingly been used to collectively identify a set of experiences of childhood trauma and abuse. The experiences under the concept of ACEs were typically thought of as

problems within individual households. With the emergence of the ACEs concept, "child maltreatment and related experiences [were unprecedentedly viewed] as a set of exposures that have broad implications for human development and prevention of public health problems" (Anda et al. 2010:93). While there is a broader understanding amongst the general public today of trauma as having long-lasting and far-reaching impacts, ACEs is still a relatively new concept that has yet to fully permeate the non-academic or medical discourse surrounding childhood trauma.

Despite the novelty of the ACEs concept, studies, conferences, and other initiatives have put forth policy and community-based recommendations to combat the negative effects of ACEs. Community organizations, school systems, and state and local governments throughout the US have embraced trauma-informed approaches to provide support for ACEs survivors. For instance, California and Connecticut have banned the suspension or expulsion of children from school for behavioral issues connected to ACEs (Metzler et al. 2017:146). A 2013-2017 agenda-setting initiative by Academic Pediatrics determined priorities for academic, research, and community efforts surrounding ACEs, including communicating the science of ACEs to health services for children, fostering cross-sector collaboration, and bringing together communities to heal trauma and prevent ACEs (Bethell et al. 2017b:S36). In the face of efforts like these, significant debate persists on the ACEs concept and how to address and prevent childhood trauma appropriately and effectively.

Recently, more scholars have investigated the defining and conceptualizing of the ACEs framework in the academic literature (e.g., Afifi et al. 2020, Kalmakis and Chandler 2014, Zyromski, Baker, Betters-Bubon et al. 2020). However, very few scholars have researched ACEs

in policy, and none have examined conceptualizations across contexts. This thesis analyzes the conceptualization and framing of ACEs in the academic literature and U.S. federal policy addressing childhood trauma to evaluate if and how the framework established in the literature makes its way into policy. Decisions about which ACEs items to include in the framework influence which experiences and whose experiences are seen as legitimate and consequently allocated resources for prevention and treatment. For this reason, the conceptualization of ACEs has the potential to either mitigate or compound health and other inequities.

Methods

This thesis asks the question: How does the conceptualization and framing of Adverse Childhood Experiences in the academic literature align with how childhood trauma is addressed in U.S. policy? I utilized content analysis to answer my research question and focused on 2009 to the present to align with the WHO-CDC conference that encouraged expanding the ACEs framework to include community factors (Anda et al. 2010). This time frame also aligns with the implementation of the first BRFSS ACEs module (National Center for Injury Prevention and Control 2020). A scoping review of the peer-reviewed scholarly literature on ACEs was conducted following the process of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines extension for scoping reviews (Tricco, Lillie, Zarin et al. 2018). A census of federal policy documents concerning ACEs and childhood trauma was gathered, as well. While the PRISMA guidelines are specific to reviews of journal articles, I followed the PRISMA scoping review guidelines to the extent they were applicable to maintain congruity between the analysis of the two bodies of documents.

These methods are appropriate for answering the research question because they allow for the extraction of conceptualizations of ACEs and childhood trauma from a population of written documents in a structured manner and facilitate the succinct presentation of common themes. Chambliss and Schutt (2016) explain that content analysis is a "research method for systematically analyzing and making inferences from text" (265). Since the research question aims to answer how a population of texts presents certain concepts, content analysis is well-suited. Scoping reviews are "a type of knowledge synthesis, [which] follow a systematic approach to map evidence on a topic and identify main concepts, theories, sources, and knowledge gaps" (Tricco et al. 2018). Though scoping reviews are a newer process for

synthesizing evidence, they are valuable when the review is intended to clarify concepts in a body of literature (Munn, Peters, Stern et al. 2018). As Peters et al. explain, "… scoping reviews are commonly used for 'reconnaissance' – to clarify working definitions and conceptual boundaries of a topic or field. [They] are therefore particularly useful when a body of literature has not yet been comprehensively reviewed, or exhibits a complex or heterogeneous nature not amenable to a more precise systematic review of the evidence" (Peters, Godfrey, Khalil et al. 2015:141).

As the conceptualization of the ACEs framework across the literature is minimally studied, and it has not been analyzed in comparison to or in the context of its use in federal policy, the scoping review methodology is highly appropriate for delving into these two sets of documents, extracting definitions, and identifying overarching themes and patterns. The PRISMA guidelines aim to increase transparency in scoping reviews of the literature and provide a systematic, standardized method for gathering a set of articles from which to extract measures for content analysis, and I have used them as a guide for the research process and reporting results. A formal protocol for review for coding was developed and followed. All studies that met the inclusion criteria detailed below were included in the sample. Because this project analyzed documents available to the public, there are no ethical concerns to consider.

Data Collection and Sampling

Literature

I conducted a systematic search of existing literature in November 2022 using the Preferred Reporting Items for Systematic review and Meta-Analysis (PRISMA) guidelines extension for scoping reviews to identify publications conceptualizing ACEs in the United

States. Peer-reviewed literature was gathered by searching the following bibliographical databases: SocINDEX, PubMed, and PsycInfo. SocINDEX is the "authoritative bibliographic database for sociology research" and provides indexed records from 900 journals in sociology and related disciplines (EBSCO 2023). PubMed, a bibliographic database from the National Institutes of Health (NIH), includes citations from approximately 30,000 journals in biomedicine and health (National Center for Biotechnology Information N.d., NIH National Library of Medicine 2021). The American Psychological Association's PsycInfo database includes records from 2,400 journals in behavioral and social sciences, with a focus on psychology (American Psychological Association 2023). These three databases were selected to glean a wide range of records across relevant disciplines. Records in each database were searched using the keywords "adverse childhood experiences" in the abstract and "United States" in all fields. All searches were restricted to records published between 2009 and 2022, written in English, peer-reviewed, and with full text available. The inclusion and exclusion criteria are as follows:

Inclusion Criteria	**Exclusion Criteria**
- Publication date: 2009-2022 (14 years) - Study period (data cover time period that includes, even partially): 2009-2022 - Study type: Original research, systematic review, or meta-analysis - Country: includes at least some data from the United States - ACEs as a defined variable in the analyses; authors explain how ACEs were measured/list all included items (i.e., not just broad categories, examples of questions, etc.)	- Commentary, letter to the editor, report, other reviews (i.e., literature or scoping), or other non-empirical research publication - Primarily a feasibility study, validity study, program evaluation, or treatment evaluation - ACEs mentioned in the intro/discussion/etc. but is not part of the analyses - Simulations or vignettes used as main method

Article type (original research, systematic review, meta-analysis, etc.) was defined by the database and/or the authors. Articles using simulations or vignettes as the main method were excluded because they did not assess the ACEs of individuals; rather these types of studies tested how people would react if they had experienced a certain set of ACEs. To maintain a sample of articles capturing ACEs experienced by study participants, articles falling into this category were not included in the final sample. When a questionnaire used to assess ACEs was mentioned but not all items were listed, the article was still included in the final sample if all ACEs items were verifiable using the cited questionnaire. However, some articles cited a questionnaire that was mismatched with the number of items the authors said were included. For example, if the original ACEs study was cited, but the article mentioned 10 items instead of seven were assessed or that neglect was included, then I was unable to verify the exact survey mechanism used, and therefore could not verify all ACEs items. Articles falling into this category were excluded to ensure coding of all ACEs items was exhaustive of all ACEs items included in a study; 20 articles were excluded at this stage.

All full texts (439) were reviewed to remove duplicates and settle on articles meeting the inclusion criteria. Five articles were excluded due to access issues. 122 articles were included in the final sample. Reference lists for each article included were not snowballed to identify additional references, as the data set was broad and comprehensive without identifying every possible article meeting the criteria. The number of articles included at each stage of review are listed below:

Number of Articles at Stages of Review
1. 439 results a. 254 SocINDEX b. 84 PubMed c. 101 PsycInfo 2. 409 after duplicates removed 3. 262 after title & abstract screening 4. 142 after full-text screening 5. 122 included – 20 removed during data extraction phase

Once the relevant documents were identified, I reviewed each document for mentions of ACEs. All coding was completed using the qualitative data analysis program NVivo. Results of cross-tabulations and coding matrices were exported to Microsoft Excel for further analysis and data visualization. To compare the elements included in definitions of ACEs, I analyzed if each article's conceptualization of the ACEs variable included a set of factors drawn from the original ACEs study (Felitti et al. 1998), the expanded framework from the second wave of the ACEs study (Felitti and Anda 2010), recommendations from the WHO-CDC conference (Anda et al. 2010), the Philadelphia Urban ACE Survey (Public Health Management Corporation et al. 2013), and other categories relevant to the study aims. I am considering 15 elements and assessed if each article included or did not include the item in its definition or conceptualization of ACEs. If an item was mentioned more than once, i.e., if ACEs was defined in the text of an article and a chart, the item was only coded for once. The items are as follows:

ACEs Factor	Instruments in Which Factor Is Found				
	Original ACEs Study	Second Wave ACEs Study	WHO-CDC Recommendations	Philadelphia Urban ACE Survey	No Specific Instrument but Relevant in Literature
1. psychological, emotional, or verbal abuse	✓	✓		✓	
2. physical abuse	✓	✓		✓	
3. sexual abuse	✓	✓		✓	
4. living with household members who abuse substances	✓	✓		✓	
5. living with household members who were mentally ill or suicidal	✓	✓		✓	
6. witnessing domestic violence, IPV, and/or violence against the mother	✓	✓		✓	
7. living with family members who were ever incarcerated or involved in criminal activity	✓	✓		✓	
8. parental separation or divorce		✓			
9. neglect (physical or emotional)		✓		✓	
10. witnessing criminal and/or collective violence in the community, including peer-to-peer violence			✓	✓	
11. exposure to bullying or peer victimization			✓	✓	
12. death of a parent/guardian or immediate family member (i.e., a sibling)					✓
13. economic hardship/financial insecurity					✓
14. racial/ethnic discrimination				✓	
15. out-of-home placement (i.e., foster care, adoption, revoked custody)				✓	

Policy

I conducted a review of U.S. policy related to ACEs and childhood trauma to identify how the ACEs framework is conceptualized in federal policy. To locate relevant bills and U.S. codes, legislative records on Congress.gov were searched using the terms “adverse childhood experiences,” “child maltreatment,” “childhood trauma,” “childhood adversity,” “child abuse,” and “child neglect” to search titles and summaries, allowing for word variants. The use of other related terms besides “adverse childhood experiences” allows for the analysis of trends in the use of the ACEs framework in policy. While originally only the term “adverse childhood

experiences" was used, the search only yielded a few results. For that reason, I expanded the search terms to include ACEs and related terms, so that policies related to adverse childhood experiences that did not utilize the term would be included in the search results. This expanded search allowed for the identification and analysis of if/when the ACEs framework is used to address childhood trauma in policy.

"ACEs," rather than "Adverse Childhood Experiences," yielded unrelated results, so the full name rather than the acronym was used in the search. The search was limited to bills that can become law. The search yielded 294 results that covered the years 2009-2022, 36 of which became law. Results were reviewed to eliminate duplicates and identify policies meeting the inclusion criteria, which were almost identical to the criteria for articles but allow for the use of other related terms besides ACEs. The inclusion criteria are as follows:

Inclusion Criteria
- Date introduced: 2009-2022 (14 years) - ACEs or related term (i.e., child abuse, child maltreatment, etc.) as a focus of the policy (not just briefly mentioned) - Focused on more than one type of ACEs/trauma (i.e., not just substance use or sexual abuse) - ACEs or related term defined in the body of the policy; included items are listed

When there were multiple versions of a bill, only the most recent version was included. If the same bill was introduced in both chambers, only the Senate version of the bill was included. If the most recent version of a bill was introduced in the House, then the most recent version (i.e., the version introduced in the House), rather than the Senate version, was included. As with articles, if specific definitions of ACEs or related terms (child abuse and neglect, for example)

were not given, but the definition was traceable (for instance, that the act was an amendment to the Child Abuse Prevention and Treatment Act (CAPTA) and the term was defined in CAPTA), then it was included in the final sample. Where there were no definitions available or they were unable to be verified, the policy was excluded from the final sample.

20 policies were included in the final sample, three of which became law. The number of policies at each stage of review are listed below:

Number of Policies at Stages of Review
1. 294 results 2. 148 after duplicates removed 3. 54 after title & summary screening 4. 24 after full-text screening 5. 20 included – four removed during data extraction phase

Each policy document was coded using NVivo to identify the elements included in the definitions of ACEs or related terms. If an item was mentioned more than once, i.e., if ACEs or a related concept was defined in multiple places in the text, the item was only coded for once. As with the body of articles, results of cross-tabulations and coding matrices were exported to Microsoft Excel for further analysis and data visualization. I have used the same list of elements for the content analysis of policies and academic literature to facilitate comparisons between the two bodies of documents. For policies, I also considered the year/congressional session introduced, sponsor party affiliation, status, and if the ACEs term was used. For articles I considered the year published, field of the primary researcher, database, and ACEs screening tool.

Generalizability

It is critical to acknowledge that all decisions made about inclusion and exclusion criteria have implications for the samples used, and as such, for the generalizability of the results of this thesis. The original body of academic literature was a broad sample from three different databases. The databases were selected purposefully to cover a range of disciplines studying the ACEs framework. Because each database also covers related disciplines, the resulting body of articles spanned diverse approaches. The body of policies was a census to the extent that resulting policies included the search terms in the title or summary.

Articles left out of the final sample due to the inability to verify the items used in questionnaires assessing ACEs could have affected the results. That said, this was a deliberate choice to ensure each item coded for was definite. I limited the search for articles and policies to 2009-2022 to focus on documents following the WHO-CDC conference in 2009 to yield a more manageable sample size for the time constraints of the thesis. Articles were excluded if the data collection occurred outside of the period from 2009-2022 to ensure results were current for the years sampled. This led to no articles fitting the inclusion/exclusion criteria for the first two years (2009 and 2010) of the 14-year period. While this has no practical implications for the results, as they can only be generalized to the sample, it is worth noting the consequence of this decision.

Articles that were primarily feasibility studies, validity studies, program evaluations, or treatment evaluations were excluded because they largely did not assess ACEs. This choice excluded articles focusing on providers' knowledge of ACEs, arguments for new survey mechanisms, and ACEs treatment possibilities, for example, if ACEs were not defined or measured. Excluding these article types might have led to an emphasis on traditional academic

research over practice-based research and clinical trials. That said, this component of the criteria may have been redundant, as articles were only excluded if they did not define or measure ACEs.

Excluding policies from the sample that only addressed a single item in the ACEs framework (i.e., domestic violence or substance abuse) or that did not list items included in/did not define ACEs or a related term might have affected results, as well. Though this decision regarding inclusion/exclusion criteria reduced the size of the policy sample, this project intended only to capture policies using a multi-item framework to address adverse childhood experiences or childhood trauma. As alluded to in the previous chapter, there are many sources and sites of policy, including all levels of government and private organizations and institutions. This project focuses on one narrow kind of policy but many different types of research. Federal policy is decidedly influential, but it is important to acknowledge that this research only captures one type of policy. The results can only be generalized to the population of articles and policies meeting the criteria, but a careful review of all documents through multiple sampling stages using the PRISMA guidelines ensures systematic, deliberate consideration of each of the articles and policies. While this method does not allow for cross-population generalizability, the intention is only to draw conclusions about the sample.

Additionally, judgments were made about inclusion and exclusion for articles and policies. It is possible that a reproduction of this study would have a different sample and come to different conclusions. Furthermore, there is a chance that the original searches may have missed some results fitting the inclusion/exclusion criteria as database search results are not flawless. Reference sections were not reviewed for additional articles meeting the criteria that did not come up in the initial searches. Though this is not necessary for scoping reviews according to the PRISMA guidelines, it is important to consider that it is likely the sample did

not capture every existing article meeting the criteria. While I am confident in the results of the policy search, especially because the only site searched has complete legislative records, there is still potential for researcher error. Regarding judgments made, only one researcher decided whether to include an article or policy in the final sample. As such, no intercoder reliability could be established, and while each decision was systematic and carefully made, they were ultimately the result of only one person's consideration. This was also true of coding for each of the ACEs items in the coding scheme.

In addition, decisions were made about classifying documents beyond the ACEs factors, especially for the set of articles. With the policies, the party of the sponsor and legislative status was readily available information. Categorizing articles, on the other hand, was more subjective. For instance, in determining the field of the primary researcher was subjective, I made the best judgment I could based on available information, like the name of their university department and their degree. Also, categorizing ACEs survey mechanisms was more complex than originally anticipated. As I will show in my analysis, I differentiated between designated ACEs modules and questionnaires or ACEs variables constructed by the authors.

Decisions were also made about which ACEs to code for beyond the first nine included in the original and the second wave of the CDC-Kaiser ACE study. From the WHO-CDC recommendations, I chose to include the items most relevant to the U.S. context. Early conscription, for instance, would not be relevant to a body of documents focusing exclusively on the U.S. Community violence and bullying/peer victimization, the two items included from the conference recommendations, were also included in the Philadelphia Urban ACE Survey. Two more items from the Philadelphia study that were not found in the other instruments were included in the coding scheme: racial/ethnic discrimination and out-of-home placement. Despite

not appearing in the other instruments included in this study, they are highly relevant in the literature.

Parental death and economic hardship do not appear in any of the instruments I consider, but they are relevant in the literature, as well. The choice to include these two factors and not any of the other broader ACEs factors mentioned was due to the frequency of appearance in the literature and the sample. I will briefly reiterate that some of these community-level or expanded ACEs items are controversial in the literature, specifically racial discrimination and economic hardship. I chose to include in the coding scheme them because they appeared frequently in the sample and because seeing if and how they appeared might help shed light on the debate in the literature. Finally, in the coding scheme, I chose to collapse some ACEs items that were referred to differently across documents but used similarly. For example, some articles refer to emotional abuse, while others refer to psychological abuse, but these items are defined similarly. For the sake of straightforward coding and analysis, I combined items into a single ACEs factor if they were equivalently utilized and defined.

Analysis

In this chapter, I present the results of my analyses of whether and how the various ACEs appear in both research and policy. I begin by documenting that the number of ACEs categories included in each article and each year varies widely, but that generally more categories are included over the years. Then, I show that the original ACEs factors appear much more frequently than newly added factors, but that all ACEs factors are relatively evenly spread across academic disciplines. The primary author's discipline does not correlate much with the use of different ACEs categories, and most fields include community-level factors, albeit less than the original ACEs factors. Lastly, screening tools differ extensively, but for the most are spread across different disciplines.

For policies, I first document that the number of ACEs categories included in policies also varies widely. On average, fewer categories are included than in articles. The number of categories increases over the years, but not steadily. Not all the additional ACEs factors beyond the original study categories appear in policies, and those that are included only appear beginning very recently. Four categories – psychological, physical, and sexual abuse, and neglect – are represented the most in policies by far compared to others, and policies that have gone farther in the legislative process only include these categories. Most policies do not include the ACEs term. Some policies using the ACEs term did progress in the legislative process, but they define childhood abuse/trauma separately from the use of the ACEs term. The political party of the sponsor is correlated with the ACEs categories included and the use of the ACEs term, but not with legislative status. In-depth analyses for the two bodies of documents can be found in the rest of the chapter beginning below.

Literature

The first and most fundamental question for my analysis is how often ACEs categories are used in the research literature. Table 1 shows measures of central tendency and variation for the number of ACEs categories used in each article.

Table 1

Descriptive Statistics: Number of ACEs Categories in Each Article	
Mean	8.31
Median	8
Mode	9
Minimum	2
Maximum	14
Range	12
Standard Deviation	1.82

N = 122

As Table 1 indicates, the average number of ACEs categories included in each article is just over eight. Over half of the maximum possible ACEs categories studied appeared in each article on average. There were seven ACEs categories in the original CDC-Kaiser study, which jumped to nine categories with the inclusion of parental separation/divorce and neglect (physical and emotional) in the second wave (Felitti and Anda 2010). The average number of categories included in each article falling between these two numbers indicates that likely many articles included only categories from the first or second wave of the foundational ACEs study. That said, the large range demonstrates that articles varied greatly in the number of categories

included, with some only including a couple of categories, and others including nearly all the categories I analyzed. Furthermore, the relatively large standard deviation shows that the number of categories mentioned in each article varied widely from the mean.

To expand on the question of how often ACEs categories appear in the literature, Figure 1, found below, shows the total number of ACEs categories in articles by each year published. Each category appearing in a year was counted once. This chart shows the appearance of each category across entire years, illustrating trends in the number of categories used in the literature across time.

