Do State TANF Policies Affect Child Abuse and Neglect?

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Abstract:

Child maltreatment is a costly public health problem that contributes to morbidity and mortality in childhood with consequences that persist into adulthood. Correlations between low income and child abuse and neglect have been observed consistently over the past four decades. However, few studies have examined the relation of social safety net policies to child maltreatment using causal methods. In this study, we examine whether changes in the Temporary Assistance to Needy Families (TANF) cash-assistance program affected child maltreatment rates from 2004-2015 using difference-in-difference models. We find that TANF restrictions implemented by states increased victims of child maltreatment as well as foster care placements. Results underscore the consequences of federal block grant policies that give states wide discretion in determining the extent of the social safety net.

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I. Introduction

Child abuse and neglect are public health problems that can lead to morbidity and mortality in childhood and increased risk for health concerns into adulthood such as alcoholism, smoking, and drug abuse; depression and suicide; high-risk sexual behaviors; sexually transmitted diseases; and certain chronic diseases (Runyan et al., 2002; Norman et al., 2012). A costly public health problem, the total lifetime economic burden resulting from new cases of fatal and non-fatal child abuse and neglect in the United States has been estimated at $124 billion (Fang, Brown, Florence & Mercy, 2012). During FFY 2015, child protective services agencies received an estimated 4.0 million referrals involving approximately 7.2 million children. Of these children, an estimated 683,000 were determined to be victims of child abuse and neglect, a rate of 9.2 victims per 1,000 children (USDHHS, 2017). This paper examines whether changes in the Temporary Assistance to Needy Families (TANF) cash-assistance program has impacted child abuse and neglect, and finds that TANF restrictions implemented by states have increased victims of child abuse and neglect as well as foster care placements.

The Healthy People 2020 Initiative has set goals to reduce rates of non-fatal child maltreatment from 9.4 per 1000 children in 2008 to 8.5 per 1000 children by 2020 (IPV-38) and child maltreatment deaths from 2.3 per 100,000 to 2.1 per 100,000 children (IPV-37; USDHHS, 2014). Since the early 1990s, child abuse and neglect rates have declined from a high of 15.1 per 1000 children in 1994 to a low of 9.1 per 1000 children in 2013 (Child Trends, 2015). However, these trends have been largely explained by precipitous declines in physical abuse and sexual abuse rates, whereas rates of child neglect have remained relatively stagnant (Finkelhor, Jones, & Shattuck, 2013).

The largest percentage of children who come to the attention of the child protective services (CPS) suffer from neglect (75.0%) (USDHHS, 2017), a multitude of caregiver behaviors that can be divided into two types: failure to provide or meet the basic physical, emotional, or educational needs of the child; and failure to supervise or ensure a child's safety within and outside the residence given a child's emotional and developmental needs, and exposure of the child to violent environments (Leeb et al., 2008). While most children that come to the attention of CPS experience neglect (USDHHS, 2017), traditional surveillance systems may undercount cases given that neglect is less likely to be captured by data systems when compared to physical or sexual abuse (Leeb et al., 2008).

The determinants of child abuse and neglect are typically approached from the perspective of developmental-ecological theories (Garbarino, 1977; Belsky, 1993) that suggest child abuse and neglect result from the interactions between a number of risk factors including parent and child characteristics, parent-child interactions, family characteristics, socioeconomic status and economic resources, and the social and environmental contexts in which the child and family are situated (Stith et al., 2009; Coulton et al., 2007). While none of these factors in isolation have been proven to cause child maltreatment, studies over the past four decades have repeatedly demonstrated the association between economic determinants and child abuse and neglect (e.g., Paxson, Berger, & Waldfogel, 2002; Pelton, 2015; Shook, 1999; Slack et al., 2004; Berger & Waldfogel, 2011; Lindo, Schaller & Hansen 2013; Lindo & Schaller, 2014).

In the U.S., increased risks for child abuse and neglect and CPS involvement have been observed consistently among poor families and families of low-income based on income measures as well as indicators associated with low income such as unemployment, single parenthood, and self-perceived material hardship (Berger & Waldfogel, 2011). Shocks during

periods of economic instability such as male layoffs, loss of employment, declines in consumer confidence, and housing foreclosures have also been associated with increased risks of child abuse and neglect and increased probabilities of CPS involvement (Berger et al., 2015 Huang et al., 2011; Lindo, & Schaller, 2014; Lindo, Schaller & Hanson, 2013; Wood et al., 2012; Brooks-Gunn, Schneider, & Waldfogel, 2013). Associations have also between reported between economic determinants and child abuse and neglect rates at the neighborhood and community levels (Coulton, Korbin, Su & Chow, 1995; Freisthler, Merritt, & LaScala, 2006; Zuravin, 1989; Paxson & Waldfogel, 2003; Coulton, et al., 2007; Eckenrode, Smith, McCarthy, & Dineen, 2014). A small body of research has also demonstrated relationships between economic and social safety net policies and child abuse and neglect (Paxson & Waldfogel, 2002; 2003; Berger et. al. 2014; Klevens et al., 2015; Berger, Font, Slack & Waldfogel, 2016; Raissian & Bullinger; 2017; Wildeman & Fallesen, 2017).

The link between social safety net programs and neglect is direct: to the extent that social assistance in the form of programs such as the Temporary Assistance to Needy Families (TANF) provide resources for basic needs, reduction in access may result in increased child neglect. Furthermore, work requirements included in TANF require parents to obtain child care in order to find employment. If support for child care is lacking, parents may make the difficult choice between providing for a child's basic needs or ensuring their child's safety through adult supervision.

That rates of child abuse and neglect remained unchanged during the Great Recession, which began in 2007 and continues to reverberate throughout the economy, has been noted as a surprise to many observers given the strong association between economic determinants and child abuse and neglect (Sedlak et al, 2010; Stith et al., 2009; Slack et al. 2011). However, data

from the National Child Abuse and Neglect Data System (NCANDS) demonstrate that several states experienced considerable increases in rates of child abuse and neglect during this time period while others experienced declines (Figure 1). We hypothesize that increases in child neglect in some states may be partly explained by changes that states made in their economic and social safety net policies during this period.

