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The Impact of Step Parenting on the Health, Behavior and Development of School-aged Children

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The impact of step parenting on the health, behavior and development of school-aged children

by

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Abstract

The American family structure has undergone rapid transformations since the 1960s. Even though divorce rates have declined, the rate of remarriage has continued to increase and has resulted in children from previous relationships finding themselves growing up in stepfamily households. The health and development of children from this family structure has become ever more important but there has been a growing gap in research and literature. I contribute to the existing literature by analyzing the impact of step parenting on some child health and behavioral outcomes. I used rich data from the 2016 National Survey of Children Health (NSCH) and utilize the variation that exits between stepfamilies and intact families (families with both biological parents). I also use a variety of treatment effect estimation technique to uncover causal impacts of growing up in stepfamily household across child health outcomes. I find that living in stepfamily households, children are more likely to have anxiety issues, depression, behavioral issues, difficulty making and keeping friends, and repeated a grade in school relative to children who live with both biological parents.

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1. Introduction

There has been a decline in the traditional biological mother-father-child family dynamic to families taking on a variety of forms. A 2017 Pew Research Center report shows that for every 1000 married persons aged 40 to 49, 21 got a divorce in 2015. But in the last two decades there have been a decline in divorce rates among adults ages 25 to 39, from 30 persons in 1990 to 24 in 2015. People in this age group are delaying marriage until later and as a result of pursuing higher levels of education (Pew Research, 2017). The family landscape has evolved to include cohabitating stepfamilies which have become a central part of U.S. families, with an estimated 40% of American children growing up in cohabitating household by age 12 (Manning, 2015)[1]. Women in cohabiting relationships are more likely to give birth than those in non-cohabiting unions (Lundberg et al, 2016).

The high divorce rates and the increase in non-marital childbearing means that many children in these relationships will experience changes in their family structures, from a traditional two-biological-parent family into a single-parent or stepparent family. A stepfamily can be defined as a family structure that has at least one of the partners with at least one dependent child from a prior relationship or marriage. According to the report from the "America's Families and Living Arrangements, 2014", 5% of U.S. children under age 18 lived with one biological parent and a stepparent (America's Families and Living Arrangements, 2014). Studies have shown that the stepfamily setup provides an improvement in economic resources due to the additional source of income (Dunn, 1995 & Coleman et al, 2000). This study focuses on the impact that stepfamilies have on the health, behavior and development of school-aged children. I exploit the variation between children raised in stepfamily households

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[1] Estimate include children in cohabiting stepfamilies and non-stepfamilies.

and those in intact family households, focusing on indicators of health and behavioral outcomes – including anxiety, depression, behavioral issues, difficulty making and keeping friends, and repeating a grade in school.

The underlying hypothesis is that children in stepfamilies are more likely to experience negative emotional, behavioral and developmental issues compared to those raised in intact non-divorced families. This study uses several treatment effect estimation techniques for observational data to estimate the causal impact step parenting has on school-age children specifically with regards to their health and behavioral outcomes, accounting for the covariates that predict being a stepparent.

This study can be an incremental step towards understanding what is currently known about children in stepfamilies and can help drive the development of intervention strategies and public policies that are geared towards ameliorating the effects of the stepfamily setup and improving child health outcomes.

2. Literature Review

According to the Pew Research Center, 42% of American adults have at least a step or half relative in their family, whether a stepparent, a step or half sibling or a stepchild (Pew Research, 2011). Remarriage is currently on the rise, in 2013, 20% of new marriages were between people who had both previously been married at least once compared to 13% in 1980. More so, 23% of adults who were married (in 2013) had been married before (Pew Research, 2014). This leads to a growing number of children who spend their childhood as members of stepfamilies. The traditional family setup of children raised by both biological parent in the U.S. has declined since the 1960s. In 1960, 73% of American children live in intact families – with both biological parents but this has reduced to 46% in 2014 (Pew Research, 2015). In the U.S. there is a steady increase in the

number of children that are born to unmarried women, from 13% in 1968 to 32% in 2017. The percentage of children raised in single-parent (mother) households increased from 12% in 1968 to 21% in 2017 (Pew Research, 2018). It is estimated there is about 4.6% of U.S. children living in stepfamilies[2]. Out of the 64.8 million children under 18 in 2010, 4% were estimated to live with a step-parents (Kreider & Lofquist, 2014) this means that fewer children growing up in the traditional family structure and there is a concern over the health and wellbeing of children growing in other family structures.

Children who have experienced the divorce of a parent are associated with lower measures of academic achievements (repeated grades in school), increased levels of depression, stress, anxiety, aggression and other emotional and behavioral problems (Clark et al, 2013). The findings from studies indicate that compared to children in biological nuclear families, stepchildren have lower school performance on average, higher dropout rates and lower graduation or GED rates as well as low self-esteem, depression and poor overall mental health (Coleman et al, 2000 & Jeynes, 2006). Studies using nationally representative data also shows that youth in stepfamilies have behavioral problems (Hoffman, 2006), and lower grade-point average (Tillman, 2007).

Adolescent children who had a substantial degree of autonomy in single-parent households when moved into stepfamilies, after remarriage, resent the monitoring and supervision by stepparents. Some these children often remain loyal to their noncustodial parent to whom they feel a sense of betrayal if they come to like their stepparent (Amato, 2005). Stepfamily face a lot of challenges including conflicting expectations from step-couples, step-couple disagreements on parenting, co-parenting conflict, loyalty binds, shifts in parent-child relationships, step parenting challenges, and clashing family cultures make the adjustment for children difficult (Jensen,

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[2] Estimated number of children living with at least one stepparent vary widely across surveys due the differences I data collection, stated estimate is from the 2010 Current Population Survey.

Lombardi, & Larson, 2015; Jensen & Shafer, 2013; Jensen, Shafer, & Larson, 2014; Pace, Shafer, Jensen, & Larson, 2014; Papernow, 2013; Shafer, Jensen, Pace, & Larson, 2014). Co-parenting between the biological parents becomes challenging when there is a disconnection between the child and his or her biological father, as this may lead to significant distrust of men attempting to take on fatherhood (Jensen & Shafer, 2013).

Although there are problems that are common among stepfamilies, the addition of a stepparent can result in some positive outcomes for the family. The addition of a stepparent provides an additional source of income or an improvement in economic resources available to the family. This provides a financial stability and creates an environment which helps to improve the stepfather-stepchild relationship as stepfather can meet the needs of the stepchildren (Fomby & Cherlin, 2007).

