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Impact of Short Lifetime Limits on Child Neglect

Vicky N. Albert

University of Nevada, Las Vegas, vicky.albert@unlv.edu

William C. King

Dominican University, San Rafael CA, william.king@dominican.edu

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Impact of Short Lifetime Limits on Child Neglect

Cover Page Footnote

Several people helped shape the present study. First and foremost, I would like to thank Dr. Ron Haskins from the Brookings Institution in Washington, D.C., with whom I collaborated on a project entitled "The Responsiveness of the Temporary Assistance for Needy Families Program during the Great Recession". This project laid the foundation for some of the present study. Second, I would like to thank my research assistant, Ashley Fossile who made the analyses of the secondary data possible. Finally, I would like to thank all of those who provide us with secondary data, including folks from Cornell University. Page 11 Great Recession" in 2014. This project laid the foundation for the present study and led me to further explain TANF case- loads with states' severe policies during the recession. Dr. Has- kins' suggestions during this study were always useful. Second, I would like to thank William King, whose mathematical sup

Impact of Short Lifetime Limits on Child Neglect

Vicky N. Albert

University of Nevada, Las Vegas

William C. King

Dominican University, San Rafael CA

The Great Recession that officially began in December 2007 nationally resulted in a loss of income on the part of many families with children who, in turn, relied on a variety of safety nets, including cash assistance from Temporary Assistance for Needy Families (TANF) program. Loss of income has been recognized as a major risk factor of child maltreatment, in particular child neglect. During its 2007 recession, Arizona shortened its TANF lifetime limits substantially, which resulted in transfer income losses for many families with children on TANF. Using time-series analysis, the present study determines the relative impact of TANF's shorter than 60-month time limits on Arizona's child neglect caseload. This paper shows that there is a strong inverse relationship between child neglect and the decrease in the number of families receiving cash assistance from TANF. Key findings reveal that all else constant, under the presence of 36-month time limit there was an increase of 190 children substantiated for neglect in the state of Arizona ($p < .001$). The corresponding figure under the 24-month lifetime limit was 461 cases per month ($p < .001$). This study reminds us that policies in one program should not be implemented in a vacuum but rather that their consequences for children and families in related programs need to be closely analyzed.

Key words: Lifetime limits in Arizona, Child neglect during the Great Recession, Short lifetime limits, TANF program and child neglect, loss of income and child neglect, substantiated neglect cases

The Great Recession that officially began in December 2007 and ended in June 2009 was the most severe recession in the United States since the Depression of the 1930s. Because of this major economic downturn, millions of Americans lost their market income and relied on a number of federal and state programs designed to provide people with cash and other benefits when they fall on hard times. One of these programs is the Temporary Assistance for Needy Families Program (TANF), commonly referred to as “welfare.” This program, as well as its predecessor, Aid to Families with Dependent Children (AFDC), provides cash assistance to needy families with dependent children (Haskins, Albert, & Howard, 2014).

In all but 4 states, enrollment in the TANF program increased in response to rising unemployment. The average growth rate of TANF caseloads during the states’ recessions was about 26 percent (Albert & Lim, 2017). TANF caseload increases, however, varied substantially between states, partially because the severity of the recession differed significantly between states, and partially because of TANF policy shifts which also varied across the states (Haskins et al., 2014). The present study focuses on Arizona, where during its recession, the unemployment rate increased by 209% and the TANF caseload increased by lower than average rate of 6%, 11 months after the unemployment rate began to increase (Albert & Lim, 2017). Because Arizona substantially shortened its lifetime limit policies under TANF, Arizona’s TANF caseload began to fall sharply in 2009.

Some families who lost their market income during the recession turned to TANF; some also lost their transfer income because Arizona implemented severe TANF policies. In 2009, Arizona cut its benefits by 20% and concurrently stopped providing benefits to prospective mothers in their third trimester. Moreover, Arizona’s policy shifts of cutting its lifetime limits from 60 months to 36 months, and then to 24 months, left many families with children without their transfer income.

Loss of income is recognized as a major risk factor of child maltreatment, in particular child neglect. Child neglect is viewed as inadequate provision of food, clothing, or other basic needs to children (Berger & Walfogel, 2011). Loss of TANF transfer income may have led to a greater number of child neglect cases during Arizona’s recession. In fact, Arizona’s child

neglect caseload increased substantially when the TANF caseload decreased in response to shorter time limits.

This study examines Arizona's changes in its unemployment rate, major TANF policy shifts, and changes in its child neglect caseload during its recession. It quantitatively explains trends in child neglect using time series analysis that controls for rising unemployment, TANF policy shifts, and demographics in Arizona. The findings of the study are important to those interested in the relationship between cash assistance enrollment and child maltreatment cases. Based on the present study's findings, recommendations are made that could make the TANF program more responsive to families in children in the State of Arizona as well as other states considering major TANF policy shifts.

