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Family Preservation and Fatalities: The Effect of Policy on Child Maltreatment Deaths

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Family Preservation and Fatalities: The Effect of Policy on Child Maltreatment Deaths

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Dedication

To my dad, for sharing his profession

and

to my grandfather, for sharing his university.

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Abstract

National estimates suggest that between 1,600 and 1,800 children are victims of CMFs each year (USDHHS, 2020), though it is believed that this number is an underestimation of the true figure (Douglas and Finkelhor, 2005; Yampolskaya, Greenbaum, and Berson, 2009). Two belief systems in protecting children have arisen over the past decades, influenced both by sensational cases of child abuse and research. One side argues that every effort must be made to keep the family intact: the family preservation approach. Alternatively, some argue that by attempting to preserve the family structure and failing to remove victims expeditiously, we leave children in dangerous and life-threatening situations and increase risk.

Family preservation is a common intervention strategy used in cases of child maltreatment. States are tasked with developing their own legislative approach to prevention and intervention of child maltreatment; and the statutes vary between states in terms of prioritization of family preservation. An indicator of family preservation priority was constructed by coding statutes from each U.S. state based on policy language. This value served as the predictor variable in the hierarchical regression analyses of rates of CMF.

The sample consisted of all CMFs reported to the National Child Abuse and Neglect Data System between the years of 2008 and 2018. A series of multiple hierarchical regressions were run to determine if a relationship existed between family preservation statute score and rate of CMFs by state in an attempt to determine if a relationship existed between family preservation statute score and CMF rate. Analyses revealed no significant correlations, although it was found that the direction of the relationship was that the more states emphasized family preservation in their statutes, the lower the rate of CMFs. In a second hierarchical analysis examining trends of CMFs, no association was found between preservation statute score and increased rates in CMFs.

Family Preservation and Fatalities: The Effect of Policy on Child Maltreatment Deaths

When an injury sustained during an abuse or neglect episode directly causes a child's death, or the abuse and/or neglect is a contributing factor to the death, the child's death is referred to as a child maltreatment fatality (CMF) (Douglas and Finkelhor, 2005; Child Welfare Information Gateway, 2019). Most commonly, the deaths of these children result from the abuse or neglect by a parent or caregiver. The category of caregivers may include teachers and daycare workers, cohabiting household members, and others who have frequent access and a responsibility to provide care for the child (USDHSS, 2019). Maltreatment fatality victims span from newborns to teens, though as later discussed, victims are primarily younger children for numerous reasons.

Child maltreatment fatalities differ from homicides as many cases of child maltreatment fatalities do not meet the legal criteria for homicide, which generally necessitates proving a willful intent to kill (Douglas, 2016). Additionally, the classification of "homicide" allows for the inclusion of a broader range of cases, with greater differences in victim/perpetrator relationships and circumstances behind the death, while child maltreatment fatalities are limited to deaths caused by neglect or abuse at the hands of caretakers. For example, a homicide victim could be a child, but the perpetrator could be a stranger, a family friend that is not expected to bear any responsibility for the child, or a peer. The circumstances behind the homicide could differ greatly; for example, the child could have been killed in a gang-related event or to prevent disclosure of sexual abuse.

Current child welfare policy is based on the premise that the state has the ultimate responsibility for the welfare of children when parents pose a threat to the child's well-being (Altstein and McRoy, 2000; Gelles, 1996). Goals of legislation have varied since the 1970s.

Actions that arose from a piqued interest in child welfare in the 1970s resulted in a large number of children entering foster care, while more recent legislation has prioritized the preservation of family units. National approaches to prevent maltreatment are important to study under a critical lens, as there is some question as to whether the current focus on family preservation is doing more harm than good (Gelles, 1996). The U.S. government, through the National Child Abuse and Neglect Data System and Adoption and Foster Care Analysis and Reporting System, collects data on children who enter the purview of protective services and subsequently puts out annual reports on trends in child maltreatment and fatalities. One such report is the annual *Child Maltreatment* report put out by the U.S. Department of Health and Human Services.

Included in the *Child Maltreatment* report is an annual estimate of the number of CMFs broken down by reporting state. Not every CMF looks the same; however, as dynamics of the circumstances vary between family. The USDHHS *Child Maltreatment* report categorizes fatalities into 5 maltreatment types (2019).

Maltreatment Typologies

Three types of maltreatment fall under the umbrella of abuse: physical, psychological, and sexual abuse. Additionally, neglect is subdivided into medical neglect and other neglect (USDHHS, 2019). Though it is easy to categorize violent abuse and blatant neglect deaths as CMFs, researchers have not come to an agreement on whether or not acts of omission, or failure to act, count in this definition as well (Douglas and Finkelhor, 2005; Meyer, et al., 2001). Meyer, et al. (2001) subdivides neglect into two categories: neglect-omission and neglect-commission. Neglect-omission includes cases in which the parent or caretaker failed to attend to health, nutrition, or safety needs of the child. Additionally, neglectful omissions could include the failure to supervise a child resulting in death (Meyer, et al., 2001; Douglas and Finkelhor, 2005).

By contrast, neglect-commission deaths include cases in which a parent's neglectful action causes the death of a child, for example, an intoxicated parent rolling on top of an infant as they co-sleep in the parent's bed, restricting the child's ability to breathe. Though the U.S. Department of Health and Human Services' categories are beneficial for analysis of death by type of maltreatment, these typologies do not sufficiently explore the sophisticated typologies of offenders.

Motivational Models

Researchers have attempted for years to develop a typology classification system for maltreatment fatalities. Often, terms like "filicide", "infanticide", "child abuse death", and "parental homicide" are used interchangeably across literature (Douglas, 2016). For the purpose of this paper, "child maltreatment fatality" or CMF will be used as an all-encompassing definition for these types of deaths. Though researchers have come up with a number of motivational models for maltreatment fatalities over the years, the models discussed below were chosen as they seem to frequently resurface in the literature (Meyer, et al., 2001; Wilczynski, 1995; Resnick, 1970 as cited in Meyer, et al., 2001).

Neglect related. The neglect category includes deaths of children in which the offender had no intent to kill or injure the child. This would exclude any batterings, as injury is generally intended, but would include other physical injuries sustained due to neglect of a parent or caretaker (Wilczynski, 1995; Meyer, et al., 2001). The neglect related category would include the deaths of children resulting from the omission or commission behaviors formerly described.

Even within the category of neglect the cases differ in dynamics. Researchers have attempted to categorize neglect fatalities based on typologies developed for non-fatal neglect incidences (Welch and Bonner, 2013). Welch and Bonner (2013) published a study in which they

defined and categorized fatal neglect cases into three categories: care neglect, supervisory/environmental neglect, and medical neglect.

Care neglect. This category is also sometimes referred to as "deprivation of needs". In these cases, the child dies as a direct result of the lack of basic needs, such as food, water, or shelter (Welch and Bonner, 2013). Deaths caused by starvation would be categorized as a care neglect death. This category would also include abandoning a child, consequently ceasing the provision of necessary resources (Welch and Bonner, 2013). Of the 372 deaths in Welch and Bonner's (2013) sample, 7.8% of deaths occurred due to incidents categorized as care neglect.

Supervisory or environmental neglect. Environmental neglect deaths result from inadequate living conditions. Death may result from an unsafe home, such as open windows or unsanitary and dangerous conditions, such as exposure to deadly chemicals or access to unsecured drugs (Knutson, et al., 2005 as cited in Mennen, et al., 2010). These deaths could be prevented if care was taken to make the home safer for the child.

An example of a supervisory neglect death would be the hyperthermia death of a child left in a car (Burkowitz, 2001). These deaths, while generally unintentional, are most frequently caused by heatstroke after a parent forgets that their child is in the backseat (NHTSA, 2019). The majority of victims of this particular scenario are under 4 years of age, with a significant portion of those victims being under the age of 1 year—young enough to be pre-verbal and riding in a backwards facing car seat (Booth, Davis, Waterbor, and McGwin, 2010). Often, these cases occur when a parent's daily routine is altered for whatever reason or transportation of the child is not of the norm. Ultimately, the responsible party forgets that the child is in the vehicle (Diamond, 2019). Another common example of supervisory neglect death is the unintentional

drowning of a child poorly supervised around a body of water, such as a lake, pool, or bathtub (Knutson, et al., 2005 as cited in Mennen, et al., 2010; Burkowitz, 2001).

Welch and Bonner (2013) propose a combined category of supervisory and environmental neglect deaths, as the majority of deaths in their sample resulted from a dangerous combination of poor supervision and hazardous environment, with 61% of the cases in their sample of 372 deaths attributed to supervisory and environmental neglect.

Medical neglect. Medical neglect is a form of neglect in which the parent or caregiver fails to meet the medical needs of the victim (Welch and Bonner, 2013; Mennen, et al., 2010). This could be failing to take the child to the doctor for an illness until it is far too late, or failing to manage complicated medical needs of children, like maintaining a feeding tube or colostomy bag. In cases of medical neglect fatalities, the child dies as a direct result of lack of medical care. In Welch and Bonner's (2013) sample of 372 deaths, 9.7% of fatalities were attributed to medical neglect incidents.

Abuse related. Abuse related deaths include non-accidental acts of physical force in which death was not the intended result (Meyer, et al., 2001). Many abuse related deaths stem from attempts to discipline a child that ends in tragedy (Wilczynski, 1995). This category would include cases of parents lashing out in frustration and mortally wounding the child. Oftentimes, with maltreatment fatalities, parents do not injure the child with the intent to kill, rather the injury is induced by an action during an attempt to cease unwanted behavior, such as disobedience, sustained crying, refusal to eat, or difficulties with toilet training (Palusci and Covington, 2014). The child then succumbs to the injuries endured during the abuse incident.