Even though remarriage provides a source of financial stability for the stepfamily, it is no guarantee for a happy stepparent-stepchild relationship. A study has shown that among young children, especially girls, a close marital relationship is associated with more negative behavior towards custodial mothers and stepfathers (Hetherington et al, 1994). The age of children during the formation of the stepfamily also impacts the pattern of relationship and the adjustment of children within the stepfamily. Estimates indicate that children in their early adolescence have difficulty establishing a harmonious relationship with their stepfather compared to those who are younger when the remarriage occurred (Booth et al, 1994). The relationship between stepsiblings can also play an important role in the adjustment into stepfamilies. Among stepfamilies, young adolescents reported that their stepsiblings provide a source of support, acceptance and influence compared to non-stepfamilies which leads to affectionate sibling relationship and can act as a protective factor (Kurdek et al, 1995). On the other hand, increased hostility towards children of the stepparent versus the custodial parent leads to serial conflicts and difficulty in adjustment,

which is associated with poor child outcomes. Parental differential treatment of children is associated with difficulty adjusting among children in stepfamilies (Hetherington, 1989). The emotional and mental wellness of children in stepfamilies tend to suffer; children in stepfamilies show more signs of depression and are at risk of developing emotional problems compared to children in intact families (Barrett & Turner, 2005). Compared to children living with both biological parents, adolescent stepchildren engaged in more risky behaviors – alcohol and drug use – and sexual activities (Coleman et al, 2000).

The complexities of stepfamily setup provide positive and negative effects on child health outcomes. The relationship that exist between children and these outcomes tend to change over time as initial difficulties with family adjustments become more positive and there is an improvement in the improvement in the stepparent-stepchild relationship.

3. Methods

3.1 Data

The data used to analyze and test my hypothesis is from the 2016 National Survey of Children's Health (NSCH). This dataset provides rich data on multiple, intersecting aspects of children's lives – including physical and mental health, access to quality health care, as well as the child's family, neighborhood, school, and social context. The NSCH is funded and directed by the Health Resource and Services Administration (HRSA) and Maternal and Child Health Bureau (MCHB). The 2016 version of the survey was conducted as a mail and web-based survey by the Census Bureau.

The NSCH is designed to produce national and state-level data on the physical and emotional health of non-institutionalized children in the U.S. ages 0-17. Information is collected on factors related to the health and wellbeing of children, including access and utilization of

health care, receipt of care in a medical home, family interactions, parental health, school and after-school experiences, and neighborhood.

The dataset has a total of 50,212 observations. Due to the area of interest here, observations for adults with missing values for their relation to the selected child as well as adults with missing values for their marital status are dropped. Observations for children five years and younger are also dropped, as they are not the group of interest in this study as well as observations with missing values for key dependent and independent variables. Due to the nature of the study design, non-parental statuses (Aunt or Uncle, Grandparent, Foster Parent and other relatives and non-relatives) are excluded, leaving the target groups as children who live in households with Biological or Adoptive parents and children who live in households with Stepparents. The final sample has approximately 26,000 observations.

3.2 Analysis

To explore the impact of family structure on child health and behavioral outcomes, I take advantage of the variation between children that live in household with both biological or adoptive parents and children that live in households with stepparents. I created a binary variable equal to 1 if the selected child has a stepparent and 0 otherwise. Dummy variables are also created for my child health and behavioral outcomes of interest (Depression, Anxiety, Behavioral Issues, Difficulty Making and Keeping friends; and Repeating a School Grade). For depression, anxiety and behavioral issue; the dummy variables created has a value 1 if the child currently has the condition and 0 otherwise. For the outcome variable of difficulty making and keeping friends, the dummy variable created has a value of 1 if the child has little or a lot of difficulty and 0 otherwise. For the outcome variable of repeating a school grade, the dummy variable I created has a value of 1 if yes and 0 otherwise.

3.3 Challenges with Selection Bias

The data used for this analysis are observational, the assignment of treatment – having a stepparent – is not randomized. Conducting a randomized control trial (RCT) would eliminate this bias as random allocation of treatment will ensure that having a stepparent is not confounded by the baseline characteristics of children in stepfamilies and those in non-stepfamilies. The observational data make it impossible to observe a selected child in both a stepparent household as well as a biological household. A simple comparison or an OLS estimation of the relationship between having a stepparent and child health outcomes lead to selection bias and may result in misleading estimates of the causal effect. Selection bias (omitted variable bias) occurs when there are important control variables that are not included in the regression analysis. Because of the non-randomized nature of the treatment assignment, there will be systematic differences in baseline characteristics of the children who have stepparents (treated) and those who have biological or adoptive parents (untreated). Moreover, the outcomes of interest and the treatment may not be necessarily independent. In order to deal with these econometric concerns, I accounted for systematic difference in the baseline characteristics between children with stepparents and those in biological or adoptive households by controlling for these characteristics. Using treatment effect estimators under the conditional mean independence (CMI)[3] assumption among others provides unbiased estimators for the average treatment effects (ATE) under the potential-outcome framework.

I estimated a preliminary logistical regression to examine the association between having a stepparent and the child health outcomes. This initial result showed that children in stepparent

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[3] The Conditional Mean Independence (CMI) assumption is used by the treatment effect estimators to estimate the ATE and POMs. Explanation of the CMI assumption can be found in Hirano, Imbens, and Ridder (2003).

households had deleterious effects across all the child health indicators used in my study[4], but this result has selection bias issues.

The treatment effect of the causal impact of step parenting on child health outcomes can be estimated using regression adjustment, inverse-probability weights, inverse-probability-weighted regression adjustments, and propensity score techniques discussed below.

3.4 Regression Adjustment (RA)

In the regression adjustment method, the outcome is modelled via regression to account for the nonrandom assignment of treatment. The specification model takes the form below;

$$CHB_i = \pi S_i + \beta_n \mathbf{X_i} + \varepsilon_i \qquad\qquad (1)$$

Where CHB denotes one of the five child health and behavioral outcomes of interest (Depression, Anxiety, Behavioral issues, Difficulty making and keeping friends, and Repeating a School Grade). S_i captures if a child has a stepparent or not, indicating treatment status. X is a vector of covariates that includes sociodemographic characteristics of the child (age, sex and race) and that of the related adult (sex, education, income) and the household size. The coefficient of interest, π, captures the causal impact of a stepparent on the child health outcomes.

The RA approach fits separate regressions for children who live with stepparents (treatment group) and children who live with biological or adoptive parents (unobserved potential outcomes or counterfactual) controlling for the same covariates. Then the estimator evaluates the averages of the predicted outcomes for the treated group and the untreated group, which gives the potential outcome means (POMs). The differences between the predicted outcome of children with stepparents and those with both biological parents provide the ATEs.