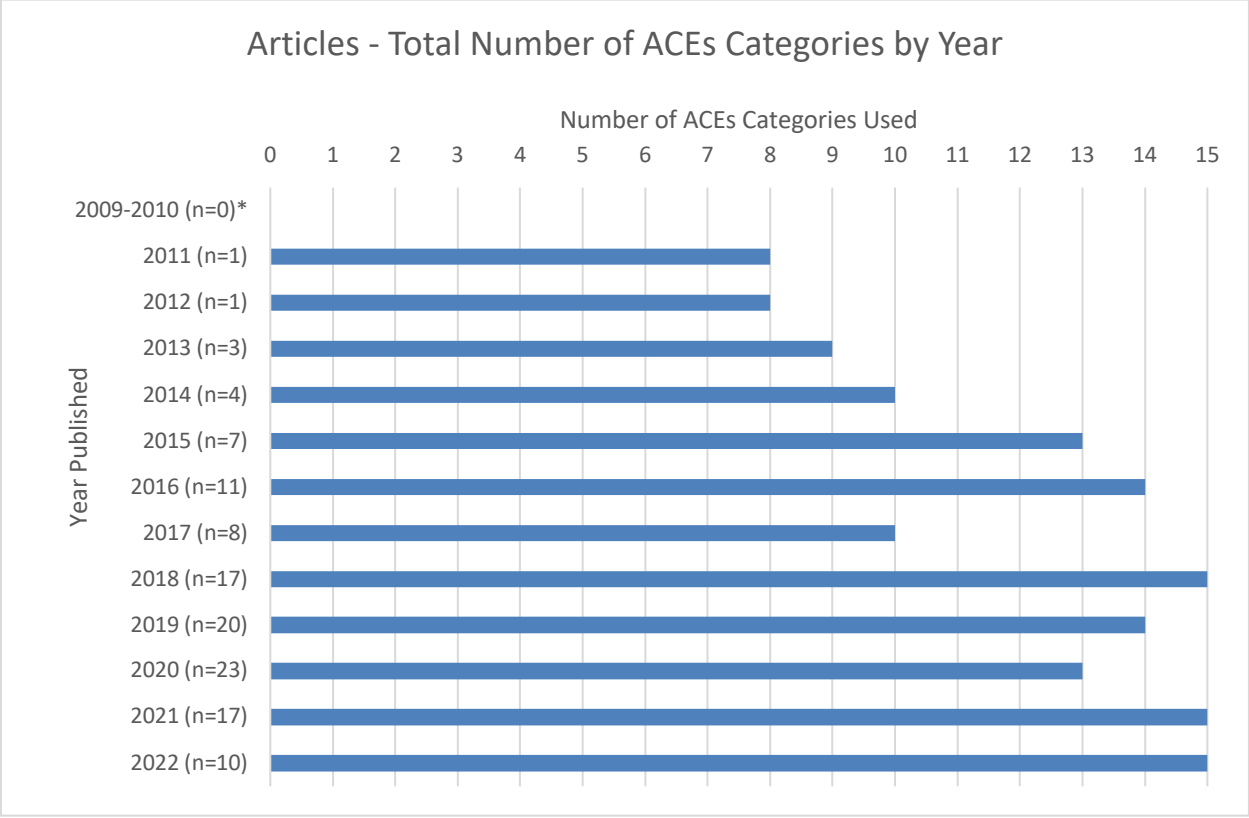

Figure 1 (*2009 and 2010 were included in the sample, but due to constraints on the time period of data collection in the inclusion/exclusion criteria, no articles published in these years met the criteria)

Though there are some outliers, such as in 2017 with only ten total categories appearing in articles published that year, the number of categories generally increases each year. In each year

2015-2022, apart from 2017, 13 or more categories made an appearance in articles published. Though the WHO-CDC recommendations for including community factors in the ACEs framework were published in 2009, the inclusion of community-level ACEs and items focused on marginalized or higher-risk groups seems to have gained traction only in the last decade.

An article in the sample by Brockie et al. (2015), "The Relationship of Adverse Childhood Experiences to PTSD, Depression, Poly-Drug Use and Suicide Attempt in Reservation-Based Native American Adolescents and Young Adults," highlights adverse experiences of American Indigenous communities, like historical loss. Other examples include "Adverse Childhood Experiences, Depression, Resilience, & Spirituality in African-American Adolescents" by Freeny et al. (2021), "The prevalence of mental illness and substance abuse among rural Latino adults with multiple adverse childhood experiences in California" by Barrera, Sharma and Aratani (2018), "Rural-urban differences in exposure to adverse childhood experiences among South Carolina adults" by Radcliff, Crouch and Strompolis (2018), and "Adverse Childhood Experiences and Young Adult Health Outcomes Among Youth Aging Out of Foster Care" by Rebbe, Nurius, Courtney et al. (2018). The data align with the emphasis on community-level factors and marginalized groups in the 2013 Philadelphia Urban ACE Survey and the 2013-2017 Academic Pediatrics agenda-setting initiative, as the number of categories included each year just starts to increase in 2014 from the original seven to nine ACEs items and increases dramatically two years later. The increase in categories is not true of every article published in a particular year, but overall, more categories are included in the ACEs framework as the study has advanced.

To move beyond the number of categories into the specific categories of ACEs that appear in articles each year, Figure 2 shows the unique occurrences of each category studied for

5 time periods. Individual years were condensed for the ease of viewings trends in the data without overwhelming visuals.

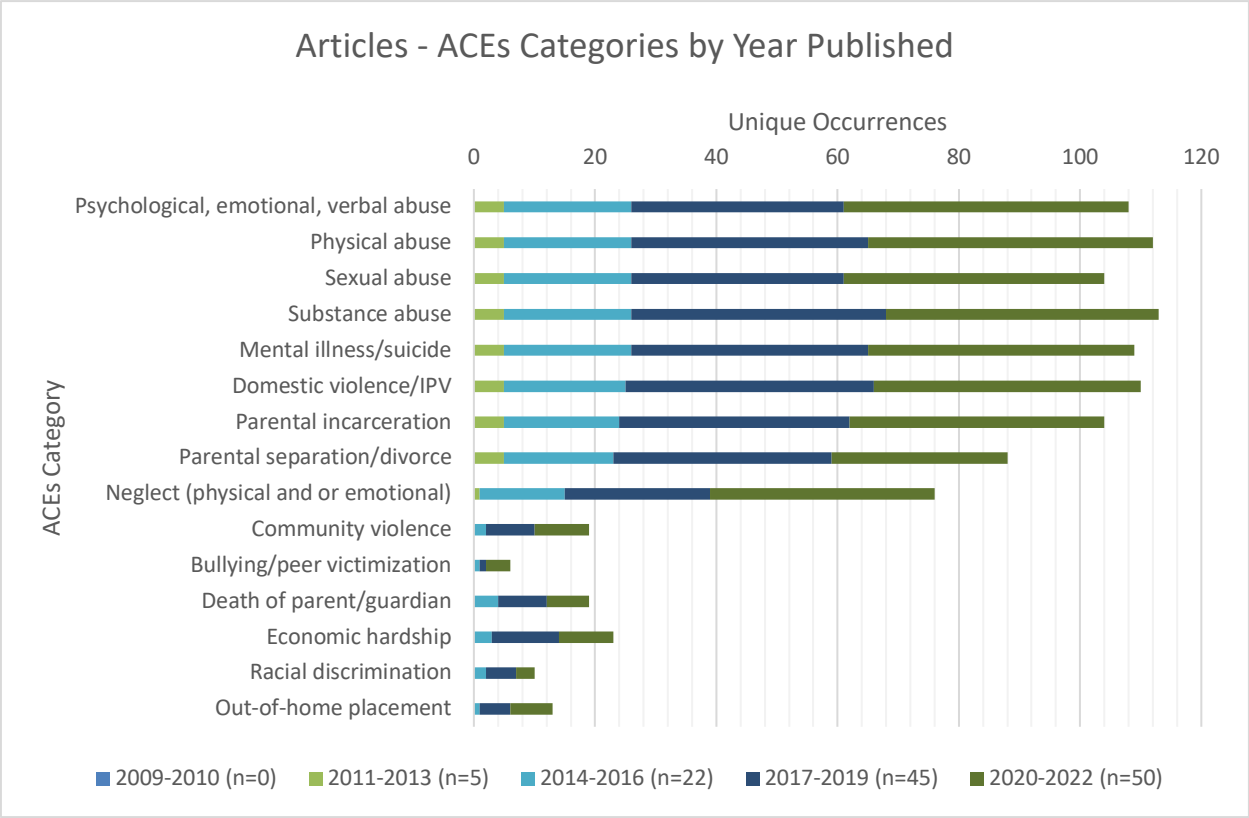

Figure 2

The first seven categories (psychological, physical, and sexual abuse, substance abuse, mental illness, domestic violence, and incarceration) were found the most frequently in articles. These categories were included in the original CDC-Kaiser ACE study. The two next most frequent categories were parental separation/divorce and neglect, which were added to the ACEs definition in the second wave of the original ACEs study.

The remaining categories appeared much less frequently, with community violence, parental loss, and economic hardship appearing more frequently than bullying, racial discrimination, and out-of-home placement. Each of these categories first appeared in 2014-

2016, compared to the other more frequent categories first appearing in 2011.[1] Though these newer ACEs categories were introduced relatively recently, they do appear in each of the three time periods from 2014-2022. For community violence, bullying, and out-of-home placement, representation was the highest from 2020-2022, indicating these categories have gained more traction only very recently.

It is also valuable to consider how the database an article was found in, the discipline of the primary researcher, and the ACEs assessment mechanism used by the authors interact with each other and with the ACEs categories utilized in each article. Figure 3 shows the database in which each article was found in the preliminary search by the year the article was published.

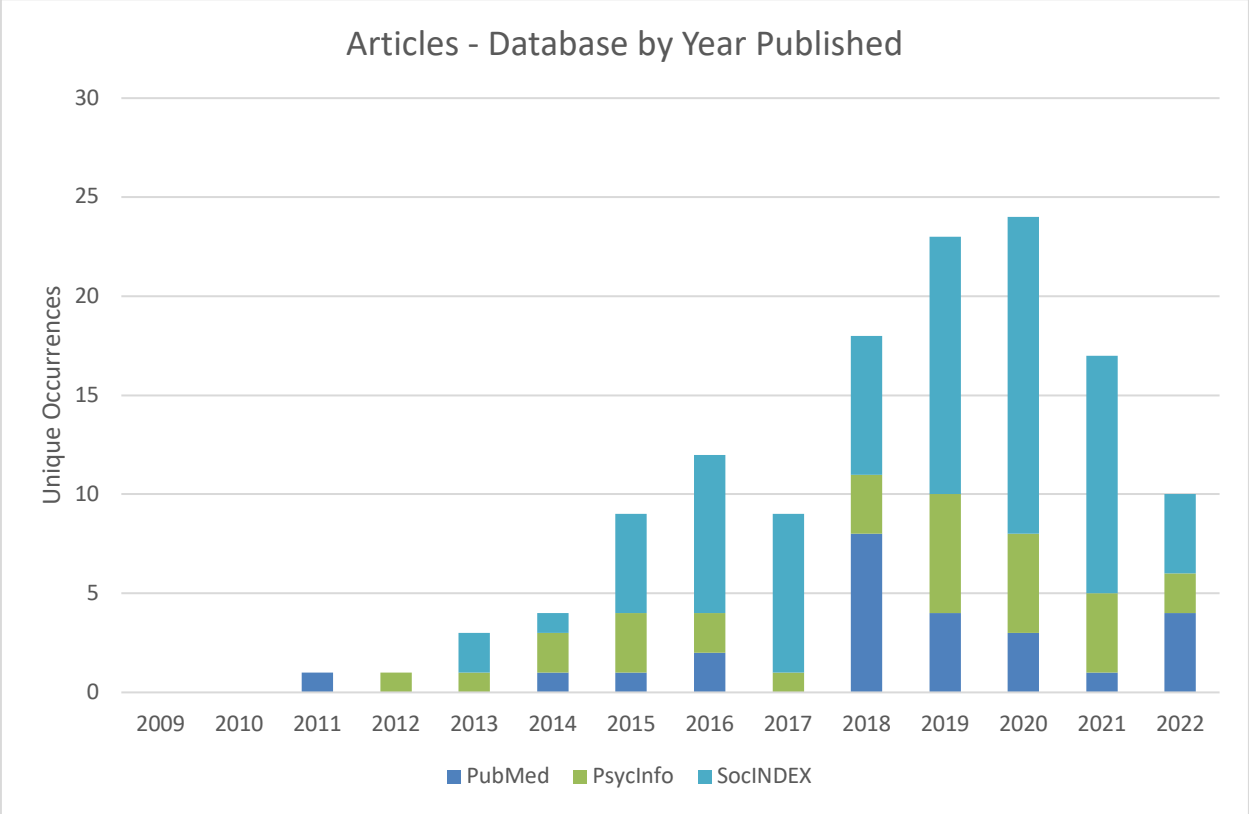

Figure 3

[1] Note that even though the years 2009-2010 were included in original search, no articles published in these years fit the inclusion/exclusion criteria.

Eight articles in the final sample were found in multiple databases. This chart accounts for that fact by including an article in every database in which it was found, i.e., if an article was found in PubMed and PsycInfo, it was counted for both. As such, the number of articles represented by this chart is slightly higher than the number of articles in the final sample in order to accurately represent the small number of articles found across multiple databases.

Significantly more articles were found in SocINDEX than in PubMed or PsycInfo, but the proportional representation of articles found in each database varies widely from year to year. For instance, SocINDEX articles do not appear in the sample until 2013, and articles found in PubMed were absent from the sample in 2012, 2013, and 2017. On the other hand, PubMed was considerably represented in 2018, but less so in the following years until 2022. It appears as if the study of ACEs in sociology and related disciplines has generally increased over the years, while medicine and psychology peaked in 2018/2019. I speculate the beginning of the COVID-19 pandemic in 2020 and intertwined spread of the Black Lives Matter movement may have prompted the wider-spread use of sociological lenses in studying ACEs proportional to other approaches. Of course, this is a question for further research, but it is worth keeping in mind throughout the analysis, especially in considering if and how community-level ACEs factors are included in academic research and federal policy.

Figure 4 shows the field of the primary researcher of each article in the sample, delving further into the question of how academic discipline may impact how ACEs are addressed. Additionally, academic discipline does not directly map onto the database in which articles are published, so this analysis will help to better understand the disciplines represented by each database in the previous figure. As much ACEs research is highly interdisciplinary, scholars across different fields often come together to produce research. These data are only

representative of the discipline of the first author listed for each article but show the spread of disciplines studying ACEs overall.

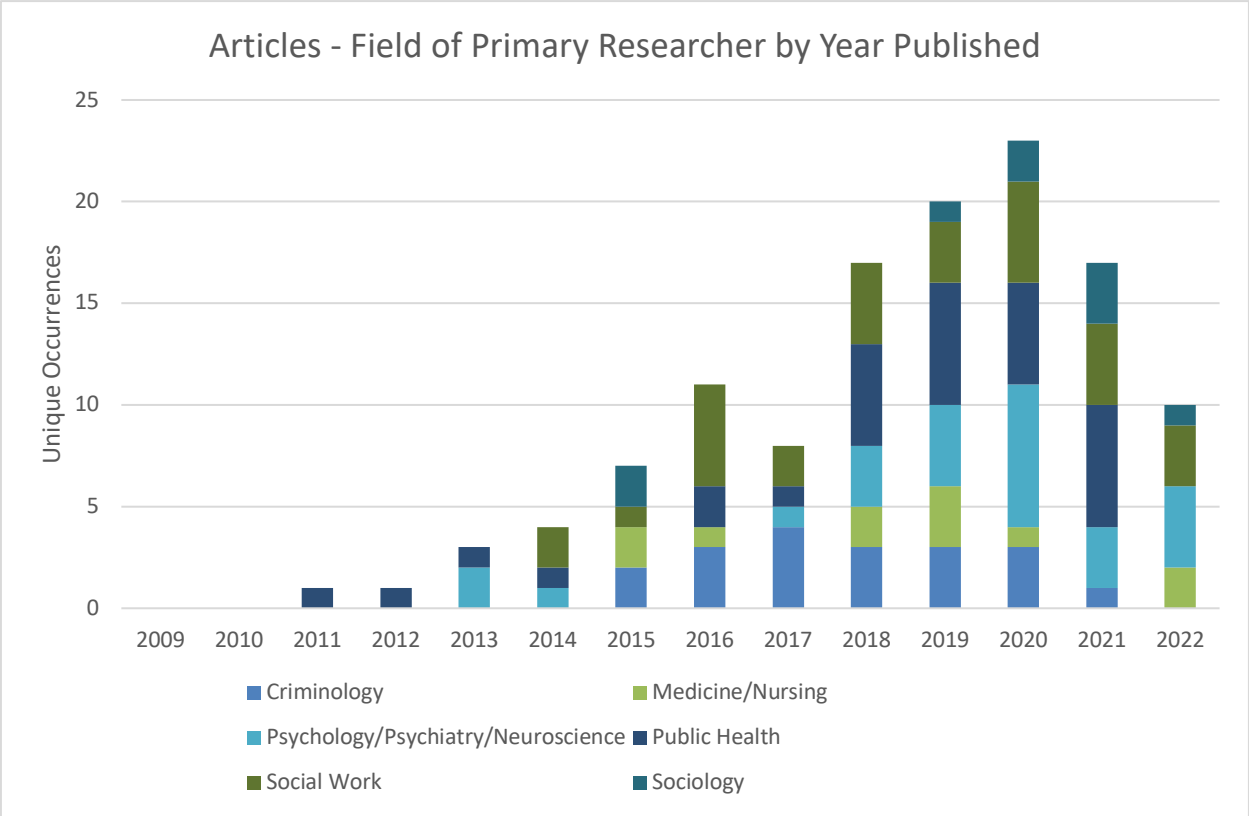

Figure 4

As previously mentioned, categorizing the discipline of the primary researchers was often subjective, as there were numerous authors whose field was interdisciplinary, such as health sciences or behavioral sciences. Considering the department listed if the author worked at a university or the title of their research organization, as well as their degree, I placed authors into one of six categories most aligned with their research and background. I combined nursing and medicine because there were too few authors in each category to compare well to the other categories. As well, there were many authors whose main field was psychology, but only one in psychiatry and one in neuroscience. As the fields are distinct but highly related, I combined them for the sake of comparison with the other more represented fields.

The fields are generally well-represented across the years in the sample. Overall, more fields appear over the years. Criminology, psychology/psychiatry/neuroscience, social work, and public health were the dominant fields across the sample. Research began in public health, with psychology and related disciplines appearing first in 2013, and social work appearing in 2014. It seems ACEs research grew to be more interdisciplinary around the time of the Philadelphia Urban ACE Survey and advocacy around that time for the inclusion of more community-level factors. It is unexpected that no authors in 2022 were primarily in criminology or public health when these two fields were previously so ubiquitous in ACEs studies. That said, this may just be a factor of when the search was conducted before the end of the year.

Figure 5 shows the ACEs categories appearing in articles by the field of the primary researcher to discern if certain categories are over- or underrepresented in certain disciplines.