Background, Purpose and Questions

Loss of Income and Child Neglect: What to Expect

Existing research differentiates between income levels and income loss as correlates of child maltreatment. Researchers have long recognized that children living in poverty are at higher risk for child maltreatment, particularly child neglect, than those living with greater economic resources (Pelton, 2016). During recessions, when unemployment rates increase, many families experience economic hardship which puts them at a higher risk of child neglect. Berger and Walfogel (2011) defined child neglect as the "inadequate provision of basic necessities such as food, clothing, shelter, supervision, education, or medical care and in some cases, a failure to meet children's emotional needs" (p. 5).

All in all, level of income has been found to have an inverse relationship with the risk for child maltreatment. Loss of income also has been identified as one of the major risk factors associated with child neglect. When a family loses market income or income from TANF, the family may be deprived of food, shelter or health benefits (Berger & Walfogel, 2011). Families who find themselves suddenly not having enough to eat or not having a place to live are likely to experience added stress, which may lead to child maltreatment (Berger, 2004). Clearly, the loss of market income is more common during economic downturns

such as the Great Recession, and in turn, it would be expected that more caretakers would find themselves under stress and unable to provide for their children.

Berger and Waldfogel (2011) maintain that child maltreatment in families receiving cash or in-kind transfers may actually decrease, because clearly such income replaces market income and alleviates some of the economic hardships families experience. Moreover, and very importantly, often cash assistance or in-kind benefits are conditioned on providing adequate care to the children. In turn, the primary caretakers have the financial incentives not to maltreat their children because they risk losing their public assistance income. For example, under welfare rules, TANF recipients are required to provide health screenings and immunizations for their children, and they must assure that their children are attending school (Kassabian, Vericker, Searle, & Murphy, 2011). Such requirements make some recipients cautious about providing for their children when receiving transfer income.

All in all, research suggests that when TANF program becomes involved in children's lives, caretakers experience more supervision and basic needs are met. At the very least, child neglect should not increase due to TANF benefit receipt during a recession. When transfer income is lost for some families who do not or cannot replace it with market income, the result may be an increase in child neglect caseloads because more families are experiencing economic hardship. This study tests the hypothesis that child neglect caseloads have an inverse relationship to public assistance caseloads due to loss of transfer income or inability to access it.

Most academics and practitioners recognize that economic hardship is not the sole risk factor leading to child maltreatment, but it is of major importance. Clearly, poor mental health, substance abuse, poor parenting skills on the part of the caretaker, or lack in disciplinary options also can increase the likelihood of child maltreatment (Berger & Waldfogel, 2011). Taken together, these personal factors, along with environmental factors, will affect the likelihood of child neglect occurring.

Child Maltreatment and Loss of Income: Evidence

Some research has been devoted to testing the relationship between loss of market income and child maltreatment. The findings clearly suggest that market income loss during recessionary or non-recessionary periods increases the risk of child maltreatment, particularly if the family does not replace lost income with other income (Shook, 1999; Slack, Lee, & Berger, 2007).

More income losses are evident when unemployment rates are high. In turn, some studies tested the impact of increasing unemployment on child maltreatment. Earlier findings are mixed regarding the impact of increasing unemployment on child maltreatment. Some analyses of National Incidence Study of Child Abuse and Neglect (NIS-4) suggest that children whose parents were unemployed experienced two to three times higher rates of neglect than those whose parents were employed (Sedlak et al., 2010). These findings were consistent with prior NIS studies (Sedlak & Broadhurst, 1996). Recent studies, which specifically examined the impact of recessions and accompanying job losses, reveal some mixed findings about child maltreatment. One study examined the association between the Great Recession and spanking among families with young children. This was the first study to examine associations between the Great Recession and maternal spanking in a prospective sample (Brooks-Gunn, Schneider, & Waldfogel, 2013). This study revealed that during the Great Recession the risk for being reported for child abuse increased among fragile families.

On the other hand, when inspecting aggregate national child maltreatment trends during the official Great Recession which lasted from 2007 to 2009, the evidence suggests that national substantiated child maltreatment rates actually declined by 2% from 2008 to 2009; specifically, neglect was unchanged during that year with an estimated 552,000 substantiated cases, or 75.1 per 10,000 (Finkelhor, Jones, & Shattuck, 2009). Over the decade from 1990 to 2009, national substantiated neglect rates decreased by 10%, physical abuse decreased by 55%, and sexual abuse decreased by 61 percent. Some researchers attribute part of the decline in rates to fiscal constraints the child welfare systems faced, changes in reporting practices, investigation standards, and administrative procedures, rather than real

changes in the incidence of child maltreatment (Finkelhor et al., 2009). While on a national level declines in child maltreatment occurred in the face of rising unemployment, not all states faced declining child maltreatment while their unemployment was rising. As this paper shows, in Arizona, child neglect was increasing while unemployment was rising.