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[4] The logistical regression results of stepparent on children's health and behavioral outcomes are reported in the appendix

Since the outcomes of interest are binary, logistic regression are run to estimate the treatment effect. The estimate of this effect for each child controls for whether the child has a stepparent or not. The averages of these effects across all children in the data give the average treatment effect of having a stepparent on the child health outcomes.

3.5 Inverse Probability Weighting

The Inverse Probability Weighting (IPW) is a treatment effect estimator that uses weighted means rather than unweighted means to unpack the effects of treatment and other confounding variables in the data (StataCorp, 2013). This treatment effect estimator also creates a pseudo-population that imitates a randomized population in which the covariates and the treatment assignment are independent of each other. The inverse probability weights are acquired by running a logistic regression model and estimating each child's probability of having a stepparent condition on all observed covariates and then weighted by the inverse of the estimated probability[5]. The child who has a stepparent gets a weight of $1/\text{Pr}(Z=1|\mathbf{X})$, and the child who has a biological or adoptive parent receives a weight of $1/[1-\text{Pr}(Z=1|\mathbf{X})]$. Where Z is a binary treatment indicator, $Z = 0$ for control treatment (having a Biological or Adoptive parent) and $Z=1$ for active treatment (having a Stepparent) while $\mathbf{X}$ is a vector of baseline covariates.

3.6 Inverse Probability Weighted Regression Adjustment

The Inverse Probability Weighted Regression Adjustment (IPWRA) estimator combines the outcome modeling techniques of the RA discussed earlier and the treatment modeling strategy of the IPW**.** The combination of elements of the RA and the IPW makes this estimator

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[5] Extensive literature on IPW is covered in Imbens (2000), Hirano, Imbens and Ridder (2003), Tan (2010), Wooldridge (2010), and Tisatis (2016, chapter 6)

more robust to misspecification. The IPWRA estimator operates as a RA but uses the properties of the IPW to correct the estimator when the regression function is misspecified[6].

3.7 Propensity Score Matching

The propensity score is the probability of treatment assignment after controlling for observed baseline characteristics (Austin, 2011). With an observational data, the propensity score matching (PSM) allows for the design and analysis of such data to imitate some of the properties of a randomized control trail. Propensity Score was defined by Rosenbaum and Rubin (1983a) as the probability of treatment assignment conditional on observed baseline covariates: $e_i = $ Pr (Z_i $=1|\mathbf{X}_i$), Z_i is a binary treatment indicator with other variables defined as discussed under the IPW.

The distribution of the measured baseline covariates is similar between those who receive treatment and those who do not, conditional on their propensity score. Hence when a group of children have the same propensity score, the distribution of observed baseline covariates will be the same between those with stepparents and those with biological parents. The PSM requires the formation of matched sets of children with stepparents and those with biological parents who have a similar propensity score. Once the matched samples have been formed, the treatment effect is estimated by comparing outcomes between children with stepparents and those with biological parents in the matched sample. Each child in that data set is given a propensity score which will capture the probability of having a stepparent. I use the specification below to help estimate this.

$$S_i = \beta_0 + \beta_n \mathbf{X_i} + \varepsilon_i \qquad (2)$$

S_i is as defined in (1) above and $\mathbf{X}$ is a vector of covariates also defined in (1) that determines the propensity of having a stepparent. The covariates include the selected child's sex,

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[6] Inverse probability regression adjustments are discussed in depth in Wooldridge (2010, section 21.3.4)

age and race, as well as the age, sex, level of education, income level of the adult respondent, and the number of people in the household. ε_i is the error term not associated with **X**. Each child's propensity score, which is given by the estimated $\hat{S}$, carries a value between 0 and 1 indicating the probability that a child has a stepparent after controlling for the covariates in the estimation. Using the PSM technique, I match the children who have a stepparent with those who have biological parents base on their propensity score. I then estimate the below specification for the effect of step-parenting on child health and behavioral outcomes.

$$CHB_i = \beta_0 + \beta_1 \hat{S}_i + \varepsilon_i \qquad (3)$$

CHB is one of the seven child health and behavioral outcomes: Depression, Anxiety, Behavioral issues, Difficulty making and keeping friends, and Repeating a School Grade.

B_1 is the Average Treatment Effect (ATE) of having a stepparent on child health and behavioral outcomes.

4. Results

Table 1 shows the summary statistics of the variables of interest in the data. It shows the treatment effect estimators of the causal impact of having a stepparent on children's health and behavioral outcomes after controlling for socio-demographic covariates of the child (sex, race and age) as well as those of the related adult (age, sex, level of education, income) and the household size. Tables 2 to 6 gives the ATE estimates from the RA approach. They indicate that, on average, children who have stepparents are 3.5 percentage points more likely to have anxiety issues and depression compared to children who live with two biological and or adoptive parents. Stepchildren are also 4.5 percentage points more likely on average to have behavioral issues relative to those in intact families. Looking at the socio-demographic covariates, black children across the comparison family setups are less likely to have anxiety issues relative to white

children. Also, among children from intact families (living with both biological parents) those from wealthy household (400% FPL or greater) across comparison groups are less likely to be depressed or have difficulty making and keeping friends. Also, across comparison groups children whose parents have some college degree or higher are less likely to repeat a school grade.

The results from the IPW that accounts for the probability of treatment – having a stepparent – are shown in tables 7 to 11. Stepchildren continue to show poor child health and behavioral outcomes than those in intact families. These children are on average more likely to have anxiety issues (3.4 percentage points), depression (3.4 percentage points), and have difficulty making and keeping friends (6.4 percentage points) compared to children who live with both biological parents. These findings are robust in signs and mostly statistically significant.

The ATE results the from inverse-probability-weighted regression adjustment (IPWRA)[7] are doubly robust as it combines the modeling techniques of the RA and the treatment modeling of the IPW to produce unbiased estimate. They show that children from stepfamilies are on average more likely to have declining child health outcomes relative to their counterparts who live in intact families. The results reveal that stepchildren are 4.6 percentage points more likely to have behavioral issues, and difficulty making and keeping friends (6.3 percentage points). Also, as children from both comparison groups get older, they are more likely to have anxiety issues and suffer from depression. But children from wealthy families (400% FPL or greater) across comparison groups are less likely to have depression, behavioral issues, and have difficulty making and keeping friends compared to those from poor households (0 – 99% FPL).

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[7] IPWRA results are shown in Tables 12 to 16

Female children from both family setups are less likely to have behavioral issues but are more likely to be depressed and have anxiety issues[8] relative to male children.

