

**Workfare and the Great Recession: Socioeconomic Outcomes Among Black, White, and Hispanic Mothers in the Era of Work-First Welfare**

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## Abstract

With the introduction of welfare reform in 1996 – the culmination of Bill Clinton’s campaign promise to “end welfare as we know it” – means-tested cash assistance became conditional upon participation in the labor market. The current welfare program Temporary Assistance to Needy Families (TANF) is dependent on recipients being able to find work, typically in the low-wage service sector. In addition, this reform handed the states considerable autonomy in TANF’s implementation and administration. The literature, citing increased caseworker discretion and state-level policies, has also shown substantial evidence of favorable treatment toward white recipients (e.g. less sanctioning) compared with that of blacks and Hispanics. Using the National Longitudinal Survey of Youth-1997 cohort, this study examines the impact of TANF before and during the Great Recession of 2008 by comparing socioeconomic outcomes among TANF recipients and similarly situated “non-entrants” with an added focus on racial disparities in these outcome measures. Also, the role of state-level policy context is explored by assessing employment, income, and healthcare coverage outcomes among white, black, and Hispanic recipients living in states whose TANF policies are comparatively strict. Main findings include a significantly negative relationship between TANF participation and socioeconomic outcomes when controlling for relevant factors. No evidence was found, however, linking state TANF policy strictness with decreased socioeconomic outcomes among program participants.

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## Chapter 1: Introduction and Statement of the Problem

By the 1990s, somewhat of a consensus had been reached among policymakers – Republican and Democrat alike – regarding the nation’s welfare program Aid to Families with Dependent Children (AFDC). Many conservatives and liberals agreed that AFDC had become part of the poverty problem, supposedly allowing poor mothers to eschew hard work in favor of a monthly check from the government. Works like Charles Murray’s *Losing Ground* (1984), Lawrence Mead’s *Beyond Entitlement* (1986), and Michael Novak et al.’s *The New Consensus on Family and Welfare* (1987) painted a picture of American poverty rife with the consequences of New Deal- and Great Society-style social engineering: disincentives to take paid work, an erosion of the work ethic, dependence on government, and even a rejection of the civic obligations that come with democratic citizenship. Notions of “personal responsibility” and “dependence” – with their strong racial undertones – came to dominate the discourse surrounding means-tested cash assistance (Fraser and Gordon 1994; Neubeck and Cazenave 2001; Omi and Winant 1994; Schram 2005). In a move that foreshadowed AFDC’s demise, then-presidential candidate Bill Clinton promised to “end welfare as we know it.”

Although states had previously been allowed to experiment with work-based reforms to the AFDC program, it wasn’t until the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) that dramatic and comprehensive changes were made to the nation’s welfare system. In this post-AFDC era of the Temporary Assistance for Needy Families (TANF) program, direct cash assistance is now contingent upon finding paid employment, with a five-year lifetime limit, sanctions for non-compliant recipients, and incentives for the formation of two-parent families. Although the program was declared a success by many (largely because of drastic caseload reductions across the country), what became visible in hindsight was the



context surrounding passage of the PRWORA: an historic spurt of economic growth, expansion of the Earned Income Tax Credit and other related social programs, and full funding of the TANF block grant all helped move low-income women off welfare caseloads and into the labor market. Since then, the American economy has been through back-to-back recessions and the TANF block grant has suffered significant reductions in funding.

While reform advocates lauded the new program's performance during the economically favorable late-1990s, it is important to assess the fate of program recipients in tougher times. As policy scholars have asked, how will TANF and its recipients fare during a major recession (Blank 2009; Falk 2009; Holzer and Stoll 2000; Lim, Coulton and Lalich 2009; Peck 2001)? Up until the Great Recession of 2008, TANF had not been fully tested, including the slowdown of the early 2000s, because during this mild recession "the industries where many less-skilled women were employed did not experience a recession. Retail sales, health care, other services, and consumer-spending-related industries remained strong..." (Blank 2009: 48). Thus, when the success of a safety net program such as TANF is predicated on the ready availability of jobs, what happens when a recession hits the very industries that less-skilled women typically look to for employment? And what are the implications of mandated employment for low-income mothers' socioeconomic outcomes during a more severe recession?