One aggregate study used data from seven states, which during the official Great Recession (2007 to 2009) experienced higher unemployment than the national average, lower labor force participation, and higher than average food stamp receipt. Taken together, these indicators suggest that a severe recession took place in these states (Millett, Lanier, & Drake, 2011). Using the unemployment rate, labor force participation, and food stamp utilization as independent variables to predict child maltreatment rates, their findings, with the exception of California, did not support a relationship between the economic downturn and increasing maltreatment rates. In explaining their findings, the authors suggested that it may have been sample selection or the fact that not enough time had elapsed since the recession started for child maltreatment to surface (Millett, et al., 2011).

Some studies paid particular attention to the impact of change in transfer income on child maltreatment rather than the impact of rising unemployment on maltreatment. Of particular importance is the experimental study by Cancian, Yang, and Slack (2013), which compared an experimental group of TANF recipients to a control group in Wisconsin. The experimental group was allowed to keep additional child support income and the control group was allowed to keep only part of their child support. The modest gain in average income experienced in the experimental group led to a likewise modest, but significant, reduction in screened-in (investigated) child abuse and neglect reports over a two-year period.

Early correlational evidence demonstrates that when a welfare benefit reductions were not offset by other income sources, such as market income, the risk of being reported to the child welfare system increases (Slack et al., 2007). The most relevant to the present study are correlational studies of TANF income losses, demonstrating the relation between TANF income loss and child maltreatment. One study of TANF families in Ohio who left TANF between 1999 and 2002 found that those who

left due to lifetime limits or other involuntary reasons were at greater risk of child maltreatment in comparison to those who left on their own accord, typically due to employment (Beimers & Coulton, 2011). The impact of losses from housing assistance, as well as other in-kind benefits such as clothing or furniture, also increased the risk of substantiated child maltreatment reports (Ryan & Schuerman, 2004).

While some evidence suggests that there is a relationship between loss of transfer income and child maltreatment, the relationship between unemployment rate and aggregate child maltreatment is hard to find, particularly on a national level and during the official dates of the Great Recession. In other words, when the unemployment level increased substantially during the Great Recession, child maltreatment on a national level did not increase in turn. Perhaps this relationship was not witnessed for two reasons. First, the dates of the official recession did not actually coincide with the dates of unemployment growth in many individual states. Evidence strongly suggests that the inclusive dates of growth in unemployment dates of December 2007 to June 2009 usually did not coincide with the dates of unemployment growth in many individual states (Haskins et al., 2014). Second, evidence also suggests that there is a relationship between transfer income loss due to involuntary reasons and child maltreatment (Beimers & Coulton, 2011). In light of these two findings, it makes research sense to determine the relationship between TANF caseload size and the size of the child neglect caseload in a single state, rather than the relationship between child maltreatment and unemployment rate nationwide.

The present study takes place in Arizona, where drastic TANF policy shifts in its lifetime limits meant that many more recipients left the program on an involuntary basis and perhaps, consistent with earlier findings, more families were at greater risk of child maltreatment (Beimers & Coulton, 2011). While it was not possible to determine if increases in child neglect in Arizona during its recession were the direct result of involuntary TANF exits, it is possible to test the relationship between the number of families on TANF during Arizona's recession and the number of child cases deemed as neglect by the Child Welfare system, while controlling for a number of variables that

also can explain the size of the child neglect caseload. This relationship is tested in the present study.

Study Purpose and Questions

The primary purpose of this study is to assess whether there is a relationship between Arizona's TANF caseload size and the number of substantiated child neglect cases during its recent recession. The specific questions addressed in this study are as follows. First, what did Arizona's recent recession look like? Second, what were TANF's major policy shifts and its responsiveness to rising unemployment? Third, how does the state of Arizona's child neglect caseload compare to its TANF caseload during the recent recession? Fourth, all else constant, what is the relative impact of TANF's shorter than 60-month time limits on the Arizona's child neglect caseload during Arizona's recession? In order to answer the last question, a time-series analytic model is developed that is explained in detail in subsequent sections. Data for both child neglect and TANF were used from January 2005 to December 2013, the dates of the study period.

Arizona's Unemployment Rate and TANF Caseload

We used the unemployment rate as the main economic indicator of the recession. In order to compare trends in the unemployment rate to trends in TANF caseload during Arizona's recession, we used the monthly values of the seasonally adjusted unemployment rate and monthly values of TANF caseload from 2005 to 2013. The seasonally adjusted unemployment rate values were obtained from the Bureau of Labor Statistics (BLS). (See local area Unemployment, Statewide Unemployment Rate, <http://www.bls.gov/lau>.) The TANF caseload numbers from 2005 to 2013 were provided by the Congressional Budget Office (CBO).

