Federal Social Safety Nets, Single-Mother Households, and Children’s Grade Repetition

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References
Abstract

Children from single-mother households face increased risks of poverty and poor academic outcomes. This analysis used the National Survey of Children’s Health 2011-2012 data set to examine the correlation between federal social safety net programs – namely SNAP, TANF, and Medicaid/SCHIP – for U.S. single-mother households under the poverty line, and children’s grade repetition. Given the income support and increased access to resources that federal benefits provide, this analysis hypothesized that more receipt of federal benefits would correlate with lower chances of grade repetition. Results from a t-test and a logistic regression were contrary to the hypothesis, and instead suggested that receiving more benefits is associated with greater probability of grade repetition. Selection bias in federal benefit recipients may explain these results, as those who face more poverty may use more federal benefits, and the same poverty depth may contribute to worse child outcomes. When analyzing how each benefit correlated with grade repetition, this analysis found that receipt of public or private healthcare insurance was consistently associated with lower probabilities of grade repetition at marginally statistically-significant levels even after controlling for a broad set of covariates. This result provides encouraging insight into the positive connection between healthcare receipt and child academic outcomes.
1. Introduction

One role of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act aimed to empower single-mothers to transition out of poverty through work-incentives and work requirements (Rector, 2006). However, even after welfare reform, single-mothers face disproportional rates of poverty. In 2013, the poverty rate for single-mother households in the U.S. was 39.6%. This rate is five times larger than the poverty rate for married-households (Entmacher et al., 2014).

Of equal concern are the negative effects that poverty may have on their children. Poverty puts children at risk of lower cognitive development, adverse physical health, worse emotional and behavioral outcomes, and fewer years of schooling (Brooks-Gunn & Duncan, 1997), which further perpetuates the poverty cycle. According to the 2010 Census, 24% of children under the age of 18 lived in single-mother households and 70% of these children were poor or low-income (Mather, 2010).

Federal social safety net programs play a role in alleviating some of the poverty. Three key federal programs that many single-mothers receive are the Supplemental Nutrition Assistance Program (SNAP), the Temporary Assistance for Needy Families (TANF), and Medicaid or State Child Health Insurance Program (SCHIP). While one role of these three programs is to provide income-support in low-income families, another role is to provide resources in the form of food and health care services (Dye, 2008).

Studies (Cohodes, Grossman, Kleiner, & Lovenheim, 2014; Frongillo, Jyoti, & Jones, 2006) continue to debate the effects that these federal resources have on various child outcomes, such as school achievement. Grade repetition is an indicator of school achievement, as it reflects behavioral and cognitive characteristics of a child (Jimerson, Woeher, & Kaufman, 2007). Additionally, grade repetition serves as a risk-indicator for future poverty (National Association of School Psychologists, 2003). Using grade repetition as a measure of
child academic outcome facilitates inferences about poverty’s effect on children and the likelihood that a child will continue the poverty cycle as an adult.

Studies that investigate the effect of federal programs on school achievement only focus on the role of one federal program (Levine & Schanzenbach, 2009; Frongillo et al., 2006). However, among low-income families with children, 56% receive two or more federal benefits, although this is not limited to SNAP, TANF, and Medicaid (Edelstein, Pergamit, & Ratcliffe, 2014). The purpose of this thesis was to contribute to the literature that explores the connection between social safety net programs used by low-income single-mother households and child outcomes. Specifically, this analysis investigated how SNAP benefits, Medicaid/SCHIP, and TANF benefits received by low-income single-mother households correlate with grade repetition, and whether receiving a higher number of these federal programs was associated with grade repetition. This research can provide additional insight into how receipt of multiple benefits, or how lack of receipt, correlates with child school achievement.

This analysis sought to answer the following research question: how do the number of social safety net programs received, where social safety net programs refer to SNAP, TANF, and Child Medicaid/SCHIP, correlate with grade repetition for children in single-mother households under the poverty level? As a secondary question, this analysis sought to identify whether one social safety net program was more strongly correlated with grade repetition than the other federal benefits.
II. Conceptual Framework

A. Poverty and Grade Repetition

Students repeat a grade when teachers and school administrators determine that they are underachieving, are cognitively or socially unready to continue to the next grade, or if they were absent too often during the school year. The rationale behind this is to allow students to catch up before proceeding to the next grade level, and to prevent students from falling further behind (Nemours, 2014). Grade repetition is more common among children living in single-parent households (National Association of School Psychologists, 2003), in poverty, of Black and Hispanic origin, and of male gender (Child Trends, 2013). While the exact rate of grade repetition in the U.S. is uncertain, estimates from children in grades 1 through 9 suggest that children in single-parent households have a 26% greater probability of grade repetition, and while 3.8% of black and 2.8% of Hispanic children repeat grades, only 2.0% of white children repeat a grade (Warren, Hoffman, & Andrew, 2014). Similarly, other estimates suggest that students living in neighborhoods where 20% of children were under the federal poverty level had a 6.5% grade repetition rate, compared to the average 5% grade repetition rate (Child Trends, 2013).

In evaluating child outcomes, grade repetition serves as an indicator of children’s cognitive, emotional, and physical well-being and a risk factor for future poverty later in life (Jimerson et al., 2007; National Association of School Psychologists, 2003). Children who score lower on standardized tests may need to repeat a grade (Child Trends, 2013), which indicates lower achievement levels. Grade repetition can also predict poor future outcomes. Students who repeat a grade commonly experience lower self-esteem and emotional distress, which contributes to problem behaviors and increased likelihood of substance abuse (Xia & Glennie, 2005). Additionally, these students tend to have poor attendance, negative attitudes towards school, and negative social adjustments (Child Trends, 2013). These negative social
adjustments may explain why grade repetition increases the risk of school dropout by 20% to 50%, which decreases the probability of employment and lifetime earnings in adulthood (Xia & Glennie, 2005). These findings hold even after controlling for academic performance, race and ethnicity, gender, and socioeconomic status.

Poverty and other factors may be mechanisms that contribute to low school performance and grade repetition. It is therefore important to investigate how social safety nets and program benefits that are designed to alleviate poverty influence grade repetition, an indicator of current child success and a predictor of future success.