The unwanted child. One category outlined by researchers is the unwanted child. This type of maltreatment fatality includes the killings of children of all ages that are deemed

"unwanted". For example, newborns that are killed because the mother does not have the desire to raise the child would be incorporated in this category (Wilczynski, 1995). Frequently, these unwanted children are killed (or neglected resulting in death) just minutes or hours after birth, but this typology can include children who were decidedly unwanted in the days, months, or years following birth. Meyer, et al. (2001) describes a subcategory of the unwanted child typology, defined as neonaticides, in which the mother (most frequently the offender in these cases) has ignored or denied their pregnancy, subsequently killing their child upon delivery. A review of 55 neonaticides revealed that these children are commonly killed as a result of inaction, rather than violent actions, with asphyxiation being the most common cause of death (Shelton, Corey, Donaldson, and Dennison, 2011). Oftentimes, these children are unwanted due to a lack of resources or due to the child causing disruption in the parent's life (Beyer, Mack, and Shelton, 2008). In addition to the killings of very young children, this category includes the killings of older children who, for some sudden reason, becomes an impediment to something desirable, for example, a new relationship (Resnick, 1970 as cited in Meyer, et al., 2001).

Altruistic killings. Another commonly shared category among researchers is the altruistic killing. Wilczynski (1995) breaks down altruistic killings into two categories: primary or "mercy" killings and secondary killings. Primary killings are homicides in which the parent or caretaker believes that the death of the child will relieve some sort of real or perceived suffering, such as from a physical disability or illness. Secondary killings are homicides in which the parent is typically the one suffering, often from depression, and kills the child so they do not bear witness to the decline of a caregiver (Wilczynski, 1995). Secondary killings would include homicide/suicides, in which a parent kills their child(ren) and then themselves. Motivations for homicide/suicides differ, but a common motivator in these instances is the suicidal ideation of

the parent themselves. Often the children are collateral damage, sometimes killed because there is nobody left to care for them after the suicide of the parent or the concern that life after losing a parent will be too painful (Meyer, et al., 2001).

Perpetrators

Most CMF perpetrators have daily contact with their victims and are likely to be biologically related to the victim (USDHHS, 2019; Douglas and Finkelhor, 2005). In 2018, 80.3% of reported CMFs were perpetrated by parents either acting alone, together, or with a nonparent. In comparison, 14.6% of CMFs were perpetrated by non-parents and 5.1% of the cases had unknown relationships (USDHHS, 2020).

Child Maltreatment Fatalities by Perpetrator Relationship

Parents	
Father	16.4%
Father and Non-Parent	1.8%
Mother	26.8%
Mother and Non-Parent	11.3%
Mother and Father	22.1%
Mother, Father, and Non-Parent	1.9%
	Total Parent 80.3%
Non-Parents	
Day Care Provider	1.3%
Foster Parent	0.4%
More than 1 Non-Parent	2.9%
Relative	2.9%
Unmarried Partner	1.7%
Other	5.3%
	Total Non-Parent 14.6%
	Unknown 5.1%

Table 1. 2018 Child Maltreatment Fatalities by Perpetrator Relationship.
Data retrieved from USDHHS, 2020.

Mothers perpetrate CMFs at a much higher rate than fathers. This could be due to the fact that mothers generally play a greater role in child rearing (Douglas, 2016). Common non-parental offenders of CMFs are relatives, unmarried partners of parents, and daycare providers (USDHHS, 2020).

These findings support prior research that the majority of fatalities are perpetrated by biological parents, especially mothers (53.8% of perpetrators in 2018 were female as compared to 45.3% male) (USDHHS, 2020). Additionally, mothers are more frequently found to be the perpetrator in neglect death cases (Klevens and Leeb, 2010; Douglas and Finkelhor, 2005). If not perpetrated by a biological parent, the second most likely perpetrator is a cohabiting intimate partner of the parent and more likely to be male (Douglas and Finkelhor, 2005; Yampolskaya, et al., 2009). Perpetrators of child maltreatment fatalities are more likely to be young, with many studies concluding that the majority of perpetrators are under the age of 30 (Douglas and Finkelhor, 2005; Yampolskaya, et al., 2009; Anderson, et al., 1983). In 2018, 41.9% of all child maltreatment perpetrators reported to NCANDS were between the ages of 25 and 34 (USDHHS, 2020). Young parents might not understand child development, have experience appropriately disciplining children, and may not have reasonable expectations for a child, leading to inappropriate methods of behavioral correction that could result in maltreatment fatalities (Anderson, et al., 1983; Douglas, 2016; Douglas and Finkelhor, 2005). Additionally, it is likely that young parents have young children, who make up the vast majority of CMF victims historically (Douglas and Finkelhor, 2005). Young parents' immature parenting and coping skills coupled with an age of child that demands a greater level of care and patience is unsurprisingly a precarious intersection marked with higher rates of CMFs.

Victims

It was estimated that 1,770 children died from abuse or neglect in 2018 at a rate of 2.39 per 100,000 children, an 11.3% increase in deaths since 2014. U.S. states and territories voluntarily report data through the National Child Abuse and Neglect Data System (NCANDS) and national estimates of CMFs are developed through analysis of this dataset. When fatality data is missing from one or more states, a national estimate is calculated by multiplying the national fatality rate by the child population in all 52 states and territories that report to NCANDS and is then divided by 100,000. Therefore, national estimates may be higher or lower than the actual number of child maltreatment fatalities that occur annually (USDHHS, 2019). Figure 1 shows the national fatality estimates from 1999 to 2018 as reported in a number of *Child Maltreatment Report* publications (USDHHS, 2020; USDHHS, 2019; USDHHS, 2013; USDHHS, 2009; USDHHS, n.d.; USDHHS, 2001).

Figure 2 represents the aggregated number of CMFs in all 50 U.S. states and the District of Columbia across the years of 2008 to 2018. The data is presented from high to low, from left to right (USDHHS, 2020; USDHHS, 2019; USDHHS, 2013; USDHHS, 2009). Since some states have missing data across the years, missing data was interpolated to provide an estimate for the number of CMFs that occurred in each state for the sample time period.

Figure 3 represents the rate of CMFs per 100,000 children for every U.S. state (except Massachusetts, due to lack of reported data) and the District of Columbia across the years of 2008-2018 (USDHHS, 2020; USDHHS, 2019; USDHHS, 2013; USDHHS, 2009). The figure is a choropleth map in which states with a low rate of CMFs are of a lighter shade and ones with higher rates are of a darker shade. Regional differences in CMFs are exposed by Figure 3 with

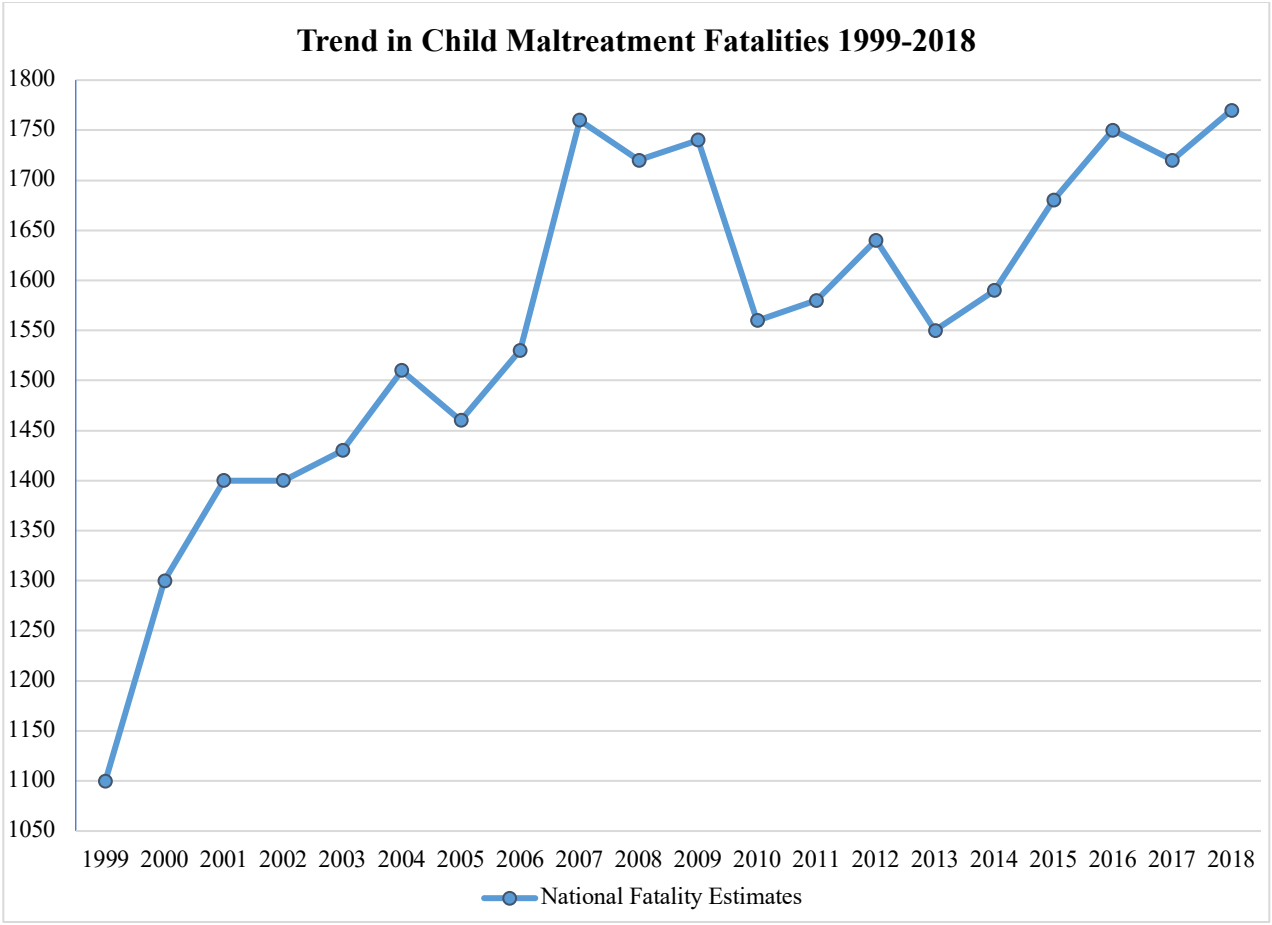

Figure 1. Trend in Child Maltreatment Fatalities 1999-2018.
(USDHHS, 2020; USDHHS, 2019; USDHHS, 2013; USDHHS, 2009; USDHHS, n.d.; USDHHS, 2001).