The purpose of this study is twofold: (1) to examine socioeconomic outcomes among low-income women in the United States that occurred following the Great Recession of 2008 – comparing those who enrolled in TANF with those who did not enroll<sup>1</sup> – and (2) for those who

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<sup>1</sup> The NLSY-97 only has program participation data (e.g. individuals' TANF enrollment status) for respondents through September 2009, thus limiting my ability to capture TANF, SNAP, WIC, or other safety net program enrollment among respondents after this date. According to the National Bureau of Economic Research (2010) – the entity generally recognized as providing authoritative data on macroeconomic business cycle dynamics in the U.S. – the Great Recession ended in June of 2009. While this was certainly not the time that economic hardship came to a halt across the country, it nonetheless

did enroll in TANF, to assess the effects, if any, state-level policy context has on such outcomes for black, Hispanic, and white women during the years 2005-2011. The year 2005 was chosen as the baseline because it was the last year in which national statistics measuring poverty and unemployment showed steady improvement across all groups before deteriorating again in 2006 during the lead-up to the Great Recession (U.S. Census Bureau 2012); 2006 is also the first year in which black and Hispanic home mortgage delinquencies and foreclosures began to dramatically increase (Bajaj and Nixon 2006a; Bajaj and Nixon 2006b; Harvey 2010). The importance of this research lies in the opportunity to evaluate one of our nation's most important public assistance programs for the poor with a focus on potentially disparate experiences among racial and ethnic groups living in diverse state policy environments. Relevant data are just now becoming available that allow researchers to put together a before-and-(very shortly) after assessment of the subprime mortgage crisis' influence on income, employment, and other indicators of socioeconomic well-being.

Although the Great Recession is generally acknowledged to have begun in late-2007 following a dramatic spike in mortgage delinquencies and foreclosures across the country (Krugman 2012; Stiglitz 2010), the downturn affected minority households – especially black and Hispanic – earlier and more intensely relative to whites or Asian Americans (Harvey 2010; Rugh and Massey 2010). Citing archival data from RealtyTrac and the Mortgage Bankers Association of America, David Harvey (2010) points out that low-income black and Hispanic homeowners began defaulting at abnormally high levels as early as the late 1990s and that this ominous sign of macroeconomic distress was largely ignored by the mainstream media until

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marks the “bottoming out” point in the major indicators of national economic conditions. Thus, I am confident that the NLSY-97 data allow me to measure individuals' decisions to enroll or not enroll in TANF during not just the early months of the Recession but also its peak months of mid- to late-2009. In addition, the dependent variables for this study (i.e. socioeconomic outcomes) are available, uninterrupted, for every round of NLSY-97 data, i.e., past September 2009.

middle-class whites began showing similar delinquency and foreclosure rates. Just as many were emerging from the relatively mild recession of 2001 poverty, unemployment, and other indicators of economic hardship began to worsen well before the subprime crisis officially began, especially for black and Hispanic female-headed households (Bureau of Labor Statistics 2012; U.S. Census Bureau 2012).

The effects linger on today and will continue to do so as the Great Recession was the worst episode of economic contraction since the Great Depression of the 1930s and generated an extreme amount of job loss (Krugman 2012). At the height of the Recession, in October 2009, 17.5 percent of the American labor force was either unemployed or underemployed and states like Michigan, Florida, and California suffered even worse (Bureau of Labor Statistics 2012). This wave of unemployment forced the poor and near-poor toward alternative sources of economic relief, one of which was TANF. And yet, this crucial safety net program did not respond as the general public might assume, considering the severity of the Recession (DeParle 2012; Pavetti, Trisi and Schott 2011).

According to the Center on Budget and Policy Priorities from December 2007 to December 2009 TANF caseloads rose from approximately 1.75 million to 1.98 million, or an increase of 13.4 percent. Supplemental Nutrition Assistance Program (SNAP, more commonly known as food stamps) caseloads, on the other hand, rose from 12.30 million to 17.87 million, an increase of 45.3 percent. Furthermore, as DeParle (2012) points out, 16 states saw caseload *declines* since the onset of the Great Recession. Figure 1, which presents data in national welfare caseload sizes, conveys the meager rise in enrollments post-2008. The slight rise in caseloads, TANF's paltry cash benefit levels, state strategies of applicant diversion, and a built-in "hassle factor" all combined to undermine the program's effectiveness during a period of extreme hardship – the very type of

episode policy scholars expressed worry over in the years leading up to the Great Recession (Danziger 2010; Schott and Pavetti 2011).