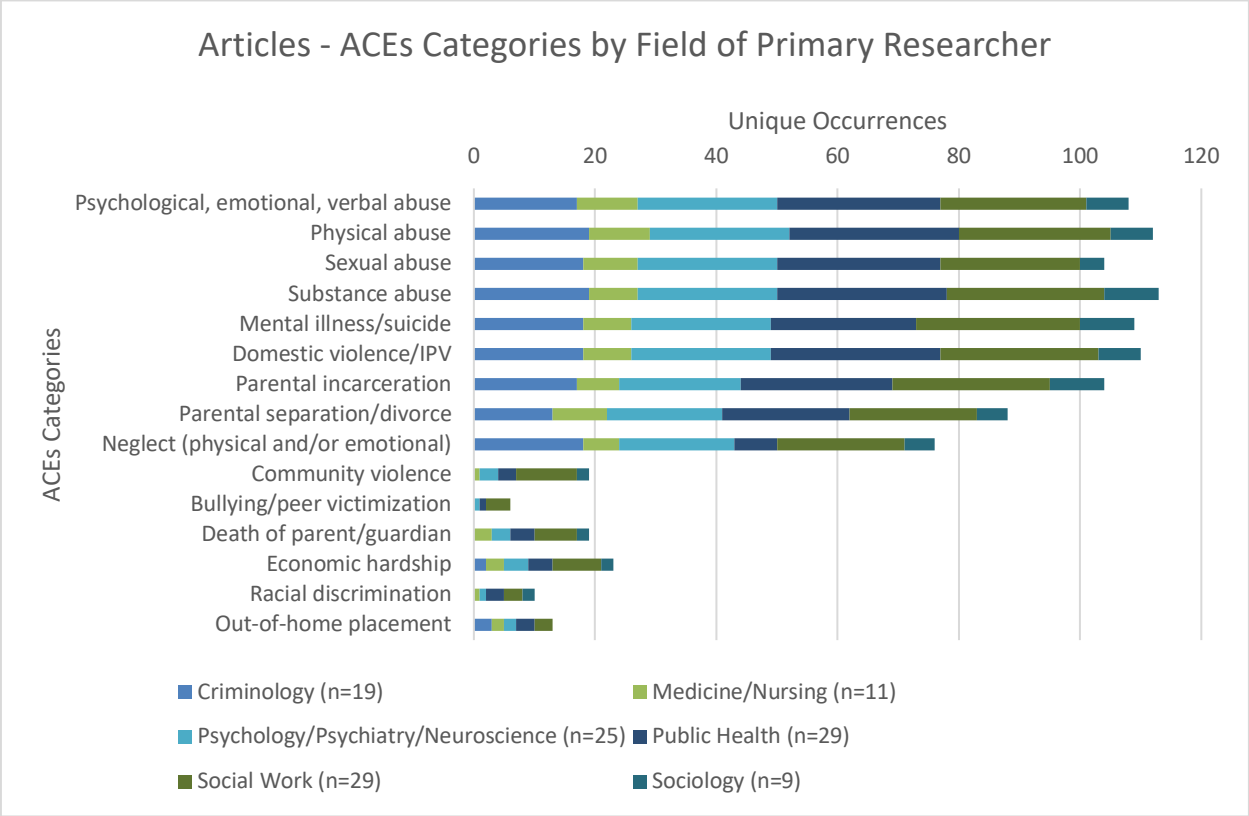

Figure 5

For the nine categories in the original ACEs study second wave, the fields are evenly represented proportionally to the number of articles for each. Articles from most fields include the majority of the additional ACEs factors, with a few exceptions. Only psychology, public health, and social work consider bullying/peer victimization as an ACEs factor. Criminology only looks at economic hardship and out-of-home placement out of the additional factors. Sociology includes four out of six of the additional ACEs factors, not incorporating bullying or out-of-home placement. However, it is worth considering the small sample size for this field.

Economic hardship was the only of the additional factors appearing in articles from each field. That said, community violence, parental death, racial discrimination, and out-of-home placement appeared in five of six of the fields. Social work includes community violence, bullying, parental death, and economic hardship slightly more compared to other fields, while for racial discrimination and out-of-home placement, the fields including the factors are evenly spread. Generally, most fields include most factors, with social work including community-level and additional ACEs factors somewhat more than other fields. Overall, the disciplines are pretty evenly distributed, even for community-level factors and newly added ACEs items.

Figure 6 shows the ACEs screening tool used in each article by year. Though the screening tool somewhat maps onto the ACEs categories appearing in each article due to the categories assessed by different screening tools, it does not match up exactly. As well, articles used a variety of tools, reemphasizing that although the ACEs framework is often seen as static and exact, ACEs measurement is highly diverse, which as discussed in previous chapters has significant implications for understanding ACEs across populations and allocating resources for prevention and treatment.

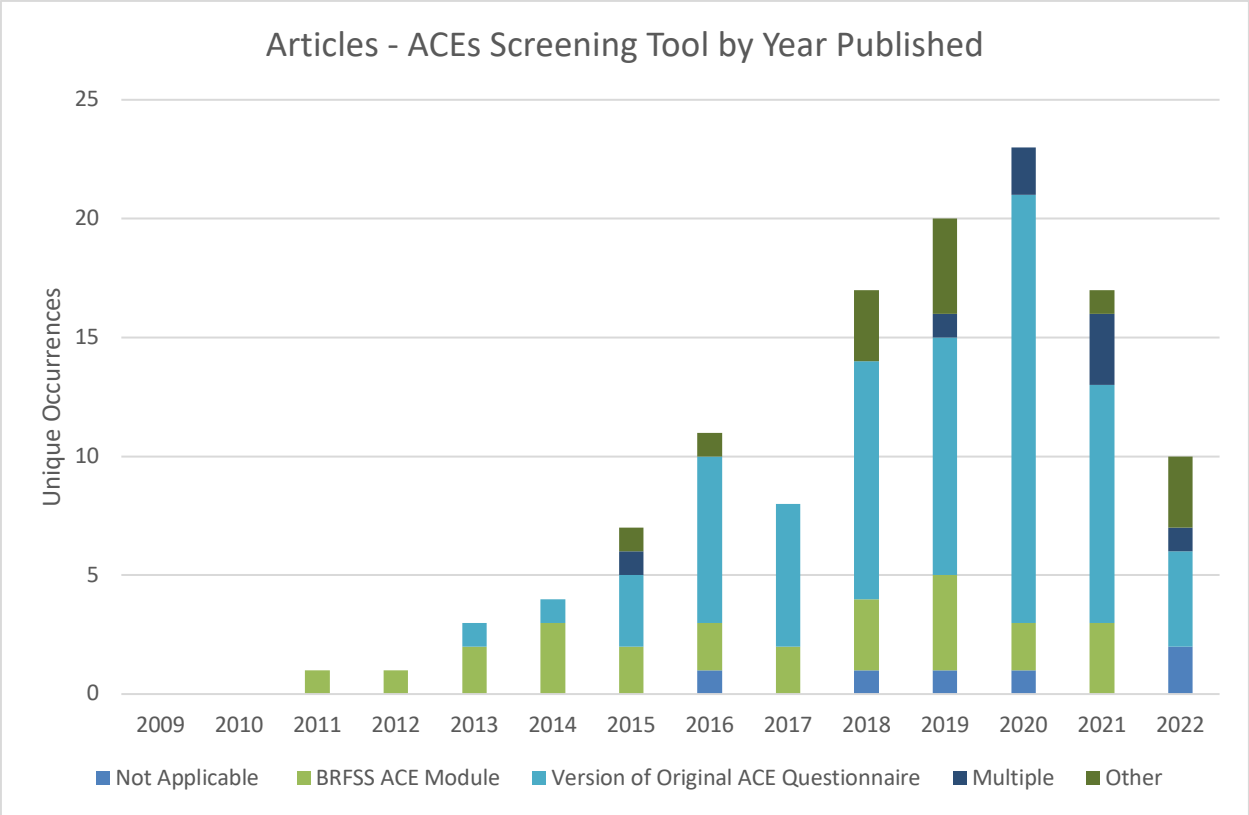

Figure 6

As mentioned in the methods section, I differentiated between articles using dedicated ACEs modules from previously published surveys (i.e., the BRFSS), constructing ACEs surveys from multiple existing survey instruments, and articles using a version of the original ACEs questionnaire or items. Articles using versions of the ACEs questionnaire were a broad category, with some identifying ACEs from a larger survey according to the CDC-Kaiser ACEs categories, some using the questions from the original ACEs questionnaire, and some constructing their own interview questions adapted from the original questionnaire. What I consider to be a version of the original ACE questionnaire included articles with and without additional ACEs factors added. Though this category was diverse, they all based ACEs measurement specifically on the original questionnaire without using existing ACEs modules/surveys. The "other" category captured articles using one existing survey mechanism, like the National Survey of Children's

Health (NSCH) ACE Module or the Juvenile Victimization Questionnaire (JVQ). The BRFSS ACE module, while fitting into this category, was separated due to its prevalence across the articles. The "multiple" category included articles that combined more than one of these pre-existing ACEs modules. The "not applicable" category captured mainly systematic reviews and meta-analysis that analyzed other studies and therefore did not employ their own ACEs measurement.

While these categories are distinct and articles were carefully and systematically coded into the categories, it is necessary to reiterate that the original ACE questionnaire was constructed from previously published surveys, including the Conflicts Tactics Scale (Straus and Gelles 1990), a survey of childhood contact sexual abuse (Wyatt 1985), the 1988 National Health Interview Survey (Schoenborn 1991), the BRFSS (Siegel et al. 1992), the Third National Health and Nutrition Examination Survey (Crespo et al. 1996), and the Diagnostic Interview Schedule of the National Institute of Mental Health (NIMH) (Robins et al. 1981). Furthermore, the BRFSS adapted questions from the second wave of the original ACEs study to create their ACEs module. As such, these categories are all intertwined to a certain extent, but differentiating between them is crucial for understanding the diversity in how researchers measure ACEs.

Articles predominantly used a version of the ACEs questionnaire not utilizing existing surveys different from the original ACEs study. This shows the measurement of ACEs is inconsistent across articles, as many authors adapted or expanded upon the original study differently. On the other hand, numerous articles employed the BRFSS ACEs module, which is a standardized instrument used across many different states. While the BRFSS is not flawless, it seems many authors use it to compare across populations or because of the readily available data. 13 articles used other dedicated ACEs modules. The number of articles using each is included in

parentheses. These included the National Survey of Children's Health (NSCH) ACE Module (six), the PhenX Adverse Life Events scale (one), the Juvenile Victimization Questionnaire (JVQ) (one), the Childhood Experiences Survey (CES) (one), the Adverse Childhood Experiences International Questionnaire (ACE-IQ) (one), the Childhood Retrospective Circumstances Supplement (CRCS) (one), and the College Student Health Survey (CSHS) ACE Module (two).

Eight articles combined multiple ACEs survey instruments, and the number of articles using each is included in parenthesis. These included the Life Stressors Checklist (LSC-R) (one), the Life Events Checklist for Diagnostic and Statistical Manual for Mental Disorders-Fifth Edition (LEC for DSM–5)—Extended (one), the Childhood Trauma Questionnaire (CTQ) (one), the Perceived Discrimination (PD) Scale (one), the Historical Loss Associated Symptoms (HLAS) Scale (one), The Family Conflict and Hostility Scale (one), the Children's Exposure to Community Violence scale (one), the Parent-Child Conflict Tactics Scale (CTS-PC) (five), the Composite Interview Diagnostic Interview (CIDI) (four), and the Childhood Experiences Survey (CES) (one). Ultimately, ACEs measurement varies widely across articles, and there is no standardized ACEs survey mechanism, despite the prevalence of the BRFSS which intends to be the ACEs standardized instrument across the United States.

Figure 7 shows the ACEs screening tool used in each article by the field of the primary researcher to see if there is any correlation between the instrument used and academic discipline.

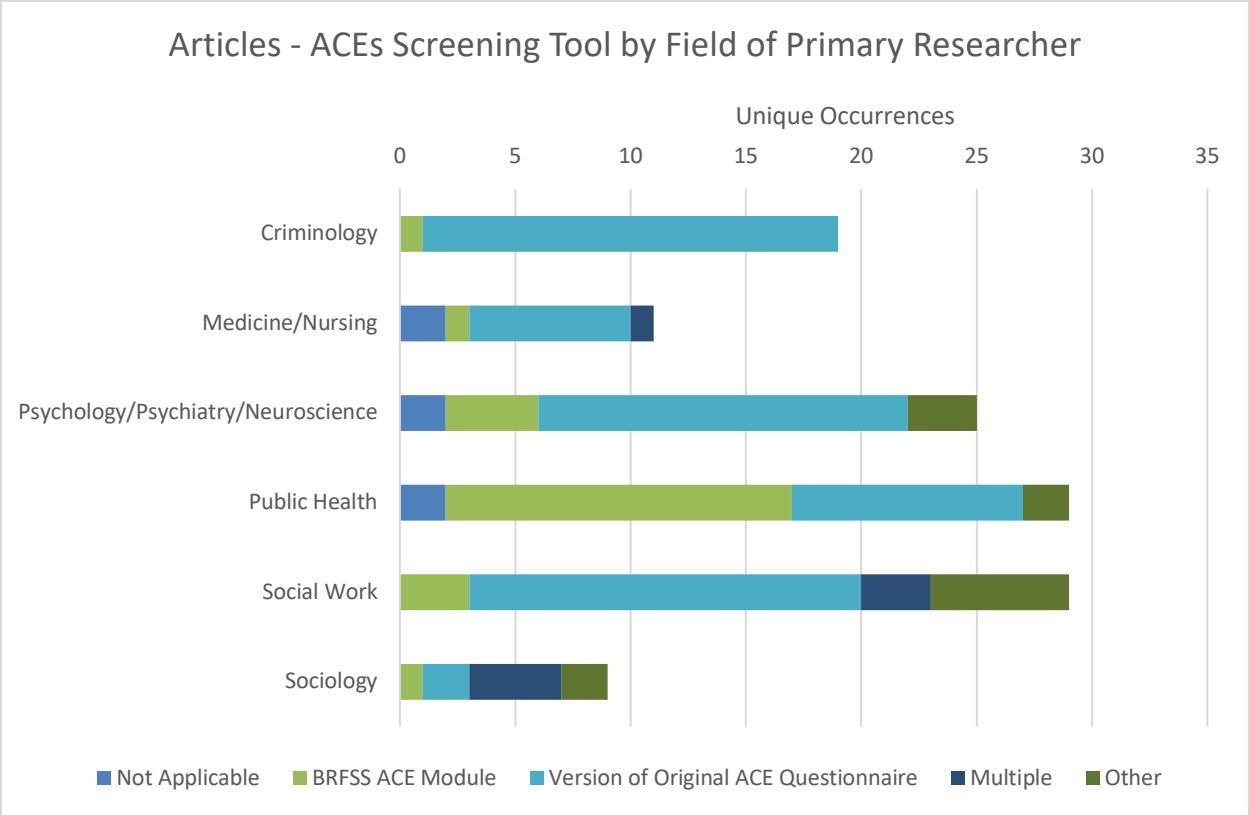

Figure 7

Medicine/nursing, psychology/psychiatry/neuroscience, and public health are the only fields publishing systematic reviews and meta-analyses not completing their own assessment of ACEs, which makes sense considering the other disciplines largely do not use these methods. While each field has at least some articles using the BRFSS, public health is by far the most reliant on its ACEs module. As the BRFSS ACEs module was constructed by and is still currently organized by the CDC, it is reasonable that most public health scholars studying ACEs would use this tool.

Versions of the original ACE questionnaire are highly prevalent in nearly all the other fields. Scholars in different fields presumably adapt the ACEs questionnaire to study specific factors their field is most interested in, or to shape the survey to focus on the experiences of marginalized people, for example. It is surprising, though, that sociologists are relying more on

previously published survey mechanisms than versions of the original ACE questionnaire, especially considering the prevalence of ACE questionnaire versions in every other field.

ACEs categories included in the articles differ greatly, but original ACEs factors appear much more than newer additions. That said, newer factors have been included more and more in recent years. Academic discipline does not appear to impact which ACEs factors are used, and the ACEs screening tool used varies significantly but is spread across academic fields. Overall, articles consistently include child maltreatment (i.e., physical, psychological, and sexual abuse) and household challenges (i.e., substance abuse, mental illness, and incarceration) factors, in line with the literature explored previously (Afifi et al. 2020, Hughes and Tucker 2018). Analyses for the body of policies proceeds below.

Policy

As with the body of academic research, the foundational question for my analysis of policies is how ACEs categories are used. Descriptive statistics are shown for the number of ACEs categories in each policy document. Measures of central tendency and variation are shown below.

Table 2

Descriptive Statistics: Number of ACEs Categories in Each Policy	
Mean	4.7
Median	4
Mode	4
Minimum	2
Maximum	13
Range	11
Standard Deviation	2.64

N = 20

Much lower than for the articles, the average number of ACEs categories appearing in each policy document was just under five. As with the articles, there is a large range between the lowest number of categories and the highest, and the standard deviation, which is higher than that for articles, indicates that the number of categories differ greatly from the mean.

The total number of ACEs categories for policies introduced each year is shown below in Figure 8 to ascertain how the inclusion of additional categories has progressed over the years. Each category appearing in a year was counted once.

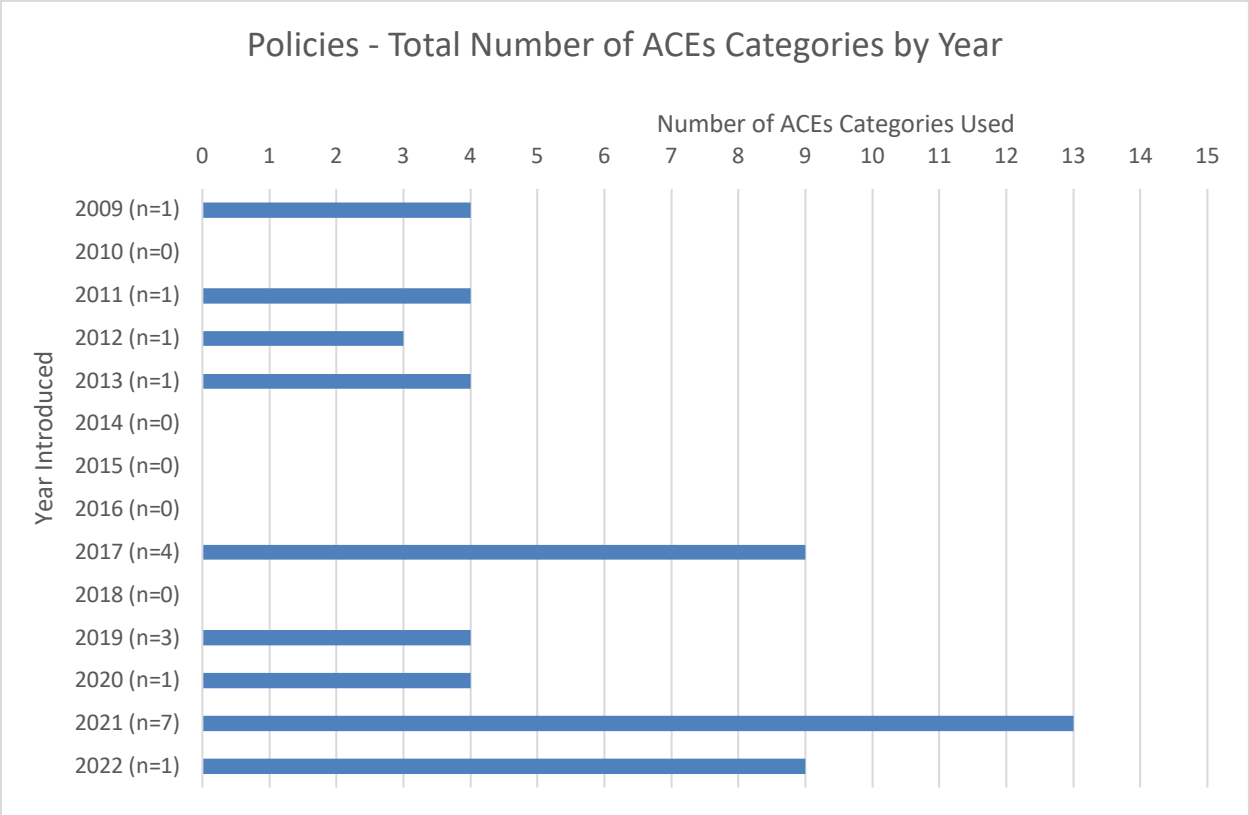

Figure 8

Across the 14 years shown in Figure 8, for the first half the mean number of categories included for years with a policy was 3.75, while for the second half of the time period the mean for years with a policy was 7.8. Though there are a few outlier years, including years in which there were no policies introduced that fit the criteria, the number of ACEs categories used in policies generally increased over the years in the sample. The most common number of categories included was four, which will be particularly interesting when looking at the specific categories included in the policies, especially because it does not align with the number of categories used in the original ACEs study as was common for the body of articles.

Figure 9, found below, shows the total number of ACEs categories in policies by year introduced. Each category appearing in a certain year was counted once.