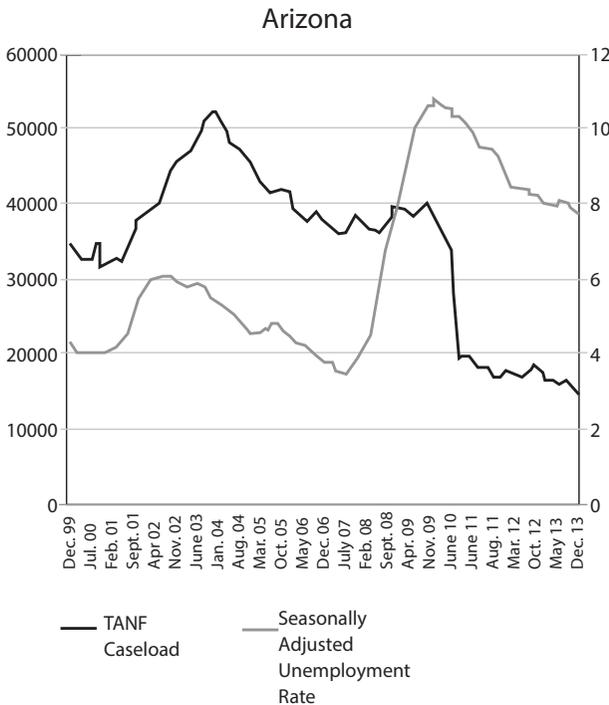
During the official national recession, 2007 to 2009, on average, the rise in unemployment rate nationwide was about 133%, whereas the rise in TANF caseload, on average, was 30 percent (Haskins et al., 2014). During Arizona's recession, the unemployment rate grew by 209 percent. Arizona's unemployment rate began increasing substantially in July 2007 and peaked in March 2010, well after the end of the official national recession.

Initially, Arizona’s TANF caseload increased in response to the increasing unemployment rate by 6 percent.

Of all the states that had above average increases in the relative unemployment rate in the far West, Arizona was the only one to experience a substantial sudden drop in its TANF caseload during the period of its rising unemployment rate. Figure 1 demonstrates the large increase in the unemployment rate in Arizona and the subsequent decrease in the TANF caseload.

Aside from Arizona, there were four other states with above

Figure 1. Arizona’s Unemployment Rate and TANF Caseload—December 1999 to December 2013.



average increases in unemployment rates and decreases in their TANF caseloads during their state-level recessions. The TANF caseloads in Georgia, Indiana, North Dakota, and Rhode Island fell while their unemployment rate was increasing rapidly. Unlike Arizona, these four states did not experience any increases in their TANF caseloads during the recession. Moreover, in

these four states, the TANF caseload was decreasing even prior to the recession. Very importantly, Arizona's TANF caseload dropped much more rapidly during its recent recession than the caseloads dropped in those four states.

Arizona's Benefits and Policy Shifts

The extent to which TANF caseloads decreased during the 5 states' recessions may be partially explained by these states' benefit levels. All else constant, a state with higher benefits levels may be more attractive to potential recipients than one that offers lower level benefits. In order to compare the 5 states' benefit levels, we used maximum aid benefit levels for a family of three over time.

The comparison of decreasing benefit levels in real terms between the 5 states is found in Table 1. The maximum aid data were retrieved from the Urban Institute Welfare Databook (Urban Institute, n.d.). The Consumer Price Index (CPI-UW) for all urban consumers for the Western Region was used to deflate the maximum aid variable valued in dollars (U.S. Department of Labor, n.d.). During some of the years, geometric monthly estimates of the CPI-UW were computed from bimonthly values. Additional information about TANF cuts was obtained from the Morrison Institute for public policy, at Arizona State University (Reilly & Vitek, 2015).

As Table 1 shows, in real terms, Arizona's benefit levels decreased much more than its counterparts. Between 2006 and 2013, Arizona's benefit levels for a family of three decreased by about 32%, whereas the other states' benefit levels decreased by about 15%, after adjusting for inflation (real terms). In Arizona, at least two factors triggered the decrease in benefit levels. First, in July 2009, Arizona reduced its maximum cash benefit amount for families with children by 20% and stopped providing benefits to prospective mothers in the third trimester. This substantial cut in benefits in nominal terms is a larger cut in the purchasing power of recipients than found in the other states. Second, maximum aid decreased in real terms for Arizona, as well as all other states presented in Table 1. Only in Arizona, however, did benefits decrease at the rate of 32%, a rate faster than inflation. Thus, Arizona not only decreased in its benefit

levels in nominal terms (by 20%) but also did not keep its benefits matched with inflation during this time period. The other states did not cut their benefits in nominal terms, nor did they match their benefits with inflation.

Table 1: States with Falling TANF Caseloads and Rising Unemployment

Real Maximum Aid Jan 1, 2006 to Dec 1, 2013
States with Falling Caseloads During the Recession
(average for 2006 = 100)

State	Change	Relative Percent Change
Arizona	-\$114.34	-32.4%
Georgia	-\$43.67	-15.3%
Indiana	-\$44.92	-15.3%
North Dakota	-\$74.40	-15.3%
Rhode Island	-\$86.41	-15.3%

Note: Maximum aid decreased in real terms for the above states which had decreases in the TANF caseloads during their recent recessions.