B. Background on Program Benefits

The federal programs of interest are the Supplementary Nutrition Assistance Program (SNAP), the Temporary Aid for Needy Families (TANF), and Medicaid/State Children’s Health Insurance Program (SCHIP). SNAP provides food-purchasing assistance, TANF provides a cash-benefit, and Medicaid/SCHIP gives recipients access to free to low cost healthcare services. These programs are means-tested; families qualify based on their financial resources and household characteristics (Dye, 2008). Children in families below the federal poverty line, which is $20,090 for a three-person family (U.S. Department of Health and Human Services, 2015a), qualify for SNAP and Medicaid, and eligibility for TANF varies by state (Dye, 2008).

Many low-income single-mothers use one or more of these programs to support their families. For children in single-mother households, 64% receive public health insurance (Child Trends, 2014), 10% receive TANF, and 45% receive SNAP (United States Census Bureau, 2013). While there is little data on their rate of multiple benefit use and the number of benefits received, reports and studies agree that low-income single-mother households
receive multiple benefits (Dye, 2008; Edelstein et al., 2014) judging from their rates of participation in different federal benefit programs (Carson, 2013; Edelstein et al., 2014).

i. **Temporary Assistance for Needy Families (TANF)**

The Temporary Assistance for Needy Families (TANF) replaced Aid to Families with Dependent Children (AFDC) as part of 1996’s welfare reform. TANF is administered by the U.S. Department of Health and Human services and provides a cash benefit. In order to qualify for TANF, families must have children under 18 years old. Recipients may only receive TANF’s cash benefits for a maximum of 60 months during their lifetimes, although some states shorten their TANF periods (Center for Budget and Policy Priorities, 2015a). Single-parent recipients are federally mandated to participate in work 30 hours a week as part of welfare reform’s goal to transition families from welfare to work (Hahn, Kassabian, & Zedlewski, 2012), but what constitutes work activities is up to the state’s discretion (Center for Budget and Policy Priorities, 2015a).

Even though the federal government provides states with a block grant to distribute TANF benefits to families below the poverty level, states determine the income threshold and the amount of cash recipients receive. For example, in Alaska, a family of three can receive a maximum benefit of $923 a month. In Mississippi, a three-person household can only receive a maximum of $170 per month. Overall, the median state benefit is $429 (Lloyd & Scott, 2014) and the median state eligibility income threshold was 49% of the federal poverty level in 2011 (Edelstein et al., 2014).

ii. **Supplemental Nutrition Assistance Program (SNAP Benefits)**

The Supplemental Nutrition Assistance Program is a federal food assistance program administered by the U.S. Department of Agriculture. In 2014, the U.S spent $76 billion on
SNAP benefits for 46 million people (Center for Budget and Policy Priorities, 2015b). Families can apply for SNAP benefits through local, state, or county human services offices. In order to qualify, recipients’ household income cannot exceed 130% of the poverty level, and yearly assets cannot exceed $2,250. For example, a family of three can earn no more than $2,144 per month. The amount of SNAP benefits a family receives on a monthly basis depends on the household’s number of working parents and number of children (United States Department of Agriculture, 2014). For a three-person household in 2015, the maximum benefit is $511 and the average monthly benefit is $378 (Center for Budget and Policy Priorities, 2015b).

As a way to empower recipients, SNAP requires 30 hours of work activities, which includes employment, volunteering, or job-development activities. However, states provide various exemptions, including age-exemptions, recipients’ physical and mental health, and recipients’ responsibilities for caring for a child under 6 years old or for an incapacitated individual. Of all SNAP recipients in 2011, 85% were exempt from work requirements (United States Department of Agriculture, 2013).

### iii. Medicaid and State Children’s Health Insurance Plan (SCHIP)

Medicaid is available to children from low-income families. All children ages 0 to 6 with family income less than 130% of the federal poverty level, and children ages 6 to 18 with family income less than 100% of the federal poverty level, are eligible for Medicaid in all states. Children enrolled in Medicaid are entitled to receive early periodic screening, diagnosis services, and treatment services (Department of Health and Human Services, 2015b). The services include physical exams, immunizations, laboratory tests, simple dental services, and treatment for mental and physical illnesses (U.S. Department of Health and Human Services, 2015c). The U.S. spends $404 billion a year to provide Medicaid to 41 million low-income
children and 23 million other adults who are low-income, elderly, or with a disability (Gruber, 2012).

Children who do not qualify for Medicaid but are still low-income qualify for the State Children’s Health Insurance Program. This allows children from families with slightly higher incomes to receive free or low-cost health insurance. Under SCHIP, states have more discretion over maximum income eligibility and services provided to children. All states except Idaho, Alaska, and North Dakota extend SCHIP to children with family incomes at or above 200% of the federal poverty level (U.S. Department of Health and Human Services, 2010). Depending on the state, families may also be required to pay a premium for services, but this amount is less than 5% of the family’s income (U.S. Department of Health and Human Services, 2015d).

While low-income children may be eligible for public health insurance, some receive private health insurance instead. In households with annual income of $25,000 or less, 78% of children received public health insurance and 17% received private health insurance (Child Trends, 2014). Those who have private health insurance may have higher household incomes compared to those with public health insurance, as many attain private insurance through their employers (Gruber & Simon, 2008).

C. Federal Programs: Studies on Benefits and Effects on Children’s Achievements

Federal programs play a role on child academic achievement through two mechanisms: an income support and access to resources such as food or healthcare. Studies evaluating whether income supports and additional income enhance children’s achievement found positive associations between receiving additional income and children’s reading and math scores (Dahl & Lochner, 2012) and positive behavior (Huston et al., 2001), two important components for school success. Income supports can enhance positive child development by
increasing the family’s purchasing power and helping them allocate more resources, such as books and toys, towards a child’s development (Gershoff, Aber, Raver, & Lennon, 2007). Additionally, an income support can indirectly improve child outcomes by alleviating parental stress (Gershoff et al., 2007) and promoting emotional well-being, which influences parents’ abilities to nurture their children (Dahl & Lochner, 2012).