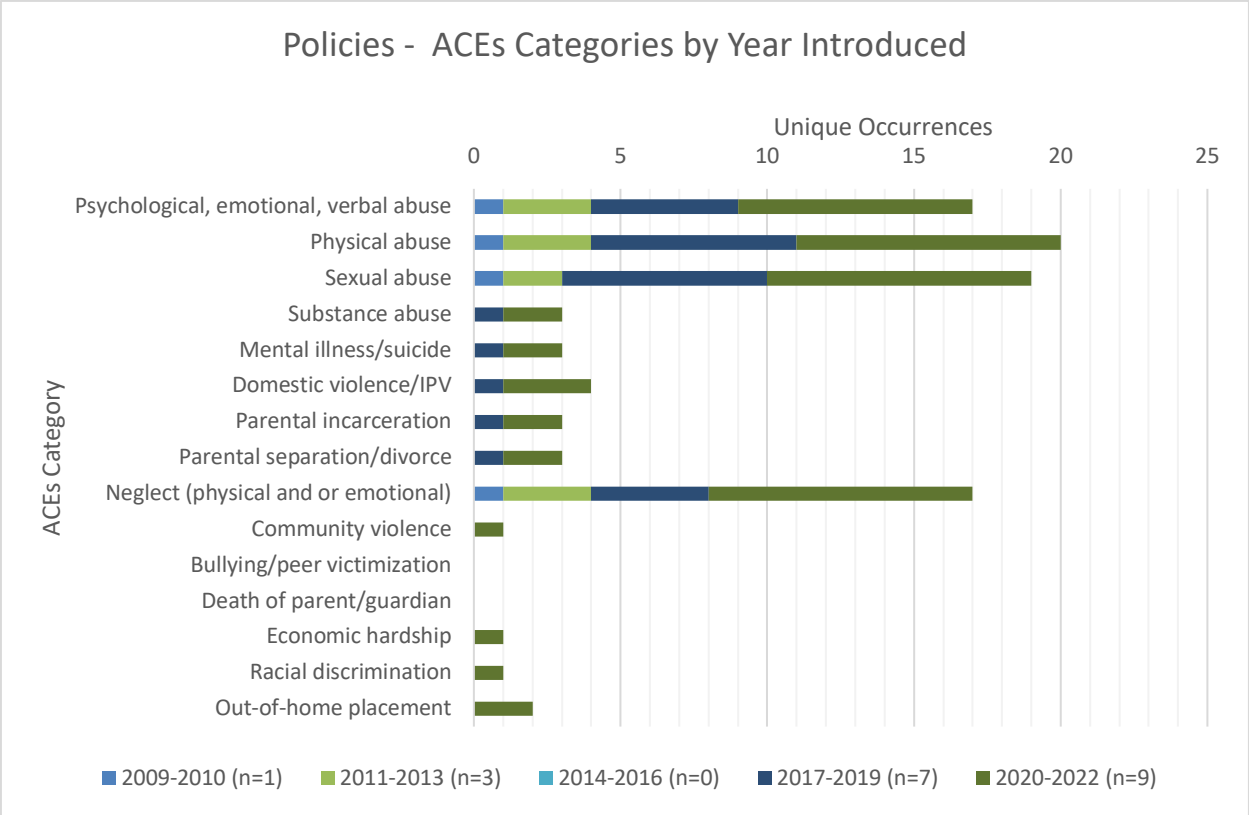

Figure 9

The most common categories by a considerable amount were psychological, physical, and sexual abuse, and neglect. The other categories included in the original ACEs study (substance abuse, mental illness, domestic violence, incarceration, and parental separation/divorce) were found much less, but still more than any of the remaining categories. Not appearing until 2020-2022, community violence, economic hardship, racial discrimination, and out-of-home placement were found infrequently. Bullying and the death of a parent were not found in any of the policies in the sample. This may suggest that it will take time for the expanded ACEs approach to make its way into policy, but it could also be that structural inequalities will not be recognized as widely as the more individualized aspects of ACEs.

Additionally, six of the twenty policies were amendments to or reauthorizations of the Child Abuse Prevention and Treatment Act (CAPTA) (1974) and six policies cited CAPTA for

their definitions of ACEs or a related term. Not every amendment to/reauthorization of CAPTA cited the law for its definition, and not every policy citing CAPTA for its definition was an amendment. Many more policies than were amendments to or specifically cited CAPTA use its framework to define child abuse, which includes psychological, physical, and sexual abuse, and neglect. I cannot conclude if the preexisting CAPTA framework in the U.S. code makes it more difficult to include additional factors or if bill sponsors follow along with the framework because it is entrenched in law, but it is clearly influential.

The following figure shows the ACEs categories by legislative status, which will help to better understand how bills that do or not become law use ACEs categories respectively.

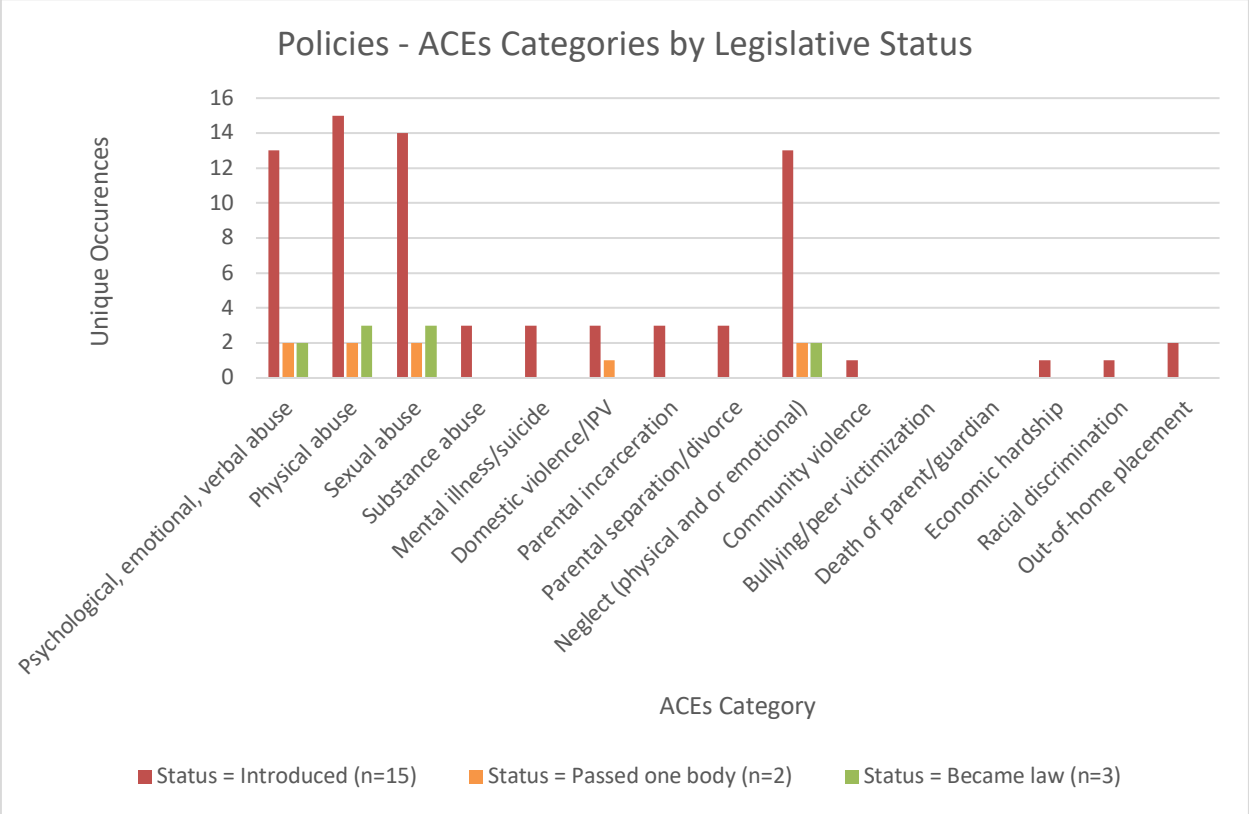

Figure 10

While many more policy documents were introduced than passed one body of Congress or became law, this chart illustrates the ACEs categories that appear in more successful bills. Bills that were introduced included a wide range of ACEs categories. Bills that passed one Congressional body included psychological, physical, and sexual abuse, domestic violence, and neglect. These bills included the Supporting Family Mental Health in CAPTA Act (2019a) and the Stronger Child Abuse Prevention and Treatment Act (2021h). Bills that became law only included the four most common categories: psychological, physical, and sexual abuse, and neglect. These bills included the Violence Against Women Reauthorization Act of 2013 (2013), the Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act of 2017 (2018a), and the Empowering Olympic, Paralympic, and Amateur Athletes Act of 2020 (2020a). The inclusion of only these four categories reiterates the hypothesis made from the previous figure that the CAPTA framework is highly influential in the creation of policy on childhood abuse and trauma.

Figure 11, found below, shows the use of the ACEs term in policy documents by year introduced to further explore if the ACEs framework makes its way into policy not just in the use of ACEs categories.

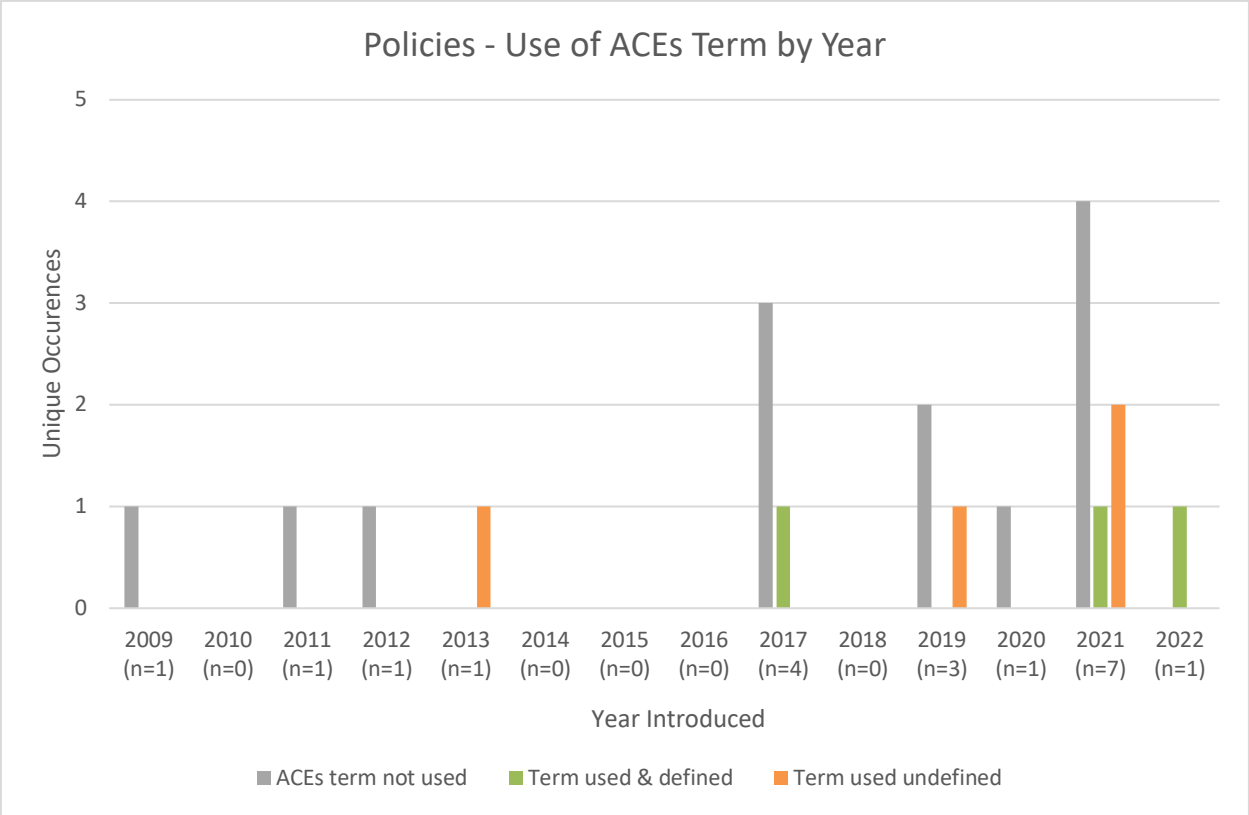

Figure 11

The ACEs term appeared relatively infrequently in the sample of policy documents. The term made its first appearance in 2013, and it was not used again until 2017. Though the term appears seven times in twenty articles, it is not often used to define child abuse. While categories of child abuse and neglect used in the ACEs framework may appear in policy, albeit infrequently, the term is rarely used to identify those categories as child abuse or childhood trauma.

Figure 12 shows the use of the ACEs term by legislative status to understand if the ACEs term makes its way into bills that become law.

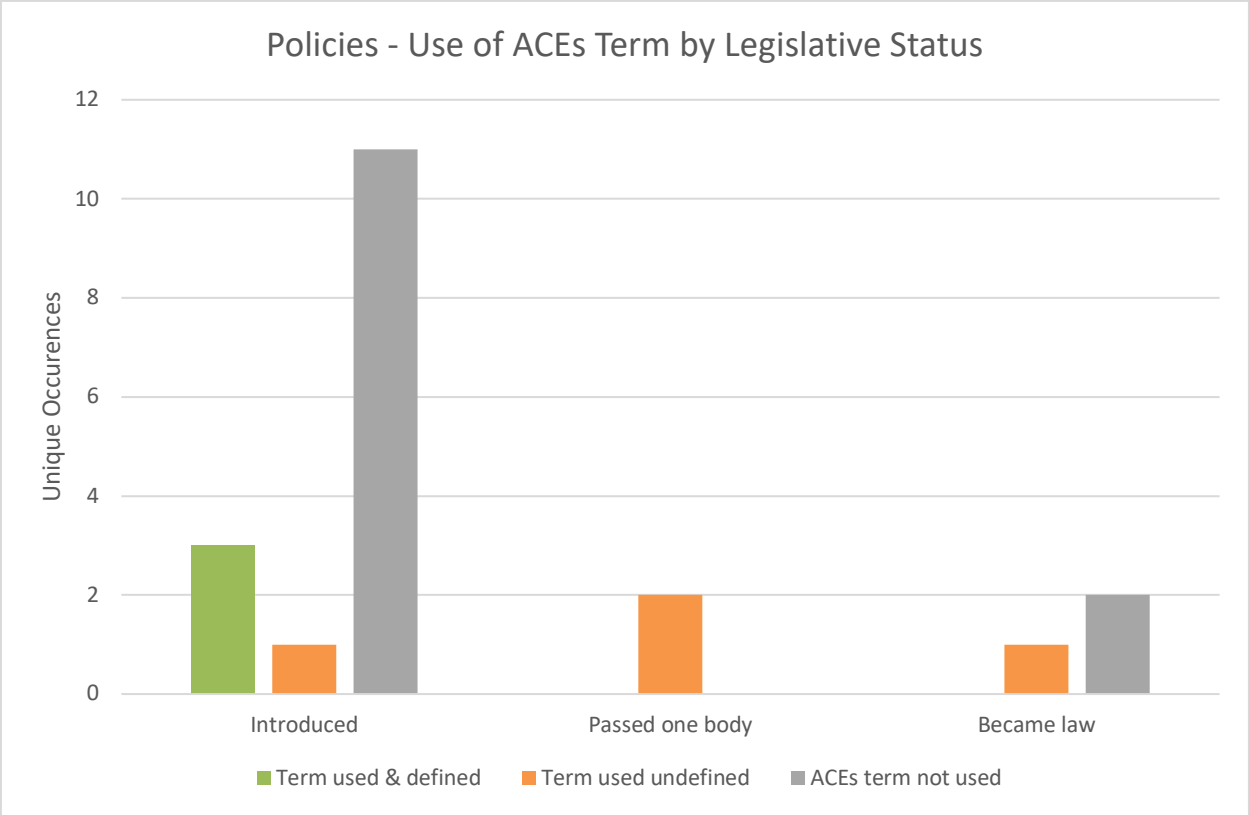

Figure 12

As shown in Figure 12, many more policies do not use the ACEs term than do use it. No bills that used and defined ACEs moved beyond being introduced. Bills using the term but defining childhood abuse/trauma without using ACEs were found in each category; one was just introduced, two passed one body, and one became law. It is interesting to note that the only bills to have passed one Congressional body but not become law used the ACEs term but did not define it. Mentioning the term but not using it to define child abuse may make a bill more likely to become law as opposed to bills that use the ACEs term to define child abuse. Potentially, bills pass if they define child abuse or trauma according to the CAPTA framework, but mentioning the ACEs framework as important to the prevention and treatment of childhood trauma does not preclude a bill from passing. However, it would be unwise to conclude anything causal about this observation.

The following figure, Figure 13, illustrates the use of each ACEs category by the party affiliation of the bill's sponsor. Examining the political party of the sponsor of each bill will help to ascertain if party platforms are more amenable to including certain types of ACEs items, i.e., individual factors versus community-level factors. Best (2017) writes, "… when discussing social problems, those on the left … favor social policies that promote equality and discourage discrimination. And in general, those on the right … worry that excessive social policies may constrain liberty and, in the process damage overall societal well-being" (287). All agree that child abuse and trauma are negative, but "they may disagree about their relative importance, or the best ways to achieve [their] values in particular situations" (Best 2017:287). With that in mind, Democrats or Republicans may approach addressing child abuse through policy differently, emphasizing some factors over others.

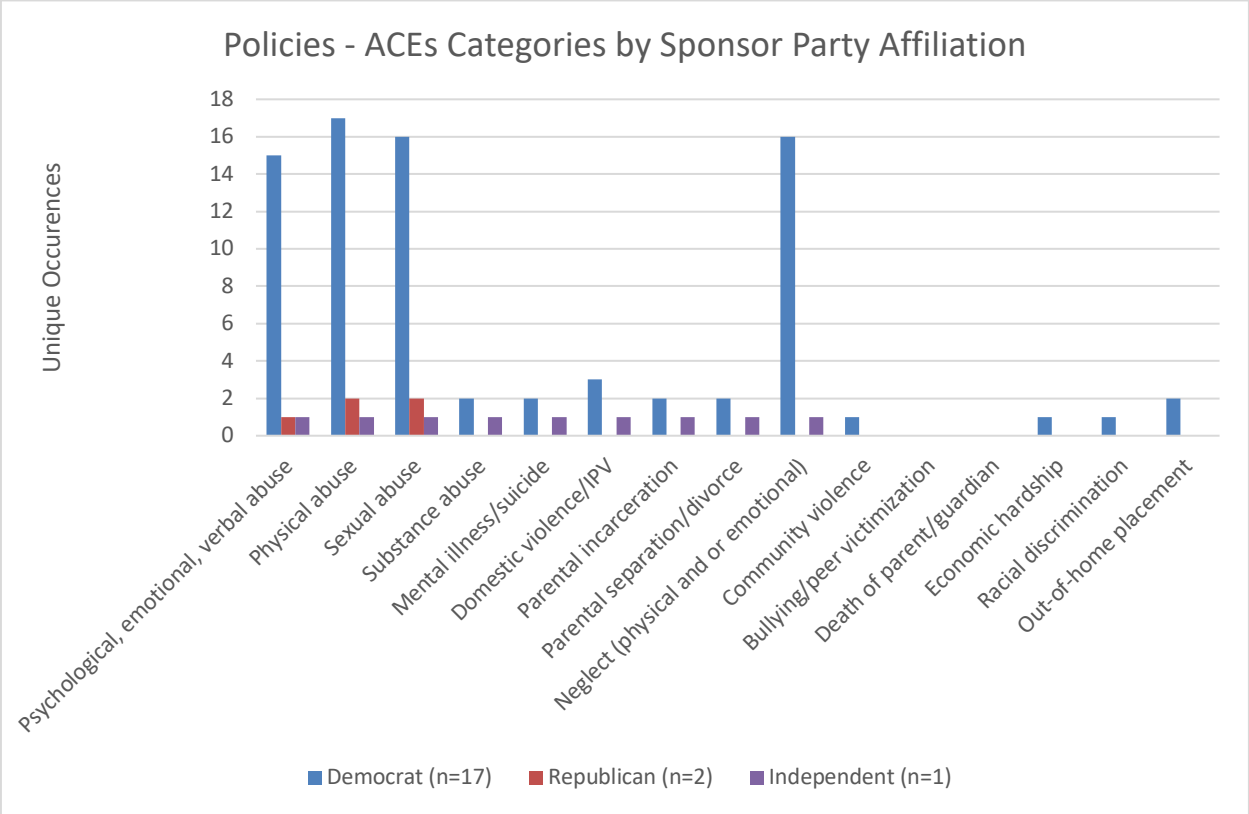

Figure 13

Many more Democrats than Republicans or Independents sponsored bills in the sample. Democrats also used the broadest range of ACEs categories. Bills sponsored by Democrats spanned every ACEs category except bullying and parental death, which did not show up in the sample. The bill sponsored by an Independent included the nine ACEs categories used in the second wave of the CDC-Kaiser study. Bills sponsored by Republicans only included psychological, physical, and sexual abuse in their definitions or conceptualizations of childhood abuse and trauma. Republican-sponsored bills did not include neglect, which is a key part of the CAPTA framework and was also used very frequently alongside psychological, physical, and sexual abuse.

Figure 14 shows the legislative status of policies by the party affiliation of their sponsor to further explore the impact of political party on how ACEs, child abuse, and childhood trauma are addressed in federal policy.