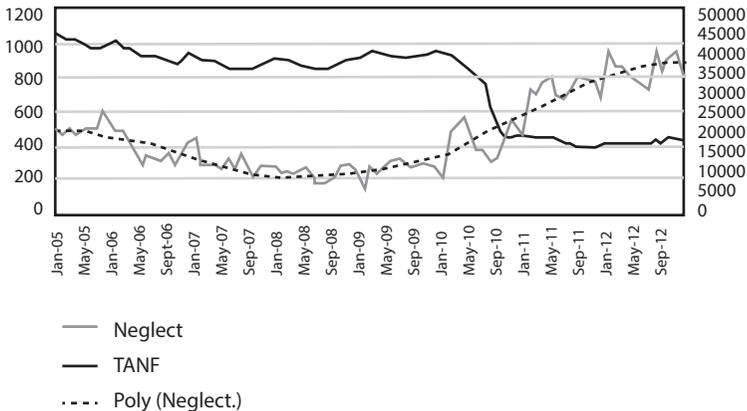
Since the inception of TANF in 1996, some of the most conspicuous features of this program have been the states' lifetime limits, work requirements and sanction policies. These policies may have kept some applicants off welfare, even when faced with serious economic need. Under federal requirements, families are no longer eligible for cash assistance with federal monies after 60 months of receiving aid. States are allowed to institute stricter lifetime time limit policies, requiring families to leave the system after receiving benefits for less than 60 months. In 2010, for example, Connecticut and Delaware had lifetime-limits as short as 21 months and 36 months, respectively. During the Great Recession, Arizona shortened its lifetime limits, which most likely explains the sharp decrease in its TANF caseload. In

2010, Arizona shortened its TANF lifetime limits to 36 from 60 months. A year later, Arizona further shortened its time limits to 24 months. A 12-month lifetime limit was implemented in Arizona in July 2016. Whereas in 2009 there were 40,000 families on TANF, in 2015 there were 12,000 families. (State-level TANF policies were obtained from the Urban Institute Welfare Databook [Urban Institute, n.d.])

TANF and Child Neglect Caseloads during the Recession

Figure 2 demonstrates how Arizona's substantiated child neglect caseload increased while the state's TANF caseload decreased substantially. During the period that Arizona altered its lifetime TANF policies, from July 2009 to the end December 2012, the number of children who were found to be substantiated child neglect cases in the state of Arizona increased from 313 to 836, an increase of 213 percent. Child neglect data were obtained from Cornell University (2015). Cornell University receives the data from the U.S. Children's Bureau and stores Child Abuse and Neglect (NDACAN) data for every state over time. The number of children in Arizona found to be neglected by the court is the dependent variable for the present study. Several covariates were selected in order to explain the number cases of child neglect in Arizona.

Figure 2: Arizona's TANF Caseload and Child Neglect Cases



Analytic Approach

Method: Time-Series Analysis

Time-series analysis uses data that occur sequentially in time. Much like cross-sectional regression analysis, it employs explanatory variables as determinants of a dependent variable; in this study, the dependent variable is the number of children found to be neglected by the court. The longitudinal nature of time-series allows for the analysis of the impact of major program policy shifts or other external developments in a single state such as Arizona.

When an explanatory variable has a delayed or lingering effect on the dependent variable, a time-series model may contain independent explanatory variables lagged in time. For example, an increase in employment opportunities in the marketplace, captured by the number of unemployed, would not necessarily have an immediate effect on child neglect caseloads. It may take several months for unemployment to impact the size of the child neglect caseload.

Auto-correlation of the residual error term is often present in time-series. If auto-correlation is present, the standard errors of estimate of the regression coefficients tend to under or overestimate the coefficients, resulting in an unreliable value. This could lead to spurious significance or non-significance of the coefficients. It is, however, often possible to model the auto-correlation of the error terms, correcting for their auto-correlation. Such correction provides a more accurate estimate of their standard error of estimate. In this study, the Durbin-Watson test statistic failed to show the presence of positive or negative auto-correlation. Thus, there was no need to correct for auto-correlation.

The Model

Time-series studies vary along the functional form specified by the researchers. The present study develops and uses a linear model from January 2005 to December 2013, the term for which child neglect data were available. The idea underlying the model is that over the study period, month-to-month changes in the child neglect caseload occur in response to changes in external

events, some in TANF policies, as discussed earlier.