The propensity score matching estimates are presented in table 17. These estimators create statistically similar treatment and control groups controlling for observed covariates to produce the propensity scores. The ATE estimates indicate that stepchildren on average are more likely to have anxiety issues (3.8 percentage points) as well as depression (3.7 percentage points) compared to children in intact families. Children who live in stepparent households continue to be more likely to have difficulty making and keeping friends (6.9 percentage points) and behavioral issues (4.6 percentage points).

I describe the estimation results for the impact of having a stepparent on specific child health and behavioral outcomes in this section. The child health and behavioral outcomes of interest include anxiety, depression, behavioral issues, difficulty making and keeping friends and repeating a grade in school. The ATE results show on average, across all the methods discussed in section (3), there is a highly statistically significant negative impact on average among children who have stepparents relative to those in intact families across all child health and behavioral outcomes.

5. Discussion

This study set out to examine the impact of step-parenting on child health and behavioral outcomes among school-aged children. The underlying assumption is that children who live in stepparent household are more likely to experience negative emotional, behavioral and development issues compared to their counterparts who live with two biological or adoptive parent.

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[8] Both estimates for female children who have depression and anxiety issues from stepfamily household are not statistically significant

Consistent with my hypothesis and other studies (Coleman et al, 2000; Jeynes, 2006; Hoffman, 2006; Tillman, 2007), this study found that stepchildren are more likely to experience depression, anxiety, behavioral issues and low academic performances across all the study methods. Children from racial minority groups, are less likely to undergo negative mental health and behavioral problems. Specifically, African-American stepchildren are less likely to be depressed, anxious and have behavioral problems compared to White stepchildren. This indicative of the fact that family boundaries in African-American stepfamilies are less rigid, more fluid, and welcoming with children being able to bond with new stepfamily members than White families (Stewart, 2007).

The result also shows that across all methods used, the economic status of stepfamilies matter as the movement into a stepparent family may provide a great benefit to children in higher-income families than those in low-income families. Because movement into stepfamilies typically follows divorce or separation, these children are associated with increasing behavioral problems (Hoffman, 2006). The behavior of these children improves when the addition of a stepparent increases the economic resources available to the family. This finding is consistent with previous study that show that financial stability creates an environment which helps to improve stepparent-stepchild relationships (Fomby & Cherlin, 2007), and help alleviate the financial stress that is associated with negative child health and behavioral outcomes.

6. **Limitations and Future Research**

There are some limitations associated with my study which must be considered. The data from the National Survey of Children Health (NSCH, 2016) is limited in its ability to account for the length of time since remarriage occurred as this plays a vital role on the impact

of the family structure on child health outcomes. The impact of these outcomes diminishes over time and it is important to be able to consider the time factor in this kind of analyses (Hetherington & Kelly, 2002).

Using an observational data to estimate the relationship between step-parenting and child health outcomes will suffer from endogeneity. This is because the assignment of treatment, in this case having a stepparent, is not randomized, and the outcomes and the treatment are not necessarily independent. Using a randomized control trail (RCT) would allow for the random assignment of treatment and eliminate the problem of endogeneity but doing this will be difficult when investigating the impact of family structures on child health outcomes.

A recommendation for future research could be an analysis of a similar study that incorporates data accounting for the time since remarriage occurred using longitudinal data as the impact of child health outcomes among stepchildren are estimated to reduce with time. Also, it is worthy to investigate using longitudinal data, the influence of other stepfamily relationships, such as between co-parents, non-resident parents and other extended kin (Hetherington & Elmore, 2003). This will allow researchers to continue exploring the causal impact between step-parenting and child health outcomes.

7. Conclusion

Evaluating the association between family configuration and child health and behavioral outcomes is well known, but the evaluation of the causal impact of the family configuration on these same outcomes using observational data has been a challenging task. This paper uses the variation between children who live in stepparent households and those who live with both biological or adoptive parents to analyze the causal impact of the family structure on specific child health and behavioral outcomes. Using observational data to assess

this effect means that a simple logistical regression analysis will have some selection bias (Omitted Variable Bias) as the selection of children into family setups and child health outcomes are not independent. Using a variety of treatment effect estimators – regression adjustment, inverse probability weighting, inverse probability weighting with regression adjustment, and propensity score matching – attempted to eliminate the effects of confounding and selection bias, which yielded similar results and suggested that these biases may not be serious.

The results are robust across the various estimators used and indicate that children who live in stepfamily households are more likely to have negative child health and behavioral outcomes relative to children who live with two biological or adoptive parents. Specifically, stepchildren are more likely to be depressed, anxious, have behavioral issues, difficulty making and keeping friends, and repeating a grade in school. These results are consistent with findings from Amato and Keith (1991), Coleman et al (2000), Jeynes (2006), and Hoffman (2007). The overall differences are small and may disappear with time as the length of time since remarriage occurs is considered (Hetherington & Kelly, 2002). Also, the results indicate that children from wealthy household with stepparents across all estimating strategies are less likely to experience negative child health outcomes[9] compared to those from poor households. This implies that an increase in economic resources could help children be able to overcome some of the negative outcomes of the family structure

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[9] Estimates across some of the child health outcomes are not statistically significant. Estimates for wealthy children from the Propensity Score Matching (PSM) estimates not reported.

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Table 1 - Summary Statistics

Variable	Observation	Mean	SD	Min	Max
Anxiety	26,085	.092	.289	0	1
Depression	26,085	.037	.188	0	1
Behavioral Issues	26,085	.064	.245	0	1
Difficult Making Friends	26,085	.215	.411	0	1
Repeated Grade	26,085	.041	.199	0	1
Sex of Selected Child					
Female	26,085	.486	.499	0	1
Race of the Selected Child					
Black	26,085	.038	.191	0	1
Other	26,085	.154	.361	0	1
Age of the Selected Child	26,085	12.086	3.452	6	17
Age of Adult 1	25,882	44.377	7.502	18	75
Age of Adult 2	25,694	44.870	7.403	18	75
Sex of Adult 1					
Female	25,973	.644	.479	0	1
Sex of Adult 2					
Female	26,009	.361	.480	0	1
Highest level of education among Adults					
High School/GED	25,990	.104	.306	0	1
Some College/Technical school	25,990	.209	.407	0	1
College Degree or higher	25,990	.669	.471	0	1
Number of People in Household	25,651	4.153	1.001	3	12
Income level of Household (Federal Poverty Level, FPL)					
100-199% FPL	26,085	.132	.339	0	1
200-399% FPL	26,085	.305	.460	0	1
400% FPL or greater	26,085	.504	.499	0	1

