



# Non-Income Effects of Welfare Receipt on Early Childhood Cognitive Scores<sup>1</sup>

## Unintended Consequences of the Program for Temporary Assistance for Needy Families (TANF)

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### Abstract

This report draws upon data from a multi-year study to assess whether the receipt of Temporary Assistance for Needy Families (TANF) benefits has an impact on the cognitive development of young children. We find that a family's participation in TANF is negatively associated with childhood cognitive development and we identify maternal stress as a possible explanatory factor.

### Introduction

Child poverty in America is the highest among Western industrialized countries, affecting 19% of children in 2008 (Smeeding, 2006, DeNavas-Walt, Proctor and Smith, 2009), and exposure to poverty has been linked with negative outcomes across the life course. Public assistance is designed to mitigate the impact of poverty on children and their parents but there have been relatively few studies that examined the effects of welfare on early child development. These studies have typically focused on the transition of the child to adulthood, examining high school graduation rates, and have generally found that receipt of welfare negatively affects graduation rates, although the effect is small.

There are, of course, reasons why welfare participation might have positive effects on the family, including effects resulting from having more money to spend on family essentials. These include better access to ancillary services, a possible improvement in mental health, and a connection to the workforce. But welfare participation may have negative effects on the family too. These may include effects related to a decreased sense of efficacy, the potential for public censure, and maternal depression. In addition, maternal employment, a requirement for participation in TANF, may produce stress and have negative consequences for the family.

We take advantage of a unique dataset to look at the effect of welfare on the cognitive development of young children to assess whether there is an effect at an early age. That dataset is the Fragile Families and Child Wellbeing Study that follows unmarried parents and nearly 5000 children born in large U.S. cities between 1998 and 2000. This dataset includes data collected at the hospital when the baby was born with follow-up interviews conducted one, three and five years after birth. From these data, we created two groups for comparison: women (and their children) who were on welfare and similar women (and their children) who were not on welfare.

<sup>1</sup> This is a summary of a more extensive article by Heflin and Kukla-Acevedo. Those interested in the methodology and complete findings should consult: Heflin, C. M., & Acevedo, S. K., (Article in Press). Non-income effects of welfare receipt on early childhood cognitive scores, *Children and Youth Services Review* (2010), doi:10.1016/j.chilcyouth.2010.11.006

## Child cognitive development

Child cognitive development was measured by the Peabody Picture Vocabulary Test (PPVT).<sup>2</sup> Research has demonstrated that PPVT test scores, which measure language ability, are related to academic achievement and early childhood PPVT test scores predict later academic outcomes. (Altepeter & Handal, 1985; Bing & Bing, 1984; Naglierei & Pfeiffer, 1983; Smith, Smith & Dobbs, 1991; Breitchman, Wilson, Brownlie, Walters & Lancee, 1996). Using this measure, we found that children whose mothers participated in welfare between the three and year five interviews had standard scores that were lower than children whose mothers did not participate in welfare. This effect is found even after controlling for the mother's PPVT score, household income and a variety of other potentially relevant factors.<sup>3</sup> We also found that that the year five PPVT score was negatively associated with a child's anxiety level and the number of children in the house. Female five year olds had higher scores than males and racial minorities had lower scores than other children.

## Parental and environmental characteristics

Fragile Families is one of only a handful of datasets that includes a measure of the mother's cognitive ability. Interviewers administered the PPVT to mothers during the year three or year five in-home interview. As with the children's PPVT scores, the mothers' scores are lower than the national average. In addition, there are significantly higher percentages of female headed households in the TANF sample. TANF households are, on average, younger, have lower levels of education, lower incomes and report worse health statistics than the mothers in non-TANF households. When we compare the family dynamics of the two groups, we find that there are significantly fewer marriages, more family moves, and larger families in the TANF sample.