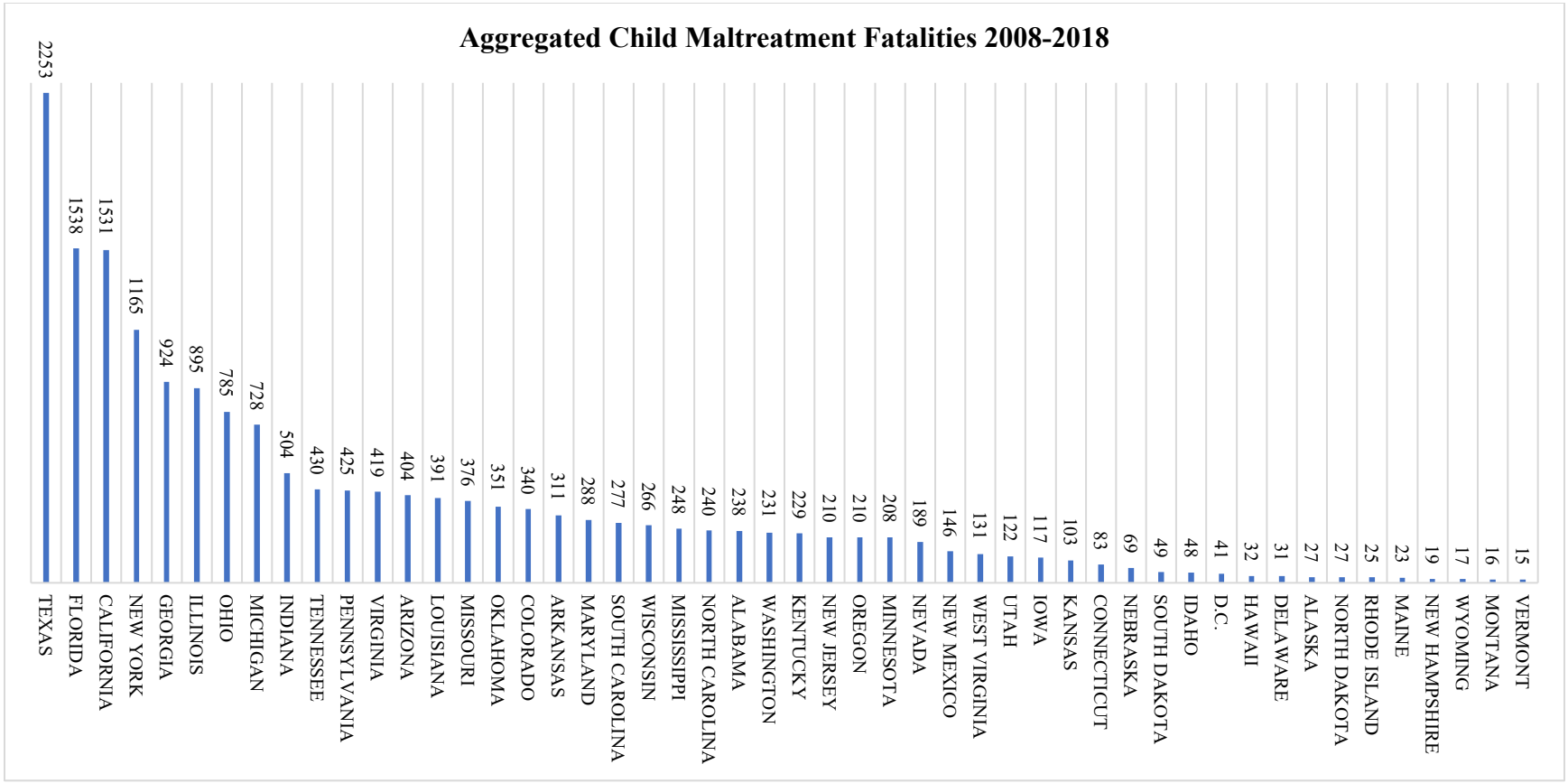

Figure 2. Aggregated Child Maltreatment Fatalities in U.S. States and D.C., 2008-2018.
Massachusetts excluded due to lack of data.
(USDHHS, 2020; USDHHS, 2019; USDHHS, 2013; USDHHS, 2009; USDHHS, n.d.; USDHHS, 2001).

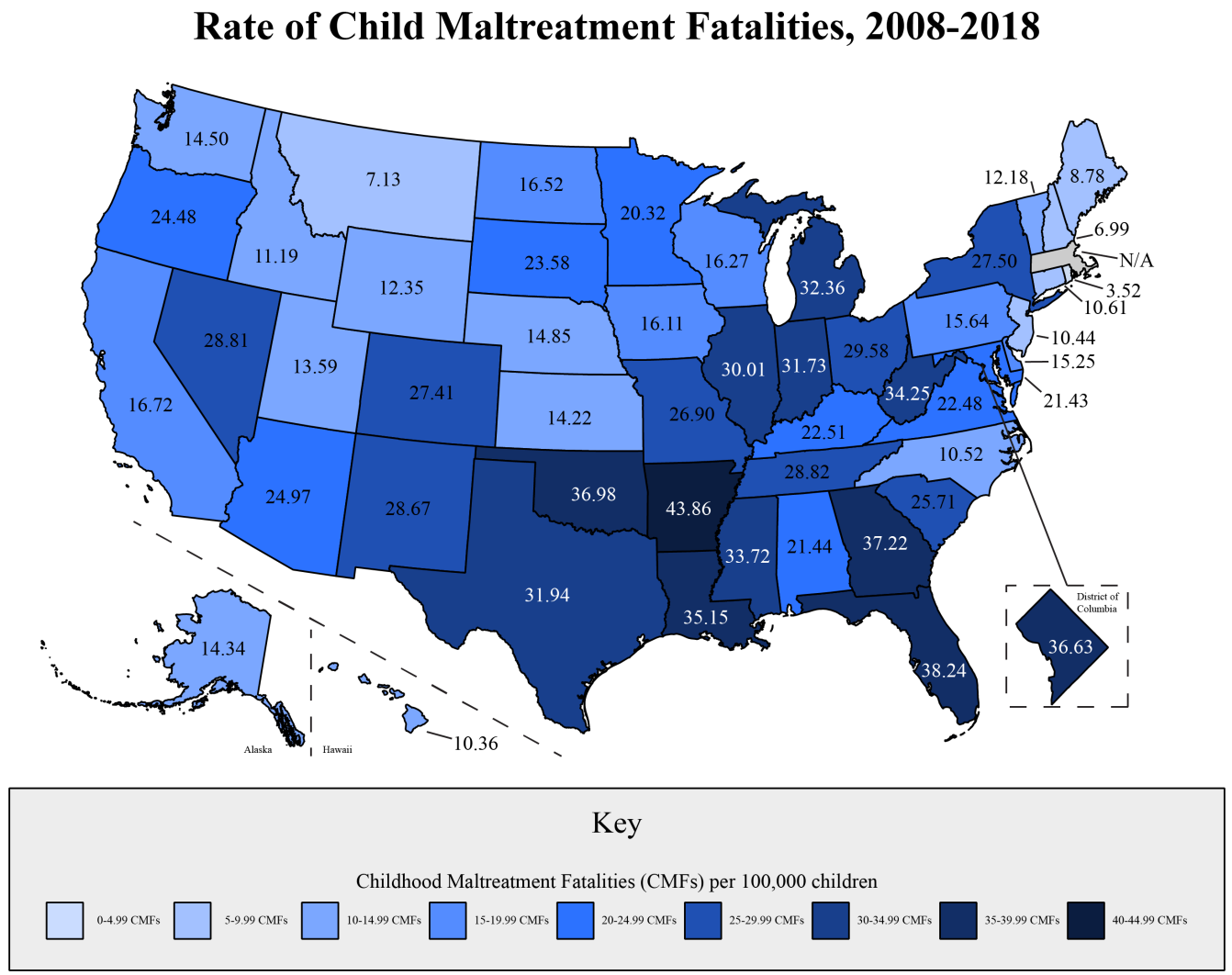

Figure 3. Rate of Child Maltreatment Fatalities, 2008-2018.
Massachusetts excluded due to lack of data.
(USDHHS, 2020; USDHHS, 2019; USDHHS, 2013; USDHHS, 2009; USDHHS, n.d.; USDHHS, 2001).

the U.S. South, South-East, and Mid-West having higher rates of CMFs than the North-West and especially the North-East.