Table 2 - Regression Adjustment Result for Anxiety

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1
Sex of Selected Child - Female			0.195***	0.298**
			(0.0473)	(0.117)
Race of Child - Black			-0.741***	-1.327***
			(0.164)	(0.392)
Race of Child - Other			-0.436***	-0.382**
			(0.0761)	(0.194)
Age of Selected Child			0.0866***	0.0901***
			(0.00691)	(0.0188)
High School/GED			0.158	0.240
			(0.232)	(0.566)
Some College/Technical school			0.551**	0.569
			(0.224)	(0.557)
College Degree or higher			0.468**	0.367
			(0.223)	(0.560)
Age of Adult 1			1.250***	1.449***
			(0.255)	(0.337)
Age of Adult 2			0.873***	0.981***
			(0.253)	(0.321)
Number of People in Household			-0.0411	0.0743
			(0.0264)	(0.0534)
100-199% FPL			-0.0791	-0.287
			(0.125)	(0.233)
200-399% FPL			-0.238**	-0.244
			(0.116)	(0.227)
400% or greater			-0.302***	-0.272
			(0.117)	(0.239)
Stepparent	0.0349***			
	(0.00698)			
Biological/Adoptive Parent		0.0886***		
		(0.00189)		
Constant			-4.615***	-4.915***
			(0.395)	(0.757)
Observations	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 3 - Regression Adjustment Result for Depression

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1
Sex of Selected Child - Female			0.343***	0.385***
			(0.0774)	(0.149)
Race of Child - Black			-0.308	-0.878**
			(0.224)	(0.428)
Race of Child - Other			-0.229*	-0.358
			(0.118)	(0.239)
Age of Selected Child			0.248***	0.163***
			(0.0135)	(0.0259)
High School/GED			0.110	-0.0730
			(0.330)	(0.576)
Some College/Technical school			0.516	0.0119
			(0.319)	(0.568)
College Degree or higher			0.234	-0.240
			(0.319)	(0.575)
Age of Adult 1			1.067***	0.671
			(0.352)	(0.456)
Age of Adult 2			0.799**	0.413
			(0.348)	(0.437)
Number of People in Household			-0.0170	0.120*
			(0.0448)	(0.0640)
100-199% FPL			-0.269	-0.269
			(0.184)	(0.278)
200-399% FPL			-0.457***	-0.0793
			(0.170)	(0.268)
400% or greater			-0.528***	-0.651**
			(0.172)	(0.297)
Stepparent	0.0351***			
	(0.00497)			
Biological/Adoptive Parent		0.0325***		
		(0.00119)		
Constant			-7.602***	-5.436***
			(0.576)	(0.916)
Observations	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 4 - Regression Adjustment Result for Behavioral Issues

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1
Sex of Selected Child - Female			-0.929*** (0.0623)	-1.022*** (0.140)
Race of Child - Black			0.325** (0.131)	-0.399 (0.291)
Race of Child - Other			-0.126 (0.0836)	-0.301 (0.208)
Age of Selected Child			-0.0448*** (0.00789)	-0.0632*** (0.0192)
High School/GED			0.246 (0.245)	0.122 (0.517)
Some College/Technical school			0.236 (0.241)	0.196 (0.504)
College Degree or higher			0.226 (0.238)	-0.0798 (0.508)
Age of Adult 1			0.393 (0.410)	0.896** (0.376)
Age of Adult 2			0.153 (0.409)	0.619* (0.355)
Number of People in Household			0.0107 (0.0311)	0.104* (0.0584)
100-199% FPL			0.0648 (0.137)	-0.304 (0.234)
200-399% FPL			-0.155 (0.131)	-0.259 (0.226)
400% or greater			-0.349*** (0.133)	-0.463* (0.246)
Stepparent	0.0453*** (0.00673)			
Biological/Adoptive Parent		0.0591*** (0.00157)		
Constant			-2.257*** (0.522)	-1.864** (0.770)
Observations	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 5 - Regression Adjustment Result for Difficulty Making Friends

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1
Sex of Selected Child - Female			-0.168***	-0.0719
			(0.0328)	(0.0886)
Race of Child - Black			-0.428***	-0.714***
			(0.0989)	(0.226)
Race of Child - Other			-0.0622	-0.250*
			(0.0464)	(0.136)
Age of Selected Child			0.0322***	0.0175
			(0.00469)	(0.0140)
High School/GED			0.172	0.0579
			(0.145)	(0.380)
Some College/Technical school			0.313**	0.313
			(0.141)	(0.372)
College Degree or higher			0.313**	0.126
			(0.139)	(0.375)
Age of Adult 1			0.426**	0.499*
			(0.178)	(0.302)
Age of Adult 2			0.285	0.444
			(0.177)	(0.293)
Number of People in Household			-0.0354**	-0.0163
			(0.0178)	(0.0409)
100-199% FPL			-0.224***	-0.316*
			(0.0845)	(0.176)
200-399% FPL			-0.276***	-0.329*
			(0.0785)	(0.170)
400% or greater			-0.393***	-0.471***
			(0.0796)	(0.180)
Stepparent	0.0604***			
	(0.0100)			
Biological/Adoptive Parent		0.209***		
		(0.00270)		
Constant			-1.835***	-1.310**
			(0.257)	(0.564)
Observations	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents.
The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 6 - Regression Adjustment Result for Repeated Grade

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1
Sex of Selected Child - Female			-0.474***	-0.503***
			(0.0726)	(0.157)
Race of Child - Black			0.328**	-0.105
			(0.158)	(0.338)
Race of Child - Other			0.0710	0.0638
			(0.0979)	(0.224)
Age of Selected Child			0.0747***	0.0719***
			(0.0104)	(0.0237)
High School/GED			0.0173	-0.875**
			(0.205)	(0.432)
Some College/Technical school			-0.435**	-0.931**
			(0.206)	(0.423)
College Degree or higher			-0.676***	-1.538***
			(0.203)	(0.435)
Age of Adult 1			-0.227	0.206
			(0.614)	(0.493)
Age of Adult 2			-0.268	-0.158
			(0.613)	(0.479)
Number of People in Household			0.0256	0.143**
			(0.0371)	(0.0663)
100-199% FPL			-0.297**	-0.405
			(0.136)	(0.274)
200-399% FPL			-0.743***	-0.220
			(0.136)	(0.261)
400% or greater			-0.791***	-0.294
			(0.139)	(0.288)
Stepparent	0.0244***			
	(0.00494)			
Biological/Adoptive Parent		0.0379***		
		(0.00128)		
Constant			-2.717***	-2.567***
			(0.700)	(0.828)
Observations	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 7 – Inverse Probability Weighting Result for Anxiety