II. The Effect of Policy on Child Abuse and Neglect

The Center for Disease Control and Prevention's (CDC) Strategic Direction for Child Maltreatment Prevention focuses on building safe, stable, and nurturing relationships (SSNRs) between children and adults to prevent child abuse and neglect (CDC, n.d.). Economic determinants play a central role in creating and sustaining the social contexts that support SSNRs through family processes.

Economic determinants influence stability, and the degree of predictability and consistency in a child's environment, and they create social contexts for neglect when families are unable to invest in a child's basic needs for food, housing, medical care, clothing, and appropriate child care. Economic factors may influence the extent to which a parent or caregiver is available and able to nurture and respond to their child's needs when factors such as low income, income instability, food insecurity, or lack of health insurance contribute to parental stress, anxiety, or depression, factors that are associated with child neglect (Stith et al., 2009; Slack et al., 2011).

Policies refer to any law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other institutions (CDC, 2013). To date, population-level research on the effects of economic and social safety net policies on the prevention of child

abuse and neglect has been limited to a few studies (Paxson & Waldfogel, 2002; 2003; Klevens et al., 2015 Berger, Font, Slack & Waldfogel, 2016; Wildeman & Fallesen, 2017; Raissian & Bullinger; 2017). We discuss the strengths and limitations of each of these studies in turn.

Paxson and Waldfogel (2002) examined the relationships between state measures of parental economic circumstances and state maltreatment reports, substantiated cases, substantiated maltreatment rates, physical abuse, neglect and children in out-of-home (foster) care. They found that family structure (e.g., father absence), working mothers, family poverty, and decreases in state welfare benefit levels were associated with increased rates of child maltreatment prior to welfare reform in 1996.

In a related study, Paxson and Waldfogel (2003) examined how restrictions introduced by welfare reform were associated with the same measures of child abuse and neglect. They found that reductions in welfare benefits were associated with increases in out-of-home care, and lifetime welfare limits and sanctions for noncompliance were associated with increases in substantiated child abuse and neglect cases. However, these studies suffer from both methodological and data limitations. First, Paxson and Waldfogel (2003) use data through 1998, which includes only the first two years of welfare reform. However, between 1998 and 2014, TANF caseloads plummeted by 45.4%. Figure 2 shows AFDC and TANF caseloads from 1990 to 2014 with the grey shading indicating recession years and the red line indicating the enactment of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), commonly referred to as welfare reform.

During the 1990-91 recession, AFDC caseloads increased in response to the economic downturn. During the 2001 recession, TANF caseloads were flat, and during the Great Recession, TANF caseloads only increased by 12% despite unemployment rates of nearly 10%.

Thus, we consider whether the decrease in TANF caseloads is associated with increases in neglect. Second, states have enacted several policy changes since PRWORA that have restricted benefits and caseloads (Floyd, Pavetti & Schott 2015). Therefore, we agree with Paxson and Waldfogel's conclusion that their 2003 results are preliminary: "These factors indicate that welfare reforms may have greater long-run effects on maltreatment than this evidence indicates." (Paxson & Waldfogel, 2003 p. 109). Third, Paxson and Waldfogel's work only identify correlations between polices and child maltreatment. Econometric approaches developed since Paxson and Waldfogel's seminal work now use state variation in policy over time to identify the causal effects of policies on outcomes (Angrist & Pischke 2010). Longitudinal data at the state and county level are key to identifying a causal impact of policy on child neglect.

In their exploration of policies for the reduction of child abuse and neglect, Klevens et al. (2015) identified several state longitudinal data sources and explored the association between poverty reduction policies, affordable housing, affordable child care, access to pre-Kindergarten, and children's and parent's access to health care. After controlling for childhood poverty, high school graduation, unemployment, demographic characteristics, and the child dependency ratio they find only a few policy variables that are associated with state-level child maltreatment investigation rates. In particular, wait lists for child care increase child maltreatment investigations while continuity of eligibility for Medicaid/SCHIP decreases investigations. Like Paxson and Waldfogel (2002, 2003), Klevens et al. (2015) examine the correlation between policies and maltreatment rates, and cannot evaluate the causal effects of policy changes. Furthermore, their empirical specification is biased because they do not control for state and year fixed effects. State fixed effects control for variations in state-level socioeconomic factors that can influence child abuse and neglect patterns such as definitions of maltreatment and the

enforcement of child abuse and neglect laws. Without controlling for state fixed-effects, the estimated impact of policies on maltreatment investigations will be biased. Including year fixed effects will control for spurious correlation between trends in economic conditions such as employment and trends in child maltreatment. Finally, Klevens et al.'s (2015) examination was limited to child maltreatment investigation rates. Paxson and Waldfogel (2003) show that TANF restrictions are statistically significant in estimates of substantiated child maltreatment cases but are not significant in maltreatment reports.

Berger et al. (2016) examined the effect of additional income resulting from the Earned Income Tax Credit on child abuse and neglect. They used an instrumental variables strategy that is identified by state-level variation in EITC rates to identify exogenous changes in income. They find that an increase in income via the EITC is associated with reductions in involvement with CPS. However, they do not investigate whether the EITC is associated with the number of child victims nor involvement in out-of-home care. Furthermore, instrumental variables strategies depend critically on the validity of the instrument and may be subject to change when different instruments are used.

Raissian and Bullinger (2017), using child maltreatment reports from NCANDS from 2004 to 2013, found that increases in the minimum wage led to a decline in overall child maltreatment reports, particularly neglect reports. Estimating the effect of the minimum wage on child maltreatment using weighted least squares regression, they find that a $1 increase in the minimum wage implies a statistically significant 9.6% decline in neglect reports, an effect that was concentrated among young children (ages 0-5) and school-aged children (ages 6-12). However, this study examined the minimum wage only without taking into account the effects of

other economic or social safety net policies, and did not use a difference-in-differences approach to identify the causal effect of state minimum wages.