Federal programs also provide access towards a resource not formerly available to the household, such as food or healthcare. Increased access to resources can improve academic outcomes by addressing elements related to school achievement, such as positive health (Kreider, Pepper, Gundersen, & Jolliffe, 2012) and food sufficiency (Alaimo, Olson, & Frongillo, 2001).

i. **TANF and Child Outcomes**

As a direct cash benefit, TANF increases household income, which can positively influence child outcomes (Ku & Plotnick, 2003). TANF’s work requirement also mandates mothers to enter the workforce, which provides an avenue towards additional income. Despite the connection between income-supports and improved child outcomes, TANF is also connected with negative child outcomes. Adolescents and children in middle childhood whose households received TANF for longer periods completed fewer years in school (Ku & Plotnick, 2003). Likewise, TANF receipt was associated with negatively cognitive development for children five years old and under. Mothers’ stress induced by social stigma from receiving benefits and ability to balance work and family life plays a role in the negative association between TANF and child outcomes (Heflin & Acevedo, 2010). The work requirement may contribute to maternal stress. Results from randomized anti-poverty experiments suggest that women’s work reduces stress if the mother’s work led to an increased income; negative effects on mothers’ stress levels and child outcomes were likely
when mothers received lower wages (Huston et al. 2001). The extent in which negative influences associated with receiving TANF outweigh its benefits as an income support is unknown.

Another consideration is the poverty level of households that receive TANF. The state median income threshold for TANF eligibility is below half of the poverty line (Edelstein et al., 2014), indicating that TANF recipients are severely disadvantaged. As poverty increases risks of child underachievement (Brooks-Gunn & Duncan, 1997), the financial disadvantage in TANF families may increase the likelihood that TANF recipients’ children perform worse academically compared to non-TANF recipients’ children. Measuring the benefits of TANF on children becomes challenging as analyses try to account for the role of poverty in TANF households on child outcomes.

**ii. SNAP Benefits and Child Academic Outcomes**

SNAP benefits offer financial relief and encourage adequate nutrition for low-income children. While not a direct cash benefit, SNAP benefits provide a financial allotment towards food resources, allowing families to spend more of their income on non-food items. SNAP also plays a role in thwarting food insecurity, which studies associate with worse cognitive and academic development (Cook & Jeng, 2009), and higher probabilities of grade repetition (Alaimo et al., 2001). The extent in which SNAP fully eliminates food insecurity is still unclear (Ratcliffe & McKernan, 2010), yet there is evidence that SNAP may promote better academic outcomes. Children, particularly females, who started to use SNAP from Kindergarten to third grade achieved improvements in reading and math scores that were three points higher than those who stopped using SNAP during that period (Frongillo et al., 2006). Similarly, although not found to be statistically significant, SNAP usage over time was associated with less probability of grade repetition (East, 2014; Kim, 2012).
SNAP benefits provide low-income families with resources, but they may not fully protect families from the negative outcomes associated with poverty. Ortu (2011) found that despite lower math SAT scores for individuals ages 18 and up with families enrolled in SNAP, scores increased as families received more SNAP benefits. This implies that poverty, as seen through SNAP benefit receipt, serves as a risk factor for lower scores, but that receiving more resources through SNAP leads to better outcomes. Thus, while SNAP may work towards improving child academic outcomes and mitigating grade repetition, it may not fully ensure academic success.

iii. Medicaid and SCHIP – Public Health Insurance and Child Outcomes

Federal programs such as Medicaid and SCHIP can influence child outcomes by improving families’ financial security and increasing the likelihood that children receive preventative health services (Gassman-Pines & Hill, 2013). Access to preventative and general health services can help children address health problems that may negatively influence their academic achievement (Levine & Schanzenbach, 2009).

Studies conclude that the availability of public health insurance for low-income children is beneficial to children’s educational outcomes (Cohodes et al., 2014; Levine & Schanzenbach, 2009). Explanations for positive outcomes revolve around access to insurance. A study that examined the impact of access to health insurance at birth from Medicaid/SCHIP expansions in the late 1980’s and 1990’s found that a 50 percentage point increase in public health insurance eligibility was associated with a 3 point increase in reading scores on a base of 239 points for 4th and 8th graders (Levine & Schanzenbach, 2009). This suggests that access to healthcare may have a modest positive influence in children’s educational outcomes. A similar study that investigated the long-term effects of healthcare expansion in the 1980’s and 1990’s on educational outcomes found that insurance coverage increased the rate of high
school completion (at the 5% significance level) and college completion (at the 10% significance level) among low-income children, (Cohodes et al., 2014). While not measuring educational outcomes by grade repetition, these studies imply that access to healthcare relates to various forms of educational success.

*iv. Challenges of Selection Bias in the Literature*

A challenge in evaluating the effects of federal benefits on child outcomes is accounting for unobservable characteristics in households that receive federal benefits. The same unobservable characteristics that are associated with receipt of federal benefits, including personal attitudes toward federal aid, human capital, and level of household dysfunction, may also influence child outcomes and confound the effects of federal benefits, introducing a selection bias to the analysis.

It is difficult to untangle the effects of unobservable characteristics when investigating program participation and child outcomes (Kreider et al., 2012). The selection bias can develop in different ways. Low-income households who would qualify for programs may attain financial resources from various sources, de-incentivizing them from pursuing program benefits. Those who do pursue federal benefit may represent more disadvantaged households, and the poverty experienced in these families can contribute to worse child outcomes and confound federal benefits’ role in improving outcomes. On the other hand, households may experience dysfunction, including drug and alcohol abuse, which impedes them from enrolling. Therefore, those who do receive federal benefits represent more resilient and functional families, and these same characteristics contribute to better child outcomes, making it challenging to determine the extent in which federal benefits influenced outcomes.