The model presented below is model A from our findings section. Some variations of this model are found in models B and C, with Child Neglect (C) as a dependent variable in all models.

$$C(t) = b_0 + b_1 \text{ UNEMP}(t-1) + b_2 \text{ UNEMP}(t-2) + b_3 \text{ PY}(t) + b_4 \text{ LIFETIME1}(t) + b_5 \text{ LIFETIME2}(t) + b_6 \text{ NON-MARITAL BIRTHS}(t) + b_7 \text{ CHILDPOV}(t) + e(t),$$

for any $t \geq 1$, where t = number of months from February 2005

Where,

$C(t)$	= substantiated child neglect caseload during month t ,
$\text{UNEMP}(t-n)$	= total unemployment rate in Arizona at month $t-n$,
$\text{PY}(t)$	= total payments of TANF maximum aid for a family of three, deflated by the CPI-UW (2006 average = 100), at month t ,
$\text{LIFETIME1}(t)$	= the presence of lifetime time limits of 36 months
$\text{LIFETIME2}(t)$	= the presence of life time limits from of 24 months
$\text{NONMARITAL}(t)$	= the number of non-marital births in the state of Arizona, at month t ,
$\text{CHILDPOV}(t)$	= the number children in Arizona who fall under the poverty line in the state during the month (t)
$e(t)$	= random error term at t .

Dependent Variable and Covariates

In the model, the dependent variable is the number of substantiated child neglect cases in Arizona during any given month from 2005 until December 2013. The dependent variable is a function of a set of covariates as explained below. The data sources for each of the variables are found in the following discussions.

Unemployment (UNEMP)

One of the indicators of the Great Recession is the unemployment rate. As discussed earlier, Arizona's unemployment rate began to increase in July 2007, somewhat sooner than the

official recession, and lasted much longer than the official recession. Moreover, Arizona's unemployment rate grew during its recession by 209%, a much higher rate than the national average of 133 percent (Haskins et al., 2014). Clearly, when families lose their market income through unemployment, such a loss can lead to an inability to provide for children's basic needs, as well as to higher stress levels among caretakers, all factors thought to be associated with child neglect.

The results of research are mixed concerning the relationship of unemployment and child maltreatment. Some evidence from the 1990s suggests that there is a relationship between unemployment and maltreatment (Albert & Barth, 1996). On the other hand, some recent research suggests that such a relationship does not exist (Millett, et al., 2011). In light of the mixed findings, the present study integrates a two-month lag of unemployment rate, expecting that as the unemployment rate increases, the number of children found to be neglected would increase as well.

TANF Payment Levels (PY)

As indicated earlier, some research suggests that income loss increases the risk of child maltreatment. In particular, the evidence demonstrates that when welfare benefit reductions were not offset by other income sources (such as another source of market income, transfer aid, or in-kind benefits), the risk of being reported to the child welfare system increases (Slack et al., 2007).

When child neglect cases increased in Arizona, some TANF families lost their cash transfer income from TANF due to Arizona's 20% cut in benefit levels during the recession. In addition, Arizona stopped providing benefits to prospective mothers in their third trimester. Arizona's TANF system was not very attractive, even prior to such cuts in benefits, in part because benefit levels, or payment levels (PY) were not very high in Arizona, since the state did not match its TANF payment level with inflation.

The model incorporates the variable capturing the income alternative available to recipients by TANF. We used the maximum aid variable (PY) available to a family of three with no other income. This variable was deflated by the CPI-UW for the

Western Region. The average of CPI-UW for 2006 (2006 = 100) was used to deflate variables valued in dollars.

All else constant, assuming that income loss among families with children may result in the inability to provide children with all of their basic needs, it would be expected that the lower benefit levels due to inflation or benefit cuts, the higher the number of children found to be neglected. This expectation is consistent with earlier research that found higher benefit levels are associated with lower child maltreatment cases.

TANF Lifetime Limit Policies (LIFETIME 1 AND LIFETIME 2)

The income loss of TANF benefits on the part of many families with children during Arizona's recession occurred primarily because of the shorter lifetime limits for TANF participants. During its recession, Arizona shortened its lifetime limits twice: in 2010, AZ shortened its life time limit to 36 from 60 months. This resulted in a steep decline in its TANF caseload. A year later, Arizona further shortened its lifetime time limits to 24 months. This resulted in an additional drop in its TANF caseload.

Some evidence suggests that relying on transfer income when there is a loss of market income decreases the chances of child welfare involvement because families can provide for their children's basic needs with transfer income and because some of their parenting behaviors are overseen by caseworkers. It is hypothesized here that the dramatic TANF policy shifts and the resulting decline in the Arizona TANF caseloads would mean that, all else constant, child neglect in Arizona would increase. Both of these TANF lifetime limits (the decrease from 60 months to 36 months and the decrease from 36 months to 24 months) were entered into the model as dummy variables indicating the presence of these lifetime limit policies.

Non-Marital Births (NON-MARITAL)

Typically, financial responsibility for children born outside marriage rests with the mother, her family, and the government. Thus, those who meet the income test are eligible for cash public assistance, Medicaid and other government programs (this includes the vast majority of unwed mothers) (Plotnick,

Garfinkel, McLanhan, & Ku, 2007). Therefore, it stands to reason that as non-marital births increase in the general population, so does the number of single parent households and the number of families with children in poverty. Since the evidence strongly shows that poverty is related to neglect, it also would be expected that, all else constant, as non-marital births increase, so do the number of children found to be neglected in the general population. Therefore, a term for non-marital births in the population is entered as a covariate.