[Figure 1 about here]

Even as TANF caseloads did not respond to the recession as one might expect, matters were compounded for black and Hispanic women seeking relief in this safety net program. There is strong evidence that the low-income black and Hispanic women who are greatly overrepresented among TANF caseloads have experienced differential treatment and outcomes based on their race and state of residence. More specifically, researchers have shown a strong positive correlation between a state TANF caseload's composition of black and Hispanic recipients and the adoption of stringent TANF policies (Fellowes and Rowe 2004; Soss, Fording and Schram 2011). States with such policies (e.g. having a 'family cap' on benefits or imposing a shorter lifetime limit on benefit receipt than the federal government's 60 month limit) are shown to produce different socioeconomic outcomes among its recipients when compared with relatively less strict states. Thus, it is important for scholars of racial and gender inequality to assess the different experiences that black, Hispanic, and other women of color have had, relative to whites, as a result of the confluence of the Great Recession, TANF enrollment, and state-level policy contexts.

## **Chapter 2: Review of the Literature**

### **Leaver Studies and Policy Evaluations**

The literature on TANF and its recipients generally falls into one of two categories: the mainstream, human capital-based studies on TANF's level of "success" – measuring income and employment outcomes among former recipients, for example – or the critical scholarship which problematizes the very nature of TANF and situates these socioeconomic concerns – and the welfare state in general – within the broader context of institutionalized power relations. What the former sees as a great success (e.g. moving large numbers of low-income single mothers into jobs, compelling them to adopt a seemingly self-sufficient lifestyle based on full-time employment outside the home) the latter sees as a problem (i.e. moving large numbers of low-income single mothers into low-paying service work while aggravating the tensions inherent in expecting single mothers to balance wage earning with carework).

Within the mainstream research on TANF, the vast majority of studies ask questions like: "was TANF a success?," "what defines a success?," or "which women are benefiting the most from TANF" (Blank 2006; Cancian and Meyer 2004; Mead 2007; Parrott and Sherman 2007)? Attempts to answer these questions empirically are typically centered on "leavers" – those who began receiving welfare and then either exited voluntarily, were sanctioned out of the program, or ran up against their lifetime limit of receipt. Generally, these leaver studies follow a fairly straightforward blueprint, comparing a baseline measure of recipients' income, poverty status, employment, and other relevant socioeconomic variables against subsequent measurements taken in the months following the transition off TANF.

In surveying these studies, one will also notice the majority of these analyses use data from the years immediately following the passage and implementation of the PRWORA – i.e. the

mid- to late-1990s up to the early 2000s. The further one gets away from the implementation of TANF, the less research there is tracking the status of leavers. Also, most leaver studies are quantitative and use state-level or local-level data which make it difficult to draw broader conclusions about the nationwide impact of the PRWORA. For example, Wisconsin has achieved a reputation as a leading innovator in welfare reform, beginning with the state's adoption of federal AFDC waivers in the years leading up to the PRWORA. Because Wisconsin's TANF policies are seen to epitomize the 'get tough' approach that welfare reform is modeled after, this state has attracted a disproportionate amount of attention from researchers (e.g. Cancian et al. 2002; Collins and Mayer 2010; Kwon and Meyer 2011; Moore and Arora 2009; Wu, Cancian and Meyer 2008; Ybarra 2011).

With these caveats in mind, most studies assessing the impact of TANF on its participants tend to show that a large proportion of these women have entered the workforce, however tenuously, since its passage. Along with an sharp drop in caseloads across the country following the 1996 welfare reform (see Figure 1) the participation of vast numbers of TANF leavers in the labor force is seen by many as a sign that PRWORA has been largely successful (Cherry 2007; Cherry 2008; Haskins 2012; Mead 2007). Mothers increase their employment significantly in the immediate years after leaving the program, reaching levels around 50 to 88 percent with most studies showing a peak at around 65 percent. However, after this initial spike employment declines and levels out, typically between 50 and 70 percent, yet still higher than pre-PRWORA employment levels (Cherlin et al. 2009; Mueser, Stevens and Troske 2009; Wood, Moore and Rangarajan 2008).