Variables	(1) ATE	(2) POmean	(3) TME1
Sex of Selected Child - Female			-0.00986
			(0.0424)
Race of Child - Black			0.261***
			(0.0972)
Race of Child - Other			-0.119*
			(0.0625)
Age of Selected Child			0.0694***
			(0.00616)
High School/GED			0.555***
			(0.178)
Some College/Technical school			0.757***
			(0.174)
College Degree or higher			0.127
			(0.175)
Age of Adult 1			1.394***
			(0.193)
Age of Adult 2			1.071***
			(0.191)
Number of People in Household			0.0905***
			(0.0219)
100-199% FPL			-0.0690
			(0.0901)
200-399% FPL			-0.315***
			(0.0861)
400% or greater			-0.573***
			(0.0899)
Stepparent	0.0337***		
	(0.00699)		
Biological/Adoptive Parent		0.0885***	
		(0.00189)	
Constant			-4.693***
			(0.306)
Observations	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under TME1 are from the logistic regression used to estimate treatment status.
The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 8 - Inverse Probability Weighting Result for Depression

Variables	(1) ATE	(2) POmean	(3) TME1
Sex of Selected Child - Female			-0.00986
			(0.0424)
Race of Child - Black			0.261***
			(0.0972)
Race of Child - Other			-0.119*
			(0.0625)
Age of Selected Child			0.0694***
			(0.00616)
High School/GED			0.555***
			(0.178)
Some College/Technical school			0.757***
			(0.174)
College Degree or higher			0.127
			(0.175)
Age of Adult 1			1.394***
			(0.193)
Age of Adult 2			1.071***
			(0.191)
Number of People in Household			0.0905***
			(0.0219)
100-199% FPL			-0.0690
			(0.0901)
200-399% FPL			-0.315***
			(0.0861)
400% or greater			-0.573***
			(0.0899)
Stepparent	0.0344***		
	(0.00503)		
Biological/Adoptive Parent		0.0326***	
		(0.00119)	
Constant			-4.693***
			(0.306)
Observations	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under TME1 are from the logistic regression used to estimate treatment status.
The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 9 - Inverse Probability Weighting Result for Behavioral Issues

Variables	(1) ATE	(2) POmean	(3) TME1
Sex of Selected Child - Female			-0.00986
			(0.0424)
Race of Child - Black			0.261***
			(0.0972)
Race of Child - Other			-0.119*
			(0.0625)
Age of Selected Child			0.0694***
			(0.00616)
High School/GED			0.555***
			(0.178)
Some College/Technical school			0.757***
			(0.174)
College Degree or higher			0.127
			(0.175)
Age of Adult 1			1.394***
			(0.193)
Age of Adult 2			1.071***
			(0.191)
Number of People in Household			0.0905***
			(0.0219)
100-199% FPL			-0.0690
			(0.0901)
200-399% FPL			-0.315***
			(0.0861)
400% or greater			-0.573***
			(0.0899)
Stepparent	0.0449***		
	(0.00691)		
Biological/Adoptive Parent		0.0591***	
		(0.00157)	
Constant			-4.693***
			(0.306)
Observations	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under TME1 are from the logistic regression used to estimate treatment status.
The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 10 - Inverse Probability Weighting Result for Difficult Making Friends

Variables	(1) ATE	(2) POmean	(3) TME1
Sex of Selected Child - Female			-0.00986
			(0.0424)
Race of Child - Black			0.261***
			(0.0972)
Race of Child - Other			-0.119*
			(0.0625)
Age of Selected Child			0.0694***
			(0.00616)
High School/GED			0.555***
			(0.178)
Some College/Technical school			0.757***
			(0.174)
College Degree or higher			0.127
			(0.175)
Age of Adult 1			1.394***
			(0.193)
Age of Adult 2			1.071***
			(0.191)
Number of People in Household			0.0905***
			(0.0219)
100-199% FPL			-0.0690
			(0.0901)
200-399% FPL			-0.315***
			(0.0861)
400% or greater			-0.573***
			(0.0899)
Stepparent	0.0636***		
	(0.0103)		
Biological/Adoptive Parent		0.209***	
		(0.00270)	
Constant			-4.693***
			(0.306)
Observations	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under TME1 are from the logistic regression used to estimate treatment status.
The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 11 - Inverse Probability Weighting Result for Repeated Grade

Variables	(1) ATE	(2) POmean	(3) TME1
Sex of Selected Child - Female			-0.00986
			(0.0424)
Race of Child - Black			0.261***
			(0.0972)
Race of Child - Other			-0.119*
			(0.0625)
Age of Selected Child			0.0694***
			(0.00616)
High School/GED			0.555***
			(0.178)
Some College/Technical school			0.757***
			(0.174)
College Degree or higher			0.127
			(0.175)
Age of Adult 1			1.394***
			(0.193)
Age of Adult 2			1.071***
			(0.191)
Number of People in Household			0.0905***
			(0.0219)
100-199% FPL			-0.0690
			(0.0901)
200-399% FPL			-0.315***
			(0.0861)
400% or greater			-0.573***
			(0.0899)
Stepparent	0.0239***		
	(0.00493)		
Biological/Adoptive Parent		0.0380***	
		(0.00128)	
Constant			-4.693***
			(0.306)
Observations	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under TME1 are from the logistic regression used to estimate treatment status.
The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 12 - Inverse Probability Weighting Regression Adjustment Result for Anxiety

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1	(5) TME1
Sex of Selected Child - Female			0.0160***	0.0216	-0.00986
			(0.00377)	(0.0135)	(0.0424)
Race of Child - Black			-0.0499***	-0.0932***	0.261***
			(0.00809)	(0.0194)	(0.0972)
Race of Child - Other			-0.0303***	-0.0318*	-0.119*
			(0.00462)	(0.0180)	(0.0625)
Age of Selected Child			0.00660***	0.00972***	0.0694***
			(0.000522)	(0.00193)	(0.00616)
High School/GED			0.00845	0.0254	0.555***
			(0.0140)	(0.0458)	(0.178)
Some College/Technical school			0.0400***	0.0676	0.757***
			(0.0138)	(0.0452)	(0.174)
College Degree or higher			0.0325**	0.0461	0.127
			(0.0134)	(0.0450)	(0.175)
Age of Adult 1			0.112***	0.158***	1.394***
			(0.0294)	(0.0324)	(0.193)
Age of Adult 2			0.0837***	0.105***	1.071***
			(0.0294)	(0.0325)	(0.191)
Number of People in Household			-0.00349*	0.0120*	0.0905***
			(0.00204)	(0.00644)	(0.0219)
100-199% FPL			-0.00700	-0.0309	-0.0690
			(0.0105)	(0.0287)	(0.0901)
200-399% FPL			-0.0201**	-0.0322	-0.315***
			(0.00979)	(0.0283)	(0.0861)
400% or greater			-0.0250**	-0.0328	-0.573***
			(0.00992)	(0.0297)	(0.0899)
Stepparent	0.0340***				
	(0.00702)				
Biological/Adoptive Parent		0.0885***			
		(0.00189)			
Constant			-0.0912**	-0.203***	-4.693***
			(0.0356)	(0.0699)	(0.306)
Observations	25,390	25,390	25,390	25,390	25,390

for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents. Coefficients under TME1 are from the logistic regression used to estimate treatment status.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 13 - Inverse Probability Weighting Regression Adjustment Result for Depressed