A recent attempt by *The Boston Globe* to obtain more complete estimates of CMF victims by personally requesting data, rather than retrieving the data from NCANDS, resulted in state reports of approximately 7000 CMFs across the years of 2011 to 2015 (Huseman, Palmer & Schroering, 2019). Huseman, Palmer, and Schroering (2019) report that, for this time period, researchers estimate that the number of CMFs is likely closer to 15,000. The 1,720 deaths in 2017 is in line with recent trends of estimated CMFs in the United States; however, researchers understand that reports of fatalities are underestimated by 16% to 59% with others indicating that underestimation might be closer to 60% to 85% (Douglas and Finkelhor, 2005; Yampolskaya, et al., 2009). Researchers attribute some of the under-ascertainment of CMFs to miscoding of child deaths by medical professionals or law enforcement, as many maltreatment fatalities present similarly to common fatal childhood accidents and are reported to law enforcement as such (Herman-Giddens, et al., 1999). Of the 2018 data, 72.8% of deaths were attributed to neglect and 46.1% of deaths were attributed to physical abuse alone or in combination with another form of maltreatment (USDHHS, 2020). These findings support previous research and trends of neglect to abuse death ratios (Douglas and Finkelhor, 2005; Douglas, 2016; USDHHS, 2016)

U.S. Trends of Child Maltreatment vs. Homicides

Given the decline of juvenile homicides in the U.S. since the mid-1990s (Finkelhor and Ormrod, 2001; Butts and Evans, 2014), the increase in CMFs seems antithetical to those findings, especially when rates of child physical and sexual abuse have declined, too (Finkelhor and Jones, 2006). The increase in CMFs is likely due to an improved effort in classifying fatalities, rather than an actual increase in deaths (Finkelhor and Jones, 2006). A better

understanding of the symptoms and dynamics of these cases has led to more CMF classifications that would previously have been marked “accidental”. Additionally, the largest source of CMF data, NCANDS, has begun collecting data from additional sources, rather than those known just to child protective service agencies (Finkelhor and Jones, 2006). Metaphorically, casting a larger net when collecting data will yield a larger number of CMFs.

Age as a Risk Factor

Victims of CMFs are overwhelmingly young. In fact, the strongest risk factor for a child maltreatment fatality is age (Douglas and Finkelhor, 2005). Homicide is the fifth leading cause of death among children under the age of 5, with nearly half of homicides being attributed to child maltreatment (Klevens and Leeb, 2010). Children under a year of age are at the highest risk for a maltreatment fatality, making up 46.6% of CMFs reported in 2018 (USDHHS, 2020). Risk generally decreases as a child gets older, with rates dropping off significantly after the age of 5 or 6. Researchers posit that physical resiliency to injury increases as a child ages and therefore lowers the likelihood of fatality (Douglas and Finkelhor, 2005). Additionally, older children have greater skill sets and can either retaliate or defend themselves if physical abuse occurs or can extract themselves from a poor situation—by running away, for example—more easily than a young child. Younger children rely more heavily on parents and caretakers to fulfill their needs and have minimal opportunities to seek help. Of reported CMFs in 2018, 84.3% of victims were aged 5 and under (USDHHS, 2020).

Gender as a Risk Factor

Males are more commonly victims of a maltreatment fatality than females. Males accounted for 57.6% of fatalities in 2018, while females accounted for 42%, (USDHHS, 2020) which supports trends of gender differentials in fatalities, in that males are more likely to be

victims of child maltreatment fatalities than girls (Douglas and Finkelhor, 2005; Palusci and Covington, 2014). Further, past research suggests that males are more likely to die from neglect or a combination of abuse and neglect than females, who are more likely to die from abuse incidents alone (Anderson, et al., 1983). This could be due to cultural factors that impact how children are raised. Male children are more likely to be pushed toward independence and self-sufficiency at a younger age, while young girls are more likely to be sheltered (Chodorow, 1978, as cited in Rosenfeld, Kato, and Smith, 2017). Reduced supervision or expectancy of self-sufficiency of male children could breech the line into neglect, leading to a higher rate of neglect deaths in males over females. This could also be due to cultural ideas of masculinity, being that males are "tougher" and can withstand physical discipline, or even benefit from it, while females cannot. Understanding who is at higher risk for a maltreatment fatality can help aid in prevention and intervention, as well as help direct efforts of caseworkers.

Race as a Risk Factor

African American children are victims of CMFs at disproportionately high rates. In 2018, 32.8% of victims identified as African American (a rate of 5.48 per 100,000 children) versus 40.1% who identified as white (1.94 per 100,000 children) (USDHHS, 2020). While it is possible that race itself is a risk factor, it is also a possibility that the risk actually stems from low socioeconomic status and poor living environments that may be more likely to be experienced by certain racial groups. Table 2 depicts the number and rate of CMFs in the U.S. for the federal fiscal year (FFY) of 2018 by race.

2018 Child Maltreatment Fatalities by Race

Race	Total Child Fatalities	Rate per 100,000 children
African American	470	5.48
American Indian/Alaskan Native	15	3.12
Asian	10	0.44
Hispanic	206	1.63
Pacific Islander	2	2.22
White	576	1.94
Two or More Races	81	3.50

Table 2. 2018 Child Maltreatment Fatalities by Race
Data retrieved from USDHHS, 2020.

Additional Risk Factors

Four offender risk factors that may increase the likelihood of maltreatment were identified by NCANDS in 2017 being: alcohol abuse, drug abuse, financial problems, and domestic violence. Of these fatality reports, 6.1% had a caregiver risk factor of alcohol abuse, 17.4% had a caregiver risk factor of drug abuse, 10.4% had a caregiver risk factor of financial problems, and 10.4% had a caregiver risk factor of exposure to domestic violence (USDHHS, 2019). However, these factors are not always known to those involved (coroners or medical examiners, police officers and detectives, CPS caseworkers) with a family after a CMF occurs, so the numbers reported to NCANDS are likely undercounted. Regardless, these rates of risk factors speak to the complexities of negative and challenging aspects that occur in the homes of American families, but also reveals that maltreatment fatalities occur in households with varying sociodemographic characteristics.

In addition to victim and offender characteristics, the characteristics of the household are important in determining the level of risk one might be facing when it comes to child maltreatment fatalities. Financial hardship, low education, low socioeconomic status, and poverty have been determined to be risk factors for CMFs (Douglas and Finkelhor, 2005; Douglas, 2016; Meyer, et al., 2001). Moving, change in household composition including the birth or a death of a family member, loss of gainful employment, and living with non-family members are all factors that put children at risk for a CMF (Douglas and Finkelhor, 2005).

Anderson, et al.'s (1983) sample of child maltreatment fatalities in Texas in the 1970s collected data on employment status and family mobility. Regarding mobility, 40% of families with relevant data had moved physical households within 12 months of the fatality and 26% had moved within 6 months or less. Over one quarter (26.4%) of the primary providers in the sample were unemployed. Of those employed, 49.5% worked "blue collar" skilled or unskilled jobs, while 9.6% worked "white collar" jobs (Anderson, et al., 1983). These findings support other research that stressors and strain experienced by a family can put a child at an increasing risk of fatality (Douglas and Finkelhor, 2005).

Involvement with Child Protective Services

It is estimated that 30% to 50% of CMF victims are known to child protective services prior to death (Douglas and Finkelhor, 2005; Douglas, 2016; Yampolskaya, et al., 2009). In 2017, 27.3% of fatality victims had at least one CPS contact within the three years prior to death (USDHHS, 2019). These federal rates are comparable to both dated and recent rates of prior contact derived from individual state data sets. Anderson, et al. (1983) reviewed 267 child deaths in Texas reported over a three-year period in the 1970s and determined that approximately one quarter of the participants reviewed were known to and involved with CPS prior to the victim's

death. A more recent study conducted by Palusci and Covington (2014) reviewed 2,285 child maltreatment fatalities across 37 states that voluntarily submitted child death review data over a five-year period in the mid-to-late 2000s. One third of victims in the sample had at least 1 prior contact with CPS prior to death, which is comparable to the 27.3% of victims reported in the 2017 *Child Maltreatment* report (Palusci and Covington, 2014; USDHHS, 2019). Additionally, 1.3% of Palusci and Covington's (2014) sample had been removed and subsequently returned to the family following a substantiated abuse or neglect report. Similarly, out of 34 states that provided relevant data in 2018, 2.4% of victims of CMFs (as reported through the NCANDS Child File) had been placed in foster care and reunited with family within 5 years of their death. Out of the 24 states reporting data on provision of service, 10.4% of child fatalities occurred in families who had received family preservation services within the 5 years prior to death (as reported through the NCANDS Child File). In 2017, statistics derived from uniquely counting child victims in both the NCANDS Agency File and Child File report that 15.1% (28 states reporting) of families with a fatality received preservation services and 5.1% (36 states reporting) experienced a foster care placement and subsequent return to household within 5 years of the date of death (USDHHS, 2019).

The number of children who are killed due to maltreatment despite services having knowledge of the situation is concerning, with at least 30% of CMF victims being prior or current clients of child services; however, perhaps what demands equal attention is that 50% to 70% of CMF victims are *not* known to child services at the time of death (Douglas and Finkelhor, 2005). While known vulnerabilities exist, such as being too young to engage in activities that would introduce them to mandatory reporters, such as teachers or doctors, there is still a large portion of children not known to child services that could theoretically come onto the

radar of service workers. Research to determine how these children differ from known victims is greatly needed to help prevent future children from becoming the victim of a preventable death.