In an analysis of three nationally representative datasets<sup>2</sup> Acs and Loprest (2007) found that between 54 and 64 percent of former recipients were employed just after leaving but later measurements showed declines to between 41 and 60 percent employment. As I discuss below, this initial rise in employment among former TANF recipients was in large part the result of a combination of Earned Income Tax Credit (EITC) increases at both federal and state levels, the favorable economic environment of the late 1990s, and the newly implemented welfare-to-work policies. Furthermore, these averages mask a significant amount of cycling in and out of the labor market (and poverty more broadly) that occurs for a large number of recipients. In Wood et al.'s (2008) five-year study of TANF recipients 88 percent of women in their sample were employed at some point during the study; however, three-quarters of this group had stopped working at least once, with the average unemployment spell lasting eight months. As a result of such erratic employment, cycling between poverty and near-poverty was the norm and time spent out of work was often “fairly lengthy” for these women.

What has been shown in terms of income and poverty among TANF recipients is similarly mixed. While those who were able to find and retain a job that paid above-poverty wages are a small minority throughout the literature, a more typical scenario exhibited by mothers leaving TANF involves significant ups and downs. Many studies find that former recipients find low-paying service sector jobs, see significant increases in earned income for the first year or two and then – for reasons related to caretaking responsibilities, mental or physical disability, or poor labor market conditions – begin a more erratic employment (and thus, earnings) course (Cherlin et al. 2009; Danziger et al. 2002; Johnson and Corcoran 2003; Mueser, Stevens and Troske 2009; Seefeldt 2009; Wu, Cancian and Meyer 2008).

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<sup>2</sup> The Survey of Income and Program Participation, the Current Population Survey, and the National Survey of America's Families

In a six year study of African American and Hispanic women who left TANF by 2005, Cherlin et al. (2009) found that monthly household incomes peaked at around \$1,250 and \$1,600, respectively, but then steadily fell to around \$1,100 and \$1,500, respectively, with both groups showing overall improvement. Although Mexican American women countered this trend and had steadily higher earnings over time, the authors note that these women were more likely than African American and other Hispanic women to be part of households in which other earners were present. Acs and Loprest (2007) and Wood et al. (2008) also found gains in income to decline or become stagnant over the long term, respectively.

Poverty rates among former TANF recipients and those transitioning off cash assistance are variable – but high nonetheless – depending on the given sample. For example, while Wood et al. (2008) found a drop in poverty rates among their sample from 65 to 46 percent, Cancian et al. (2002) found that 69 percent of their respondents were living below the poverty line one year after exiting TANF. Just over half of a sample of Michigan TANF recipients and leavers had below-poverty incomes as well (Danziger et al. 2000). Historically, these results are consistent with findings from the pre-PRWORA years of AFDC (Meyer and Cancian 2000; Pavetti and Acs 2001; Peterson, Song and Jones-DeWeever 2002; Ribar 2005).

Despite overall gains in earned income for many former TANF recipients, poverty rates remain high among the employed and unemployed alike (Livermore et al. 2011; also see Kim (2012) for similar trends among recipients). Even during the strong economic growth of the late 1990s, results from Danziger et al. (2000) show that nearly 37 percent of 1998 leavers who worked in every month for the previous two years fell below the poverty threshold. In a study of mothers exiting TANF in Wisconsin Cancian et al. (2002) found high poverty rates for their overall sample, with 72 percent earning below-poverty income. Notably, even for those who



were employed, their “calculations tend to show that a leaver’s earnings are substantially higher one year later *but declines in benefits outweigh the increases in earnings*” (emphasis added, Cancian et al. 2002: 629). This calls attention to an important dynamic that is often uncovered by a close look at exiting mothers’ socioeconomic condition. Although earned or household income may be higher after leaving TANF, such increases often disqualify individuals from assistance programs like the EITC, subsidized housing and childcare, or other means-tested programs, resulting in a net loss of income (Bollinger, Gonzales and Ziliak 2009; Moffitt and Winder 2005; Romich, Simmelink and Holt 2007).

Because programs like the EITC – allowing low-income individuals a certain amount of tax-free income – work on a sliding scale (i.e. the amount of income that is allowed to be kept tax-free diminishes as more income is earned), there seems to be a delicate balance between earning enough income so as to not be completely dependent on public assistance but not earning too much and thus disqualifying oneself from all assistance. While many leavers stop receiving all or most forms of assistance in exchange for earned income, this earned income-reliant situation can be just as difficult to live on as when they entered TANF (Cancian et al. 2002; Wu et al. 2008). Those going through the process of leaving TANF for work often seem to suffer the least hardship when they have earned income plus cash and in-kind assistance. However, once hours at work increase or they get a raise – usually a happy occasion for employees – it does not take long for these women to realize that the increased earnings risk disqualifying themselves from cash assistance, daycare subsidies, or other crucial safety net programs.