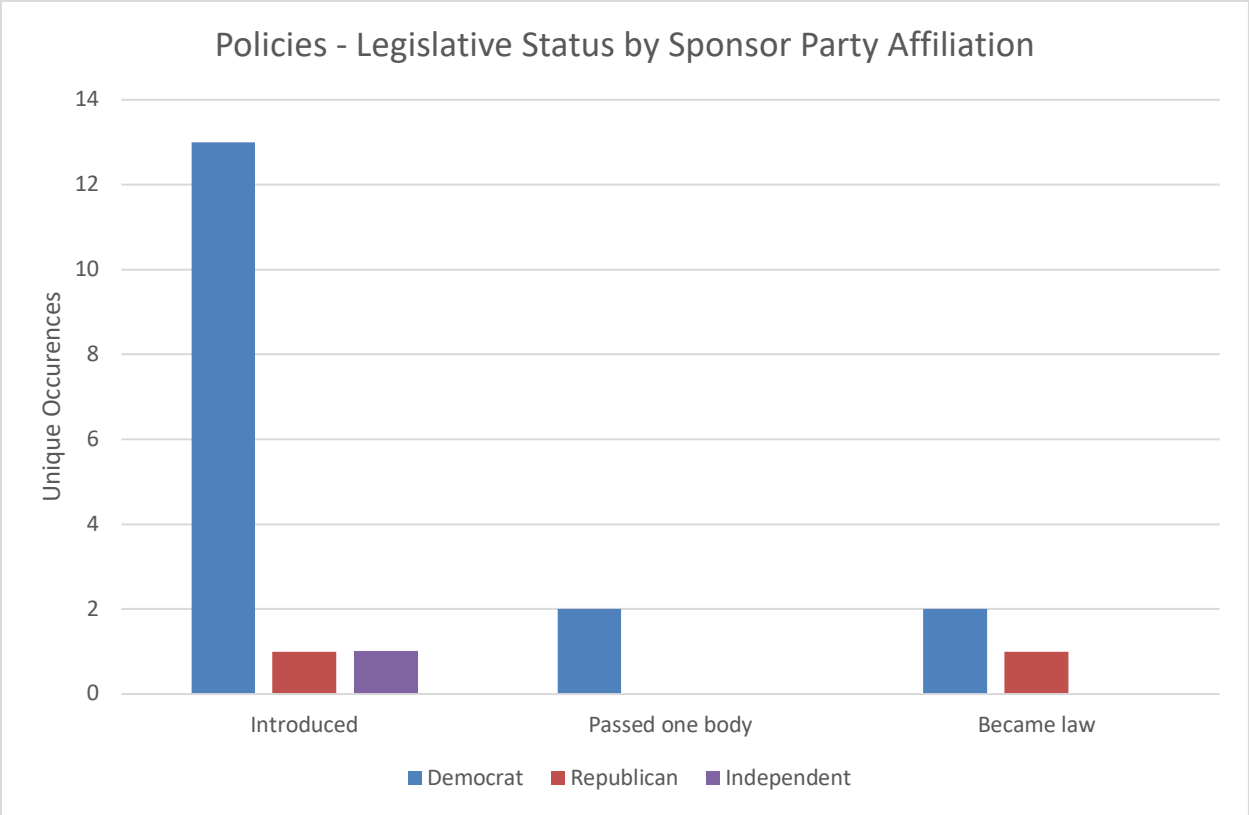

Figure 14

Bills that were just introduced and did not make it further through the legislative process were sponsored by Democrats, Independents, and Republicans. Bills that became law were sponsored by Democrats and Republicans. Again, there are many more bills sponsored by Democrats than Independents or Republicans, and there are many more bills that were just introduced than ones that passed one Congressional body or that became law. As the sample size is so small, especially for non-Democrats, it is difficult to draw conclusions about the effect of political party on legislative status. However, it is worth noting that despite the very small number of bills introduced by Republicans, one did become law. The Empowering Olympic, Paralympic, and Amateur Athletes Act of 2020 (2020a), introduced just two years after Larry Nassar's appeal of his sixty-year federal sentence for child pornography was denied (Mencarini 2018), only used psychological, physical, and sexual abuse in its definition of child abuse. The USA Gymnastics

sexual assault scandal brought the nation together across party lines, not just in the news media, but seemingly to pass policy combatting child sexual and other abuse. Another of the three bills in the sample that became law, "Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act of 2017," also focused on combatting abuse against young athletes and was introduced by a Democrat.

The last figure, Figure 15, shows the use of the ACEs term by the party affiliation of the sponsor, which is another important factor in analyzing the impacts of political party on if and how ACEs are addressed.

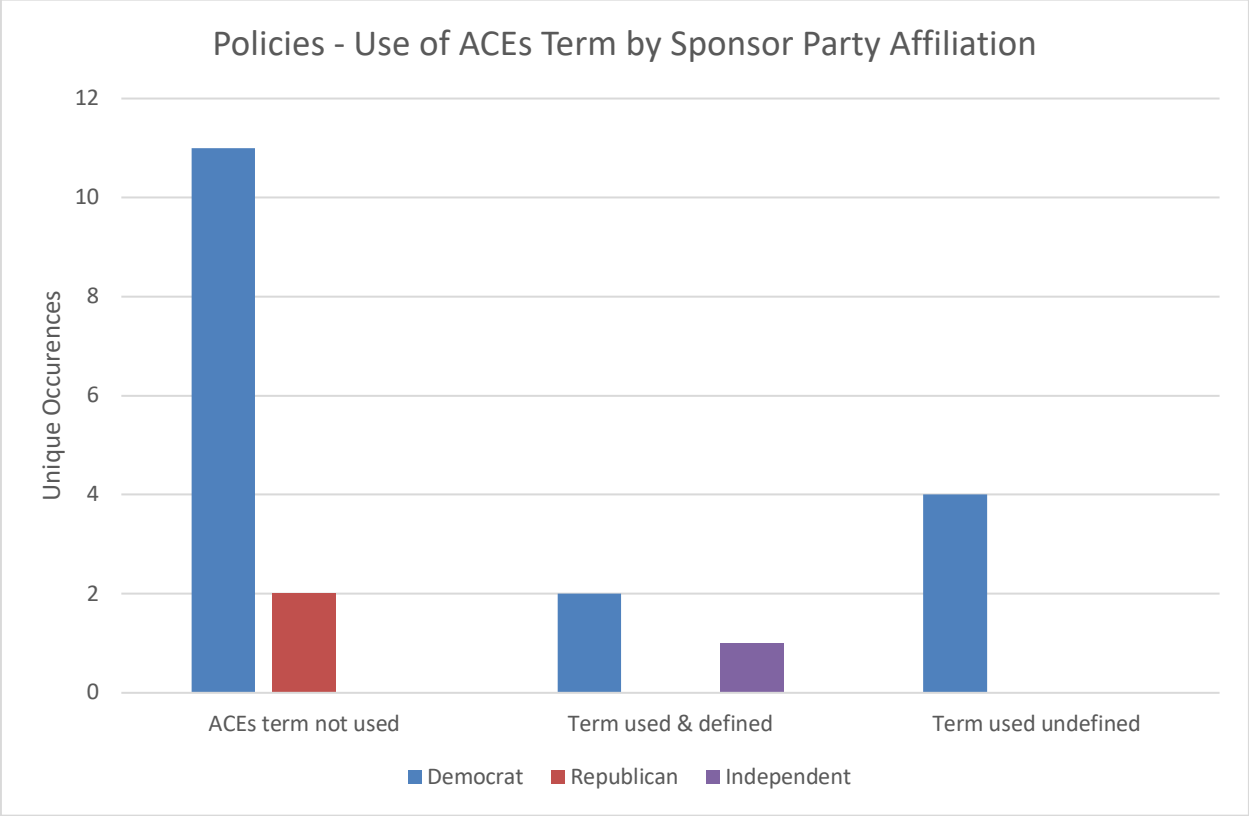

Figure 15

Many more bills did not use the ACEs term at all than those that did, but it is worth looking at the breakdown of the use of the term by sponsor party. Though both Democrats and the Independent used the ACEs term, Republicans did not use the term at all. Interestingly, the one

bill sponsored by an Independent used the ACEs term and defined it. Out of the Democrats using the ACEs term, more used it and did not define it than those who used it and defined it.

Across policies, psychological, physical, and sexual abuse and neglect are included in definitions of child abuse, trauma, and related terms much more than other factors included in the ACEs framework. Though the ACEs term appears in over a third of the policies, it is used integrated into definitions much less. The political party of the sponsor is correlated with the use of the ACEs term and which ACEs factors are included in policies. In contrast with the body of articles, policies typically only include child maltreatment factors and not household challenges factors, and they very rarely include community-level factors.

Discussion

Overall, it is encouraging that new factors are being added to the ACEs framework in the literature. As studies emerge showing robust connections between experiences like racial discrimination and community violence and adverse mental/physical health impacts later in life, the addition of these experiences to the ACEs framework recognizes and sees as valid the long-term impacts of traumas impacting marginalized communities. However, the turbulent nature of the ACEs framework in academic scholarship complicates communicating the importance of recognizing and combatting these traumatic childhood experiences as interconnected. Kalmakis and Chandler (2014) write, "A clear and agreed on meaning for adverse childhood experiences promotes not only recognizing and understanding their complex and important role in human development and health but also building a body of research united by one conceptual understanding" (1496). Both conceptualization and measurement of ACEs differ greatly across this body of literature, so while I cannot conclude anything causal, I speculate this may deter

federal policymakers from embracing the framework. The debate between risk factors for ACEs and ACEs themselves further complicates the matter of addressing these issues.

While the literature spans a broad range of ACEs factors, these diverse experiences are not salient in federal policy surrounding child abuse and trauma. Rather than addressing issues together under the ACEs framework, it appears that many policies address household challenges and community-level adverse experiences separately or not at all. A limiting factor in this analysis may be that policies addressing only a single item without a definition including multiple items were excluded from the sample, so it is not clear how many policies utilize a framework, i.e., defining elements of abuse, to address issues of child abuse and trauma compared to those that do not. That said, the main consideration was whether or not the ACEs framework established in the literature is used in policy, so the expansion of search terms for the body of policies to include other related terms captures this question.

It was unexpected to see four policies that mentioned the ACEs term separately from its definition of child abuse or trauma. The Stronger Child Abuse Prevention and Treatment Act (2021h), for example, defines child abuse and neglect according to CAPTA but also addresses other ACEs factors, such as domestic violence. Though it does not appear to have caused substance abuse to be included less than other household challenges factors, some CAPTA-based policies specifically mention that nothing in a section about substance abuse and fetal alcohol syndrome "shall … be construed to establish a definition under Federal law of what constitutes child abuse or neglect" (2017c, 2019a, 2021f, 2021h). While I assume this is intended to identify substance abuse and misuse as an illness rather than abusive or neglectful, it also discourages the use of a key tenet of the ACEs framework.

Additionally worth noting are policies that identified certain ACEs items as risk factors, rather than part of child maltreatment or abuse. The Supporting Child Maltreatment Prevention Efforts in Community Health Centers Act of 2012 identifies depression, substance, abuse, and intimate partner violence as risk factors for child abuse, rather than child abuse itself (2012a). As the differentiation between ACEs and ACEs risk factors is prominent in the literature, the distinction between risk factors and abuse itself emerging in policy is not surprising. Also, a number of acts set budgets and guidelines for the collection of data on ACEs/child abuse and neglect and have not defined them. Not identifying which factors fall under the term has tremendous implications for which issues are being addressed and the allocation of resources to address those issues, in addition to ambiguous measurement.

Overall, three main categories of ACEs frameworks for both articles and policies have emerged: the original ACEs framework from the 1998 study or the expanded framework from the second wave; only physical, emotional, and sexual abuse (and sometimes neglect, especially in policy); or factors from the ACEs study and a wide range of community-level factors. While most articles fall into the first or third category, identifying child maltreatment and household challenges factors as adverse childhood experiences, most policies fall into the second category, focusing only on child maltreatment factors. While identifying only psychological, physical, and sexual abuse and neglect as child abuse/trauma follows the preexisting policy framework driven by CAPTA, it deemphasizes not only community-level traumatic experiences but also household challenges factors.

In the literature, a "dialogue … as to what should be included as ACEs … continue[s]; but, consistency regarding both [child maltreatment] and [household challenges] remains" (Struck et al. 2021:7). As mentioned previously in the analysis, it is unclear if it will just take

more time for the ACEs framework to make its way into federal policy, especially that becomes law, or if there are barriers, intentional or otherwise, to embracing the framework at the Congressional level. Regardless, this analysis demonstrates that at this point, household challenges and community-level ACEs are not getting enough attention in federal policy as key components of child abuse and trauma. Many of the newer additions to the ACEs framework draw attention to the experiences of marginalized communities, so leaving these factors out of policy meant to address childhood abuse and trauma may obscure the experiences of children most vulnerable to ACEs and their long-term health impacts.

Conclusion

This thesis endeavored to answer the question of how the conceptualization and framing of Adverse Childhood Experiences in the academic literature align with how childhood trauma is addressed in U.S. policy. In this concluding chapter, I begin by reviewing key findings. Then, I offer suggestions for further research and thoughts on future implications.

Summary of Key Findings

Analysis of 122 articles published in academic journals revealed that the number and type of categories included under the ACEs framework vary tremendously, though the nine categories in the second wave of the original CDC-Kaiser ACE study were used most frequently. The academic discipline of the primary author does not bear much weight on which factors are included, but there is some variation by field in terms of which assessment mechanisms are used. Though community-level and other additional ACEs factors appear relatively infrequently in the body of literature overall, they appear in more articles over the years. While portrayed as exact and relatively static, the conceptualization and measurement of ACEs are inconsistent. Nevertheless, most articles include both child maltreatment and household challenge factors as integral facets of the ACEs framework.

Analyzing 20 U.S. federal policies showed that the number and type of ACEs categories used varied even more than for articles, and fewer categories were used in each policy on average. Psychological, physical, and sexual abuse, and neglect appear most frequently in policies by a considerable amount, and many only include these four items. Policies that became law only use these categories. Surprisingly, the ACEs term appeared in about a third of policies in the sample, but only three policies used the term to define child abuse/trauma. The political party of the bill's sponsor impacted which ACEs categories were included and whether the ACEs

term was used. Policies mostly include only child maltreatment factors, overshadowing household challenges and community-level factors.

The debate over what constitutes a risk factor for ACEs or child abuse/trauma appears in both the literature and policy. Further research concerning if factors like racial discrimination and low socioeconomic status should be considered risk factors or ACEs themselves is necessary to ascertain how to address ACEs and related health impacts most effectively. Perhaps it is because of this debate that expanded ACEs factors rarely appear in policy, but not considering these factors as at least related to childhood abuse and trauma has the potential to mask the experiences of communities most vulnerable to ACEs and their long-term ramifications.

Future Research and Implications

Many of the methodological limitations of this thesis give way to ideas for future research. First, while the literature search captured a diverse set of articles from different disciplines using a variety of methods, the policy search on just one specific type of policy: U.S. federal legislation. Due to the time constraints of this project, it was not feasible to also study other forms of policy, such as at the state or institutional level. A comparison of the federal to state level could give insight into barriers to enacting ACEs-focused policy at the federal level that are potentially not relevant at the state level, as well as political and other influences in states. Additionally, how institutional policies conceptualize ACEs could be studied, like prison entry screenings or screenings in pediatric primary care settings.

Though this project shows how ACEs are addressed conceptually, it does not capture preventative or remedial actions taken by policies or advocated for in research. Studying efforts across the country or in a few specific states would likely yield interesting results and deepen the

understanding of barriers faced to addressing childhood abuse and trauma at various policymaking levels. Approaches to preventing and mediating ACEs are diverse, and not every measure that works for one individual or community will work for another.

Furthermore, expanding to different country contexts could provide for thought-provoking comparisons. ACEs research and screening are prominent in the U.K.; Parliament commissioned a report on ACEs intervention in 2018 (Science and Technology Committee 2018). Scottish Government especially has embraced the ACEs framework, committing to preventing and addressing ACEs in the 2017/2018 Programme for Government and creating a Scottish ACEs Hub in conjunction with Public Health Scotland to further action on ACEs at the national level (Public Health Scotland Childhood Adversity Team 2021).

The literature search could be expanded, as well. This project was meant to capture only articles using the ACEs framework as the intent was to ascertain how the framework is established in the literature. However, it would be fascinating to explore how often the ACEs term appears in the literature on childhood abuse and trauma more generally. Another consideration is that the literature search only gathers research that has been published, while the policy search results include bills that were introduced, passed by one body, and passed by both Congressional bodies to become law. That said, it would be difficult to assess ACEs in the literature that was not published, as accessing research through databases inherently captures published research.

Qualitative research to analyze how child abuse and trauma are framed and addressed could give insight into the interests of claimsmakers and policymakers. Delving further into the problem recognition, policy proposal, and political streams identified by Kingdon (1984),

interviews or focus groups with ACEs scholars and policymakers may help to understand the economic argument for or against addressing these issues through a comprehensive framework. Additionally, it may elucidate the rhetorical shift over time and whether the ACEs framework just requires more time to saturate the Federal policy arena. The expertise of experience is uniquely informative, so focusing on the claims of ACEs survivors would be worthwhile, as well.

Future Implications

The original ACEs study found that experiencing psychological, physical, or sexual abuse; domestic violence; or living with household members who were substance abusers, mentally ill, or ever imprisoned in childhood were risk factors for an array of long-term physical and mental health issues (Felitti et al. 1998). These connections held when parental separation or divorce and neglect were added in the second wave (Felitti and Anda 2010). Studies have found that adding items to the framework, like community violence and socioeconomic status, strengthen the correlation between ACEs and negative health impacts (e.g., Finkelhor et al. 2015, Karatekin and Hill 2019). Others, however, argue some new additions to the framework, especially race/racism and socioeconomic status, are ACEs risk factors and not ACEs themselves (e.g., Slack et al. 2016).

Ultimately, I do not know how is best to address the experiences encapsulated by the ACEs framework. It is essential to address the experiences of all people, especially those most vulnerable. But, if the inconsistency in the literature is making the ACEs framework too muddled of a lens through which to focus policy efforts, then it is worth refining the framework or creating something new. Kalmakis and Chandler (2014) explain, “A clarified concept is needed to construct theory, develop effective measures and stimulate further research on the effects of

adverse childhood experiences on health" (1490). Furthermore, an easily understandable concept can help "raise … awareness of social and familial determinants on health … and challenge the way [people typically] think about the integration of social, physical and mental health" (Kalmakis and Chandler 2014:1490). Clarifying the ACEs concept across the research literature and policy would be a tremendous undertaking, requiring scholars and other actors to come together across fields toward the common goal of preventing trauma and its effects and keeping children safe, healthy, and happy.

Also, ACEs measurement could be streamlined. Of course, researchers each have their own styles and focus on different aspects of childhood trauma and/or identity, so I am unsure if this would be attainable with such diverse interests and goals in research. That said, the BRFSS attempts in a lot of ways to be that default survey mechanism. While this survey is one of the largest national surveys that measure ACEs, there are issues inherent to its methodology. As Slack, Font, and Jones (2016) note, "... ACE measures in the BRFSS are not exhaustive and omit experiences that could have a profound impact on health, such as a parent's death, community violence, and severe childhood neglect" (e29). What falls under the ACEs framework is contested in the field, but community factors are included under the definition more and more, as per the literature and the analyses of this thesis. Because the BRFSS does not measure these experiences, the correlations found between health outcomes and ACEs measured by the BRFSS cannot fully take into account the range of experiences considered to be ACEs.

The National Survey of Children's Health (NSCH), according to a June 2020 data brief from the Health Resources and Services Administration (HRSA), is the largest national and state-level survey of child and family health and healthcare needs (Maternal and Child Health Bureau 2020). The NSCH's questions about ACEs not only ask about witnessing or being a

victim of neighborhood violence, but also asks about racial and ethnic discrimination (Maternal and Child Health Bureau 2020). No survey of ACEs is perfect, nor will it have a comprehensive range of factors included under the ACEs umbrella by scholars, but maybe a survey like the NSCH would be preferable to the BRFSS as the main module used to survey ACEs. The NSCH ACE module was first implemented in the 2011/2012 survey as opposed to the first BRFSS ACE module in 2009 (Bethell, Carle, Hudziak et al. 2017a, National Center for Injury Prevention and Control 2020). Also, the NSCH is conducted by the U.S. Census Bureau, while the BRFSS is conducted by the CDC (Maternal and Child Health Bureau 2020). These factors may have led to the BRFSS being used more in the research literature to assess ACEs than the NSCH, or it could be due to the BRFSS's closer alignment to the original ACEs study.