Factors That May Influence Child Maltreatment Fatalities

There are multiple factors that might influence the rate of CMFs experienced in the U.S. Previously identified as risk factors, unemployment and race are two demographic variables that are relevant to understanding the rate of CMFs. Prior research has highlighted family instability as a risk factor (Douglas and Finkelhor, 2005). Thus, other signs of instability (or stability) should be considered to gain better insight into the true underlying factors that lead to CMFs. Variables such as average family income and rate of single parent households could be additional measures of strain and instability, as family-related stressors and having never-married parents are factors associated with CMFs (Douglas and Finkelhor, 2005).

Factors that measure government involvement, such as welfare expenditures, would also be pertinent to examine, as it could potentially represent both government funding towards prevention and a level of stability experienced by the families within the state. A large amount of welfare expenditures could mean a high level of government involvement and prioritization or a high demand for government assistance due to instability and impoverishment.

Similarly, accounting for state political leaning could help address differences in how states approach the problem of child maltreatment. State politics can influence legislation and support for family intervention. As such, these factors represent confounding variables in studies that attempt to understand what other factors contribute to the rate of CMFs, which makes them pertinent control variables in a quantitative analysis on this subject. Over the past 50 years, legislative efforts have made attempts to help curtail the rates of children dying at the hands of their parents, which will be explored in the next section.

Preventing Child Maltreatment Through Legislation

Child Abuse Prevention and Treatment Act

By 1967 every U.S. state had passed some form of child abuse reporting law (Gelles, 1996). It was not until 1974 that federal legislation was passed to prevent the growing issue of child maltreatment in the form of the Child Abuse Prevention and Treatment Act (CAPTA) (Altstein and McRoy, 2000; Child Welfare Information Gateway, 2019). CAPTA provides federal funding and guidelines to states to support prevention of abuse, child and family assessments and investigations, and treatment opportunities including educational programs and community-based family resource centers (Child Welfare Information Gateway, 2019; Altstein and McRoy, 2000). The passing of CAPTA resulted in increased reporting of suspected maltreatment, consequently triggering an increased number of children being removed from their households (Altstein and McRoy, 2000).

Removing children to prevent maltreatment. In the federal fiscal year of 2018 alone, 49 states report a total of 640,583 child victims of maltreatment. Of those children, 146,706 were removed from their home and placed into foster care. An additional 60,354 non-victims were removed and placed in foster care, as well (USDHHS, 2020). Typically, these are cohabiting children of the victim and may or not be victims of abuse as well. While foster care placement is temporary for many of these children, a study on synthetic birth cohorts by Wildeman, Edwards, and Wakefield (2020) revealed that, in a 2016 estimate, 1 in 100 children in the U.S. experience termination of parental rights. Wildeman, et al. (2020) found that though African American and Native American children are at highest risk for termination of parental rights, with 1.5% of all African American children and 3% of all Native American children ever experiencing termination, this experience is not foreign for more advantaged ethnic groups.

The logical approach to protecting children that arose from the passing of CAPTA was to remove the maltreated child; however, it was soon noticed that some of these children were removed for insignificant or inappropriate reasons, some lingered in the system for too long, and others were bounced from biological family to foster family on multiple occasions (Bagdasaryan, 2005). Research on healthy attachments revealed that infants form bonds with their biological parents, especially their mother, and the attachment continues to form until around age three (Bowlby, 1955). Children who have their attachment process interrupted were prone to become anxious or emotionally detached from others (Bowlby, 1955). Further, Bowlby (1955) suggested that healthy attachment forms even with a distant or neglectful mother and that this bond was critical to emotional functioning once stages of independence began and had consequences throughout the lifetime. Since many children seemed to be passed aimlessly through the system for an indeterminate length of time, the term "foster care drift" surfaced to paint a picture of the further damage foster care removals were doing to already vulnerable children (Bagdasaryan, 2005). Concern for how the removal of children was affecting attachment, and therefore their ability to function normally in society as an adult, led to a new approach for protecting maltreated children. Armed with the knowledge about the importance of familial bonding, new policies were written and passed to prevent unnecessary removals of children from their homes and to limit the length of foster care stays if reunification appeared unattainable.

Adoption Assistance Welfare Act and Adoption and Safe Families Act

To address the issue of the nation's growing foster child population and the concern regarding healthy attachment of foster children, policy changes in the 1980s and 1990s such as the Adoption Assistance and Child Welfare Act and the Adoption and Safe Families Act required agencies to develop expedited permanency plans for children requiring service (Altstein and

McRoy, 2000; LaBrenz, Fong, and Cubbin, 2020). These permanency plans were designed to help agencies make the decision to return the child to their home or permanently remove the child and place them for adoption. To respond to the increasing number of children being removed from their families, the strategy of permanency planning was implemented to prevent unnecessary separation of children from their parents (Altstein and McRoy, 2000). When a removal was deemed necessary, CAPTA and subsequent policies pushed for the placement of the child in a "least restrictive setting" (Altstein and McRoy, 2000). Typically, this meant that the child would be placed in a home with similar cultural and social norms and preferably with a biologically related caregiver, such as a grandparent, most commonly referred to as "kinship care" (Altstein and McRoy, 2000). Federal law requires that states demonstrate that a "reasonable effort" be made to reunify families if a child is removed from their home (Child Welfare Information Gateway, 2016). Though a formal federal definition of what constitutes a "reasonable effort" does not exist, this generally means that a family has been provided with services that fit their case (Child Welfare Information Gateway, 2016). These provisions are often based on family preservation models and include both soft (clinical and counseling) and hard (transportation, financial assistance, or parental reprieve) services (Reed and Kirk, 1998; Child Welfare Information Gateway, 2016).

Family preservation services. Family preservation models became intertwined with federal policy in the 1970s and 1980s. In 1974, the Homebuilders program was developed in Tacoma, Washington in order to deliver services to families at risk for child-removal (Reed and Kirk, 1998; Kinney, Madsen, Flemming, and Haapala, 1977). The Homebuilders model focused on the family unit by providing both soft and concrete services, in-home treatment, intervention of family subsystems, and growth through identifying and utilizing family strengths to guide

positive interactions (Reed and Kirk, 1998; Bagdasaryan, 2005). Over the years, the Homebuilders model has become regarded as a foundational example of family preservation services and has been used as the basis for the development of new family preservation models across the country. It is important to note, however, that the Homebuilders program is an incredibly restrictive example of a preservation service model. The Homebuilders program is generally considered an intensive family preservation service (IFPS) due to its rapid crisis-intervention and short service period (usually 4-6 weeks) (Bath and Haapala, 1994). Homebuilder staff carry very low caseloads, typically around two families, as compared to traditional service caseworkers (Kinney, et al., 1977). Initial examinations of effectiveness of the Homebuilders model provided promising results (Kinney, et al., 1977). Non-experimental research continues to laud the effectiveness of intensive family preservation services; however, quasi-experimental and experimental research has delivered mixed findings (Bagdasaryan, 2005; Bath and Haapala, 1994). However, very little research has been conducted to identify the particular clientele that will benefit from this type of intervention and the effectiveness of matching services as the Homebuilders program aims to do (Ryan and Schuerman, 2004). Bath and Haapala (1994) attribute some of the mixed findings of effectiveness to studying groups that are homogenous. This further highlights the need for research to be conducted on which subsections of clients show improvement if family preservation services are delivered. Research is needed on heterogenic samples to determine if these services are more effective for certain family crises and/or dynamics over others.

Unfortunately, as presidential administrations came and went, new regulations in this area failed to set minimum standards. The burden to define standards and implement programs were left to the state, while requiring them to meet a federally specified goal (Altstein and

McRoy, 2000). It has become apparent that this disconnect between the state and federal systems have unfortunately left children vulnerable to continued maltreatment.

State Differences That May Impact Child Maltreatment Fatalities

By leaving the task of statute development up to the state, the government allows for high levels of influence from state-level culture. In a country as diverse as the United States, politics, religion, and beliefs on government intervention are greatly intertwined with state and local government and legislation.

The role of the government when it comes to intervention in the private life of families is greatly contested when it comes to developing child welfare policies, which in turn effects a state's emphasis or prioritization of family preservation. While some liberal states might be more accepting of family intervention and welfare expenditures, more conservative states might hold fast to the idea of strong family values and privacy within the home. Long-standing religious affiliations might also influence child advocacy policies, espousing sanctity of the family. Ideas surrounding what is acceptable for child punishment might also vary depending on culture.

Another factor that may influence a state's emphasis on family preservation is the adoption or interpretation of family preservation research. Some state legislators might be more accepting of the findings of researchers, while others might rely on anecdotal or observed facts. These factors, in one way or another, affect the decision-making process of legislation. While advocating for child welfare is a critical and worthwhile mission, it is not one without great emotional implications.

Summary and Need for Research

As mentioned above, it is critical that research be conducted to determine if a certain subgroup of clientele responds better to family preservation services over others, as some prior

research shows that family preservation does not work for every family in crisis (Bath and Haapala, 1994). Additionally, research is needed to determine if family preservation statutes and the subsequent delivery of family preservation services have affected rates of CMFs across the United States. Not every family preservation program is created equally, due to the burden being the responsibility of the state and not through an overarching plan established by the federal government, which leaves children vulnerable for not receiving adequate services. Without an understanding of how these programs are affecting the rates of CMFs, we cannot safely say that one strategy being implemented across the nation over another is the best method for protecting the lives of America's children.