As the findings of poverty and poverty-level income among a significant proportion of TANF leavers would suggest, many mothers continue to rely on some form of public assistance. Many, if not most, of those transitioning out of the TANF program still rely on food stamps,

subsidized housing, childcare vouchers, Medicaid, the EITC, or other forms of government assistance (Cancian et al. 2002; Danziger et al. 2000; Danziger 2010; Litt et al. 2000; Scott et al. 2004; Wood, Moore and Rangarajan 2008). Despite the low take-up rates for many of these programs by the nation's poor and near-poor, this patchwork of state and federal programs has proven to be an indispensable component to the survival strategy of the nation's low-income families (Zedlewski 2012). This is especially true given the fact that many TANF leavers have erratic employment histories or simply have not worked long enough in order to qualify for unemployment insurance. As Wu et al. (2008) observed among a sample of leavers in Wisconsin, "even six years later, relatively few of these women have formal earnings sufficient enough to provide for their families... our finding[s] suggest the need for additional social services that provide a variety of supports" (102).

Many leavers rely on food stamps, housing, childcare, and healthcare assistance, but a significant number of leavers return to TANF itself. While one-quarter of leavers in Cancian et al.'s (2002) sample eventually returned to TANF within the first year, 41 percent did so in Wood et al.'s (2008) study which tracked leavers over a longer period of time; other studies also find return rates within the 20 to 40 percent range (Born, Ovwigho and Cordero 2002; Cheng 2005; Loprest 2002). Even among those working most or all of the time, Danziger et al. (2000) found that about 40 percent returned to TANF at some point during the two-year observation period. Thus, while those who were able to find employment did see increases in their earned income as one would expect, their earnings trajectory was not a smooth ascent into socioeconomic stability, much less upward mobility. Instead, most former recipients spend time above and below the federal poverty threshold, often receiving public assistance during both periods (whether from TANF, SNAP, housing vouchers, or subsidized healthcare; Danziger 2010).

While most of the research evaluating TANF's success has been quantitative and involves state or nationwide samples, there is also a substantial qualitative literature examining similar questions of leavers' socioeconomic well-being in the era of welfare reform. This group of studies largely parallels the findings of the large quantitative leaver studies while providing a more nuanced picture of the complexities and struggles faced by families attempting to transition off TANF. Much like the literature reviewed above, the interviews and observations in this group convey an overall picture of unstable and precarious survival strategies among low-income single mothers in particular. For the vast majority of these respondents, leaving welfare for work did not provide a path to economic stability and self-sufficiency. Those that did find jobs most often worked for very low wages and few, if any, benefits (Collins and Mayer 2010; Fletcher, Winter and Shih 2008; Hays 2003; Litt et al. 2000; Scott et al. 2004).

Employment in the low-skilled and low-paying service sector (e.g. fast food, retail, and health services) is typically the most common industry for TANF leavers. This kind of work proved to be highly incompatible with mothers' caretaking responsibilities, either for their children or other dependent relatives. Inconsistent work schedules and abnormal hours are significant obstacles to mothers' childcare arrangements, while extremely low wages and paltry benefits make such employment all the less rewarding (Hays 2003). Even for women able to find employment, reliance on wages alone is typically not enough; they rely on a support network which usually incorporates some combination of public assistance (including combining work with TANF, State Children's Health Insurance Program benefits, or food stamps) and family help (Seefeldt and Horowski 2012). The situation faced by mothers who leave TANF without work is even more precarious. Some marry or cohabitate with a wage-earner but an increasing number of women are leaving TANF with no stable income source (at least through

formal sources); these women are referred to as being “disconnected” (Loprest 2003; Ovwigho et al. 2011; Seefeldt and Horowski 2012) and are found to be anywhere between 13 and 20 percent of the nation’s poor at any given time (Lein 2012).