Much research has emerged exploring the experiences of different groups beyond identity factors like race, gender, and sexuality, such as those who have been in foster care (e.g., Hall, Stinson and Moser 2017, Rebbe et al. 2018), involved in the justice system (e.g., Baglivio, Wolff, Piquero et al. 2016, Kowalski 2018), in the military (e.g., Applewhite et al. 2016, Laird and Alexander 2019), or unhoused (e.g., Aykanian and Mammah 2022). As more ACEs research highlights the traumatic impacts of racism and witnessing community violence, it may also be worth studying police brutality and generational trauma in connection to the ACEs framework, especially in the wake of the COVID-19 pandemic which highlighted and exacerbated many racial inequities (Gangamma, Tor, Whitt et al. 2020:284).

Regarding COVID-19 specifically, some articles and policies are beginning to address potential long-term effects. Békés, Starrs and Perry (2022) address previous childhood trauma as a risk factor for worse mental health effects due to the pandemic. LaBrenz et al. (2021) study ACEs and the resilience of parents and families during COVID. The STRONG Support for

Children Act of 2021 highlights a range of impacts of COVID-19 on children, explaining that the pandemic "increased and exacerbated the trauma inflicted on young people, specifically young people who live in communities with higher rates of infection and mortality, have parents who are essential workers or first responders, have parents who have lost their sources of income, have witnessed death, have had their education interrupted, are living without access to green space and space for physical exercise, have become housing insecure and lack access to nutritious food, and are isolated amidst increased domestic violence and sexual assault" (2021a:4-5). Unfortunately, this bill died, but it is a powerful illustration of all of the ways the COVID-19 pandemic may affect children, especially those already more vulnerable to ACEs.

Throughout this thesis, I have emphasized the potential for the framing of childhood abuse and trauma to highlight or obscure the experiences of certain groups depending upon which aspects are included by research or policies. As the pandemic has compounded so many social, health, economic, and other inequities and risk factors, it is crucial now more than ever to pay attention to the effects on different people of how issues are addressed, and in paying attention, make sure that these decisions mediate rather than harm. Best (2017) explains that "… new social policies often provide the raw material for launching yet another social problems process, one in which critics construct claims that the policy is doing too little, too much, or the wrong thing, that this in itself is a troubling condition; and that something ought to be done about it" (272). I hope as the nation continues recovering from this incredibly tumultuous collective experience, scholars and policymakers paying attention to those scholars understand the value of the ACEs framework to combat the individual and public health effects of childhood trauma and abuse but work to refine it, so it has the impact Felitti and colleagues intended.

Bibliography

*Asterisks denote citations that were part of the samples for analysis (*Articles,**Policies)*

Child Abuse Prevention and Treatment Act (CAPTA), Public Law 93-247, 42 U.S.C. Ch. 67, §§ 5101–5116i, (1974).

Crime Control Act of 1990, Public Law 101-647, 18 U.S.C. 1, (1990).

Uniform Code of Military Justice Statute of Limitations, 10 U.S.C. 843, Art. 43, (1995).

**2009. "Safe Babies Act of 2009." *111th Congress*.

**2011a. "Violence Against Children Act of 2011." *112th Congress*.

Crimes and Criminal Procedure, 18 U.S.C. Ch. 1 §16, (2011b).

**2012a. "Supporting Child Maltreatment Prevention Efforts in Community Health Centers Act of 2012." *112th Congress*.

The Public Health and Welfare, 42 U.S.C. 13925, (2012b).

***Violence Against Women Reauthorization Act of 2013,* Public Law 113-4, 42 U.S.C. 13701, (2013).

**2017a. "Child Abuse Accountability Enhancement Act." *115th Congress*.

**2017b. "Alleviating Adverse Childhood Experiences Act." *115th Congress*.

**2017c. "Stop Child Abuse in Residential Programs for Teens Act of 2017." *115th Congress*.

***Protecting Young Victims from Sexual Abuse and Safe Sport Authorization Act of 2017,* Public Law 115-126, 36 U.S.C. Ch. 220541, (2018a).

The Child Abuse Prevention and Treatment Act Including the Substance Use-Disorder Prevention That Promotes Opioid Recovery and Treatment for Patients and Communities Act, Public Law 93-247, 42 U.S.C. Ch. 67, (2018b).

**2019a. "Supporting Family Mental Health in CAPTA Act." *116th Congress*.

**2019b. "Harmony's Law." *116th Congress*.

**_Empowering Olympic, Paralympic, and Amateur Athletes Act of 2020,_ Public Law 116-189, 36 U.S.C. 220501, (2020a).

Designation of United States Center for SafeSport, 36 U.S.C. 220541, (2020b).

**2020c. "End Military-Connected Child Abuse and Neglect Act." *116th Congress*.

**2021a. "STRONG Support for Children Act of 2021." *117th Congress*.

**2021b. "Help Grandfamilies Prevent Child Abuse Act." *117th Congress*.

**2021c. "Alternative Pathways to Child Abuse Prevention Act." *117th Congress*.

**2021d. "Native American Child Protection Act of 2021." *117th Congress*.

2021e. "Resilience, Investment, Support, and Expansion (RISE) from Trauma Act." *117th Congress*.

**2021f. "CAPTA Reauthorization Act of 2021." *117th Congress*.

**2021g. "Safe Home Act of 2021." *117th Congress*.

**2021h. "Stronger Child Abuse Prevention and Treatment Act." *117th Congress*.

**2022. "Improving Data Collection for Adverse Childhood Experiences Act." *117th Congress*.

*Aafjes-van Doorn, K., C. Kamsteeg and G. Silberschatz. 2020. "Cognitive mediators of the relationship between adverse childhood experiences and adult psychopathology: A systematic review." *Dev Psychopathol* 32(3):1017-29. doi: 10.1017/s0954579419001317.

Afifi, Tracie O., Samantha Salmon, Isabel Garcés, Shannon Struck, Janique Fortier, Tamara Taillieu, Ashley Stewart-Tufescu, Gordon J. G. Asmundson, Jitender Sareen and Harriet L. MacMillan. 2020. "Confirmatory factor analysis of adverse childhood experiences (ACEs) among a community-based sample of parents and adolescents." *BMC Pediatrics* 20(1):178. doi: 10.1186/s12887-020-02063-3.

American Psychological Association. 2023, "APA PsycInfo": American Psychological Association. Retrieved 3/7/23, (https://www.apa.org/pubs/databases/psycinfo).

Anda, R. F., A. Butchart, V. J. Felitti and D. W. Brown. 2010. "Building a framework for global surveillance of the public health implications of adverse childhood experiences." *Am J Prev Med* 39(1):93-8. doi: 10.1016/j.amepre.2010.03.015.

*Andersen, Judith P. and John Blosnich. 2013. "Disparities in adverse childhood experiences among sexual minority and heterosexual adults: Results from a Multi-State probability-based sample." *PLoS One* 8(1). doi: 10.1371/journal.pone.0054691.

*Applewhite, Larry, Derrick Arincorayan and Barry Adams. 2016. "Exploring the prevalence of adverse childhood experiences in soldiers seeking behavioral health care during a combat deployment." *Military Medicine* 181(10):1275-80. doi: 10.7205/MILMED-D-15-00460.

Archer, Patrick. 2015. "Towards a Theory of Interest Claims in Constructing Social Problems." *Qualitative Sociology Review* 11(2):46-60. doi: 10.18778/1733-8077.11.2.04.

*Aronson, Keith R., Daniel F. Perkins, Nicole R. Morgan, Julia A. Bleser, Dawne Vogt, Laurel A. Copeland, Erin P. Finley and Cynthia L. Gilman. 2020. "The impact of adverse childhood experiences (ACEs) and combat exposure on mental health conditions among new post-9/11 veterans." *Psychological Trauma: Theory, Research, Practice, and Policy* 12(7):698-706. doi: 10.1037/tra0000614.

*Austin, Anna, Harry Herrick and Scott Proescholdbell. 2016. "Adverse Childhood Experiences Related to Poor Adult Health Among Lesbian, Gay, and Bisexual Individuals." *American Journal of Public Health* 106(2):314-20. doi: 10.2105/AJPH.2015.302904.

*Aykanian, Amanda and Ricka Olga Mammah. 2022. "Prevalence of Adverse Childhood Experiences Among Frontline Homeless Services Workers in Texas." *Families in Society: Journal of Contemporary Social Services* 103(4):438-49. doi: 10.1177/10443894211063579.

*Baglivio, Michael and Nathan Epps. 2015. "The Interrelatedness of Adverse Childhood Experiences Among High-Risk Juvenile Offenders." *Youth Violence & Juvenile Justice* 14(3):179-98. doi: 10.1177/1541204014566286.

*Baglivio, Michael, Kevin Wolff, Alex Piquero, Shay Bilchik, Katherine Jackowski, Mark Greenwald and Nathan Epps. 2015. "Maltreatment, Child Welfare, and Recidivism in a Sample of Deep-End Crossover Youth." *Journal of Youth & Adolescence* 45(4):625-54. doi: 10.1007/s10964-015-0407-9.

*Baglivio, Michael, Kevin Wolff, Alex Piquero, Mark Greenwald and Nathan Epps. 2016. "Racial/Ethnic Disproportionality in Psychiatric Diagnoses and Treatment in a Sample of Serious Juvenile Offenders." *Journal of Youth & Adolescence* 46(7):1424-51. doi: 10.1007/s10964-016-0573-4.

Baglivio, Michael T., Nathan Epps, Kimberly Swartz, Mona Sayedul Huq, Amy Sheer and Nancy S. Hardt. 2014. "The Prevalence of Adverse Childhood Experiences (ACE) in the Lives of Juvenile Offenders." *Journal of Juvenile Justice* 3(2):1-23.

*Balistreri, Kelly Stamper. 2015. "Adverse childhood experiences, the medical home, and child well-being." *Maternal and Child Health Journal* 19(11):2492-500. doi: 10.1007/s10995-015-1770-6.

Bambra, C., M. Gibson, A. Sowden, K. Wright, M. Whitehead and M. Petticrew. 2010. "Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews." *Journal of Epidemiology and Community Health* 64(4):284. doi: 10.1136/jech.2008.082743.

*Barboza, Gia Elise. 2017. "Latent Classes and Cumulative Impacts of Adverse Childhood Experiences." *Child Maltreatment* 23(2):111-25. doi: 10.1177/1077559517736628.

*Barile, John P., Valerie J. Edwards, Satvinder S. Dhingra and William W. Thompson. 2014. "Associations among county-level social determinants of health, child maltreatment, and emotional support on health-related quality of life in adulthood." *Psychology of Violence* 5(2):183-91. doi: 10.1037/a0038202.

*Barnhart, Sheila, Antonio R. Garcia and Nicole R. Karcher. 2022. "Adolescent Mental Health and Family Economic Hardships: The Roles of Adverse Childhood Experiences and Family Conflict." *Journal of Youth & Adolescence* 51(12):2294-311. doi: 10.1007/s10964-022-01671-9.

*Barrera, Irán, Vrinda Sharma and Yumiko Aratani. 2018. "The prevalence of mental illness and substance abuse among rural Latino adults with multiple adverse childhood experiences in California." *Journal of Immigrant and Minority Health* 21(5):971-76. doi: 10.1007/s10903-018-0811-9.

*Békés, Vera, Claire J. Starrs and J. Christopher Perry. 2022. "The COVID-19 pandemic as traumatic stressor: Distress in older adults is predicted by childhood trauma and mitigated by defensive functioning." *Psychological Trauma: Theory, Research, Practice, and Policy*. doi: 10.1037/tra0001253.

Bernard, Donte L., Casey D. Calhoun, Devin E. Banks, Colleen A. Halliday, Chanita Hughes-Halbert and Carla K. Danielson. 2021. "Making the "C-ACE" for a Culturally-Informed Adverse Childhood Experiences Framework to Understand the Pervasive Mental Health Impact of Racism on Black Youth." *Journal of Child & Adolescent Trauma* 14(2):233-47. doi: 10.1007/s40653-020-00319-9.

Best, Joel. 2017. *Social Problems*. New York: W.W. Norton & Company

Bethell, C. D., A. Carle, J. Hudziak, N. Gombojav, K. Powers, R. Wade and P. Braveman. 2017a. "Methods to Assess Adverse Childhood Experiences of Children and Families: Toward Approaches to Promote Child Well-being in Policy and Practice." *Acad Pediatr* 17(7s):S51-s69. doi: 10.1016/j.acap.2017.04.161.

Bethell, C. D., M. R. Solloway, S. Guinosso, S. Hassink, A. Srivastav, D. Ford and L. A. Simpson. 2017b. "Prioritizing Possibilities for Child and Family Health: An Agenda to Address Adverse Childhood Experiences and Foster the Social and Emotional Roots of Well-being in Pediatrics." *Acad Pediatr* 17(7S):S36-S50. doi: 10.1016/j.acap.2017.06.002.

*Blosnich, John R., Melissa E. Dichter, Catherine Cerulli, Sonja V. Batten and Robert M. Bossarte. 2014. "Disparities in adverse childhood experiences among individuals with a history of military service." *JAMA Psychiatry* 71(9):1041-48. doi: 10.1001/jamapsychiatry.2014.724.

*Blosnich, John R., Emmett R. Henderson, Robert W. S. Coulter, Jeremy T. Goldbach and Ilan H. Meyer. 2020. "Sexual Orientation Change Efforts, Adverse Childhood Experiences, and Suicide Ideation and Attempt Among Sexual Minority Adults, United States, 2016–2018." *American Journal of Public Health* 110(7):1024-30. doi: 10.2105/AJPH.2020.305637.

*Blosnich, John R., Dana Rose Garfin, Shira Maguen, Dawne Vogt, Melissa E. Dichter, Claire A. Hoffmire, Paul A. Bernhard and Aaron Schneiderman. 2021. "Differences in childhood adversity, suicidal ideation, and suicide attempt among veterans and nonveterans." *American Psychologist* 76(2):284-99. doi: 10.1037/amp0000755.

Blumer, Herbert. 1971. "Social Problems as Collective Behavior." *Social Problems* 18(3):298-306. doi: 10.2307/799797.

*Boch, S. J., B. J. Warren and J. L. Ford. 2019. "Attention, Externalizing, and Internalizing Problems of Youth Exposed to Parental Incarceration." *Issues Ment Health Nurs* 40(6):466-75. doi: 10.1080/01612840.2019.1565872.

*Boppre, Breanna and Cassandra Boyer. 2019. ""The Traps Started During My Childhood": The Role of Substance Abuse in Women's Responses to Adverse Childhood Experiences (ACEs)." *Journal of Aggression, Maltreatment & Trauma* 30(4):429-49. doi: 10.1080/10926771.2019.1651808.

*Bosch, Jeane, Terri L. Weaver and Lauren D. Arnold. 2019. "Impact of adverse childhood experiences on oral health among women in the United States: Findings from the Behavioral Risk Factor Surveillance System." *Journal of Interpersonal Violence* 36(21-22):10220-38. doi: 10.1177/0886260519883872.

Braveman, Paula, Susan Egerter and David R. Williams. 2011. "The Social Determinants of Health: Coming of Age." *Annual Review of Public Health* 32(1):381-98. doi: 10.1146/annurev-publhealth-031210-101218.

*Brindle, R. C., A. Pearson and A. T. Ginty. 2022. "Adverse childhood experiences (ACEs) relate to blunted cardiovascular and cortisol reactivity to acute laboratory stress: A systematic review and meta-analysis." *Neurosci Biobehav Rev* 134:104530. doi: 10.1016/j.neubiorev.2022.104530.

*Brockie, Teresa N., Gail Dana-Sacco, Gwenyth R. Wallen, Holly C. Wilcox and Jacquelyn C. Campbell. 2015. "The Relationship of Adverse Childhood Experiences to PTSD, Depression, Poly-Drug Use and Suicide Attempt in Reservation-Based Native American Adolescents and Young Adults." *American Journal of Community Psychology* 55(3/4):411-21. doi: 10.1007/s10464-015-9721-3.

*Brown, Monique J., Amandeep Kaur, Titilayo James, Carlos Avalos, Prince N. O. Addo, Elizabeth Crouch and Nikki L. Hill. 2021. "Adverse Childhood Experiences and Subjective Cognitive Decline in the US." *Journal of Applied Gerontology* 41(4):1090-100. doi: 10.1177/07334648211058718.

*Brumley, Lauren D., Maya Nauphal, Lisa A. Schwartz and Sara R. Jaffee. 2020. "Psychosocial Correlates and Consequences of Adolescents' Self-Generated Academic Goals and Appraisals." *Journal of Research on Adolescence (Wiley-Blackwell)* 31(1):204-17. doi: 10.1111/jora.12593.

*Burnette, Catherine Elizabeth, Roh Soonhee, Lee Kyoung Hag, Lee Yeon-Shim, Lisa A. Newland and Jun Jung Sim. 2016. "A Comparison of Risk and Protective Factors Related to Depressive Symptoms among American Indian and Caucasian Older Adults." *Health & Social Work* 42(1):e15-e23. doi: 10.1093/hsw/hlw055.

Burstein, Paul. 2014. *American Public Opinion, Advocacy, and Policy in Congress: What the Public Wants and What It Gets*. Cambridge: Cambridge University Press.

Centers for Disease Control and Prevention. 2014, "About BRFSS": U.S. Department of Health & Human Services. Retrieved 3/27/23, (https://www.cdc.gov/brfss/about/index.htm).

*Chatterjee, D., B. McMorris, A. L. Gower, M. Forster, I. W. Borowsky and M. E. Eisenberg. 2018. "Adverse Childhood Experiences and Early Initiation of Marijuana and Alcohol Use: The Potential Moderating Effects of Internal Assets." *Subst Use Misuse* 53(10):1624-32. doi: 10.1080/10826084.2017.1421224.

*Cho, Hyunkag, Esther Son, Seon Jisuk, Yun Sung Hyun, Choi Ga-Young and Jungeun Olivia Lee. 2021. "Child Maltreatment, Peer Victimization, Bystander Intervention Outcomes, and Survivors' Long-term Health." *Child Welfare* 99(5):1-23.

*Cigrang, Jeff, Christina Balderrama-Durbin, Douglas K. Snyder, Aleja M. Parsons, Kelsey Lorko, Avantika Gupta, Amy M. Smith Slep, Richard E. Heyman, Danielle M. Mitnick, Kati L. Wijdenes and Courtney Yahle. 2021. "Predicting marital health from adverse

childhood experiences among United States air force active-duty personnel." *Couple and Family Psychology: Research and Practice*. doi: 10.1037/cfp0000207.

*Connolly, Eric J. 2019. "Further Evaluating the Relationship Between Adverse Childhood Experiences, Antisocial Behavior, and Violent Victimization: A Sibling-Comparison Analysis." *Youth Violence & Juvenile Justice* 18(1):3-23. doi: 10.1177/1541204019833145.

*Cosanella, Taylor, Nicolette Youkhaneh, Nicole Bennett and Holly E. R. Morrell. 2019. "Demographic moderators of the relationship between adverse childhood experiences and cigarette smoking." *Substance Use & Misuse* 54(13):2229-40. doi: 10.1080/10826084.2019.1642358.

*Cprek, Sarah E., Lucy H. Williamson, Honour McDaniel, Rachel Brase and Corrine M. Williams. 2019. "Adverse Childhood Experiences (ACEs) and Risk of Childhood Delays in Children Ages 1–5." *Child & Adolescent Social Work Journal* 37(1):15-24. doi: 10.1007/s10560-019-00622-x.

*Craig, Jessica M., Michael T. Baglivio, Kevin T. Wolff, Alex R. Piquero and Nathan Epps. 2016. "Do Social Bonds Buffer the Impact of Adverse Childhood Experiences on Reoffending?". *Youth Violence & Juvenile Justice* 15(1):3-20. doi: 10.1177/1541204016630033.

*Craig, Jessica M., Jonathan Intravia, Kevin T. Wolff and Michael T. Baglivio. 2017. "What Can Help? Examining Levels of Substance (Non)use as a Protective Factor in the Effect of ACEs on Crime." *Youth Violence & Juvenile Justice* 17(1):42-61. doi: 10.1177/1541204017728998.

*Craig, Jessica M., Haley R. Zettler, Kevin T. Wolff and Michael T. Baglivio. 2018. "Considering the Mediating Effects of Drug and Alcohol Use, Mental Health, and Their Co-Occurrence on the Adverse Childhood Experiences–Recidivism Relationship." *Youth Violence & Juvenile Justice* 17(3):219-40. doi: 10.1177/1541204018796910.

*Craig, Jessica M., Chad R. Trulson, Matt DeLisi and Jon W. Caudill. 2020. "Toward an Understanding of the Impact of Adverse Childhood Experiences on the Recidivism of Serious Juvenile Offenders." *American Journal of Criminal Justice* 45(6):1024-39. doi: 10.1007/s12103-020-09524-6.