Children in Poverty (CHILDPOV)

Research strongly suggests that child maltreatment is correlated with aggregate community or state-level poverty rates (Coulton, Crampton, Irwin, Spilsbury, & Korbin, 2007; Coulton, Korbin, Su, & Chow, 2008; Drake & Pandey, 1996; Jones & McCurdy, 1992; Pelton, 2015; Sedlak & Broadhurst, 1996; Sedlak et al., 2010). Cross-sectional evidence reveals that families of low socioeconomic status were five times more likely to experience child maltreatment than families of higher socioeconomic status (Sedlak et al., 2010).

In light of such strong evidence, it is hypothesized that all else constant, as the number of children in poverty in the population increases, the number of children found to be neglected in the system also increases.

Findings and Limitations

Table 2 presents findings associated with the time series multivariate analyses component of the study. The table presents three alternate configurations of a model with a dependent variable capturing the number of cases substantiated for child neglect and where all independent variables are statistically significant ($p < .05$) and have the expected sign. The overall R^2 across the three models is at least 72 percent. Thus, in the three models, the covariates explain at least 72% of the variance in the dependent variable. The following provides specific explanations of the time series results.

Table 2: Time-Series Analyses Findings

Model A	Model B	Model C
Lifetime limit from 60 to 36 months (t) 190 ***	Lifetime limit from 60 to 36 months (t) 224 ***	TANF (t) -0.00792 ***
Lifetime limit from 36 to 24 months (t) 461 ***	Lifetime limit from 36 to 24 months (t) 477 ***	Lifetime limit from 36 to 24 months (t) 264 ***
Unemployment Rate (t-1) -108 **	_____	TANF benefit cut 67 ***
Unemployment Rate (t-2) 113 **	_____	_____
F(5, 90) = 65.53 P < 0.00005	F(2, 93) = 129.8 P < 0.00005	F(3, 92) = 80.45 P < 0.00005
R ² = 0.79 N = 96	R ² = 0.74 N = 96	R ² = 0.72 N = 96
*** p < 0.0001		
** p < 0.01		

Impact of TANF Lifetime Limit Policies

Table 2 presents two models that show the impact of the TANF short time limit policies of 36 and 24 months on child neglect (models A and B). In model A, the effect of the 36-month lifetime limit variable means that under the presence of 36-month time limit, which lasted for a year, there was an increase of 190 children substantiated for neglect in the state of Arizona ($p < 0.0001$). The corresponding figure in model B was 224 children ($p < 0.0001$). The impact of the 36-month time limit lasted for about a year, while the impact of the 24-month time limit lasted until the end of the study period. All else constant, the monthly impact of the 24-month time limit was larger, increasing the number of neglect cases by 461 cases per month in model A and 477 cases per month in Model B.

The third model in the table does not have the 36-month lifetime time limit changes. However, it does have the TANF caseload, which, of course, fluctuates in response to policy changes over time. During the study period before Arizona imposed the benefit cuts and the lifetime limits, its TANF caseload averaged 38,630 cases per month. After the imposition of the benefit cuts and the lifetime limits, its caseload averaged 18,460 cases, resulting in a difference of 20,170 cases. The coefficient corresponding to the TANF caseload in Model C suggests that a decrease of 20,170 fewer families on public assistance (TANF) results in an increase of 160 children substantiated for neglect each month. After the benefit cuts and the lower lifetime limits, the average number of monthly substantiated cases was 737 cases, of which 160 cases (21.7%) are associated with fewer families receiving TANF. All else equal, this study suggests that the decrease in Arizona's TANF caseload had a substantial effect on neglect cases.

Model C further suggests that under the 24-month lifetime limits, the number of children substantiated for neglect increased by 264 cases. In addition, the 20% cuts in TANF benefits (which also meant that benefits were eliminated for many pregnant women) meant that 67 more children per month in Arizona were found neglected by the courts, all else constant.

Economic and Other Environmental Factors

Only Model A integrated the unemployment variable in the model as an explanatory variable. When the unemployment variable is taken out of the model in Model B, it is obvious that unemployment does not contribute much to explaining the dependent variable, the number of children neglected in Arizona. The percentage of the variance explained by the variables in model A with the unemployment rate is 79 percent, whereas the corresponding figure without the unemployment rate in Model B is 74 percent. In model A, the unemployment variable is lagged two months, which means that, taken together, two months in the past, all else equal, an increase in the unemployment rate of 1% is associated with 5 more substantiated neglect cases. The other variables, such as non-marital births, were left out of the final models because they did not add to the models nor were they statistically significant.

Limitations

The present study was designed to show whether a relationship exists between the number of families enrolled in the TANF program and number of neglected children in Arizona during its recession. The study suffers from several limitations that need to be addressed. First, since the study was conducted in a single state, it is not possible to determine whether the same effects would have been found elsewhere. Yet, because states differ so much with regards to their TANF policies and programs, a single state analysis was warranted. Arizona implemented two drastic lifetime limits during its recession. These two drastic changes, which took place very close to one another during the recession, were unique to Arizona.