However, in-depth interviews with leavers often uncover a more complicated relationship with public assistance and their bureaucracies than comes across in broad statistical analyses. Fletcher et al. (2008) for example, shows that many women need the help of public assistance programs, including re-enrollment in TANF, but are reluctant to do so for a variety of reasons. Even though in-kind assistance has been made available by most states to those transitioning off TANF – usually childcare, healthcare, or housing subsidies for a year or two after exit – women often had contentious relationships with their caseworkers and state welfare offices to the point that “[i]n some cases, families were critical of caseworkers who showed a lack of respect and treated them in a condescending manner. Not surprisingly, some families were willing to forego cash benefits rather than return to a system that treated them poorly” (Fletcher et al. 2008: 129). Similarly, Latimer (2008) found that West Virginia mothers’ biggest grievances against the program included the behavior of caseworkers who were often demeaning and treated recipients “like dirt.”

Regardless of methodology, the research on socioeconomic outcomes among TANF recipients and former recipients is mixed at best. While there is no doubt that the introduction of workfare has resulted in drastic reductions in caseloads across the country and significant employment increases among its target population, there is heated debate about what this actually means for poor single mothers. Is it a good thing that there is now a five year lifetime limit on welfare receipt and that benefits are contingent upon employment in jobs that pay poverty-level wages? Welfare reform advocates like Lawrence Mead, Ron Haskins, and others

consistently point to the higher rates of employment and earned income, the drop in welfare entry, and acceleration of exits. In the words of one of the PRWORA's architects, Ron Haskins:

“It is notable that even during and after the recessions of 2001 and 2007 to 2009, work rates among never-married mothers did not return to their pre-welfare reform level. Although their work rates fell from the 1999 peak (and highest ever) of 66.0 percent to 58.7 percent in 2010, the 2010 level is still about 25.0 percent higher than the pre-welfare reform level of 46.5 percent in 1995” (2012: 6).

Additionally, welfare reform is often credited (along with a surging economy and policies designed to “make work pay”) with reducing overall poverty, long-term dependence on government assistance, and increasing the odds that low-income women will achieve financial self-sufficiency (Mead 1997, 2007; Danziger et al. 2005; Haskins 2006; Cherry 2007, 2008). While no one on either side of the debate over TANF's success denies the enormous caseload declines or the increases in employment and earned income for a significant proportion of former recipients, what is more contested is the amount of credit attributed to the PRWORA, the late-1990s economy, and policies like the EITC. As Corcoran et al. (2000) note, “PRWORA was implemented under nearly ideal conditions” (248).

The combination of large economic growth, a 30-year low in unemployment, rising wages, and expansion of the Earned Income Tax Credit (at both federal and state levels) played a dramatic role in the improved economic prospects for America's working and non-working poor. The exact level of contributions to the socioeconomic outcomes of low-income Americans during the years following welfare reform is debated, but the idea that welfare reform *alone* is responsible for such changes is not supported by the evidence (Acs, Phillips, and Nelson 2005; Albert and King 2001; Herbst 2008; Looney 2005; Noonan, Smith, and Corcoran 2007).

Also, the nation-wide caseload decline was not simply a result of there being fewer eligible families; other factors – state diversion policies, gatekeeping, and other mechanisms of bureaucratic churning – helped keep many families from entering the TANF rolls, an aspect of welfare reform that has received far too little attention in the literature (see Broughton 2010 for an important exception). Partly in response to federal funding mandates and incentives that reward states for reducing caseloads (and punishing those who do not), states began implementing official diversionary tactics to prevent welfare applicants from receiving assistance.

Depending on mothers' level of job-readiness and the state in which she is applying, applicants are either offered a one-time lump-sum payment, required to engage in pre-enrollment job searches, encouraged to contact private charities, or applicants may simply be denied assistance altogether (London 2003; Moffitt et al. 2003; Rosenberg et al. 2008). States also ensure that only the neediest and most persistent get TANF assistance by making the application process a protracted, time-consuming, and hassle-ridden experience (Gonzales, Hudson, and Acker 2007). New York City's diversionary methods were part of a 1998 class action lawsuit filed by disgruntled applicants, where

“[a]ccording to court documents, applicants are commonly misinformed. When they first arrive at a job center, receptionists routinely tell them that there is no more welfare, that this office exists solely to see that they get a job, that if they miss any appointments their application will be denied, that emergency food stamps and cash grants don't exist, that there is a time limit on benefits – without explaining that they can apply for Medicaid or food stamps. Receptionists also tell people who arrive after 9:30am that they must return another day. If they aren't already deterred, applicants are given a five-page preliminary form to fill out. They must return the next day to get an application. They are fingerprinted, undergo several interviews and are then directed to meet with a financial planner and an employment planner... At various stages, applicants are orally denied benefits or told they are not eligible to

apply, but they receive no written notice of denial or their right to appeal the decision” (Houppert 1999: 12-13).