Wildeman and Fallesen (2017) used Danish registry data and a 2004 policy shock to estimate the effect of a substantial decrease in welfare generosity (a monthly reduction in disposable income of 30% for those who were on a specific form of welfare for six consecutive months or more) on children's risk of out-of-home placement among women who lacked unemployment insurance and had been long-term recipients on welfare benefits. Their results indicate that this decrease in welfare generosity increased children's risk of out-of-home placement by about 1.5 percentage points in any given year, representing an increase of about 25% in the annual risk of out-of-home placement. Their research, which relied on a difference-in-difference framework, demonstrated that substantial changes in economic conditions of the poorest families can have a substantial effect on the probability that their children will be placed in out-of-home care. However, their dependent variable was limited to out-of-home care placement and their study was conducted in a European context, which limits the generalizability of findings.

Given the potential of economic and social safety net policies to prevent child neglect, and the paucity of methodologically rigorous research in this area, this study builds on these seminal studies by using causal methods to examine state variation in a number of policies theoretically related to child neglect including economic policies designed to reduce poverty (TANF, EITC, minimum wage, and sales taxes). For the most part, past research has studied the relationship of economic and social safety net policies to child maltreatment without examining specific maltreatment subtypes or effects on subgroups of children. To inform prevention strategies, we examine policies in relation to a broad set of neglect measures including child

neglect reports screened in for investigation, substantiated child neglect reports, child fatalities due to child neglect, and entries to foster care for reasons of child neglect, controlling for a large number of covariates.

III. Data and Methods

We use data from a variety of sources to examine the impact of TANF policy changes on child abuse caseloads. Data on child neglect are available from the National Child Abuse and Neglect Data System (NCANDS)**,** a federally sponsored initiative that collects data on child abuse and neglect known to Child Protective Services (CPS) agencies in the United States on an annual basis. States submit case-level data, called a Child File, by constructing an electronic file of child-specific records for each report of alleged child maltreatment that received a CPS response in the form of an investigation or alternative response. Case-level data include information about the characteristics of the reports of abuse and neglect, characteristics of the children involved, including age, gender, and race/ethnicity, maltreatment type, and CPS findings (USDHHS, 2015). Data on foster care entries are available from the Adoption and Foster Care Analysis and Reporting System (AFCARS). AFCARS collects case-level information from state and tribal title IV-E agencies on all children in foster care and those who have been adopted with Title IV-E agency involvement (USDHHS, 2012). Our outcomes of interest include all reported incidents of child abuse and neglect by state and year and total number of victims of child abuse and neglect. We also examine cases reported and screened in specifically for neglect, investigated reports (neglect reports) and the number of cases substantiated (neglect victims). Finally, we can measure the total number of children placed in foster care and those placed in foster care due to neglect. We take our control variables from the

Annual Social and Economic Supplement of the Current Population Survey (ASEC) (Flood et al 2017). NCANDS and AFCARS data are only reliably available for most states starting in 2004 through 2015.

Table 1 provides descriptive statistics for the outcome variables as well as the state covariates used in the estimation. Reported child abuse and neglect reports grew between 2005 and 2015, but Figure 1 indicates that child abuse reports grew more quickly in some states than others. The number of victims of abuse decreased between 2005 and 2010, but victims of neglect were basically flat. Although the average number of children placed into foster care dropped between 2005 and 2015, the number placed into foster care due to neglect increased. Table 1 includes measures of state shares of covariates that we include in the regressions. We note that the share of immigrants increased between 2005 and 2015 as did the share of Hispanics and Asians among state populations. The share of children in extreme poverty increased from 11% to 14% between 2005 and 2015.

We used the Welfare Rules Database for the years 1999–2015 (Welfare Rules Database Project website, http://wrd.urban.org/wrd/query/query.cfm downloaded on October 24, 2017) to identify and code TANF policy change variables. Although many researchers have examined the impact of welfare reform waivers on outcomes (see Zilliak, 2016 for a review), few studies have examined the effect of state TANF policy changes since welfare reform in 1996. Since the 1996 welfare reform, states have had the ability to increase restrictions on access to benefits. We follow an approach used by Moffitt, Phelan and Winkler (2017) in their study of the effect of welfare rules on family structure. For each state and year, we created five strict TANF policies related to work. First, the work sanction variable equals one if the most severe sanction for not working is that households lose their entire benefit or have their case closed. Second, the time

limit variable equals one if the state adopts a time limit on welfare benefits less than the median of 60 months. Third, expanded disregard equals one if the state did not increase the amount of income disregarded. Fourth, the child work variable equals one if the state requires a recipient to return to work if the child is less than 12 months old. Finally, a strict state variable is coded to one when the states have all four of these restrictions on benefit in place. In addition, states have created incentives for parents to assure that their children attend school, receive immunizations, and obtain health screenings.

Table 2 measures the count of states that have these policies in place and the changes over time. Forty-three states imposed the most severe sanction of losing the entire benefit if a TANF recipient refused to work in 2005. That number grew to 46 by 2015. Eight states reduced the number of years eligible for benefits to less than the national median of five years in 2005. By 2015, 12 states had imposed this restriction. By 2015, half of the states required mothers to work before their child was 12 months old. Less than half of the states had increased the earnings disregard by 2015. Only four states had all four restrictions on benefits in place in 2005, which increased to five states in 2010, but returned to four in 2015. States have also imposed behavioral requirements on TANF recipients. First, states have school requirements where children have to attend school, achieve a minimal grade point average, or be involved in their children's education. Second, states give families financial bonuses for meeting these school requirements. Third, states may explicitly require children to be immunized. Finally, states may require health screenings for both adults and children. Table 1 indicates that states have increased the school requirements but decreased requirements for immunizations and health screenings.