Some studies overcome selection bias in their sample (Kreider et al., 2012; Dahl & Lochner, 2012) through methodological techniques, while others, including this investigation,
restrict their analysis to a correlational design, which cannot account selection bias in the results. Despite difficulties in overcoming selection bias, correlational studies can still contribute insight to the field while acknowledging possible confounding covariates and alternative explanations that contribute to observed results.

v. Number of Benefits and Grade Repetition

While the literature discusses how access to federal benefits for low-income households is associated with positive child outcomes, studies focus on the role of one specific federal program. Other research (Child Trends, 2013) mentions that children who receive benefits such as Medicaid and SNAP are at greater risk of grade repetition, but such analyses compare recipient households to non-recipient households without accounting for wide differences in income. I aimed to contribute to the existing literature through an analysis that aggregated receipt of TANF, SNAP, and Medicaid/SCHIP and evaluated the association of bundles of receipt to grade repetition within single-mother households under the poverty level. This analysis considered how an aggregate of the federal benefits, each associated with positive outcomes for children in households under the poverty level, correlated with child academic outcomes.

III. Hypothesis

My central hypothesize was that children whose mothers benefit from more federal programs will have less probability of grade repetition than those who use fewer federal programs. My sub hypothesis was that access to healthcare through Medicaid or SCHIP will be the strongest predictor of less grade repetition. As seen through the literature review, SNAP benefits do not fully eliminate food insecurity, and TANF has a work requirement that may
influence single-mothers’ stress levels. Medicaid/SCHIP for low-income children helps them achieve better health, which ultimately plays a role in school achievement.

Synthesizing from previous studies that show demographic differences in academic achievement (Warren et al., 2014; Child Trends, 2013), I expected results to vary by race/ethnicity and gender, where African American students, Latino, and male students will have higher probabilities of grade repetition.

IV. Methods

A. Research Design

This analysis used a quantitative statistical design to assess the strength of associations between receipt of federal safety-net programs in the past 12 months since surveyed and grade repetition in low-income single-mother households. Multiple logistic regressions were used to analyze the relationship between number of benefits received and the probability of grade repetition, the specific program associated with less probability of grade repetition, and how probability of grade repetition varies by demographic and household characteristics.

B. Data

Data came from the 2011-2012 National Survey of Children’s Health (NSCH). This is a cross-sectional telephone survey of US households that aims to evaluate the physical and emotional health of children ages 0 to 17 years old as well as children’s resources, family interactions, school and after-school experiences, and neighborhood characteristics. The 2011-2012 NSCH was conducted by the Centers for Disease Control and Prevention’s (CDC) National Center for Health Statistics State and Local Area Integrated Telephone Survey program, and is the most recent NSCH data set available. Johns Hopkins’s Child and
Adolescent Health Measurement Initiative provided the necessary data set through its Data Resource Center for Child and Adolescent Health.

The telephone survey’s design attained a sample of 95,677 out of 187,422 eligible households through a list-assisted random-digit dial sample of landline and cell phone numbers between February 2011 and June 2012. Only households with children ages 0 to 17 years old were eligible. The NSCH collected data by interviewing a parent or guardian in the household. While an adult responded to the questions, the answers pertained to one randomly selected focal child in the household. Landline interviews lasted an average of 33 minutes and cell-phone interviews lasted 34 minutes on average (National Center for Health Statistics, 2013).

This investigation used a subsample of 2,940 single-mother households with children ages 6 to 17 and with an income below the 2011 poverty line.

C. Variable Selection and Definitions

The primary dependent variable was whether a student had ever repeated a grade. The NSCH measured this variable by asking the adult respondent whether the focal child repeated a grade since Kindergarten. Respondents also answered questions about what grade level the child repeated and whether the child repeated multiple grades. The data set did not specify what exact grade the child repeated and instead indicated whether the child repeated a grade in elementary school, middle school, or high school. Given that several independent variables describe receipt of benefits within a 12-month frame, I needed to limit grade repetition to approximately the same time frame to better establish a predictive relationship between receipt of the benefit and grade repetition. To determine whether a child repeated a recent grade, I compared their current age to the grade level in which repetition occurred. Using the Department of Education’s Structure of Education Diagram (2013), which describes
the expected-age-for-grade in the U.S., I excluded children that were too old compared to the grade that they repeated from the analysis. For example, the data analysis excluded a child aged 14-17 who repeated a grade in elementary school. The analysis included repetition from children that were one year older than their expected-age-for-grade level and children that were two years older if they repeated multiple grades.

The independent variables in this analysis included the number of federal benefits and the specific benefits received. To derive the independent variables, I extracted the NSCH’s categorical variables for SNAP receipt, TANF receipt, and type of healthcare insurance receipt. For SNAP and TANF receipt, the NSCH asked whether the focal child or another child in the household received those benefits within the past 12 months since surveyed. For type of healthcare insurance receipt, the NSCH asked whether the focal child received Medicaid/ SCHIP, private health insurance, or no health insurance at the time of the survey.

SNAP and TANF receipt served as binary independent variables indicating receipt. I created three binary independent variables for the type of healthcare receipt to demonstrate whether the child received public health benefit, no health insurance, or private health insurance. To answer the central question of how number of federal benefits correlates with grade repetition, I created another independent variable by aggregating the number of total benefits received, from SNAP, TANF, and Medicaid/SCHIP.

The analysis included demographic and household covariates in addition to the independent variables to account for confounding factors. Demographic covariates were the child’s race/ethnicity, indicated by whether the respondent identified the child as white, black, Hispanic, or another race, and the child’s gender. Household covariates included employment, parental stress, neighborhood condition, household arrangements, the number of times moved, the mother’s self-reported health, and the child’s school engagement as perceived by the respondent. The NSCH measured employment through a binary scale of whether or not
someone in the household was employed 50 out of 52 weeks during the past year since surveyed. The covariates for neighborhood condition (vandalism, littering, and rundown housing) and the number of times moved were continuous. The covariate for parental stress identified whether the mother felt stressed while parenting and the covariate for child’s school engagement described whether the child cared to do well in school and did their homework, as perceived by the respondent. For these covariates the NSCH included ordinal values: “Always,” “Usually,” “Sometimes,” “Rarely,” or “Never.” I simplified these ordinal scales into binary scales by coding “Always” and “Usually” as 1 and “Sometimes,” “Rarely,” and “Never” as 0. Similarly, the NSCH provided an ordinal scale for the mother’s self-reported health, and I created a binary code for whether the mother reported her health positively. For household arrangements, I created three dummy variables for whether the child’s household owns their home, rents, or lives in other accommodations.