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1	(5) TME1
Sex of Selected Child - Female			0.0107***	0.0161	-0.00986
			(0.00238)	(0.00980)	(0.0424)
Race of Child - Black			-0.0103*	-0.0389**	0.261***
			(0.00596)	(0.0194)	(0.0972)
Race of Child - Other			-0.00675**	-0.0224*	-0.119*
			(0.00301)	(0.0124)	(0.0625)
Age of Selected Child			0.00636***	0.00928***	0.0694***
			(0.000343)	(0.00148)	(0.00616)
High School/GED			0.00256	-0.00217	0.555***
			(0.00998)	(0.0471)	(0.178)
Some College/Technical school			0.0175*	0.00557	0.757***
			(0.00995)	(0.0465)	(0.174)
College Degree or higher			0.00740	-0.0126	0.127
			(0.00966)	(0.0466)	(0.175)
Age of Adult 1			0.0404**	0.0474**	1.394***
			(0.0181)	(0.0193)	(0.193)
Age of Adult 2			0.0324*	0.0305	1.071***
			(0.0181)	(0.0196)	(0.191)
Number of People in Household			-0.000999	0.00888*	0.0905***
			(0.00142)	(0.00466)	(0.0219)
100-199% FPL			-0.0114	-0.0375	-0.0690
			(0.00730)	(0.0251)	(0.0901)
200-399% FPL			-0.0176**	-0.0146	-0.315***
			(0.00693)	(0.0259)	(0.0861)
400% or greater			-0.0196***	-0.0546**	-0.573***
			(0.00698)	(0.0265)	(0.0899)
Stepparent	0.0336***				
	(0.00502)				
Biological/Adoptive Parent		0.0326***			
		(0.00119)			
Constant			-0.0736***	-0.0825	-4.693***
			(0.0219)	(0.0607)	(0.306)
Observations	25,390	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents. Coefficients under TME1 are from the logistic regression used to estimate treatment status.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 14 - Inverse Probability Weighting Regression Adjustment Result for Behavioral issues

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1	(5) TME1
Sex of Selected Child - Female			-0.0478***	-0.0869***	-0.00986
			(0.00308)	(0.0130)	(0.0424)
Race of Child - Black			0.0202**	-0.0388	0.261***
			(0.00976)	(0.0265)	(0.0972)
Race of Child - Other			-0.00686*	-0.0118	-0.119*
			(0.00415)	(0.0195)	(0.0625)
Age of Selected Child			-0.00254***	-0.00614***	0.0694***
			(0.000445)	(0.00224)	(0.00616)
High School/GED			0.0152	0.00468	0.555***
			(0.0130)	(0.0568)	(0.178)
Some College/Technical school			0.0143	0.00923	0.757***
			(0.0126)	(0.0555)	(0.174)
College Degree or higher			0.0138	-0.0124	0.127
			(0.0123)	(0.0554)	(0.175)
Age of Adult 1			0.0238	-0.00861	1.394***
			(0.0218)	(0.106)	(0.193)
Age of Adult 2			0.0110	-0.0280	1.071***
			(0.0218)	(0.105)	(0.191)
Number of People in Household			0.000547	0.0107*	0.0905***
			(0.00181)	(0.00620)	(0.0219)
100-199% FPL			0.00475	-0.0531*	-0.0690
			(0.00936)	(0.0317)	(0.0901)
200-399% FPL			-0.0103	-0.0403	-0.315***
			(0.00857)	(0.0308)	(0.0861)
400% or greater			-0.0205**	-0.0593*	-0.573***
			(0.00856)	(0.0314)	(0.0899)
Stepparent	0.0461***				
	(0.00682)				
Biological/Adoptive Parent		0.0591***			
		(0.00157)			
Constant			0.0910***	0.252*	-4.693***
			(0.0281)	(0.139)	(0.306)
Observations	25,390	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents. Coefficients under TME1 are from the logistic regression used to estimate treatment status.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 15 - Inverse Probability Weighting Regression Adjustment Result for Difficulty Making Friends

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1	(5) TME1
Sex of Selected Child - Female			-0.0261***	-0.0134	-0.00986
			(0.00537)	(0.0196)	(0.0424)
Race of Child - Black			-0.0649***	-0.0922**	0.261***
			(0.0132)	(0.0451)	(0.0972)
Race of Child - Other			-0.0104	-0.0352	-0.119*
			(0.00742)	(0.0287)	(0.0625)
Age of Selected Child			0.00516***	0.000991	0.0694***
			(0.000761)	(0.00316)	(0.00616)
High School/GED			0.0266	0.0147	0.555***
			(0.0217)	(0.0735)	(0.178)
Some College/Technical school			0.0515**	0.0636	0.757***
			(0.0212)	(0.0721)	(0.174)
College Degree or higher			0.0499**	0.0355	0.127
			(0.0208)	(0.0723)	(0.175)
Age of Adult 1			0.0670**	-0.0901	1.394***
			(0.0313)	(0.128)	(0.193)
Age of Adult 2			0.0439	-0.0879	1.071***
			(0.0313)	(0.127)	(0.191)
Number of People in Household			-0.00579**	0.00132	0.0905***
			(0.00288)	(0.00887)	(0.0219)
100-199% FPL			-0.0391***	-0.0814**	-0.0690
			(0.0151)	(0.0407)	(0.0901)
200-399% FPL			-0.0476***	-0.0696*	-0.315***
			(0.0142)	(0.0395)	(0.0861)
400% or greater			-0.0666***	-0.0968**	-0.573***
			(0.0144)	(0.0411)	(0.0899)
Stepparent	0.0628***				
	(0.0102)				
Biological/Adoptive Parent		0.209***			
		(0.00270)			
Constant			0.135***	0.402**	-4.693***
			(0.0428)	(0.169)	(0.306)
Observations	25,390	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents. Coefficients under TME1 are from the logistic regression used to estimate treatment status.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL. Robust standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 16 - Inverse Probability Weighting Regression Adjustment Result for Repeated Grade