A study tracking individuals who applied for TANF in Oregon but were diverted by state offices found that 46.0 percent had been successfully diverted and were not able to secure TANF assistance within a year after diversion (Gonzales, Hudson, and Acker 2007).

Resulting in part from states’ efforts at diversion and paralleling the overall drop in caseloads, there has been an equally steep decline in take-up rates among the poor (i.e. the percentage of eligible families enrolled in TANF). While AFDC consistently had take-up rates above 80.0 percent in the years leading up to welfare reform, TANF participation has dropped to well below half. The most recent government estimates put participation among eligible families at just above 40.0 percent in 2005, while Trisi and Pavetti (2012) calculate that in 2010 only 27 out of 100 families with children living in poverty were receiving cash assistance through TANF.

As one would expect, poverty levels have risen steadily since the onset of the Recession, with 13.0 percent of Americans falling below the poverty line in 2007, 13.3 percent in 2008, 14.3 percent in 2009, 15.3 percent in 2010, and 15.9 percent in 2011 (American Community Survey 2013). Female-headed households –especially those headed by women of color – have witnessed similar rises, but from already staggering heights. The percent of black and Hispanic female-headed households below the poverty line rose from 36.1 and 38.6 in 2006, respectively, to 38.4 and 40.6 percent by 2011 (ACS 2013).

In addition, the federal block grant structure of TANF has been problematic. The block grant was not designed to rise with the cost of inflation, so the fixed grant value of \$16.6 billion has, in essence, eroded the value of federal funding by nearly 30 percent since the grant’s establishment in 1996. Further, emergency funds disbursed to the states as part of the American

Recovery and Reinvestment Act of 2009 (i.e. the “stimulus”) have expired in September 2010 and were not renewed<sup>3</sup> (Trisi and Pavetti 2012).

## **TANF and Race**

Having discussed these assessments of TANF recipients’ socioeconomic outcomes and material well-being it is also instructive to explore more critical analyses of this program. Race-centered, feminist, and political economic critiques of TANF and the contemporary welfare state are concerned not only with measuring leavers’ employment status or median income but also the broader structure of social policy and how it perpetuates inequalities based on ascribed characteristics like race or gender. Although there are important and unavoidable overlaps between these social groupings – e.g. over 85 percent of TANF recipients are women, with African-American and Hispanic women being overrepresented on caseloads (Falk 2012) – I will address each stream of literature separately.

The relationship between means-tested welfare and race has been evident ever since the creation of the modern American welfare state itself. While the Social Security Act of 1935 created a cash transfer program nominally open to all Americans (Aid to Dependent Children, the precursor to AFDC), in practice, it was largely available only to whites. This and other New Deal work programs were frequently denied to Southern blacks as a way to keep white farm-owners supplied with exploitable labor during planting and harvesting seasons (Gordon 2001; Katznelson 2005; Rose 1993). The administration of ADC by Southern localities was an important component in maintaining whites’ place in the oppressive racial order of Jim Crow.

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<sup>3</sup> While the TANF program was up for Congressional reauthorization in 2012, the original block grant was only extended for six months as part of a September 2012 Continuing Resolution. While TANF funding has been extended for this short time, the program itself must still be debated and reauthorized in order to secure its future ([http://www.clasp.org/issues/in\\_focus?type=temporary\\_assistance](http://www.clasp.org/issues/in_focus?type=temporary_assistance)).



While the North was no paradise for blacks seeking relief, Southern localities used the architecture of federalist government against blacks the most effectively, providing the historical context for black recipients' uneasiness with the revitalization of local authority under the TANF program. Regarding the relationship between race and social assistance programs, Michael K. Brown concludes "[f]ederalism has been one of the chief bulwarks of racial domination in the United States" (2003: 56). Local government tactics like this continued unabated well into the 1960s, when President Johnson's Great Society programs aimed to bypass local authority and disburse federal anti-poverty funds directly to those in need (Quadagno 1994).