At a basic level, child maltreatment fatalities (CMFs) are deaths of children caused by abuse and/or neglect at the hands of parents or caregivers (Douglas and Finkelhor, 2005; Child Welfare Information Gateway, 2019). Not every case looks the same and a handful of models have been identified that highlight the varying dynamics of CMF cases seen across literature. Children who are at higher risk for a CMF are those under the age of 5 or 6, but particularly under the age of 1 year (Douglas and Finkelhor, 2005). Additionally, males are slightly more likely to be victims than females, especially of neglect (Douglas and Finkelhor, 2005).

The rates of CMFs have remained relatively stable over the years, with most estimates speculating that between 1,500 and 1,600 children die each year; however, it is understood that these figures are underestimates of the actual number of CMFs (Douglas and Finkelhor, 2005; Douglas, 2016). Historically, child maltreatment has been a prominent feature in U.S. legislation and has been an issue that many presidential administrations have attempted to tackle, especially since the 1970s.

Various generations of legislation passed to improve the well-being of children. As new research surfaced, concern for the development of children who were removed from their homes grew. From this arose a challenging cost-benefit analysis equation, with the ultimate cost being the loss of a child's life. Research conducted by Bowlby (1955) stimulated the argument for preserving family ties, while others felt that leaving children in dangerous households far outweighed the costs of severing ties with abusive parents.

With the goal of family preservation came the birth of services oriented to strengthen and keep families together. These family preservation services, some more intense than others, aimed to focus on the family as a unit, providing services to combat underlying contributing factors of maltreatment (Reed and Kirk, 1998; Bagdasaryan, 2005; Kinney, et al., 1977). However, research has shown mixed results on the effectiveness of this style of delivery of service.

Perhaps some of the mixed results stems from the lack of a federal standard for delivery of family preservation services. Since the burden of designing and implementing a service program relies heavily on the discretion of each state, it is not surprising that different approaches are taken. Since research on effectiveness of family preservation services is rather scant already, it is critical to study how the mass implementation of family preservation services across the United States is affecting the rates of child maltreatment fatalities. A deeper look into the variation of family preservation emphasis between states and any association it may have with child maltreatment fatalities is a worthwhile undertaking. The present study will examine this concern by analyzing the association between CMF rate and a score representing each state's statutory emphasis on family preservation, while controlling for a variety of other possible CMF influences.

Methods

The current analyses attempt to examine correlations between state preservation statutes and child maltreatment fatalities across U.S. states, while controlling for possible confounding influences, in order to answer the question of whether an association between state emphasis on family preservation and CMFs exists. The present study will attempt to test whether state statutes are harmful to children based on the language of the statute.

The sample consisted of all child maltreatment fatalities (CMFs) reported to the Children's Bureau between the years of 2008 and 2018 and broken down by state. These numbers are published annually in a report by the Children's Bureau of the Department of Health and Human Services and are readily available to the public. To accurately investigate the impact of family preservation statutes on CMFs, states are being used as the unit of analysis. U.S. states are self-contained policy environments, governed by distinct sets of laws and agencies and their diversity drives differences in law enforcement, training, government services, and prosecution. Political beliefs can influence state-level legislation. To address these differences and their potential impact on CMFs, state-level data was used for both control and predictor variables, as well as for dependent variables. While data was assembled for all 50 U.S. states and the District of Columbia, Massachusetts was later excluded from the analysis due to a lack of available CMF data.

Dependent Variable: Child Maltreatment Fatalities

The Child Maltreatment Fatality variable is the annual number of children under the age of 18 that died as a result of caregiver action or inaction. CPS or other child advocacy agencies are generally responsible for determining if a child was a victim of a maltreatment fatality or if the cause of death was unrelated to abuse or neglect. The National Child Abuse and Neglect Data

System classifies a death as a maltreatment fatality if "either an injury resulting from the abuse and neglect was the cause of death; or abuse and neglect were contributing factors to the cause of death" (USDHHS, 2020). These deaths differ from homicide as many cases of child maltreatment fatalities do not meet the legal criteria for homicide, which generally necessitates proving a willful intent to kill (Douglas, 2016). Additionally, CMFs typically occur at the hands of parents and other caregivers, such as daycare providers, boyfriends of mothers, or other cohabiting adults, while the perpetrators of homicides are not limited to those who are responsible for the well-being of the child victim. These deaths can range from abusive assaults on children, such as blunt force injuries to the brain or other organs, to instances of neglect, such as leaving a child in a hot vehicle resulting in the child's death. Neglect is more likely to be a contributing factor in a fatality than physical abuse, with 72.8% of CMFs in 2018 having neglect listed as a contributing factor while only 46.1% of cases list physical abuse as a contributing factor to the fatality (USDHHS, 2020).

As states voluntarily report CMFs to the Children's Bureau, data were missing from some states for a period of years. Missing data were interpolated by averaging the number of CMFs in the previous year and the following year. Massachusetts was later excluded as CMF data was missing for 8 of the 10 years included in the analysis. Each state's CMF data was then aggregated into a single variable in which all CMFs were summed across the years of 2008 and 2018 and transformed into a rate based on that state's population estimate of residents under the age of 18 as reported by the U.S. Census. This variable is used as the dependent variable for the first hierarchical regression analysis.

In order to examine trends in child maltreatment fatalities in the states, the number of CMFs in 2008, 2009, and 2010 were summed, as well as the CMFs in 2016, 2017, and 2018 for

each state. A percent change was then calculated for each state. Outliers were adjusted to two standard deviations above or below the mean (M = -5.94, SD = 118.71).

Main Predictor Variable: State Preservation Emphasis

Each state writes its own legislation outlining actions taken when a child is in danger of continued maltreatment. While family preservation is the current approach prescribed by the federal government, states develop their own statutes on determining the best interests of the child when it comes to family preservation, removal, and permanency planning (Altstein and McRoy, 2000; Children Welfare Information Gateway, date). Four coders, including the primary investigator and three Master of Arts students, reviewed state statutes for all 50 U.S. states and the District of Columbia. The coders were provided the following instructions and asked to rate the state's emphasis, and therefore priority, of family preservation based on the language of the statutes:

> For all 50 states, the District of Columbia, and Puerto Rico, coders will analyze statute language in a manner to best determine if the state or territory prioritizes family preservation when determining the 'best interest' of the child. Language that directly promotes family preservation, such as, "preserve and strengthen family," "reunite," "remain in home," and "maintaining the family," shall be coded to create a continuous scale to signify prioritizing family preservation. Statutes that do not include language prioritizing the preservation of a family unit shall be coded as a value of "0", while a value of "1" will represent one mention of family preservation, a value of "2" will represent the mention of family preservation twice, a value of "3" will represent the mention of preservation 3 times, and a value of "4" will represent the mention of family preservation 4 or more times.

Puerto Rico was later excluded from the analysis as data for many of the control variables could not be found for this U.S. territory.

The average score was calculated for each state and is presented in Table 3. A higher number represents a higher prioritization of preserving the family, while a lower number represents less prioritization of family preservation. A score of 0 would indicate that there was no explicit mention of family preservation written into the statute.

Control Variables

Several control variables were included in the analysis that could logically explain some of the variation of child maltreatment fatalities between states. The control variables (percent minority population, state youth population, rate of single parent homes, state unemployment rate, average income, average political leaning, and welfare expenditure per capita) were entered into steps one and two in the hierarchical regressions and represent potential confounding influences on the child maltreatment fatality rate for the states. The year 2013 was selected for the control variables as it fell close to the center of the CMF sample period (2008 – 2018). This would help ensure that fluctuations early or late in the sample period would not have a great effect on the analyses.

Racial makeup and state youth population. Demographic variables such as state racial makeup and state youth population size were derived from state level U.S. Census reports from 2013. Youth population was calculated by summing all residents between ages 0 and 17 across all racial categories as reported in the 2013 U.S. Census for each state. Racial makeup was coded into White and Non-White, with the Non-White category consisting of Black or African Americans, American Indians or Alaskan Natives, Asians, and Native Hawaiians or Pacific Islanders. Then, the percentage of Non-White residents were calculated for use as a control variable. This is an important control variable, as child maltreatment fatalities occur at a disproportionate rate in the Non-White population (Douglas and Finkelhor, 2005). In a study comparing maltreated and fatally maltreated children in the U.S., Douglas and Mohn (2014) found that, aside from age and sex, identifying as African American or Black was the only other statistically significant child demographic variable related to maltreatment fatalities.

Rate of single parent homes. The rate of single parent homes in a state was included as a control variable as single parents are likely to experience a greater level of stress in parenting. Additionally, household composition has been identified as a risk factor for child maltreatment fatalities, with never-married couples and mothers with cohabiting partners being at increased risk for a CMF (Douglas and Finkelhor, 2005). Using U.S. Census data from 2013, the number of single males with children under 18 at home and single females with children under 18 at home were combined to create a total number of single-parent households for each state. This number was then divided by the state population and multiplied by 100,000 to create a rate of single-parent households per 100,000 people for each state.

State unemployment rate and average income. Each state's unemployment rate and average income for the year of 2013 were retrieved from the Bureau of Labor Statistics. Since financial problems, unemployment, and poverty have been identified as risk factors for CMFs, it is necessary to control for the variation in CMFs that may be associated with differences in state unemployment rate and average income (USDHHS, 2020; Douglas, 2016).

State political leaning. State political leaning was determined by coding each state's voting results for the 3 most recent presidential elections – 2008, 2012, and 2016. States that had a majority of Democratic votes in an election were coded as a -2, while states that had a majority of Republican votes were coded as a 2. The three scores were then averaged across the elections to create a value to reflect the state's political leaning. While Family Preservation methods have been reported to appeal to both Republicans (for preserving family values and minimizing interference with an autonomous family unit) and to Democrats (for pushing to provide welfare services to families in need) (Gelles, 1996), state legislation is inevitably influenced by political

climate that varies from state to state. Political climate might influence both the likelihood of particular legislation passing and how legislation is enforced.