*Craig, Jessica M. and Haley R. Zettler. 2020. "Are the Effects of Adverse Childhood Experiences on Violent Recidivism Offense-Specific?". *Youth Violence & Juvenile Justice* 19(1):27-44. doi: 10.1177/1541204020939638.

Crespo, C. J., S. J. Keteyian, G. W. Heath and C. T. Sempos. 1996. "Leisure-time physical activity among US adults. Results from the Third National Health and Nutrition Examination Survey." *Arch Intern Med* 156(1):93-8.

*Crouch, E., E. Radcliff, M. Strompolis and A. Wilson. 2018a. "Examining the association between adverse childhood experiences and smoking-exacerbated illnesses." *Public Health* 157:62-68. doi: 10.1016/j.puhe.2018.01.021.

*Crouch, Elizabeth, Elizabeth Radcliff, Melissa Strompolis and Aditi Srivastav. 2018b. "Safe, Stable, and Nurtured: Protective Factors against Poor Physical and Mental Health Outcomes Following Exposure to Adverse Childhood Experiences (ACEs)." *Journal of Child & Adolescent Trauma* 12(2):165-73. doi: 10.1007/s40653-018-0217-9.

*Crouch, Elizabeth, Elizabeth Radcliff, Melissa Strompolis, Kevin J. Bennett and Janice C. Probst. 2019. "Examining the impact of a protective adult on long-term mental health among rural residents." *Journal of Rural Mental Health* 43(2-3):81-90. doi: 10.1037/rmh0000113.

*Cunningham, T. J., E. S. Ford, J. B. Croft, M. T. Merrick, I. V. Rolle and W. H. Giles. 2014. "Sex-specific relationships between adverse childhood experiences and chronic obstructive pulmonary disease in five states." *Int J Chron Obstruct Pulmon Dis* 9:1033-42. doi: 10.2147/copd.S68226.

*Cunradi, Carol B., Raul Caetano, Harrison J. Alter and William R. Ponicki. 2020. "Adverse childhood experiences are associated with at-risk drinking, cannabis and illicit drug use in females but not males: an Emergency Department study." *American Journal of Drug & Alcohol Abuse* 46(6):739-48. doi: 10.1080/00952990.2020.1823989.

Dahlgren, Göran and Margaret Whitehead. 1991. "Policies and strategies to promote social equity in health. Background document to WHO - Strategy paper for Europe." *Institute for Futures Studies, Arbetsrapport* 14.

*Davis, Jordan P., Katie A. Ports, Kathleen C. Basile, Dorothy L. Espelage and Corinne F. David-Ferdon. 2019. "Understanding the Buffering Effects of Protective Factors on the Relationship between Adverse Childhood Experiences and Teen Dating Violence Perpetration." *Journal of Youth & Adolescence* 48(12):2343-59. doi: 10.1007/s10964-019-01028-9.

Dong, Maxia, Robert F. Anda, Vincent J. Felitti, Shanta R. Dube, David F. Williamson, Theodore J. Thompson, Clifton M. Loo and Wayne H. Giles. 2004. "The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction." *Child Abuse & Neglect* 28(7):771-84. doi: https://doi.org/10.1016/j.chiabu.2004.01.008.

*Downey, Jacy, Clinton Gudmunson, Yuk Pang and Kyuho Lee. 2017. "Adverse Childhood Experiences Affect Health Risk Behaviors and Chronic Health of Iowans." *Journal of Family Violence* 32(6):557-64. doi: 10.1007/s10896-017-9909-4.

Dube, Shanta R. 2018. "Continuing conversations about adverse childhood experiences (ACEs) screening: A public health perspective." *Child Abuse & Neglect* 85:180-84. doi: https://doi.org/10.1016/j.chiabu.2018.03.007.

EBSCO. 2023, "Abstracting & Indexing Database: SocINDEX": EBSCO. Retrieved 3/7/2023, (https://www.ebsco.com/products/research-databases/socindex).

Felitti, Vincent J., Robert F. Anda, Dale Nordenberg, David F. Williamson, Alison M. Spitz, Valerie Edwards, Mary P. Koss and James S. Marks. 1998. "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study." *Am J Prev Med* 14(4):245-58.

Felitti, Vincent J. and Robert F. Anda. 2010. "The relationship of adverse childhood experiences to adult medical disease, psychiatric disorders and sexual behavior: implications for healthcare." Pp. 77-87 in *The Impact of Early Life Trauma on Health and Disease: The Hidden Epidemic*, edited by R. A. Lanius, E. Vermetten and C. Pain. Cambridge, UK: Cambridge University Press.

Finkelhor, D., S. L. Hamby, R. Ormrod and H. Turner. 2005. "The Juvenile Victimization Questionnaire: reliability, validity, and national norms." *Child Abuse Negl* 29(4):383-412. doi: 10.1016/j.chiabu.2004.11.001.

Finkelhor, D., A. Shattuck, H. Turner and S. Hamby. 2013. "Improving the adverse childhood experiences study scale." *JAMA Pediatr* 167(1):70-5. doi: 10.1001/jamapediatrics.2013.420.

Finkelhor, David, Anne Shattuck, Heather Turner and Sherry Hamby. 2015. "A revised inventory of Adverse Childhood Experiences." *Child Abuse & Neglect* 48:13-21. doi: https://doi.org/10.1016/j.chiabu.2015.07.011.

*Ford, E. S., R. F. Anda, V. J. Edwards, G. S. Perry, G. Zhao, C. Li and J. B. Croft. 2011. "Adverse childhood experiences and smoking status in five states." *Prev Med* 53(3):188-93. doi: 10.1016/j.ypmed.2011.06.015.

*Forster, Myriam, Timothy J. Grigsby, Amy L. Gower, Christopher J. Mehus and Barbara J. McMorris. 2020. "The Role of Social Support in the Association between Childhood Adversity and Adolescent Self-injury and Suicide: Findings from a Statewide Sample of High School Students." *Journal of Youth & Adolescence* 49(6):1195-208. doi: 10.1007/s10964-020-01235-9.

*Fox, Bryanna, Kelly Kortright, Lexi Gill, Daniela Oramas Mora, Richard K. Moule Jr and Edelyn Verona. 2020. "Heterogeneity in the Continuity and Change of Early and Adult Risk Factor Profiles of Incarcerated Individuals: A Latent Transition Analysis." *Youth Violence & Juvenile Justice* 19(1):68-93. doi: 10.1177/1541204020939648.

*Freeny, Jamie, Melissa Peskin, Vanessa Schick, Paula Cuccaro, Robert Addy, Robert Morgan, Kimberly Kay Lopez and Kimberly Johnson-Baker. 2021. "Adverse Childhood Experiences, Depression, Resilience, & Spirituality in African-American Adolescents." *Journal of Child & Adolescent Trauma* 14(2):209-21. doi: 10.1007/s40653-020-00335-9.

Fuller, Richard C. and Richard R. Myers. 1941. "The Natural History of a Social Problem." *American Sociological Review* 6(3):320-29. doi: 10.2307/2086189.

Gangamma, Rashmi, Shaelise Tor, Vanessa Whitt, Brandon Hollie, Qianhui Gao, Armirah Stephens, Ryan Hutchings and Linda Stone Fish. 2020. "Perceived Discrimination as a Mediator of ACEs and Psychological Distress." *American Journal of Family Therapy* 49(3):282-98. doi: 10.1080/01926187.2020.1813656.

*Giano, Z. and R. D. Hubach. 2019. "Adverse childhood experiences and mental health: Comparing the link in rural and urban men who have sex with men." *J Affect Disord* 259:362-69. doi: 10.1016/j.jad.2019.08.044.

*Gilin, Barbara and Stephen Kauffman. 2015. "Strategies for Teaching About Trauma to Graduate Social Work Students." *Journal of Teaching in Social Work* 35(4):378-96. doi: 10.1080/08841233.2015.1065945.

Gormley, William T., Jr. and Institution Brookings. 2012. *Voices for children: rhetoric and public policy*. Washington, D.C: Brookings Institution Press.

*Haahr-Pedersen, Ida, Camila Perera, Philip Hyland, Frédérique Vallières, David Murphy, Maj Hansen, Pernille Spitz, Pernille Hansen and Marylène Cloitre. 2020. "Females have more complex patterns of childhood adversity: Implications for mental, social, and emotional outcomes in adulthood." *European Journal of Psychotraumatology* 11(1). doi: 10.1080/20008198.2019.1708618.

*Hall, Kelcey L., Jill D. Stinson and Michele R. Moser. 2017. "Impact of Childhood Adversity and Out-of-Home Placement for Male Adolescents Who Have Engaged in Sexually Abusive Behavior." *Child Maltreatment* 23(1):63-73. doi: 10.1177/1077559517720726.

Hamilton, C. M., L. C. Strader, J. G. Pratt, D. Maiese, T. Hendershot, R. K. Kwok, J. A. Hammond, W. Huggins, D. Jackman, H. Pan, D. S. Nettles, T. H. Beaty, L. A. Farrer, P. Kraft, M. L. Marazita, J. M. Ordovas, C. N. Pato, M. R. Spitz, D. Wagener, M. Williams, H. A. Junkins, W. R. Harlan, E. M. Ramos and J. Haines. 2011. "The PhenX Toolkit: get the most from your measures." *Am J Epidemiol* 174(3):253-60. doi: 10.1093/aje/kwr193.

*Henry, Lauren M., Kathy Gracey, April Shaffer, Jon Ebert, Tarah Kuhn, Kelly H. Watson, Meredith Gruhn, Allison Vreeland, Rachel Siciliano, Lindsay Dickey, Victoria Lawson, Cassandra Broll, David A. Cole and Bruce E. Compas. 2020. "Comparison of three models of adverse childhood experiences: Associations with child and adolescent internalizing and externalizing symptoms." *Journal of Abnormal Psychology* 130(1):9-25. doi: 10.1037/abn0000644.

*Hinojosa, Melanie Sberna, Ramon Hinojosa, Melissa Bright and Jenny Nguyen. 2019. "Adverse Childhood Experiences and Grade Retention in a National Sample of US Children." *Sociological Inquiry* 89(3):401-26. doi: 10.1111/soin.12272.

*Holman, D. M., K. A. Ports, N. D. Buchanan, N. A. Hawkins, M. T. Merrick, M. Metzler and K. F. Trivers. 2016. "The Association Between Adverse Childhood Experiences and Risk of Cancer in Adulthood: A Systematic Review of the Literature." *Pediatrics* 138(Suppl 1):S81-s91. doi: 10.1542/peds.2015-4268L.

Hughes, M. and W. Tucker. 2018. "Poverty as an Adverse Childhood Experience." *N C Med J* 79(2):124-26. doi: 10.18043/ncm.79.2.124.

*Iachini, Aidyn L., Aliza F. Petiwala and Dana D. DeHart. 2016. "Examining Adverse Childhood Experiences among Students Repeating the Ninth Grade: Implications for School Dropout Prevention." *Children & Schools* 38(4):218-26. doi: 10.1093/cs/cdw029.

*Jones, Melissa S. and Hayley Pierce. 2020. "Early Exposure to Adverse Childhood Experiences and Youth Delinquent Behavior in Fragile Families." *Youth & Society* 53(5):841-67. doi: 10.1177/0044118X20908759.

*Jones, Melissa S., Hayley Pierce and Constance L. Chapple. 2021. "Early Adverse Childhood Experiences and Self-Control Development among Youth in Fragile Families." *Youth & Society* 54(5):806-32. doi: 10.1177/0044118X21996378.

Kalmakis, K. A. and G. E. Chandler. 2014. "Adverse childhood experiences: towards a clear conceptual meaning." *J Adv Nurs* 70(7):1489-501. doi: 10.1111/jan.12329.

Kalmakis, K. A. and G. E. Chandler. 2015. "Health consequences of adverse childhood experiences: a systematic review." *J Am Assoc Nurse Pract* 27(8):457-65. doi: 10.1002/2327-6924.12215.

Karatekin, C. and M. Hill. 2019. "Expanding the Original Definition of Adverse Childhood Experiences (ACEs)." *J Child Adolesc Trauma* 12(3):289-306. doi: 10.1007/s40653-018-0237-5.

*Keesler, John M., Megan Tucker, Brandy Terrell, Kacie Shipman and Ramona Osborne. 2020. "Two Schools, One Rural County: Exploring Adverse Childhood Experiences Among

School-Aged Youth." *Journal of Aggression, Maltreatment & Trauma* 30(1):101-17. doi: 10.1080/10926771.2020.1747130.

Kelly-Irving, Michelle and Cyrille Delpierre. 2019. "A Critique of the Adverse Childhood Experiences Framework in Epidemiology and Public Health: Uses and Misuses." *Social Policy and Society* 18(3):445-56. doi: 10.1017/S1474746419000101.

*Kerridge, Bradley T., S. Patricia Chou, Boji Huang and Thomas C. Harford. 2020. "Sociodemographic characteristics, adverse childhood experiences, and substance use and psychiatric disorders among adolescent-limited, adult-onset, life-course-persistent offenders and nonoffenders in a general population survey." *Crime & Delinquency* 66(12):1729-53. doi: 10.1177/0011128720915697.

*Kim, Youngmi, Kyeongmo Kim, Karen G. Chartier, Traci L. Wike and Shelby E. McDonald. 2019. "Adverse childhood experience patterns, major depressive disorder, and substance use disorder in older adults." *Aging & Mental Health* 25(3):484-91. doi: 10.1080/13607863.2019.1693974.

*King, Alan R. 2020. "The ACE Questionnaire and Lifetime Physical Aggression." *Journal of Aggression, Maltreatment & Trauma* 30(2):243-60. doi: 10.1080/10926771.2020.1796875.

Kingdon, John W. 1984. *Agendas, alternatives, and public policies*. Boston: Little, Brown.

*Kowalski, Melissa A. 2018. "Adverse Childhood Experiences and Justice-Involved Youth: The Effect of Trauma and Programming on Different Recidivistic Outcomes." *Youth Violence & Juvenile Justice* 17(4):354-84. doi: 10.1177/1541204018809836.

*LaBrenz, Catherine A., Philip Baiden, Erin Findley, Patrick S. Tennant and Sreyashi Chakravarty. 2021. "Maternal Adverse Childhood Experience Exposure and Resilience During COVID-19." *Families in Society: Journal of Contemporary Social Services* 102(3):385-99. doi: 10.1177/10443894211002323.

*Laird, Christina W. and Patricia Alexander. 2019. "Prevalence of Adverse Childhood Experiences Among Veterans." *Clinical Social Work Journal* 47(4):384-93. doi: 10.1007/s10615-019-00703-5.

*Lee, Hana, Kristen S. Slack, Lawrence M. Berger, Rebecca S. Mather and Rebecca K. Murray. 2021. "Childhood Poverty, Adverse Childhood Experiences, and Adult Health Outcomes." *Health & Social Work* 46(3):159-70. doi: 10.1093/hsw/hlab018.

*Lex, H., Y. Ginsburg, A. F. Sitzmann, C. Grayhack, D. F. Maixner and B. J. Mickey. 2018. "Quality of life across domains among individuals with treatment-resistant depression." *J Affect Disord* 243:401-07. doi: 10.1016/j.jad.2018.09.062.

*Liming, Kiley W. 2018. "Examining the Differing Effects of Economic Hardship and Poor Maternal Wellbeing on Cumulative Exposure to Adverse Childhood Experiences." *Journal of Child & Adolescent Trauma* 12(3):307-21. doi: 10.1007/s40653-018-0230-z.

*Liu, Sabrina R., Maryam Kia-Keating, Karen Nylund-Gibson and Miya L. Barnett. 2019. "Co-Occurring Youth Profiles of Adverse Childhood Experiences and Protective Factors: Associations with Health, Resilience, and Racial Disparities." *American Journal of Community Psychology* 65(1/2):173-86. doi: 10.1002/ajcp.12387.

*Liu, Yong, Janet B. Croft, Daniel P. Chapman, Geraldine S. Perry, Kurt J. Greenlund, Guixiang Zhao and Valerie J. Edwards. 2012. "Relationship between adverse childhood experiences and unemployment among adults from five US states." *Social Psychiatry and Psychiatric Epidemiology: The International Journal for Research in Social and Genetic Epidemiology and Mental Health Services* 48(3):357-69. doi: 10.1007/s00127-012-0554-1.

*Lockwood, Ashley, Jennifer H. Peck, Kevin T. Wolff and Michael T. Baglivio. 2021. "Understanding Adverse Childhood Experiences and Juvenile Court Outcomes: The Moderating Role of Race and Ethnicity." *Youth Violence & Juvenile Justice* 20(2):83-112. doi: 10.1177/15412040211063437.

*Logan-Greene, Patricia, Robert Tennyson, Paula Nurius and Sharon Borja. 2017. "Adverse Childhood Experiences, Coping Resources, and Mental Health Problems among Court-Involved Youth." *Child & Youth Care Forum* 46(6):923-46. doi: 10.1007/s10566-017-9413-2.

Loxton, Deborah, Natalie Townsend, Xenia Dolja-Gore, Peta Forder and Jan Coles. 2019. "Adverse Childhood Experiences and Healthcare Costs in Adult Life." *Journal of Child Sexual Abuse* 28(5):511-25. doi: 10.1080/10538712.2018.1523814.

*Lynch, Laura, Roberta Waite and Maureen Davey. 2013. "Adverse Childhood Experiences and Diabetes in Adulthood: Support for a Collaborative Approach to Primary Care." *Contemporary Family Therapy: An International Journal* 35(4):639-55. doi: 10.1007/s10591-013-9262-6.

Maine Resilience Building Network. 2022, "Maine Resilience Building Network". Retrieved April 3, 2023, (https://maineresilience.org).

Marmot, M. and R. Bell. 2012. "Fair society, healthy lives." *Public Health* 126 Suppl 1:S4-s10. doi: 10.1016/j.puhe.2012.05.014.

Maternal and Child Health Bureau. 2020. "Adverse Childhood Experiences NSCH Data Brief June 2020." Health Resources & Services Administration.

*McCauley, H. L., J. R. Blosnich and M. E. Dichter. 2015. "Adverse Childhood Experiences and Adult Health Outcomes Among Veteran and Non-Veteran Women." *J Womens Health (Larchmt)* 24(9):723-9. doi: 10.1089/jwh.2014.4997.

*McCoy, Kelsey, Jessie J. Tibbs, Mark DeKraai and David J. Hansen. 2020. "Household Dysfunction and Adolescent Substance Use: Moderating Effects of Family, Community, and School Support." *Journal of Child & Adolescent Substance Abuse* 29(1):68-79. doi: 10.1080/1067828X.2020.1837320.

*McDermott, Cassidy L., Katherine Hilton, Anne T. Park, Ursula A. Tooley, Austin L. Boroshok, Muralidhar Mupparapu, JoAnna M. Scott, Erin E. Bumann and Allyson P. Mackey. 2021. "Early life stress is associated with earlier emergence of permanent molars." *PNAS Proceedings of the National Academy of Sciences of the United States of America* 118(24). doi: 10.1073/pnas.2105304118.

McEwen, Craig A. and Bruce S. McEwen. 2017. "Social Structure, Adversity, Toxic Stress, and Intergenerational Poverty: An Early Childhood Model." *Annu. Rev. Sociol.* 43:445-72. doi: 10.1146/annurev-soc-060116-053252.

*Melville, Alysse. 2017. "Adverse Childhood Experiences from Ages 0-2 and Young Adult Health: Implications for Preventive Screening and Early Intervention." *Journal of Child & Adolescent Trauma* 10(3):207-15. doi: 10.1007/s40653-017-0161-0.

Mencarini, Matt. 2018, "Judges deny Larry Nassar's appeal, uphold sentence on federal child-porn convictions": USA Today. Retrieved April 1, 2023, (https://www.usatoday.com/story/news/nation-now/2018/08/22/larry-nassar-federal-sentence-appeal-child-porn-convictions/1063366002/).

*Merians, A. N., M. R. Baker, P. Frazier and K. Lust. 2018. "Outcomes related to adverse childhood experiences in college students: Comparing latent class analysis and cumulative risk." *Child Abuse Negl* 87:51-64. doi: 10.1016/j.chiabu.2018.07.020.

*Merrick, Melissa T., Derek C. Ford, Tamara M. Haegerich and Thomas Simon. 2020. "Adverse childhood experiences increase risk for prescription opioid misuse." *The Journal of Primary Prevention* 41(2):139-52. doi: 10.1007/s10935-020-00578-0.

*Mersky, Joshua P., Colleen E. Janczewski and James Topitzes. 2016. "Rethinking the Measurement of Adversity." *Child Maltreatment* 22(1):58-68. doi: 10.1177/1077559516679513.