D. Data Analysis

The analysis was conducted using the statistical software package RStudio. Five models were created to answer the central and secondary questions. Models 1 and 2 explored the relationship between the number of federal program received and grade repetition. Model 1 used a t-test difference in means to compare the mean federal program usage between households with children who repeated and did not repeat a grade. Model 2 involved a logistic regression to assess the relationship between whether or not a child repeated a grade and whether the household received zero to three benefits. Rather than treating the amount of benefits received as a continuous variable, I treated the number of benefits received as categorical variables to distinguish different effects from receiving a certain amount of benefits compared to receiving no benefits. In this regression, the receipt of private health insurance was controlled. Receipt of private insurance may indicate more wealth or better
household conditions, and controlling for this helped in parsing out its possible confounding effects.

Model 3 used multiple logistic regressions to investigate how each federal benefit, specifically SNAP, TANF, and Medicaid/ SCHIP receipt predicted the probability of grade repetition, with grade repetition as the binary dependent variable, and whether one program was more strongly correlated with grade repetition. Model 4 controlled for the child’s gender and race/ethnicity to provide a perspective on how probability of grade repetition varies demographically. Model 5 controlled for household covariates.

V. Empirical Findings

A. Descriptive Statistics

The sample contained nearly equal proportions of males and females (see Table 1).

| Table 1: Demographic Characteristics of Children from Single-Mother Households |
|-----------------|----------------|
| Variable       | Percent |
| Gender         |         |
| Female         | 50.8    |
| Male           | 49.2    |
| Race/Ethnicity |         |
| White, non-Hispanic | 38.2 |
| Black, non-Hispanic | 28   |
| Hispanic       | 22.9    |
| Other Race     | 11      |
| Age of Child   |         |
| Ages 6-10      | 43.8    |
| Ages 11-13     | 26      |
| Ages 14-17     | 30.2    |
| Sample Size    | 2,940   |
| Data from National Survey of Children's Health 2011-2012 |

Approximately 43.8% in the sample were children ages 6 to 10 years old, making up the largest age group, followed by 30.2% of children ages 14 to 17 and 26% of children ages 11 to 13. The sample had a low proportion of individuals of “other races,” composing only
11% of the sample, and a higher proportion of children of white race, composing 38.2% of the sample.

Table 2 provides information about benefits received in the households.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percent</th>
<th>Percent with private healthcare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipt in the last 12 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TANF</td>
<td>21.9</td>
<td>8.7</td>
</tr>
<tr>
<td>SNAP</td>
<td>76.4</td>
<td>8.0</td>
</tr>
<tr>
<td>Medicaid/SCHIP</td>
<td>82</td>
<td>0</td>
</tr>
<tr>
<td>Total benefits received</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Benefits Received</td>
<td>8.9</td>
<td>63.2</td>
</tr>
<tr>
<td>1 Benefit Received</td>
<td>20.3</td>
<td>21.6</td>
</tr>
<tr>
<td>2 Benefits Received</td>
<td>52.4</td>
<td>3.4</td>
</tr>
<tr>
<td>3 Benefits Received</td>
<td>18.4</td>
<td>0</td>
</tr>
</tbody>
</table>

Sample Size 2,940

Data from National Survey of Children's Health 2011-2012

In the sample, 76.4% of children’s households received SNAP, 82% of children received Medicaid/SCHIP, and 52.4% received two benefits. The chart includes a separate column that describes private health insurance receipt. Of those receiving zero benefits, 63.2% received private health insurance, while the other 36.8% did not receive any healthcare insurance.
Table 3 provides descriptive data of grade repetition per category of benefit received.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentage Who Repeated Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total Grade Repetition in Sample)</td>
<td>8.5</td>
</tr>
<tr>
<td>TANF receipt</td>
<td>9.9</td>
</tr>
<tr>
<td>No TANF receipt</td>
<td>8.1</td>
</tr>
<tr>
<td>SNAP receipt</td>
<td>8.9</td>
</tr>
<tr>
<td>No SNAP receipt</td>
<td>7.2</td>
</tr>
<tr>
<td>Medicaid/SCHIP receipt</td>
<td>8.5</td>
</tr>
<tr>
<td>No Medicaid/SCHIP receipt</td>
<td>8.3</td>
</tr>
<tr>
<td>Private Insurance receipt</td>
<td>6.6</td>
</tr>
<tr>
<td>No Private Insurance receipt</td>
<td>8.8</td>
</tr>
<tr>
<td>Total benefits received</td>
<td></td>
</tr>
<tr>
<td>0 Benefits Received</td>
<td>8.3</td>
</tr>
<tr>
<td>1 Benefit Received</td>
<td>7.5</td>
</tr>
<tr>
<td>2 Benefits Received</td>
<td>8.4</td>
</tr>
<tr>
<td>3 Benefits Received</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Sample Size 2,940

Data from National Survey of Children's Health 2011-2012

In the sample, 8.5% repeated a recent grade. Grade repetition rate was more than one percentage point higher than 8.5% for TANF receipt and for those receiving three benefits. Likewise, grade repetition was at least one point lower than 8.5% for private insurance receipt, no SNAP receipt and for those receiving one benefit.
B. Models

i. **Model 1 and Model 2: Number of Benefits Received and Grade Repetition**

Model 1’s t-test difference in means, depicted in Figure 1, shows that those who repeated grades on average received slightly more benefits than those who did not repeat grades. However, this difference was not statistically significant.

![Model 1: T-Test Difference in Mean Benefits Received](image)

**Figure 1**: Mean benefits received between children ages 6 - 17 who repeated a grade and who did not repeat a grade, National Survey of Children's Health 2011-2012.

- $t = -1.51$
- $df = 296.77$
- $p = 0.13$

Model 2 (see Table 4) displays the results of the logistic regression of categories of number of benefits received and grade repetition.