Difference-in-Differences Estimation

Differences-in-differences (DID) models are widely used by economists to study the causal effect of policy changes (Bertrand et al., 2002). The intuition behind DID models is to compare changes in the outcome in this case, child neglect, before and after policy changes in states (e.g. changes in TANF eligibility). Thus, DID models require state by year variation in policies in order to identify causal effects. The assumption is that prior to changing TANF eligibility, child neglect cases have identical trends in treatment and control states. After the policy change, the DID estimates how child neglect rates change in the treatment states compared to the control states that did not change policy. The DID method is designed to be analogous to the pre- and post-test comparison of mean outcomes in a randomized controlled trial.

Depending on the policy, states can be classified into treatment and control groups outlined above. Given the treatment classification, DID can be estimated by the following regression model:

$$\ln(Maltreatment)_{st} = \alpha + \beta_s + \delta_t + \lambda(TREAT_s * TREAT\_Year_t) + X_{st} + e_{st} \qquad (1)$$

Equation (1) shows that the natural logarithm of neglect cases is a function of state fixed effects (β_s), year fixed effects (δ_t), and an interaction term between the treated state ($TREAT_s$) and the year the treatment started ($TREAT\_Year_t$) as well as demographic and socioeconomic characteristics in the states (X_{st}). We use the natural logarithm of child neglect cases for ease of interpretation. When the natural logarithm of neglect is regressed on covariates it can be interpreted as the percentage change in neglect given a one percent change in a continuous variable or a one-unit change in a dummy variable. In equation (1) λ is the DID coefficient, and

it can be interpreted as the effect of the policy treatment on the percentage change in child neglect.

DID models assume that there are parallel trends in child neglect in states before a given policy change. Thus in the absence of a policy change, child neglect rates would be the same in treatment and control states. We can evaluate the validity of this assumption by estimating a model that includes interactions between the treatment states and years leading up to the policy change:

$$\ln(Maltreatment)_{st} = \alpha + \beta_s + \delta_t + \sum_{k=t-3}^{t} \lambda_k (TREAT_s * TREAT\_Year_t) + X_{st} + e_{st} \quad (2)$$

The parallel trends assumption indicates that the estimated coefficients on the interaction terms (λ_k) will be equal to zero in the years prior to the treatment. Although Bertrand et. al. (2002) and Donald and Lang (2007) argue that DID models can be misspecified as a result of serial correlation and intra-group correlation, our approach does not suffer from these problems because we are estimating data aggregated to the state level.

IV. The Effect of TANF Policy Changes on Abuse and Neglect Caseloads

Table 3 reports the DID estimates for our measures of reports, victims, and foster care placements. Each cell of the table reports the DID coefficient from a separate regression, and the standard errors are clustered on the state as recommended by Bertrand et al (2004). None of the TANF policy changes had a significant effect on the number of children reported as victims. However, states that imposed total benefit loss as the most severe sanction for not working had a 12 percent increase in child maltreatment victims, and a 23.3 percent increase in neglect victims specifically ($p<.05$). States that imposed these sanctions also experienced a 12.7 percent increase

in foster care placements and a 13.4 percent increase in foster care placements for reasons of neglect specifically. States that restricted benefits to less than 60 months during our time period experienced an increase in child maltreatment victims of 34.4 percent and in neglect victims of 37.3 percent. Work requirements for mothers of infants had no effect on reports, victims, or foster care placements. No change in the earnings disregard, a measure of the erosion of TANF benefits in real terms, increased neglect victims by 13.7 percent ($p<.10$). Finally, the state that imposed all four sanctions had an increase in foster care placements of 32.2%.

Next, we included the four restrictions on benefits in the same regression in Table 4 to determine whether the estimates were robust to multiple policy changes over time. When all treatments are included in the models at the same time, we see similar results. Victims and foster care placements increase when the most severe sanction is removing all benefits for not working. Time limits on benefits of less than 60 months increase maltreatment victims and neglect victims between 30 to 34% and foster care placements resulting from neglect by 19.5 % ($p<.10$).

We also considered whether behavioral requirements had any effect of reports, victims, and foster care placements in Table 5. School requirements were associated with increases in maltreatment and neglect reports (12% and 33.8% respectively). School bonuses, where TANF recipients earn extra money for children's attendance and grades, reduced reports and also reduced neglect victims by 21.1%. However, school bonuses were associated with an increase in foster care placements by 11%. Immunization requirements increased total reports by 13.4%. Finally, health screening requirements increased foster care placements resulting from neglect by 38.8%. This may be the result of doctors being mandated to report any signs of neglect.

Previous research has examined whether changes in the minimum wage had a significant impact on child abuse and neglect reports. Raissian and Bullinger (2017) used child

maltreatment reports from 2004 to 2013, and found that increases in the state minimum wage above the federal minimum wage led to a decline in child maltreatment reports and neglect reports after controlling for state fixed effects. However Raissian and Bullinger (2017) do not use the DID methodology. We revisit their analysis in our DID framework in Table 6. Our model regressed the log of the state minimum wage on reports, victims, and foster care placements, controlling for the same covariates as in the previous models. We found that an increase in the minimum wage had no significant impact on reports or victims but increased total foster care placements by 18.9 to 22.7%.

Finally, since losing all benefits and time limits have the most significant effect on victims and foster care placements, we evaluate the robustness of these results by including leads of the treatment in Table 7. We do this to see whether the number of victims and foster care placements were increasing prior to the TANF policy changes. Inclusion of the lead variables tests the counterfactual policy change prior to the actual policy change to determine any significant impact on the percentage change in caseloads. In all cases the leads are not statistically significant. In the case where the most severe sanction is losing all benefits, many of the leads are negative in sign, indicating that victims and foster care placements were dropping prior to the policy change.