Variables	(1) ATE	(2) POmean	(3) OME0	(4) OME1	(5) TME1
Sex of Selected Child - Female			-0.0173***	-0.0310***	-0.00986
			(0.00254)	(0.00943)	(0.0424)
Race of Child - Black			0.0161*	-0.00181	0.261***
			(0.00856)	(0.0222)	(0.0972)
Race of Child - Other			0.00249	0.00198	-0.119*
			(0.00366)	(0.0134)	(0.0625)
Age of Selected Child			0.00260***	0.00470***	0.0694***
			(0.000358)	(0.00134)	(0.00616)
High School/GED			-0.00405	-0.110*	0.555***
			(0.0158)	(0.0662)	(0.178)
Some College/Technical school			-0.0291*	-0.117*	0.757***
			(0.0152)	(0.0656)	(0.174)
College Degree or higher			-0.0368**	-0.156**	0.127
			(0.0150)	(0.0658)	(0.175)
Age of Adult 1			0.00322	0.0350***	1.394***
			(0.0220)	(0.0133)	(0.193)
Age of Adult 2			0.00186	0.0101	1.071***
			(0.0220)	(0.0132)	(0.191)
Number of People in Household			0.000870	0.00693*	0.0905***
			(0.00153)	(0.00419)	(0.0219)
100-199% FPL			-0.0214**	-0.0257	-0.0690
			(0.00959)	(0.0235)	(0.0901)
200-399% FPL			-0.0409***	-0.0101	-0.315***
			(0.00891)	(0.0229)	(0.0861)
400% or greater			-0.0418***	-0.0159	-0.573***
			(0.00892)	(0.0234)	(0.0899)
Stepparent	0.0234***				
	(0.00492)				
Biological/Adoptive Parent		0.0380***			
		(0.00128)			
Constant			0.0755***	0.119*	-4.693***
			(0.0289)	(0.0708)	(0.306)
Observations	25,390	25,390	25,390	25,390	25,390

Notes: ATE refers to average treatment effect. Coefficient under POmean is the potential-outcome means for children with stepparents if they were to have both biological/adoptive parent. Coefficients under OME0 are from the linear equation used to estimate the potential outcome means of children with both biological/adoptive parents. Coefficients under OME1 are from the linear equation used to estimate the potential outcome means of children with stepparents. Coefficients under TME1 are from the logistic regression used to estimate treatment status.

The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 17 – Propensity Score Matching Result for Child Health and Behavioral Outcomes

Variables	(1) Anxiety	(2) Depression	(3) Behavioral Issues	(4) Difficult Making Friends	(5) Repeated Grade
Stepparent	0.0379***	0.0368***	0.0464***	0.0694***	0.0248***
	(0.00816)	(0.00657)	(0.00955)	(0.0126)	(0.00651)
Observations	25,390	25,390	25,390	25,390	25,390

Notes: Results shown refers to the average treatment effect (ATE) of having a stepparent on child health outcomes. Stepparent is a dummy variable equal to 1 if the child has a stepparent and 0 otherwise. Robust standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix

Logistical Regression results for the impact of stepparent on outcomes

Variables	(1) Anxiety	(2) Depression	(3) Behavioral Issues	(4) Difficult Making Friends	(5) Repeated Grade
Stepparent	0.401***	0.775***	0.703***	0.344***	0.505***
	(0.066)	(0.088)	(0.073)	(0.049)	(0.090)
Race of the Selected Child					
Black	-0.839***	-0.445**	0.179	-0.473***	0.267*
	(0.152)	(0.201)	(0.121)	(0.091)	(0.144)
Other	-0.433***	-0.258**	-0.157**	-0.077*	0.079
	(0.071)	(0.106)	(0.078)	(0.044)	(0.090)
Sex of the Selected Child					
Female	0.209***	0.350***	-0.944***	-0.156***	-0.478***
	(0.044)	(0.069)	(0.057)	(0.031)	(0.066)
Age of the Selected Child	0.086***	0.239***	-0.060***	0.031***	0.082***
	(0.008)	(0.013)	(0.009)	(0.005)	(0.011)
Age of Adult 1	-0.002	0.010	0.003	-0.003	0.004
	(0.005)	(0.008)	(0.006)	(0.004)	(0.008)
Age of Adult 2	0.004	-0.016**	0.010*	0.003	-0.011
	(0.005)	(0.008)	(0.006)	(0.003)	(0.007)
Sex of Adult 1					
Female	1.281***	0.963***	0.573**	0.430***	-0.022
	(0.202)	(0.278)	(0.280)	(0.154)	(0.422)
Sex of Adult 2					
Female	0.912***	0.637**	0.341	0.315**	-0.133
	(0.198)	(0.274)	(0.277)	(0.152)	(0.420)
Highest level of education among Adults					
High School/GED	0.187	0.090	0.245	0.171	-0.153
	(0.214)	(0.285)	(0.222)	(0.136)	(0.184)
Some College/ Technical School	0.564***	0.397	0.262	0.333**	-0.532***
	(0.208)	(0.278)	(0.217)	(0.132)	(0.184)
College Degree or higher	0.461**	0.130	0.185	0.306**	-0.825***
	(0.207)	(0.278)	(0.216)	(0.131)	(0.183)
Number of People in Household	-0.019	0.007	0.038	-0.034**	0.040
	(0.024)	(0.038)	(0.027)	(0.016)	(0.033)
Income level of Household (Federal Poverty Level, FPL)					
100-199% FPL	-0.126	-0.270*	-0.038	-0.244***	-0.300**
	(0.110)	(0.155)	(0.117)	(0.077)	(0.124)
200-399% FPL	-0.256**	-0.367**	-0.222**	-0.293***	-0.628***
	(0.103)	(0.145)	(0.112)	(0.072)	(0.123)
400% FPL or greater	-0.319***	-0.528***	-0.433***	-0.414***	-0.684***
	(0.105)	(0.148)	(0.115)	(0.073)	(0.128)
Constant	-4.778***	-7.047***	-2.830***	-1.804***	-2.650***
	(0.368)	(0.554)	(0.437)	(0.252)	(0.570)
Observations	25289	25289	25289	25289	25289
R-squared	.z	.z	.z	.z	.z

Notes: The results for race of child relative to White children; sex of the selected child relative to the male child; sex of adult 1 relative to male adult 1; sex of adult 2 relative to male adult 2; highest level of education relative to less than high school; income level of household relative to 0-99% FPL.
Robust standard errors are in parenthesis *** $p<0.01$, ** $p<0.05$, * $p<0.1$.