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE b</th>
<th>Log Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Benefit</td>
<td>-0.13</td>
<td>(0.021)</td>
<td>0.88</td>
</tr>
<tr>
<td>Two Benefits</td>
<td>-0.048</td>
<td>(0.022)</td>
<td>0.95</td>
</tr>
<tr>
<td>Three Benefits</td>
<td>0.15</td>
<td>(0.024)</td>
<td>1.16</td>
</tr>
<tr>
<td>(No Benefits)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private healthcare</td>
<td>-0.26</td>
<td>(0.019)</td>
<td>0.77</td>
</tr>
</tbody>
</table>

AIC= 1716.6

Note. Reference categories are indicated in parenthesis

*p < .1 , **p < .05, *** p < .01

Data from National Survey of Children's Health 2011-2012
These results, although not statistically significant, indicate that compared to those who receive no benefits, receiving one and two benefits is associated with less likelihood of grade repetition. Children whose household received one benefit were 12% (OR = 0.88; p-value > 0.10) less likely to repeat a grade than those who receive no benefits. Likewise, children whose household received two benefits were 5% (OR = 0.95; p-value > 0.10) less likely to repeat grades than those who received no benefits. However, children receiving three benefits were more likely to repeat a grade than those who received no benefits by 16% (OR = 1.16; p-value > 0.10).

Both the t-test and the logistic regression can also suggest that no differences in grade repetition exist between households that receive different number of federal benefits, as indicated by the analyses’ failure to reach statistical significance.

### ii. Model 3: Type of Benefit Receipt and Grade Repetition

Table 5 summarizes the logistic regression analysis that evaluated how the federal benefits predict grade repetition.

**Table 5: Logistic regression of children’s grade repetition and TANF receipt, SNAP receipt, and type of healthcare receipt.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE b</th>
<th>Log Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANF</td>
<td>0.18</td>
<td>(0.16)</td>
<td>1.17</td>
</tr>
<tr>
<td>SNAP</td>
<td>0.21</td>
<td>(0.18)</td>
<td>1.20</td>
</tr>
<tr>
<td>Type of Healthcare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid/SCHIP</td>
<td>-0.43</td>
<td>(0.25)</td>
<td>0.65*</td>
</tr>
<tr>
<td>Private Healthcare</td>
<td>-0.63</td>
<td>(0.32)</td>
<td>0.53**</td>
</tr>
<tr>
<td>(No Health Insurance)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AIC = 1713.2

Note. Reference categories are indicated in parenthesis

*p < .1, **p < .05, ***p < .01

Data from National Survey of Children's Health 2011-2012
As positive predictors of grade repetition, the odds of repeating a grade for TANF recipients were 17% (OR = 1.17; p-value > 0.10) higher than those not receiving TANF, and the odds of repeating a grade for SNAP recipients were 20% (OR = 1.20; p-value > 0.10) higher than those not receiving SNAP, although these results were not statistically significant. Receipt of insurance, whether private or public, was associated with less probability of grade repetition. The odds of repeating a grade was 35% (OR = 0.65; p-value < 0.10) less likely for Medicaid/SCHIP recipients than those who received no medical insurance, and this was marginally significant. Likewise, the odds were 47% (OR = 0.53; p-value < 0.05) less likely for recipients of private insurance than those with no medical insurance, and this was statistically significant.

### iii. Model 4: Type of Benefit Receipt, Race/Ethnicity, Gender, and Grade Repetition

The relationship between race and gender with grade repetition and benefit receipt is a point of interest in this analysis. Table 6 shows Model 4, the logistic regression that controls for race and gender variables.

**Table 6: Logistic regression of children's grade repetition and TANF receipt, SNAP receipt, type of healthcare receipt, race/ethnicity, and gender.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE b</th>
<th>Log Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANF</td>
<td>0.11</td>
<td>(0.16)</td>
<td>1.15</td>
</tr>
<tr>
<td>SNAP</td>
<td>0.20</td>
<td>(0.18)</td>
<td>1.22</td>
</tr>
<tr>
<td>Type of Healthcare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid/SCHIP</td>
<td>-0.46</td>
<td>(0.25)</td>
<td>0.63*</td>
</tr>
<tr>
<td>Private Healthcare</td>
<td>-0.58</td>
<td>(0.32)</td>
<td>0.56*</td>
</tr>
<tr>
<td>(No Health Insurance)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-0.41</td>
<td>(0.13)</td>
<td>0.66***</td>
</tr>
<tr>
<td>(Male)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.30</td>
<td>(0.19)</td>
<td>1.36</td>
</tr>
<tr>
<td>Black</td>
<td>0.72</td>
<td>(0.17)</td>
<td>2.05***</td>
</tr>
</tbody>
</table>
In Model 4, TANF and SNAP remained positive, but not statistically significant, predictors of grade repetition compared to those who do not receive TANF and SNAP, and healthcare insurance receipt, whether private or public, both remained negative predictors of grade repetition and were marginally significant. Females were significantly less likely to repeat a grade by 34% (OR = 0.66; p-value < 0.01) than males and the odds of repeating a grade for black children are 105% (OR = 2.05; p-value < 0.01) higher than for white children; both results were statistically significant. Likewise, the odds of repeating a grade for Hispanic children and those of other race, while not significant, were higher than for white children.

iv. Model 5: Type of Benefit Receipt, Household Characteristics, and Grade Repetition

Table 7 displays results from Model 5, the logistic regression that included the federal benefits of interest, gender, race, and other household characteristics.

Table 7: Logistic regression of children's grade repetition and TANF receipt, SNAP receipt, type of healthcare receipt, race/ethnicity, gender, and various household covariates.