V. Conclusions

We examined the effect of TANF policy changes since 2004 on child abuse and child neglect reports, victims, and foster care placements. Our analysis considered TANF benefit restrictions: losing all benefits when sanctioned; time limits less than 60 months; returning to work when an infant was less than 12 months old; and not increasing the earnings disregard. We

found that states that adopted a policy of sanctioning all benefits in the case of non-compliance with work requirements increased child abuse victims, neglect victims, total foster care placements, and foster care placements for reasons of neglect by 12 to 23%. States that restricted benefits to less than 60 months saw increases in child abuse victims and neglect victims of over 30%. When states adopted all four sanctions, foster care placements increased by 32%. These are large and significant effects on victims and foster care placements.

We also investigated whether state behavioral requirements affected caseloads. School requirements increased reports of abuse and neglect but had no impact on victims. School bonuses for children's attendance and grades in school decreased reports by 19 to 24% and decreased neglect victims as well. However total foster care placements increased in states that offered school bonuses. When children were required to have health screenings, foster care placement for reasons of neglect increased by 38.8%. While more research is needed, it is possible that TANF sanctions associated with the failure to meet child health screening requirements contribute to income losses that increase foster care entry. It is also possible that required screenings increase the surveillance of TANF recipients among those who receive them by placing them into greater contact with mandated reporters in medical settings. At the same time, TANF workers may be more likely to report recipients that fail to meet child health screening requirements to child protective services. Finally, we found no evidence that the minimum wage reduced child abuse and neglect.

These preliminary results point out the consequences of federal block grant policies that give states wide discretion in determining the extent of the social safety net. Figure 3 graphs AFDC and TANF caseloads in the US and the state of Kansas between 1994 and 2014. Kansas caseloads were actually more sensitive to the economic downturn in 2000 and its aftermath than

US TANF caseloads. However, beginning with the Brownback Administration in 2011, Kansas imposed more restrictions on TANF benefits and caseloads declined more rapidly than in the US, dropping by almost two-thirds. Our results indicate that these restrictions on the safety net have real consequences for children's wellbeing.

That said, these results are preliminary and require additional analysis to determine the robustness of the results. We plan to conduct a series of placebo tests as suggested by Slusky (2016) to make sure that we have no spurious correlation in our estimates. In addition, Lindo and Schaller (2014) caution against using state variation in child maltreatment reports and victims because of underreporting and measurement error, especially in the case of reports. Our results found almost no impact of TANF policies on reports, but did find significant effects on victims (substantiated reports) as well as foster care placements.

NCANDS and AFCARS are the most reliable sources of child maltreatment and foster care data available in the U.S. However, the data is not without its limitations. While victims may experience multiple forms of maltreatment, NCANDS and AFCARS provide information on singular forms of maltreatment for each child, thereby limiting our understanding of the complexity, severity, and chronicity of maltreatment. Further, case substantiation has been criticized for its limited predictive validity in identifying children at greatest risk for harm (Drake, 1996; Kohl, Jonson-Reid, & Drake, 2009). Nonetheless, as a statutory classification, the substantiation decision requires a level of evidence that maltreatment occurred, and it represents an important gateway to later child protection decisions including foster care placement. Future research will incorporate levels of evidence for substantiated reports as well as universal mandated reporting laws, changes in state definitions of abuse and neglect, caseload sizes for intake workers, and funding for CPS to control for variations in reports, investigations, and

victimization within states over time.

Finally, we will investigate how changes to the administration of TANF benefits within states affected take-up of benefits. For example, in October 2011, the state of Kansas decoupled the application process for TANF benefits and Medicaid. According to Kansas caseload reduction reports, this change resulted in a reduction of an average of 1,975 TANF cases per month (http://www.dcf.ks.gov/services/ees/Documents/Reports/Kansas%20FFY%202015%20TANF%20All%20Families%20Caseload%20Reduction%20Report.pdf). Future work will attempt to measure these policy changes and examine the impact on child abuse and neglect.

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Table 1. Child Maltreatment and Demographic Measures by State 2004--2015

Variables	2005	2010	2015
Children Reported for Abuse	58521.71	59170.76	65301.69
	[72909.12]	[74850.53]	[77060.69]
Children Reported for Neglect	31347.76	38426.68	42437.53
	[43790.89]	[52563.76]	[54462.01]
Child Victims of Abuse	15998.8	13042.88	13265.43
	[22691.24]	[17995.97]	[16785.44]
Child Victims of Neglect	10330.2	9351.26	10005.12
	[13889.85]	[14769.25]	[14529.06]
Children Placed in Foster Care	5985.882	5104.706	5274.569
	[6680.22]	[5582.606]	[5526.578]
Children Placed in Foster Care because of Neglect	3061.16	2647.726	3165.314
	[3810.572]	[3569.551]	[4120.462]
Immigrant Share of Population	0.0801	0.0876	0.0946
	[.0594]	[.0612]	[.06]
Crude Drug Death Rate per 100,000	11.758	13.5647	
	[3.512]	[4.6252]	
Unemployment rate	4.9333	8.7608	5.0412
	[1.0422]	[2.0357]	[1.0927]
Lives in metro area	0.7354	0.7491	0.7633
	[.187]	[.1769]	[.1844]
Black Nonhispanic Share of Population	0.1335	0.1284	0.1289
	[.1387]	[.1235]	[.1212]
Asian Nonhispanic Share of Population	0.0331	0.0382	0.0435
	[.0544]	[.0588]	[.0613]
Other Nonhispanic Share of Population	0.0511	0.0548	0.0646
	[.0621]	[.0603]	[.059]
Hispanic Share of Population	0.1229	0.1481	0.1649
	[.1192]	[.1287]	[.124]
Log of Personal Income	18.6152	18.7923	18.9973
	[1.061]	[1.0379]	[1.0402]
Share of Children in Families with Income below 75% of the poverty line	0.1146	0.1377	0.1402
	[.0392]	[.0425]	[.0439]
Share of Mothers without High School Degree	0.1056	0.0999	0.0908
	[.0431]	[.0395]	[.0329]
Share of Single Mothers	0.2077	0.2124	0.2098
	[.0587]	[.0503]	[.0571]

Table 1 (continued)