Average welfare expenditures. Average state welfare expenditure rates in U.S. Dollars per capita were retrieved from the Tax Policy Center of Washington, D.C. for the year of 2013. Family Preservation methods generally call for the provision of federal and/or state subsidized services to families. By controlling for average welfare expenditures, any variation influenced by welfare expenditure differences between states will be controlled. Laws regarding family preservation might be associated with the level of welfare services available to the state. Additionally, access to welfare services, for example, respite care, parent education programs, or subsidized health care, may also affect child homicide rates. To further tease out potential contributing factors to differences in rates of CMFs, this variable is entered into its own step in a hierarchical regression analysis as an additional predictor variable.

Variables Used in Analyses

	DV		IV		Control Variables					
State	**Child Maltreatment Fatalities** Per 100k children	**Child Maltreatment Fatalities** % Change	**Preservation Status Score**	**Youth Population**	**% Non-White***	**Single Parent Homes** Per 100k	**Unemployment** Rate per state labor force	**Average Income** USD	**Political Leaning**	**Average Welfare Expenditures** USD per Capita
ALL	32 (0-279)	-5.94	1.05 (0-4)	72626203	20 (25-95)	3305 (2137-3985)	6.8 (2.9-9.6)	44.7k (36k-77k)	--	1,682 (934-4908)
Alabama	21 (11-43)	51.55	3.75	1109911	30	3864	7.2	40.2k	2	1306
Alaska	2 (1-5)	-20.00	0.5	188278	33	2997	7	53.1k	2	2717
Arizona	36 (11-54)	53.44	0	1618234	16	3590	7.7	44.3k	2	1257
Arkansas	28 (12-44)	56.91	1.25	709024	20	3660	7.2	37.3k	2	1742
California	139 (120-185)	-17.79	3.5	9157076	26	3186	8.9	53k	-2	1794
Colorado	30 (19-40)	13.39	1.5	1240565	12	3223	6.9	48.9k	-2	1118
Connecticut	7 (4-13)	33.33	0	782419	18	3385	7.8	54.4k	-2	1967
Delaware	2 (0-6)	12.50	0	203341	29	3461	6.7	49.2k	-2	2124
D.C.	3 (2-8)	-25.0	0	111940	56	3933	8.5	77k	-2	4908
Florida	139 (101-185)	-61.80	0	4022103	22	3245	7.2	41.1k	-.67	1215
Georgia	84 (60-113)	25.99	1.5	2482743	37	3924	8.2	44k	2	1141
Hawaii	2 (1-5)	22.22	2.5	308745	73	2073	4.9	45.4k	-2	1540
Idaho	4 (2-10)	-25.0	2.75	428768	6	3233	6.1	38.8k	2	1380
Illinois	81 (64-108)	-5.29	0	2982508	22	3363	9	47.6k	-2	1500
Indiana	45 (23-80)	52.63	0.5	1588192	14	3701	7.7	40.7k	.67	1639
Iowa	10 (5-19)	40.43	0	726454	8	3433	4.7	40.2k	-.67	1692
Kansas	9 (6-14)	27.27	1.25	724263	13	3406	5.3	41.2k	2	1181
Kentucky	20 (6-34)	-177.42	0	1017239	12	3706	8	39.5k	2	1591
Louisiana	35 (25-45)	-9.89	0	1112426	36	4329	6.7	41.4k	2	1815
Maine	2 (1-4)	0.00	1.5	262027	5	3415	6.6	41.4k	-2	2193
Maryland	26 (10-41)	46.02	0.5	1344047	39	3517	6.6	52.8k	-2	1731
Michigan	66 (49-85)	-1.62	1.25	2249512	20	3683	8.8	44.5k	-.67	1338
Minnesota	18 (10-30)	37.80	0.25	1278711	14	3319	5	47.3k	-2	2235
Mississippi	22 (7-41)	56.76	0.75	735566	40	4477	8.5	36k	2	1815

Missouri	34 (20-42)	-14.29	1.75	1397726	16	3617	6.7	42k	2	1351
Montana	1 (0-4)	83.33	2	224381	10	3363	5.4	39k	2	1422
Nebraska	6 (0-17)	-243.36	1.25	464517	10	3355	3.8	40k	2	1383
Nevada	17 (11-30)	-11.32	0.25	656116	23	3592	9.6	42.2k	-2	934
New Hampshire	1 (0-4)	66.67	3.25	271852	6	3213	5.1	46.2k	-2	1321
New Jersey	19 (8-29)	-36.54	2.25	2011110	26	3171	8.2	52.8k	-2	1669
New Mexico	13 (7-19)	-23.08	1	509329	17	4068	6.9	41.4k	-2	1933
New York	105 (83-127)	7.94	2	4236272	29	3441	7.7	54.5k	-2	3013
North Carolina	21 (14-32)	20.31	1	2280367	28	3772	8	42.4k	.67	1326
North Dakota	2 (1-8)	53.85	0.75	163396	10	2936	2.9	42.4k	2	1380
Ohio	71 (45-106)	3.67	0	2653971	17	3887	7.5	43.1k	-.67	1750
Oklahoma	31 (21-47)	18.18	3.75	949178	25	3714	5.3	39.9k	2	1620
Oregon	19 (10-30)	34.67	0	857970	12	3262	7.9	45.7k	-2	1573
Pennsylvania	38 (29-47)	14.93	1	2718128	17	3191	7.4	45.2k	-.67	1973
Rhode Island	2 (0-6)	60.00	1.25	709882	15	3908	9.3	48.8k	-2	2202
South Carolina	25 (15-39)	16.85	2.75	1077401	31	3752	7.6	38.9k	2	1260
South Dakota	4 (2-11)	33.33	0	207765	14	3684	3.8	36.5k	2	1163
Tennessee	39 (28-55)	-6.11	0	1492118	21	3637	7.8	40.2k	2	1579
Texas	204 (150-279)	-20.07	0	7053963	19	3649	6.3	44.4k	2	1159
Utah	11 (6-15)	-2.86	1.5	897446	8	2351	4.6	42.7k	2	1076
Vermont	1 (0-4)	-243.36	0	123114	5	3204	4.4	44k	-2	2606
Virginia	38 (28-54)	16.26	0	1863740	29	3186	5.7	50k	-2	1298
Washington	21 (12-28)	8.20	1.25	1593442	19	3235	7.0	52k	-2	1231
West Virginia	11 (5-20)	58.70	1	382451	6	3483	6.8	37.5k	2	1884
Wisconsin	24 (17-31)	6.25	0	1308807	12	3463	6.7	42.3k	-.67	1716
Wyoming	1 (0-4)	77.78	1	137669	7	3205	4.7	43.7k	2	1383

Table 3. List of Variables Used in Analyses. Massachusetts excluded.
*Percent White and Non-White may not equal 100 % due to errors or estimates in the US Census data.

Data Analysis

Bivariate correlations were examined to understand the relationships between individual variables. All control variables (percent minority population, state youth population, rate of single parent homes, state unemployment rate, average income, average political leaning, and welfare expenditure per capita), the predictor variable (preservation statute score), and the dependent variables (rate of CMFs and percent change in CMFs) were reviewed for potential correlations.

A series of hierarchical regressions were conducted to determine if a correlation existed between the state's preservation statute score and the rate of CMFs between 2008 and 2018. In Model 1, the state youth population (total children aged 0 - 17) for 2013, the percentage of non-white residents, average income for 2013, unemployment rate for 2013, the rate of single parent households for 2013, and the average political leaning were added as control variables. In Model 2, the state's welfare expenditure was introduced as a predictor variable. Lastly, in Model 3, state preservation statute score was added as the main predictor variable of interest. The rate of CMFs between 2008 and 2018 served as the dependent variable.

An additional series of hierarchical regressions were conducted to examine the relationship between a state's preservation statute score and the trend of child maltreatment fatalities between 2008 and 2018. The trend variable was calculated by summing the first three and last three years of the sample period, then calculating a percent change score. After adjusting outliers, variables were entered into 3 Models. In Model 1, the state youth population (total children aged 0 - 17) for 2013, the percentage of non-white residents, average income for 2013, unemployment rate for 2013, the rate of single parent households for 2013, and the average political leaning were added as control variables. In Model 2, the state's welfare expenditure was

introduced as a control variable. This was entered as its own step due to interest in the variable's predictive ability. Lastly, in Model 3, state preservation statute score was added as the main predictor variable of interest. The percent change from the first three years of the sample to the last three served as the dependent variable.

The results from the above data analysis are presented in the following section.

Results

Table 3 shows the variables used in the analyses. CMF rate, one of the two main dependent variables, is calculated for each state and for all 49 states that were used in the analyses and the District of Columbia. These numbers reflect the number of CMFs per 100,000 children across the years of 2008 to 2018. The percent change in CMFs, the second dependent variable, shows the percent change in CMFs between the first and last three years of the sample. The main predictor variable of interest, state preservation statute score, shows the average prioritization of family preservation for each state, as coded by the Primary Investigator and three Master of Arts students.

The mean rate of CMFs across the 49 states and D.C. was 32 per 100,000 children. States such as California (139), Florida (139), and Texas (204) had the highest rates of CMFs. States such as Vermont (1), Wyoming (1), and New Hampshire (1) had the lowest CMF rates. When considering CMF trends, the mean decline across the 49 states and D.C. for the period 2008 to 2018 was -5.94%. Kentucky (-177.42%), Nebraska (-243.36%), and Vermont (-243.36%) had the largest declines in CMFs, while New Hampshire (66.67%), Wyoming (77.78%), and Rhode Island (60.00%) saw the greatest increases. However, with New Hampshire and Wyoming having such low CMF rates, states such as West Virginia (58.70%) and Mississippi (56.76%) might be better representations of percent increases since they have a larger sample of CMFs.