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE b</th>
<th>Log Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANF</td>
<td>0.058</td>
<td>(0.16)</td>
<td>1.06</td>
</tr>
<tr>
<td>SNAP</td>
<td>0.10</td>
<td>(0.18)</td>
<td>1.11</td>
</tr>
<tr>
<td>Medicaid/SCHIP</td>
<td>-0.45</td>
<td>(0.26)</td>
<td>0.64*</td>
</tr>
<tr>
<td>Private Healthcare</td>
<td>-0.60</td>
<td>(0.33)</td>
<td>0.55*</td>
</tr>
<tr>
<td>(No Health Insurance)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Standard Error</td>
<td>p-value</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>---------</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.31</td>
<td>(0.14)</td>
<td>0.73**</td>
</tr>
<tr>
<td>(Male)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.33</td>
<td>(0.19)</td>
<td>1.39*</td>
</tr>
<tr>
<td>Black</td>
<td>0.73</td>
<td>(0.17)</td>
<td>2.08***</td>
</tr>
<tr>
<td>Other Race/ethnicity</td>
<td>0.24</td>
<td>(0.25)</td>
<td>1.27</td>
</tr>
<tr>
<td>(White)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>-0.055</td>
<td>(0.11)</td>
<td>0.95</td>
</tr>
<tr>
<td>Detracting Neighborhood Elements</td>
<td>-0.022</td>
<td>(0.021)</td>
<td>0.98</td>
</tr>
<tr>
<td>Parental Stress</td>
<td>0.10</td>
<td>(0.16)</td>
<td>1.11</td>
</tr>
<tr>
<td>Household Arrangement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rents Home</td>
<td>0.22</td>
<td>(0.17)</td>
<td>1.25</td>
</tr>
<tr>
<td>Other Accommodations</td>
<td>0.45</td>
<td>(0.30)</td>
<td>1.57</td>
</tr>
<tr>
<td>(Owns Home)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Times moved</td>
<td>0.004</td>
<td>(0.028)</td>
<td>1.004</td>
</tr>
<tr>
<td>Mother's health</td>
<td>-0.41</td>
<td>(0.14)</td>
<td>0.66***</td>
</tr>
<tr>
<td>Child's School Engagement</td>
<td>-0.72</td>
<td>(0.14)</td>
<td>0.49***</td>
</tr>
</tbody>
</table>

AIC= 1652.2

Note. Reference categories are indicated in parenthesis

*p < .1 , **p < .05, *** p < .01

Data from National Survey of Children's 2011-2012

Model 5 shows that even with an extensive set of household characteristics accounted for, having either public or private healthcare insurance was marginally significantly-associated with lower odds of grade repetition than having no health insurance. Receiving TANF and SNAP, although not statistically significant, remained positively associated with higher odds of grade repetition than not receiving these benefits. Being female remained significantly associated with lower odds of grade repetition than being male, being black remained significantly associated with higher odds of grade repetition than being white, and
being Hispanic became marginally associated with higher odds of grade repetition than being white.

Of the additional variables included, mother’s health and children’s school engagement levels were the only statistically significant covariates associated with lower odds of grade repetition. In this model, having a mother with self-rated positive health was associated with a 34% (OR = 0.66; p-value < 0.01) lower chance of grade repetition than having a mother with poor health. Children that were perceived to have higher school engagement levels had a 51% (OR = 0.49; p-value < 0.01) lower chance of repeating a grade than those who were not perceived as such.

VI. Conclusion

Part of the hope for distributing federal benefits to single-mother households is to alleviate poverty and to assist their children in achieving better outcomes. Building upon prior studies that discuss the positive associations of federal programs on child outcomes (Cohodes et al., 2014; Frongillo et al., 2006; Ku & Plotnick, 2003; Gershoff et al., 2007), this analysis investigated the correlation between receipt of federal benefits, namely SNAP, TANF, and Medicaid/ SCHIP and children’s grade repetitions in low-income single-mother households. The results did not support the main hypothesis that more federal receipt is associated with a lower probability of grade repetition. When evaluating various components in a logistic regression, results show that the probability of grade repetition varied by the number of benefits received, the type of benefit received, and demographic and household characteristics. This study’s correlational design could not avoid the selection bias present in the sample, suggesting that a correlation analysis of federal benefit receipt is not sufficient to understand the relationship between federal benefits and child outcomes. Despite the challenge, several consistent observations emerged throughout the models that require further explanation.
Particularly, receipt of public and private health insurance was associated with lower probability of grade repetition compared to no receipt of insurance, and this finding provides implications for policy-makers.

A. Discussion of Results

Model 1 (see Figure 1) and Model 2 (see Table 4) address the main question of this investigation by analyzing how number of benefits correlates with grade repetition. These models do not support the central hypothesis that more benefits would correlate with less probability of grade repetition. The models both fail to reach statistical significance, indicating that there is no relationship between number of benefits received and grade repetition in the analysis. Failure to reach statistical significance may relate to the data set’s level of power or that there is indeed no difference in grade repetition for those who receive different number of federal benefits.

Moreover, Model 1 and Model 2’s findings do not support the central hypothesis. Contrary to the central hypothesis, the findings suggest that receiving more benefits is related to a greater probability of grade repetition. Model 2 presents a complex relationship between the number of benefits received and grade repetition, as children who received one or two benefits were less likely to repeat a grade than those who received no benefits, but those who received three benefits were more likely to repeat a grade than those who received no benefits. Possible explanations for why children receiving one or two benefits showed better outcomes are that household characteristics, such as family dysfunction, for those receiving no benefits may put children at more risk than households who are able to attain benefits, or that attaining federal benefits can indeed help children be better off academically. On the other hand, Model 2’s finding for those who received three benefits is consistent with Model 1’s indication that receiving more federal benefits is associated with worse outcomes.
Several explanations outline why both models do not support my hypothesis. In the sample, those who received zero benefits contained two different population groups – those who received private health insurance and those who received none of the three benefits. This may have confounded the results, as those who receive private health insurance represent the most advantaged in the sample, while those who receive no benefits may represent the most disadvantaged. Given that children who received private health insurance composed 63% of those in the zero-benefit category, their presence may have driven results to show that less receipt was associated with better outcomes.

Similarly, the findings indicate selection bias in the analysis. Families that receive certain number of benefits may have unobservable characteristics that are also associated with children’s higher chances of grade repetition. For instance, children that receive SNAP or Medicaid are more likely to repeat a grade than children who do not receive these benefits. (Child Trends, 2013). This may relate to degree of poverty in the household, as families with deeper poverty levels may need to access more federal resources (Edelstein et al., 2014).