Variables	2005	2010	2015
Share of Working Mothers with no Father	0.142	0.1344	0.1432
	[.0341]	[.027]	[.0314]
Share with Father not working	0.0641	0.0977	0.0774
	[.0142]	[.0216]	[.0191]
Share of Working Mother with Nonworking Father	0.0351	0.0525	0.0416
	[.0079]	[.0122]	[.01]
Share of Working Mother and Working Father	0.4414	0.4098	0.431
	[.0696]	[.0673]	[.0697]
Log of State Population	15.0709	15.1177	15.1531
	[1.044]	[1.0421]	[1.0407]
Log of Child Population	13.75	13.7584	
	[1.2209]	[1.2236]	
Share of Children Aged 3 to 4	0.1084	0.1145	0.1072
	[.0077]	[.0092]	[.0092]
Share of Children aged 5 to 13	0.4865	0.4907	0.4976
	[.013]	[.0123]	[.0157]
Share of Children aged 14 to 17	0.2399	0.2241	0.2331
	[.0162]	[.0148]	[.0182]
Observations	52	52	52
Standard deviations in brackets			

Data Sources: Child Maltreatment: NCANDS. Foster Care: AFCARS. Demographic Variables: Current Population Survey.

Table 2. State TANF Policies

Policies	2005	2010	2015
Most Severe Sanction: Lose Benefits	43	45	46
Time Limit < 60 Months	8	11	12
Work if Child < 12 Months	22	25	25
Earnings Disregard Did Not Increase	36	27	28
States with All Four Sanction Counts	4	5	4
School Requirement	33	33	37
School Bonus	8	9	8
Immunization Requirement	27	26	25
Health Screening Requirement	8	6	5

Source: Urban Institute Welfare Rules Database.

Table 3. Difference-in-Difference Estimates of Effect of TANF Policies on Reports, Victims and Foster Care 2004-2015

Variables	Abuse Reports	Neglect Reports	Abuse Victims	Neglect Victims	Total Foster Care	Neglect Foster Care
Most severe sanction is losing all benefits	0.040	0.029	0.123*	0.233*	0.127~	0.134*
	(0.064)	(0.137)	(0.059)	(0.116)	(0.069)	(0.057)
Time limit < 60 months	0.002	0.235	0.344*	0.373*	0.148	0.183
	(0.056)	(0.248)	(0.152)	(0.176)	(0.105)	(0.121)
Return to work if child age < 12 months	0.030	-0.075	0.024	-0.007	0.059	0.012
	(0.034)	(0.078)	(0.053)	(0.072)	(0.040)	(0.056)
Earnings disregard did not change	-0.007	-0.045	0.039	0.137~	0.047	0.169
	(0.037)	(0.143)	(0.055)	(0.079)	(0.034)	(0.090)
Four strict sanctions	-0.011	0.031	0.304	0.320	0.322*	0.128
	(0.031)	(0.385)	(0.272)	(0.292)	(0.131)	(0.166)

Each column and row is a difference-in-difference estimate from a separate regression. Standard errors in brackets, clustered on state. ** p<.01, *p<.05, ~p<.10. All estimates control for unemployment rate, log of personal income, log of population, log of child population, drug death rate per 100,000, share of children ages 3-4, 5-13, and 14-17, share of population that are immigrants, non-Hispanic black, non-Hispanic Asian, non-Hispanic other race, Hispanic any race, children living below 75% of poverty line, share of mothers without a high school degree, share of single mothers, share of working mothers/no father, share with father not working, share of working mother/non-working father, share of working mother/working father, state and time fixed effects.

Table 4. Difference-in-Difference Estimates of Effect of TANF Policies on Reports, Victims and Foster Care 2004-2015

Variables	Abuse Reports	Neglect Reports	Abuse Victims	Neglect Victims	Total Foster Care	Neglect Foster Care
Most severe sanction is losing all benefits	0.048	0.030	0.125*	0.217~	0.126*	0.118~
	(0.061)	(0.137)	(0.058)	(0.109)	(0.062)	(0.070)
Time limit < 60 months	0.011	0.262	0.296*	0.335*	0.049	0.195~
	(0.064)	(0.219)	(0.119)	(0.156)	(0.060)	(0.114)
Return to work if child age < 12 months	0.033	-0.072	0.015	-0.011	0.043	0.018
	(0.035)	(0.075)	(0.057)	(0.076)	(0.034)	(0.056)
Earnings disregard did not change	-0.007	-0.040	0.031	0.126	0.033	0.170~
	(0.038)	(0.149)	(0.059)	(0.083)	(0.037)	(0.092)
Four strict sanctions	-0.026	-0.073	0.145	0.133	0.278*	-0.004
	(0.052)	(0.349)	(0.234)	(0.256)	(0.126)	(0.141)

Each column is a separate regressing including difference-in-difference coefficients. Standard errors in brackets, clustered on state. ** p<.01, *p<.05, ~p<.10. All estimates control for unemployment rate, log of personal income, log of population, log of child population, drug death rate per 100,000, share of children ages 3-4, 5-13, and 14-17, share of population that are immigrants, non-Hispanic black, non-Hispanic Asian, non-Hispanic other race, Hispanic any race, children living below 75% of poverty line, share of mothers without a high school degree, share of single mothers, share of working mothers/no father, share with father not working, share of working mother/non-working father, share of working mother/working father, state and time fixed effects.