The second limitation of the study is that it was not able to show that increases in child neglect caseloads in during the recession came from the potentially eligible population of TANF recipients or former recipients who left on involuntary basis due to lifetime limits. It was impossible to address this with the data in hand. We would have been able to address this if we had micro-level data (data on each individual/household).

Third, it should be acknowledged that other policies and practices of Arizona could have affected the size of child neglect caseloads, and these variables are not controlled for in this study. We integrated variables which have shown to be correlated with child maltreatment in earlier studies and those which we could realistically obtain.

Finally, the study did not determine the differential impact of TANF on child neglect across poverty levels, race or ethnicity, and other demographics. Such detailed analysis is warranted when future studies are conducted in this area.

Discussion

To-date, most evidence strongly suggests that national trends in child maltreatment were not affected by rising unemployment rate during the Great Recession, mainly because national neglect cases dropped from 1990 to 2009 by 10%, physical abuse cases dropped by 55% and sexual abuse cases dropped by 61 percent (Finkelhor, et al., 2009). Yet, the present study shows that in Arizona, state child maltreatment actually increased during its recession, and this increase is primarily linked to Arizona's drastic changes in its TANF policies.

Some researchers attribute the downward national trends in child maltreatment in recent years, particularly in the face of economic downturn, as a response to the downsizing of some child welfare systems or in response to state fiscal constraints (Sell, Zlotnic, Noonan, & Rubin, 2010). One mistake made by most earlier research, however, is examining national child welfare trends and national economic trends rather than focusing on state-level child welfare trends and recessions. The Great Recession did not impact all states or localities equally, and numbers of child maltreatment cases responded differently based upon their state's recession.

Furthermore, rather than attempt to correlate unemployment with child maltreatment, it appears that closer attention should be paid to the role that safety nets play in protecting the well-being of families and children during recessionary periods and to understand the impact that these safety nets have on child welfare involvement. Many children in the child welfare system are from public assistance eligible homes. Since the loss

in income from TANF can be important to families, child maltreatment may be more of a response to loss in income from major safety nets rather than child neglect's responsiveness to general economic trends. This paper shows that there is a strong inverse relationship between child neglect and a decrease in the number of families receiving cash assistance from TANF.

The reduction of the number of cases on the TANF rolls through time limits or reduction in benefit levels have been witnessed nationwide throughout recent years. Arizona, however, has been a national leader in reducing the number of families receiving TANF and in reducing the benefit levels for low-income families with children (Reilly & Vitek, 2015). Nationwide, the original goals of TANF of workforce training, cash assistance, and childcare assistance receive considerably less attention now than they have over the years. At TANF's inception in 1996, nationwide, 70% of TANF's federal and state monies were directed for basic assistance for poor families. By 2014, that figure was 26 percent (Schott, Pavetti, & Floyd, 2015).

Evidence reveals that since 1998, Arizona funded its TANF program at lower rates than it had done in previous years, instead putting TANF money into child welfare as well as other programs. In Arizona, in 1998, 90% of TANF funds were targeted towards activities such as cash assistance, job preparation, and childcare assistance to aid in moving poor families with children out of poverty and into employment (Reilly & Vitek, 2015). In 2015, the corresponding figure was about 30% of TANF funds. During this same time frame, TANF funds allocated to support child welfare programs grew from 6% to over 64% (Reilly & Vitek, 2015). The reduced benefits for poor families with children under TANF demonstrates that the efficacy of TANF as a safety net was substantially weakened, essentially leaving caretakers with little income to support their families' basic needs. The shifting of resources to child welfare may have meant that there was a shifting of responsibilities of services from TANF to child welfare.

Numerous TANF programs nationwide were not accountable enough for their block grants over the years (Schott et al., 2015). The fact that block grant money did not keep up with inflation and thus kept on losing its value over time in real terms, and the fact that monies were diverted to other programs, left

some states with few resources to meet rising demands for cash assistance during the recession. Having fewer resources during the recession gave Arizona some justification for the shortening of its TANF time limits.

This study reminds us that policies in one program should not be implemented in a vacuum, but rather that their consequences for children and families in related programs need to be closely analyzed. During economic downturns, in particular, the federal government should discourage severe policy changes such as the shortened time limits implemented by Arizona. States should be encouraged by the federal government to be more generous to families with children during recessions by relaxing their strict policies rather than keeping or instituting more severe and demanding policies. The federal government needs to help states financially, as it did with the Stimulus bill passed by Congress in 2009, that most TANF directors believed adequately allowed states to help many families in need (Haskins et al., 2014). Such financial support may stop states such as Arizona from passing drastic measures to shorten its lifetime TANF limits during recessions to avoid increases in child neglect caseloads.

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