A low preservation statute score would suggest that there was little to no language within the statute emphasizing family preservation as a goal, while a high preservation statute score would suggest that the state included lots of language emphasizing family preservation, therefore, in theory, placing great priority on family preservation. States could be scored between 0 and 4, with the average of four scores becoming the state's preservation statute score. The mean preservation statute score across the 49 states and D.C. was 1.05. Alabama and Oklahoma had the highest preservation statute scores at 3.75. Seventeen states had scores of 0, indicating no language regarding family preservation was used within the statute.

Bivariate correlations were run to examine the relationship between individual variables and are presented in Table 4. A closer look at the predictor variable of CMF rate shows a positive correlation with both the rate of single parent households and the rate of unemployment. Another noteworthy finding is a negative correlation between welfare expenditures per capita and political leaning. While neither variable was a significant predictor in the regression analyses, it is interesting that states that voted on average for a Democratic presidential nominee (coded as -2) are likely to expend more on welfare per capita than states who voted on average for a Republican presidential nominee (coded as 2). This is potentially impactful for provision and quality of family preservation services.

Bivariate Correlations

	Youth Pop.	Political Leaning	% Non-white	Single Parent Homes per 100k	Unemploy-ment Rate	Average Income	Welfare Expenditure	Preservation Statute Score	Rate of CMFs	% Change of CMFs
Youth Pop.	1	-.13	.10	.02	.36*	.16	-.10	.11	.22	-.07
Political Leaning	-.13	1	-.14	.21	-.26	-.58**	-.33*	.11	.23	.06
% Non-White	.10	-.14	1	.05	.29*	.41**	.31*	.10	.25	.08
Single Parent Homes	.02	.21	.05	1	.45**	-.15	.15	-.17	.51**	.05
Unemploy-ment Rate	.36*	-.26	.29*	.45**	1	.28*	.17	-.06	.33*	.09
Average Income	.16	-.58**	.41**	-.15	.28*	1	.68**	-.09	-.10	-.04
Welfare Expenditure	-.10	-.33*	.31*	.15	.17	.68**	1	-.17	.05	-.15
Preservation Statute Score	.11	.11	.10	-.17	-.06	-.09	-.17	1	-.21	.20
Rate of CMFs	.22	.23	.25	.51**	.34*	-.10	.05	-.21	1	.01
% Change of CMFs	-.07	.06	.08	.05	.09	-.04	-.15	.20	.01	1

Table 4. Bivariate Correlations.
N = 50. *$p < .05$. **$p < .01$.

The first hierarchical regression analysis examined whether a state's preservation status score was associated with the rate of child maltreatment fatalities across the years of 2008 and 2018, controlling for youth population, percentage of Non-White residents, average income, state unemployment rate, rate of single parent households, average political leaning, and welfare expenditures. Overall, all three models were significant for predicting rate of child maltreatment fatalities. The predictor variable of interest, preservation statute score, was not significant, but could be considered approaching significance at $p < .08$. Percent Non-White was approaching significance in Models 1 and 2 and was significant at $p < .05$ in Model 3. The rate of single parent homes was a significant predictor in each model. The results are presented in Table 5.

Hierarchical Regression Analyses Predicting CMFs by State Preservation Statute Score

	Model 1	**Model 2**	**Model 3**
	t	***t***	***t***
Youth Population	1.48	1.54	1.75†
Political Leaning	1.13	1.12	1.32
% Non-White	1.83†	1.80†	2.11*
Single Parent Homes	2.76**	2.36*	2.08*
Average Income	-.58	-.75	-.86
Unemployment Rate	.53	.56	.64
Welfare Expenditures	--	.47	.38
Preservation Statute Score	--	--	-1.83†
	F(6, 49) = 4.57, p = .001, R^2 = .39	*F(7, 49) = 3.88, p < .01, R^2 = .39*	*F(8, 49) = 4.01, p = .001, R^2 = .44*

Table 5. Hierarchical Regression Analyses Predicting CMFs by State Preservation Statute Score.
N = 50
†approaching significance. *$p < .05$. **$p < .01$.

The second hierarchical regression analysis examined child maltreatment fatality trends by state. Here, the models described above remained the same, but the dependent variable was the percent change in CMFs between the first three years of data (2008, 2009, and 2010) and the last three years (2016, 2017, and 2018). There were no significant predictors in any of the models for the trend analyses. The results are presented in Table 6.

Hierarchical Regression Analyses Predicting CMF Trend by State Preservation Statute Score

	Model 1	Model 2	Model 3
	t	*t*	*t*
Youth Population	-.73	-1.12	-1.25
Political Leaning	.40	.40	.28
% Non-White	.48	.55	.35
Single Parent Homes	-.25	.33	.54
Average Income	-.29	.78	.85
Unemployment Rate	.80	.58	.56
Welfare Expenditures	--	-1.51	-1.45
Preservation Statute Score	--	---	1.26
	F(6, 49) = 4.57, p = .001, R^2 = .39	*F(7, 49) = 3.88, p < .01, R^2 = .39*	*F(8, 49) = 4.01, p = .001, R^2 = .44*

Table 6. Hierarchical Regression Analyses Predicting CMF Trend by State Preservation Statute Score.
N = 50
†approaching significance. *$p < .05$. **$p < .01$.

Discussion

The purpose of the current study was to determine if a relationship between CMF rate and trends and state family preservation statute score existed, while controlling for a number of other variables that could potentially affect the rate of CMFs in a state.

Instead of a statistically significant relationship existing, the predictor variables failed to significantly predict child maltreatment fatalities. In the first hierarchical regression, preservation statute score was approaching significance as a predictor for child maltreatment fatalities. A hierarchical analysis revealed a negative association between preservation statute score and CMFs occurred—though not at a statistically significant level—meaning that as preservation statute score increased (the state prioritized family preservation more heavily), the rate of CMFs declined.

With about 40% of the variance explained, this would suggest that several other variables exist that could help further explain why CMFs rates vary across states. Though a statistically significant difference was not found, with preservation statute score approaching statistical

significance, one could also interpret the results as family preservation working successfully to prevent child maltreatment fatalities. Understanding whether family preservation is working to protect children is necessary, as the family preservation approach has greatly influenced state and federal legislature over the past few decades.

The first hierarchical regression analyses results support prior research that suggest that single parent homes and minorities are at greater risk for child maltreatment fatalities (Douglas and Finkelhor, 2005). These are important implications for policy, as it could help orient efforts and resources toward families that are statistically higher risk for CMFs than others.

The positive bivariate correlations between CMF and single parent households and unemployment support prior literature regarding risk factors for CMFs. Being a single parent can be stressful and overwhelming and these negative emotions could make parenting judgements difficult. Additionally, single parents might have cohabiting partners, extended family, or non-family living within the home, putting the child at greater risk for a maltreatment fatality (Douglas and Finkelhor, 2005). Unemployed parents or caretakers have also been found to be a risk factor for child maltreatment fatalities (Anderson, et al., 1983).

Limitations

The current study suffered several limitations that restrict the ability to interpret the true effect of state preservation statutes on CMFs. First, while a state may have a statute in place, this does not mean the statute is enforced. Second, without knowing when the statutes were enacted, it is difficult to determine how long it might take for them to have an effect on CMFs. These two limitations weaken the measure of preservation prioritization by looking simply at policy. Lastly, numerous other variables that influence CMFs might exist but were not included in the

measurement. For example, number of child protective investigators, caseload, or other variables might be associated with child maltreatment fatalities, but were included in this research.

Future Directions

This study could be expanded upon to better understand how state statutes impact child maltreatment fatalities. Examining more variables could possibly result in a higher R^2 value, thus better explaining factors that contribute to CMFs. Additionally, to better assess the impact of the legislature itself, determining the point of time at which the statute was enacted and measuring fatality trends prior to and after that point would provide a stronger argument for a potential causal effect of state preservation statutes on CMFs.

Future research should also focus on family-level variables, highlighting differences between families that participate in family preservation and/or reunification and lead successful lives and those that suffer a CMF despite receiving preservation services. It is likely that family preservation services work for some families, while failing others. It is critical to understand which families can benefit from this type of approach, so resources are used wisely. Moreover, programs and services should be identified to assist the subgroup of families that do not seem to effectively reform despite receiving family preservation services.

Conclusion

The present study does not suggest that a statistically significant relationship between preservation statute score and child maltreatment fatalities exists. Instead, a relationship that could be considered approaching statistical significance was found. One interpretation suggests that states that have higher preservation statute scores have lower rates of child maltreatment fatalities; however, it is worth noting that statistical significance was likely influenced by the small sample size with several covariates. Limitations in the measurement prevent accurate

interpretations of the true impact of policy on child maltreatment fatalities. The findings of the present study warrants continued and refined studies in the future. A future study that includes additional variables and accounts for time of statute enactment might result in a better understanding of the effect family preservation statutes have on child maltreatment fatality rates.

The present study has potential implications for policy and future research that should be conducted to refine the above work in order to identify methods for preventing abuse and neglect, while acting in the best interest of the child. Certain demographic groups of families might respond well to family preservation methods, while other families might respond better to alternative abuse and neglect prevention methods. It is critical to identify these subgroups of families in order to reduce the rates of abuse, neglect, and child maltreatment fatalities we see annually across the United States.

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