Table 5. Difference-in-Difference Estimates of Effect of TANF Behavioral Policies on Reports, Victims and Foster Care 2004-2015

Variables	Abuse Reports	Neglect Reports	Abuse Victims	Neglect Victims	Total Foster Care	Neglect Foster Care
School requirements	0.120*	0.338*	0.039	0.069	-0.062	-0.085
	(0.048)	(0.151)	(0.073)	(0.107)	(0.085)	(0.117)
School bonus	-0.186**	-0.244~	-0.109	-0.211*	0.110~	0.003
	(0.064)	(0.125)	(0.077)	(0.096)	(0.061)	(0.057)
Immunization requirements	0.134*	-0.072	-0.112	-0.175	0.111	0.006
	(0.055)	(0.176)	(0.100)	(0.124)	(0.078)	(0.139)
Health screening requirements	-0.033	0.097	-0.027	0.114	0.014	0.388**
	(0.052)	(0.086)	(0.146)	(0.067)	(0.088)	(0.127)

Each column is a separate regression including difference-in-difference coefficients. Standard errors in brackets, clustered on state. ** p<.01, *p<.05, ~p<.10. All estimates control for unemployment rate, log of personal income, log of population, log of child population, drug death rate per 100,000, share of children ages 3-4, 5-13, and 14-17, share of population that are immigrants, non-Hispanic black, non-Hispanic Asian, non-Hispanic other race, Hispanic any race, children living below 75% of poverty line, share of mothers without a high school degree, share of single mothers, share of working mothers/no father, share with father not working, share of working mother/non-working father, share of working mother/working father, state and time fixed effects.

Table 6. Effect of State Minimum Wages on Abuse Reports, Victims and Foster Care Placements 2004-2015

Variables	Abuse Reports	Neglect Reports	Abuse Victims	Neglect Victims	Total Foster Care	Neglect Foster Care
Log State Minimum Wage	0.011	-0.142	0.091	-0.014	0.227**	0.018
	(0.142)	(0.242)	(0.133)	(0.175)	(0.078)	(0.241)
Log State Minimum Wage	-0.008	-0.217	-0.025	-0.115	0.189*	-0.022
Other TANF Treatments	(0.137)	(0.252)	(0.129)	(0.169)	(0.071)	(0.230)

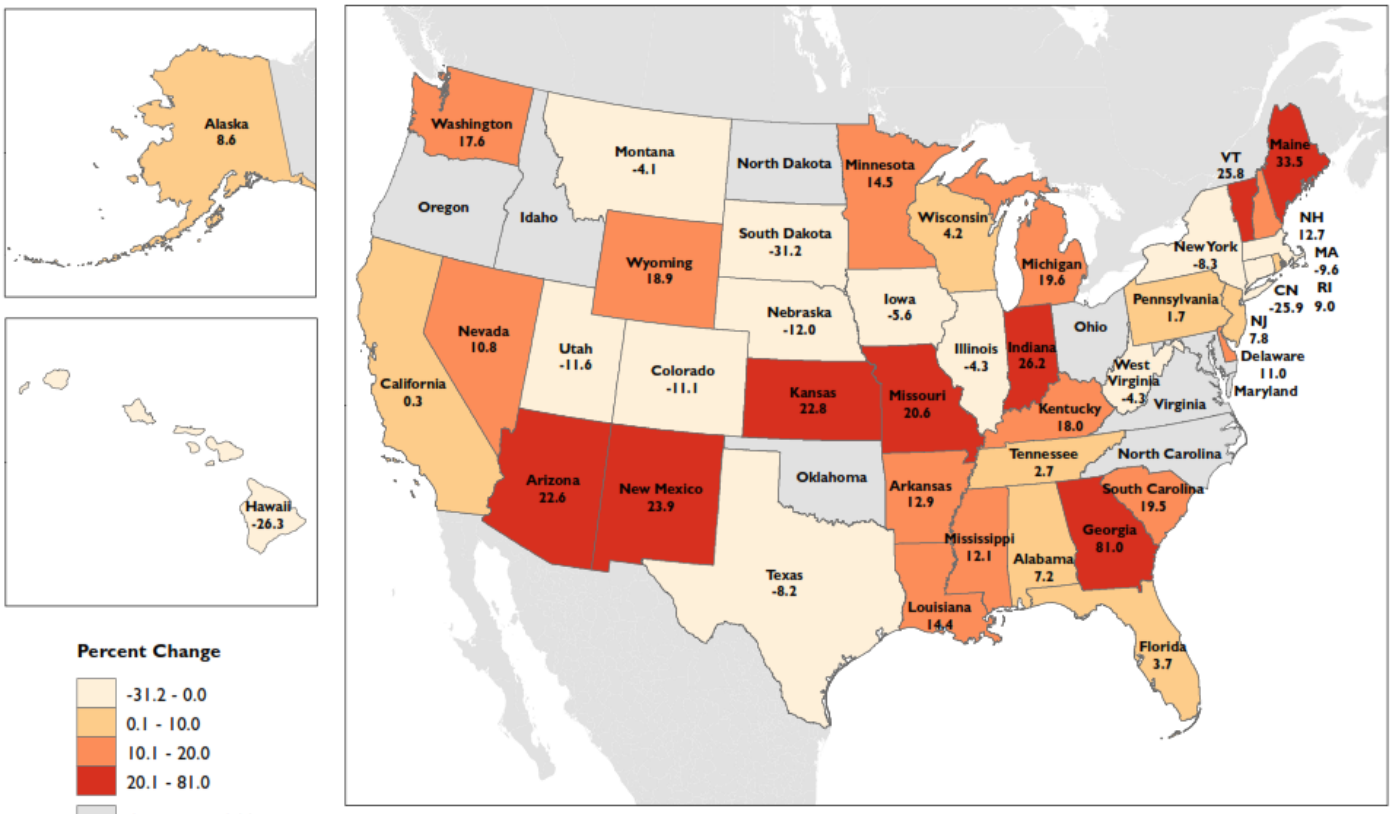
Each column is a separate fixed effect regression. Standard errors in brackets, clustered on state. ** p<.01, *p<.05, ~p<.10. All estimates control for unemployment rate, log of personal income, log of population, log of child population, drug death rate per 100,000, share of children ages 3-4, 5-13, and 14-17, share of population that are immigrants, non-Hispanic black, non-Hispanic Asian, non-Hispanic other race, Hispanic any race, children living below 75% of poverty line, share of mothers without a high school degree, share of single mothers, share of working mothers/no father, share with father not working, share of working mother/non-working father, share of working mother/working father, state and time fixed effects.