Finally, we looked at factors in the home that may affect child development. These include the presence (or absence) of cognitively stimulating materials in the home, the number of hours that the child spends in day care each week, the hours of television that the child watches each week and the level of food sufficiency in the house.<sup>4</sup> On average, in TANF households there are fewer stimulating materials, more television watching, more food insufficiency, and the children spend less time in day care. The in-home interviews also provide several measures of mother's mental health,

allowing us to control for levels of maternal depression and stress, both of which were higher among TANF participants than among non-participants.

## Refining the analysis

The findings presented above indicate that the receipt of TANF benefits is related to reduced cognitive ability among children as measured by the PPVT. The findings require us to reassess the comparison group to ensure that the findings are not an artifact of unmeasured differences between it and the group receiving benefits. We redefined the comparison group to include mothers who did not receive TANF between the year three and the year five interviews but who are similar to the group of TANF participants in terms of age, race, education, cognitive ability, income and marital status. The results are similar; they indicate that children of mothers who participate in welfare have standardized PPVT scores that are lower than children of mothers who did not participate in welfare, even though both groups are similar on important characteristics. The results of this test reinforce the earlier findings and lead us to ask questions about how receipt of TANF benefits can be related to lower cognitive scores among children. We turn to this question below.

## How TANF influences the cognitive ability of children

The academic literature documents negative associations between welfare receipt and adolescent and adult achievement outcomes (Ku & Plotnick, 2003) but it is noteworthy that we find the same pattern among children as young as five years of age. We examine maternal depression, maternal stress, maternal employment, and household income in an effort to explain this phenomenon. Maternal stress explained about 7% effect of TANF on PPVT scores. Maternal depression and maternal employment were not related to child performance on PPVT.

Consistent with expectations, income is the other pathway through which the TANF effect operates and it is responsible for roughly 19% of the effect of TANF. Since TANF recipients have household incomes on average one-third as high as non-recipients, one way to view this result as an indication of the selection into TANF. The main effect of income on PPVT is still positive, indicating that even after controlling for the ways in which TANF recipients differ from non-recipients, higher total incomes is associated with higher PPVT scores, although the size of the effect is quite small.

<sup>2</sup> The Peabody Picture Vocation Test is a measure of intelligence that can be administered to children as young as two years of age as well as adults. In the test, a child is asked to identify the picture that corresponds to a word spoken by the administrator. The test has been used for 50 years and results can be standardized to assess the mental age of any individual participant.

<sup>3</sup> By controlling for these factors, we ensure that our findings are not the result of systematic differences unrelated to whether or not the family was on welfare.

<sup>4</sup> Food sufficiency simply means that all members of the household have adequate access to food.

We have identified one mechanism above that could be related to the PPVT scores of children on welfare – maternal stress. Our expectation is that other social programs that do not have stringent behavioral requirements would not impact the mother in the same way and should not affect child PPVT scores. We used the Earned Income Tax Credit (EITC) to test this assumption, using the same mediating variables described above (maternal depression, maternal stress, maternal employment and family income). The EITC is a work incentive that provides a refundable tax credit in a lump sum after a family files its tax return. The EITC is not correlated with maternal depression or maternal stress but is correlated with maternal employment and household income and the PPVT scores of children. This result provides support for the linkage between TANF participation, maternal stress and the PPVT scores of children.

### Conclusion

Child poverty has become an enduring part of the social landscape that many families must navigate. Despite this fact, there is a continuing debate about whether child outcomes are depressed in low income households because of low income itself or because of the accumulation of other factors that result in parental income being low (Berger et al. 2009; Mayer, 1997; Taylor, Dearing & McCartney, 2004). In this report, we focus on non-income effects of participating in cash transfer programs themselves. We found that participation in TANF is associated with lower PPVT scores for children, a result that is consistent with prior research, and we traced part of the explanation to maternal stress. Our findings suggest that the structure of the social safety net may have implications for child outcomes. TANF has been the main social program providing financial support to low-income households with children, current program requirements may have behavioral effects on the mother that are at cross-purposes with the objective of improving child outcomes.

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