Relating this assumption to the results, perhaps those who received three benefits experienced deeper poverty levels than those who received one or two benefits, which also plays a negative role in child academic achievement. This may have confounded the positive effects of federal benefit receipt that were suggested by the better outcomes in grade repetition for children receiving one or two benefits. With an analysis that contains a sample with unobservable characteristics, it is difficult to determine how the number of federal benefit receipt can help children achieve academic success.

The logistic regressions in Model 3 (see Table 5), Model 4 (see Table 6), and Model 5 (see Table 7) provided more information on how the different benefits related to grade repetition. In all the three models, TANF and SNAP were related to higher probabilities of grade repetition. This analysis’ results for TANF were consistent with Heflin and Acevedo’s
(2010) study that found an association between TANF receipt and lower child cognitive scores. The depth of poverty in TANF recipient households (Heflin & Acevedo, 2010) may confound child outcomes and make it difficult to distinguish whether TANF hurts or improves outcomes. A similar explanation applies to SNAP receipt. Kreider et al. (2012) argue that SNAP receipt positively improves child health outcomes, yet the impact of the program is confounded by endogenous selection into SNAP. In my analysis, the results on SNAP and TANF did not achieve statistical significance, which can also mean that receipt of these benefits may not be associated with grade repetition.

However, results throughout Models 3, 4, and 5 found that receiving Medicaid/SCHIP or private insurance was related to lower probability of grade repetition at statistically or marginally significant levels, compared to receiving no health insurance. These results support my second hypothesis that public health insurance would more strongly correlate with less grade repetition. While the correlational design does not eliminate selection bias present in the analysis, the probabilities of lower grade repetition for public and private insurance receipt remained consistent and either statistically or marginally significant even after controlling for a broad set of household and demographic characteristics that relate to poverty, likelihood of enrollment, and child outcomes (see Table 7).

This analysis’ findings on health insurance receipt and lower probabilities of grade repetition support other studies that discuss how access to health insurance serves as a conduit towards better health, which contributes to better academic achievement (Cohodes et. al., 2014; Levine & Schanzenbach, 2009). Previous findings suggest that health insurance contributes to better academic outcomes by shielding families from financial shocks incurred from having a sick child, improving child health, and increasing the likelihood of better school attendance (Cohodes et. al., 2014). However, another possible explanation, particularly regarding private health insurance receipt, posits that those who receive private health
insurance are more financially advantaged (Child Trends, 2014; Gruber & Simon, 2008), which can also be associated with better outcomes. Similarly, perhaps the most dysfunctional families are not able to enroll in health insurance. Household characteristics, such as resilience and social support, may contribute to motivation or ability to apply for insurance, and these same characteristics may influence children’s academic achievements. Despite the lack of causal explanation, this finding is promising and warrants further investigation.

Models 4 and 5’s findings on grade repetition and child’s gender, race/ethnicity, and household characteristics support previous literature. Results for females, blacks, and Hispanics were as expected given by past studies’ findings that females perform better academically than males, and that black and Hispanic students have higher rates of grade repetition than white students (Child Trends, 2013; Warren et al., 2014). Supportive of Heflin and Acevedo (2010) and Huston et al.’s (2001) findings that mothers’ health and stress levels are significantly associated with worse child academic outcomes, this analysis found that better maternal health (see Table 7) was associated with lower odds of children’s grade repetitions. Low maternal mental and physical health and stress levels may play a negative role in student’s academic achievement. The child’s school engagement levels (see Table 7) was significantly associated with grade repetition, with higher school engagement level being associated with lower odds of grade repetition. This variable, while possibly connected to other household variables, points to how self-efficacy and discipline at the child’s individual level may play a role in the odds of repeating a grade.

B. Limitations

Numerous limitations restrained the scope of this analysis. In the NSCH sample, some of the categories observed were underpowered; for example, the category of single-mother households who received no benefits despite living under the poverty level was very small.
compared to the other categories, which can influence statistical significance attainment in the results. The NSCH collects self-reported data through telephone, indicating the possibility that people misreported, or that the poorest households could not be reached through telephone. Grade repetition as an outcome variable is also limited, since it is not standardized and is associated with numerous confounding circumstances. Lastly, the correlation design prevents this analysis from inferring causational factors between federal receipt, the type of receipt, and grade repetition. The data set did not specify the exact income that households receive, making the analysis more unable to disentangle effects from selection bias.

C. Implications and Further Research

Given this analysis’ findings that suggest that children with health insurance achieve better school outcomes compared to children without health insurance, policy makers may be incentivized to provide health insurance to all children. A study by the Department of Health and Human Service’s National Health Interview Survey found that more children are becoming insured, but 5.5% of children remain uninsured (Ward, Clarke, Freeman, & Schiller, 2015) and specifically 11% of Hispanic children were uninsured in 2013 (ChildStats.gov, 2015). While most children benefit from health insurance, a substantial amount remains uninsured. It may be in policy makers’ interests in reaching these children, especially if it serves as an avenue towards better school achievement.

As policy-makers continue to debate the efficacy of post 1996 welfare reform, SNAP and TANF benefit cuts, and Medicaid/SCHIP expansion, it is important to pinpoint evidence about the extent in which these benefits lead to better child outcomes. A future study that explains the relationship of federal benefits and child academic outcomes causally would yield insightful information about the role that federal benefits play in child academic outcomes. One possible study design can collect data for children in impoverished single-mother
households longitudinally and analyze the effects of change in benefit receipt on children’s
grade repetition and other academic achievement indicators. Collecting information that
addresses this question can help policy-makers make informed decisions that can better serve
low-income single-mothers and their children’s future success.

Despite how this research focused on associations between receipt of federal benefits
and child grade repetition, several findings provide implications to consider. The extent in
which minority children, especially black children, have a higher probability of grade
repetition is disconcerting, and educators need to continue finding ways to address this
achievement gap. Additionally, all households in this analysis qualified for SNAP and
Medicaid, yet a minority did not participate in some or all of these federal programs. This
observation may compel policy-makers to investigate whether these eligible families receive
financial assistance from other sources or whether these families represent an extremely
vulnerable group who are in need of better outreach.
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