Table 7. Difference-in-difference estimates of TANF Policies and Policy Leads on Victims and Foster Care

Variables	Total Victims	Neglect Victims	Total Foster Care	Neglect Foster Care
Most severe sanction is losing all benefits	0.154*	0.283**	0.149	0.183~
	(0.065)	(0.102)	(0.103)	(0.094)
1-period lead of Most severe sanction	-0.056	-0.080	-0.052	-0.086
	(0.042)	(0.052)	(0.078)	(0.091)
2-period lead of Most severe sanction	-0.004	-0.128	0.005	0.041
	(0.068)	(0.151)	(0.027)	(0.057)
3-period lead of Most severe sanction	0.036	0.377	0.064	-0.093
	(0.082)	(0.251)	(0.055)	(0.099)
Time limit < 60 months	0.343	0.468~	0.076	0.085
	(0.207)	(0.238)	(0.094)	(0.093)
1-period lead of Time limit < 60 months	0.076	0.059	0.035	0.080
	(0.067)	(0.067)	(0.029)	(0.043)
2-period lead of Time limit < 60 months	0.021	0.038	0.052	-0.001
	(0.058)	(0.091)	(0.045)	(0.092)
3-period lead of Time limit < 60 months	-0.161	-0.360	0.027	0.078
	(0.123)	(0.221)	(0.021)	(0.062)

Each column is a separate regression including difference-in-difference coefficients. Standard errors in brackets, clustered on state. ** p<.01, *p<.05, ~p<.10. All estimates control for unemployment rate, log of personal income, log of population, log of child population, drug death rate per 100,000, share of children ages 3-4, 5-13, and 14-17, share of population that are immigrants, non-Hispanic black, non-Hispanic Asian, non-Hispanic other race, Hispanic any race, children living below 75% of poverty line, share of mothers without a high school degree, share of single mothers, share of working mothers/no father, share with father not working, share of working mother/non-working father, share of working mother/working father, state and time fixed effects.

Figure 1. Percent Change in the Number of Children who Received a Child Maltreatment Investigation by State, 2009-2013



Source: Institute for Policy & Social Research, the University of Kansas;
data from National Data Archive on Child Abuse & Neglect, NCANDS Child File.

Figure 2. AFDC/TANF Caseloads 1990-2014

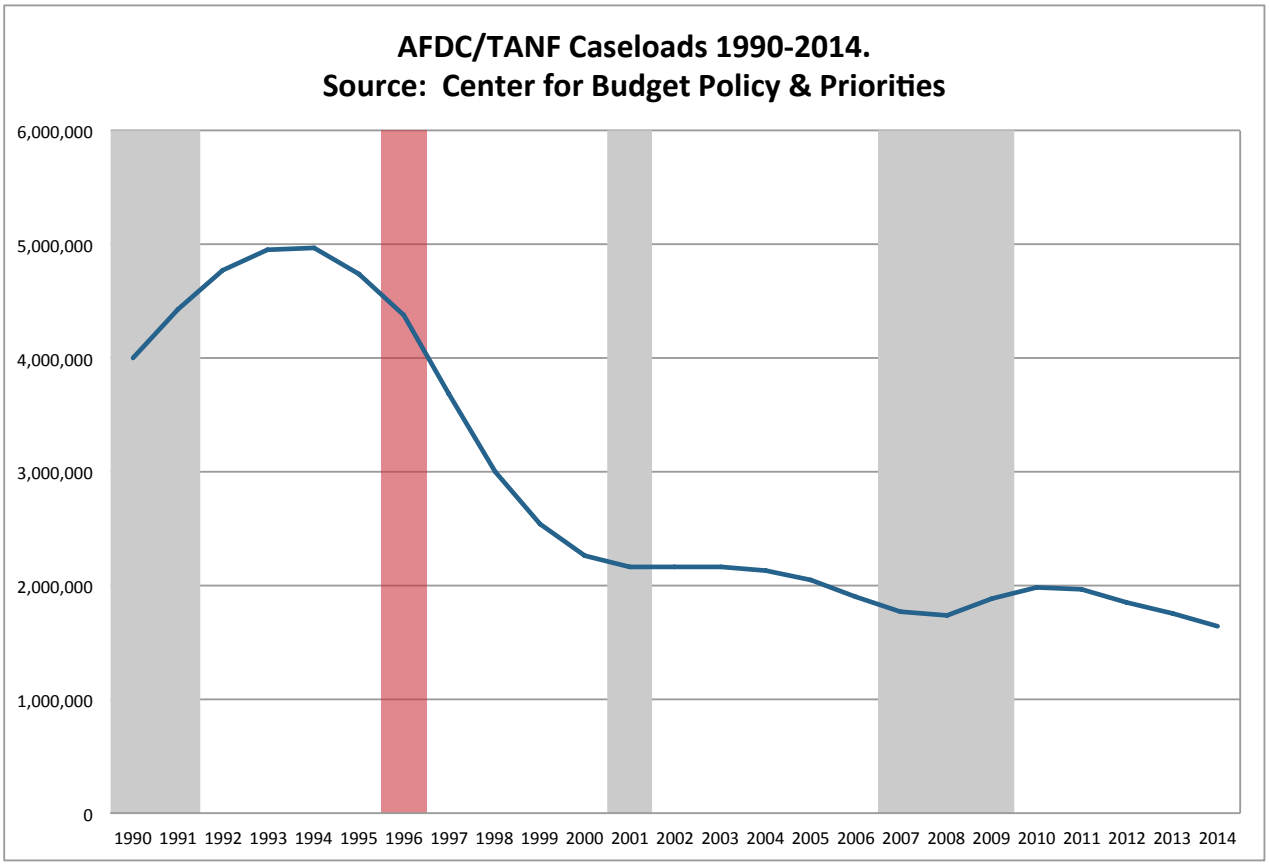


Figure 3: US and Kansas AFDC/TANF Caseloads 1994-2014