Metzler, Marilyn, Melissa T. Merrick, Joanne Klevens, Katie A. Ports and Derek C. Ford. 2017. "Adverse childhood experiences and life opportunities: Shifting the narrative." *Children and Youth Services Review* 72:141-49. doi: 10.1016/j.childyouth.2016.10.021.

*Miccoli, A., J. Song, M. Romanowicz, F. Howie, S. Simar and B. A. Lynch. 2022. "Impact of Parental Adverse Childhood Experiences on Offspring Development in Early Head Start: Parental Adversity and Offspring Development." *J Prim Care Community Health* 13:21501319221084165. doi: 10.1177/21501319221084165.

Miller, Gale and James A. Holstein. 1993. "Reconsidering Social Constructionism." Pp. 5-23 in *Reconsidering Social Constructionism: Debates in Social Problems Theory*, edited by J. A. Holstein and G. Miller. New York, NY: Aldine de Gruyter.

*Monnat, Shannon M. and Raeven Faye Chandler. 2015. "Long-Term Physical Health Consequences of Adverse Childhood Experiences." *Sociological Quarterly* 56(4):723-52. doi: 10.1111/tsq.12107.

*Montgomery, Ann Elizabeth, J. J. Cutuli, Michelle Evans-Chase, Dan Treglia and Dennis P. Culhane. 2013. "Relationship Among Adverse Childhood Experiences, History of Active Military Service, and Adult Outcomes: Homelessness, Mental Health, and Physical Health." *American Journal of Public Health* 103(S2):S262-S68. doi: 10.2105/AJPH.2013.301474.

*Mosley-Johnson, Elise, Emma Garacci, Nick Wagner, Carlos Mendez, Joni S. Williams and Leonard E. Egede. 2018. "Assessing the relationship between adverse childhood experiences and life satisfaction, psychological well-being, and social well-being: United States Longitudinal Cohort 1995–2014." *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation* 28(4):907-14. doi: 10.1007/s11136-018-2054-6.

*Mouton, Charles P., Margaret K. Hargreaves, Jianguo Liu, Saudat Fadeyi and William J. Blot. 2016. "Adult cancer risk behaviors associated with adverse childhood experiences in a low income population in the southeastern United States." *Journal of Health Care for the Poor and Underserved* 27(1):68-83. doi: 10.1353/hpu.2016.0027.

Munn, Zachary, Micah D. J. Peters, Cindy Stern, Catalin Tufanaru, Alexa McArthur and Edoardo Aromataris. 2018. "Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach." *BMC Medical Research Methodology* 18(1):143. doi: 10.1186/s12874-018-0611-x.

National Center for Biotechnology Information. N.d., "PubMed Overview": NIH National Library of Medicine. Retrieved 3/7/23, (https://pubmed.ncbi.nlm.nih.gov/about/).

National Center for Injury Prevention and Control. 2020, "Behavioral Risk Factor Surveillance System ACE Data": Centers for Disease Control and Prevention. Retrieved 3/30/23, (https://www.cdc.gov/violenceprevention/aces/ace-brfss.html).

NIH National Library of Medicine. 2021, "List of All Journals Cited in PubMed": National Library of Medicine. Retrieved 3/7/23, (https://www.nlm.nih.gov/bsd/serfile_addedinfo.html).

*Oh, D. L., P. Jerman, S. Silvério Marques, K. Koita, S. K. Purewal Boparai, N. Burke Harris and M. Bucci. 2018. "Systematic review of pediatric health outcomes associated with childhood adversity." *BMC Pediatr* 18(1):83. doi: 10.1186/s12887-018-1037-7.

*Okwori, Glory, Steven Stewart, Megan Quinn and Delaney Lawson. 2021. "Health Care Burden and Expenditure Associated with Adverse Childhood Experiences in Tennessee and Virginia." *Journal of Child & Adolescent Trauma* 15(3):727-39. doi: 10.1007/s40653-021-00390-w.

*Ottenhoff, J. S. E., J. T. P. Kortlever, E. Z. Boersma, D. C. Laverty, D. Ring and M. D. Driscoll. 2018. "Adverse Childhood Experiences Are Not Associated With Patient-reported Outcome Measures in Patients With Musculoskeletal Illness." *Clin Orthop Relat Res* 477(1):219-28. doi: 10.1097/corr.0000000000000519.

*Pace, C. S., S. Muzi, G. Rogier, L. L. Meinero and S. Marcenaro. 2022. "The Adverse Childhood Experiences - International Questionnaire (ACE-IQ) in community samples around the world: A systematic review (part I)." *Child Abuse Negl* 129:105640. doi: 10.1016/j.chiabu.2022.105640.

*Perez, Nicholas, Wesley Jennings, Alex Piquero and Michael Baglivio. 2016. "Adverse Childhood Experiences and Suicide Attempts: The Mediating Influence of Personality Development and Problem Behaviors." *Journal of Youth & Adolescence* 45(8):1527-45. doi: 10.1007/s10964-016-0519-x.

Peters, Micah D. J., Christina M. Godfrey, Hanan Khalil, Patricia McInerney, Deborah Parker and Cassia Baldini Soares. 2015. "Guidance for conducting systematic scoping reviews." *JBI Evidence Implementation* 13(3).

*Petruccelli, K., J. Davis and T. Berman. 2019. "Adverse childhood experiences and associated health outcomes: A systematic review and meta-analysis." *Child Abuse Negl* 97:104127. doi: 10.1016/j.chiabu.2019.104127.

*Pierce, Hayley, Melissa S. Jones and Emley A. Holcombe. 2022. "Early Adverse Childhood Experiences and Social Skills Among Youth in Fragile Families." *Journal of Youth & Adolescence* 51(8):1497-510. doi: 10.1007/s10964-022-01607-3.

Pittner, Katharina, Marian J. Bakermans-Kranenburg, Lenneke R. A. Alink, Renate S. M. Buisman, Lisa J. M. van den Berg, Laura H. C. G. C. Compier-de Block, Alexandra Voorthuis, Bernet M. Elzinga, Jolanda Lindenberg, Marieke S. Tollenaar, Mariëlle Linting, Vincent P. Diego and Marinus H. van IJzendoorn. 2020. "Estimating the Heritability of Experiencing Child Maltreatment in an Extended Family Design." *Child Maltreatment* 25(3):289-99. doi: 10.1177/1077559519888587.

*Polick, C. S., S. R. Polick and S. A. Stoddard. 2022. "Relationships between childhood trauma and multiple sclerosis: A systematic review." *J Psychosom Res* 160:110981. doi: 10.1016/j.jpsychores.2022.110981.

Public Health Management Corporation, Merritt MB, Cronholm P, Davis M, Dempsey S, Fein J, Kuykendall SA, Pachter L and Wade R. 2013. "Findings from the Philadelphia Urban ACE Survey." Robert Wood Johnson Foundation: Institute for Safe Families.

Public Health Scotland Childhood Adversity Team. 2021, "Adverse Childhood Experiences (ACEs)": Public Health Scotland. Retrieved April 2, 2023, (https://www.healthscotland.scot/population-groups/children/adverse-childhood-experiences-aces/overview-of-aces).

Purtle, J., F. Lê-Scherban, X. Wang, E. Brown and M. Chilton. 2019. "State Legislators' Opinions About Adverse Childhood Experiences as Risk Factors for Adult Behavioral Health Conditions." *Psychiatr Serv* 70(10):894-900. doi: 10.1176/appi.ps.201900175.

*Radcliff, E., E. Crouch and M. Strompolis. 2018. "Rural-urban differences in exposure to adverse childhood experiences among South Carolina adults." *Rural Remote Health* 18(1):4434. doi: 10.22605/rrh4434.

*Rebbe, R., P. S. Nurius, M. E. Courtney and K. R. Ahrens. 2018. "Adverse Childhood Experiences and Young Adult Health Outcomes Among Youth Aging Out of Foster Care." *Acad Pediatr* 18(5):502-09. doi: 10.1016/j.acap.2018.04.011.

*Reed-Fitzke, Kayla, James M. Duncan, Armeda S. Wojciak, Anthony J. Ferraro, Jennifer Sánchez and Kevin M. Smith. 2022. "A person-centered approach to identifying at-risk US army soldiers-in-training based on adverse childhood experiences." *Traumatology*. doi: 10.1037/trm0000395.

*Reid, Joan A., Michael T. Baglivio, Alex R. Piquero, Mark A. Greenwald and Nathan Epps. 2017. "Human Trafficking of Minors and Childhood Adversity in Florida." *American Journal of Public Health* 107(2):306-11. doi: 10.2105/AJPH.2016.303564.

Robins, L. N., J. E. Helzer, J. Croughan and K. S. Ratcliff. 1981. "National Institute of Mental Health Diagnostic Interview Schedule. Its history, characteristics, and validity." *Arch Gen Psychiatry* 38(4):381-9. doi: 10.1001/archpsyc.1981.01780290015001.

*Roh, Soonhee, Catherine E. Burnette, Kyoung Hag Lee, Yeon-Shim Lee, Scott D. Easton and Michael J. Lawler. 2014. "Risk and protective factors for depressive symptoms among American Indian older adults: Adverse childhood experiences and social support." *Aging & Mental Health* 19(4):371-80. doi: 10.1080/13607863.2014.938603.

*Ronnenberg, Megan, Aislinn Conrad, Armeda Stevenson Wojciak and Elizabeth Menninga. 2020. "More than therapy: The link between adverse childhood experiences, social support, and therapeutic services." *Child & Family Social Work* 25(3):683-93. doi: 10.1111/cfs.12745.

Schneider, Joseph W. 1985. "Social Problems Theory: The Constructionist View." *Ann. Rev. Sociol.* 11:209-29.

Schoenborn, Charlotte A. 1991. "Exposure to alcoholism in the family: United States, 1988." *Adv Data.* 205. National Center for Health Statistics.

Science and Technology Committee. 2018. *Evidence-based early years intervention.* HC 506, House of Commons, UK Parliament, (https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/506/506.pdf).

*Shaefer, H. Luke, Adrienne Lapidos, Reid Wilson and Sandra Danziger. 2018. "Association of Income and Adversity in Childhood with Adult Health and Well-Being." *Social Service Review* 92(1):69-92. doi: 10.1086/696891.

*Shafer, Kevin and Scott D. Easton. 2021. "Adverse Childhood Experiences, Psychological Distress, and Fathering Behaviors." *Journal of Marriage & Family* 83(4):1076-98. doi: 10.1111/jomf.12759.

*Sheffler, Julia L., Jennifer R. Piazza, Jamie M. Quinn, Natalie J. Sachs-Ericsson and Ian H. Stanley. 2019. "Adverse childhood experiences and coping strategies: Identifying pathways to resiliency in adulthood." *Anxiety, Stress & Coping: An International Journal* 32(5):594-609. doi: 10.1080/10615806.2019.1638699.

*Sieben, Andrew, Lynette M. Renner, Katherine Lust, William Vang and Ruby H. N. Nguyen. 2019. "Adverse Childhood Experiences Among Asian/Pacific Islander Sexual Minority College Students." *Journal of Family Violence* 35(3):297-303. doi: 10.1007/s10896-019-00095-7.

Siegel, P. Z., E. L. Frazier, P. Mariolis, R. M. Brackbill and C. Smith. 1992. "Behavioral Risk Factor Surveillance, 1991: monitoring progress toward the nation's year 2000 health objectives." *MMWR CDC Surveill Summ* 42(4):1-21.

*Slack, Kristen S., Sarah A. Font and Jennifer Jones. 2016. "The Complex Interplay of Adverse Childhood Experiences, Race, and Income." *Health & Social Work* 42(1):e24-e31. doi: 10.1093/hsw/hlw059.

Spector, Malcolm and John I. Kitsuse. 1987. *Constructing Social Problems*. New York, NY: Aldine De Gruyter.

*Srivastav, Aditi, Rachel E. Davis, Melissa Strompolis, Elizabeth Crouch, James F. Thrasher and Mindi Spencer. 2019. "Responding to Adverse Childhood Experiences: Understanding the Role of Safe, Stable, and Nurturing Relationships in Reducing Alcohol and Tobacco Related Risk Behaviors." *Journal of Child & Adolescent Substance Abuse* 28(6):426-38. doi: 10.1080/1067828X.2020.1774027.

*Steen, Jeffrey T., Evan Senreich and Shulamith Lala Ashenberg Straussner. 2020. "Adverse Childhood Experiences Among Licensed Social Workers." *Families in Society: Journal of Contemporary Social Services* 102(2):182-93. doi: 10.1177/1044389420929618.

Steptoe, Andrew, Theresa Marteau, Peter Fonagy and Kathryn Abel. 2019. "ACEs: Evidence, Gaps, Evaluation and Future Priorities." *Social Policy and Society* 18(3):415-24. doi: 10.1017/S1474746419000149.

Straus, Murray A. and Richard J. Gelles. 1990. *Physical violence in American families: risk factors and adaptations to violence in 8,145 families*. New Brunswick, N.J., U.S.A: Transaction Publishers.

Struck, Shannon, Ashley Stewart-Tufescu, Aleiia J. N. Asmundson, Gordon G. J. Asmundson and Tracie O. Afifi. 2021. "Adverse childhood experiences (ACEs) research: A bibliometric analysis of publication trends over the first 20 years." *Child Abuse & Neglect* 112:104895. doi: https://doi.org/10.1016/j.chiabu.2020.104895.

*Sutton, Tara E., Katie M. Edwards, Laura Siller and Ryan C. Shorey. 2021. "An Exploration of Factors that Mediate the Relationship Between Adverse Childhood Experiences and Sexual Assault Victimization Among LGBTQ+ College Students." *Child Maltreatment* 27(4):539-49. doi: 10.1177/10775595211041970.

*Thulin, Elyse J., Marc A. Zimmerman, Yasamin Kusunoki, Poco Kernsmith, Joanne Smith-Darden and Justin E. Heinze. 2021. "Electronic Teen Dating Violence Curves by Age." *Journal of Youth & Adolescence* 51(1):45-61. doi: 10.1007/s10964-021-01517-w.

*Thulin, Elyse Joan, Justin E. Heinze, Poco Kernsmith, Joanne Smith-Darden and Paul J. Fleming. 2020. "Adolescent Risk of Dating Violence and Electronic Dating Abuse: A Latent Class Analysis." *Journal of Youth & Adolescence* 50(12):2472-86. doi: 10.1007/s10964-020-01361-4.

*Thyberg, Christopher T. and Brianna M. Lombardi. 2022. "Examining Racial Differences in Internalizing and Externalizing Diagnoses for Children Exposed to Adverse Childhood Experiences." *Clinical Social Work Journal* 50(3):286-96. doi: 10.1007/s10615-022-00842-2.

Tricco, Andrea C., Erin Lillie, Wasifa Zarin, Kelly K. O'Brien, Heather Colquhoun, Danielle Levac, David Moher, Micah D. J. Peters, Tanya Horsley, Laura Weeks, Susanne Hempel, Elie A. Akl, Christine Chang, Jessie McGowan, Lesley Stewart, Lisa Hartling, Adrian Aldcroft, Michael G. Wilson, Chantelle Garritty, Simon Lewin, Christina M. Godfrey, Marilyn T. Macdonald, Etienne V. Langlois, Karla Soares-Weiser, Jo Moriarty, Tammy Clifford, Özge Tunçalp and Sharon E. Straus. 2018. "PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation." *Annals of Internal Medicine* 169(7):467-73. doi: 10.7326/M18-0850.

U.S. Capitol Visitor Center. N.d., "About Congress", Washington, D.C.: U.S. Capitol Visitor Center. Retrieved 3/28/23, (https://www.visitthecapitol.gov/about-congress).

*Versteegen, M., C. T. Bozlak, H. Larkin and A. A. Appleton. 2021. "Maternal depression, adverse childhood experiences, and social support in relation to gestational diabetes risk: results from the Albany Infant and Mother Study (AIMS)." *BMC Pregnancy Childbirth* 21(1):335. doi: 10.1186/s12884-021-03814-5.

*Wang, Dan, Jeong-Kyun Choi and Jiwon Shin. 2020. "Long-term Neighborhood Effects on Adolescent Outcomes: Mediated through Adverse Childhood Experiences and Parenting Stress." *Journal of Youth & Adolescence* 49(10):2160-73. doi: 10.1007/s10964-020-01305-y.

*Wang, Zhi, David K. Lohrmann, Anne Buu and Hsien-Chang Lin. 2021. "Resilience as a mediator between adverse childhood experiences and prescription opioid misuse among US adults." *Substance Use & Misuse* 56(4):484-92. doi: 10.1080/10826084.2021.1879148.

*Wheeler, Naomi J., Andrew P. Daire, Sejal M. Barden and Ryan G. Carlson. 2018. "Relationship Distress as a Mediator of Adverse Childhood Experiences and Health: Implications for Clinical Practice with Economically Vulnerable Racial and Ethnic Minorities." *Family Process* 58(4):1003-21. doi: 10.1111/famp.12392.

*Wheeler, Naomi J., Sejal M. Barden and Andrew P. Daire. 2019. "Mediation of Childhood Adversity and Health by Relationship Quality in Diverse Couples." *Family Process* 59(3):1243-60. doi: 10.1111/famp.12467.

*Wheeler, Naomi J., Rachel A. Regal, Sandy-Ann M. Griffith and Sejal M. Barden. 2021. "Dyadic Influence of Adverse Childhood Experiences: Counseling Implications for

Mental and Relational Health." *Journal of Counseling & Development* 99(1):24-36. doi: 10.1002/jcad.12351.

White, Sue, Rosalind Edwards, Val Gillies and David Wastell. 2019. "All the ACEs: A Chaotic Concept for Family Policy and Decision-Making?". *Social Policy and Society* 18(3):457-66. doi: 10.1017/S147474641900006X.

*Williams, J. R., V. Cole, S. Girdler and M. G. Cromeens. 2020. "Exploring stress, cognitive, and affective mechanisms of the relationship between interpersonal trauma and opioid misuse." *PLoS One* 15(5):e0233185. doi: 10.1371/journal.pone.0233185.

*Wolff, Kevin T., Celina Cuevas, Jonathan Intravia, Michael T. Baglivio and Nathan Epps. 2018. "The Effects of Neighborhood Context on Exposure to Adverse Childhood Experiences (ACE) Among Adolescents Involved in the Juvenile Justice System: Latent Classes and Contextual Effects." *Journal of Youth & Adolescence* 47(11):2279-300. doi: 10.1007/s10964-018-0887-5.

*Wolff, Kevin T., Michael T. Baglivio, Hannah J. Klein, Alex R. Piquero, Matt DeLisi and James C. Howell. 2019. "Adverse Childhood Experiences (ACEs) and Gang Involvement Among Juvenile Offenders: Assessing the Mediation Effects of Substance Use and Temperament Deficits." *Youth Violence & Juvenile Justice* 18(1):24-53. doi: 10.1177/1541204019854799.

Wyatt, Gail Elizabeth. 1985. "The sexual abuse of Afro-American and White-American women in childhood." *Child Abuse & Neglect* 9(4):507-19. doi: https://doi.org/10.1016/0145-2134(85)90060-2.

*Yang, Mai See and Donald Hedeker. 2019. "A life-span approach to examining older vulnerable population's subjective well-being: the role of adversity and trauma." *Aging & Mental Health* 24(12):2043-52. doi: 10.1080/13607863.2019.1652245.

*Zettler, Haley R., Kevin Wolff, Michael Baglivio, Jessica M. Craig and Nathan Epps. 2017. "The Racial and Gender Differences in the Impact of Adverse Childhood Experiences on Juvenile Residential Placement." *Youth Violence & Juvenile Justice* 16(3):319-37. doi: 10.1177/1541204017698213.

*Zhang, Lixia and Joshua P. Mersky. 2020. "Bidirectional Relations between Adverse Childhood Experiences and Children's Behavioral Problems." *Child & Adolescent Social Work Journal* 39(2):183-93. doi: 10.1007/s10560-020-00720-1.

Zyromski, Brett, Colette T. Dollarhide, Yahyahan Aras, Sarah Geiger, J. P. Oehrtman and Halley Clarke. 2018. "Beyond Complex Trauma: An Existential View of Adverse Childhood Experiences." *The Journal of Humanistic Counseling* 57(3):156-72. doi: https://doi.org/10.1002/johc.12080.

Zyromski, Brett, Emily Baker, Jennifer Betters-Bubon, Colette T. Dollarhide and Joseph Antonides. 2020. "Adverse Childhood Experiences: A 20-Year Content Analysis of American Counseling Association and American School Counselor Association Journals." *Journal of Counseling & Development* 98(4):351-62. doi: 10.1002/jcad.12338.