And yet, with the passage of the PRWORA and the introduction of TANF, evidence of racist practices in the administration of welfare continues to emerge, despite a lack of research exploring the explicit links between TANF and race (Downing 2011; Savner 2000), which this study seeks to address. Under the PRWORA of 1996, states were given great control over administration of the \$16.6 billion federal block grant. As a result, state- and, in some cases, locally-run agencies are responsible for determining program eligibility, admissions requirements, and benefit levels, but 'on-the-ground' caseworkers are also given the authority to sanction recipients as they see fit. Further, these reforms, which return significant regulatory power back to states and localities, coincide with longstanding practices of favorable treatment toward white women compared to black and Hispanic women enrolled in welfare, the three racial/ethnic groups that account for over 93 percent of the national caseload (Falk 2012).

While federal law mandates that states must punish non-compliant recipients with some form of sanctioning, there has been mounting evidence that race plays a significant role in caseworkers' decisions to sanction recipients (Gooden 1998, 2004; Kalil, Seefeldt and Wang 2002; Keiser, Mueser and Choi 2004; Monnat 2010). For example, using nationally

representative data, Monnat (2010) demonstrates that “black women, net of controls for various participant-, county-, and state-level characteristics, have significantly greater odds of experiencing both case closure sanctions and benefit reduction sanctions compared with white women” (700).

Favorable treatment of white recipients is not limited to sanctioning, as white women often report more positive interactions with caseworkers, more encouragement to pursue higher education<sup>4</sup>, and even higher benefit levels (Bonds 2006; Davis 2004; Gooden 2004; Gooden 1998). In one study of Virginia TANF recipients, 47 percent of white recipients stated that their caseworker was willing to provide help obtaining a driver’s license, a car, or car repairs while none of the black interviewees reported such discretionary treatment (Gooden 1998). The cumulative impact of disproportionate sanctioning, greater time spent on TANF, less chance of leaving for steady employment, and a greater likelihood of cycling back onto TANF means that low-income women of color have a harder time improving their socioeconomic condition compared to their white counterparts via TANF.

These observed disparities between white, black, and Hispanic women in TANF-related outcomes are even better understood when placed in the context of minority women’s relationship to the service sector and carework. While TANF is more likely to be a source of upward mobility for white women, it often works to perpetuate black and Hispanic women’s overrepresentation in the low-paid service sector (fast food, retail, in-home nursing, etc.) and can

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<sup>4</sup> The observed discouragement of black and Hispanic TANF recipients from pursuing higher education – and in some cases the completion of a GED – by caseworkers, despite the encouragement provided to white recipients, is especially notable in light of the tight restrictions placed on education by federal TANF regulations. In the words of Johnson (2010), under welfare reform TANF “essentially revokes... postsecondary options and de-emphasizes skills training” (1042).

even contribute to downward socioeconomic mobility<sup>5</sup> (Banerjee and Ridzi 2008; Collins and Mayer 2010; Collins 2000; Connolly and Marston 2005; Davis 1981; Davis 2004; Johnson and Corcoran 2003). This is achieved not only through the type of discretionary treatment by caseworkers mentioned above but also in recipients' mandated encounters with the local labor market. When enrolling in TANF or exiting the program for work, black and Hispanic women are more likely to encounter discriminatory hiring practices, receive lower wages, and be assigned to less desirable tasks or shifts compared to their white peers ((Bonds 2006; Gooden 2000; Holzer and Stoll 2000; Parisi et al. 2006) and see Kennelly (1999) for a broader analysis of how white managers' perceptions of black female applicants affects labor market outcomes).

In a study of TANF recipients in Milwaukee, Bonds (2006) found that African Americans interviewing for a job were more likely than whites to be offered the least favorable shifts and to be given pre-employment tests, including drug and alcohol screenings. Altogether, such evidence – in addition to the effects of state policies discussed below – provides ample reason to explore the relationships between TANF, race, and socioeconomic outcomes in the current environment of intense recession and joblessness.

### **Feminist Critiques of Welfare**

Regardless of a recipient's race or ethnicity, all women enrolled in TANF – over 73 percent of whom are single mothers (Falk 2012) – share in the task of navigating a welfare program laden with gender-biased contradictions. As such, feminist critiques of TANF are

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<sup>5</sup> For example, a black mother interviewed as part of Davis et al.'s (2003) study of New York City TANF recipients described her experience with the program to be highly counterproductive. Despite the fact that the respondent held a bachelor's degree and had significant work experience in quality white-collar jobs, the local social services department required her to take a job cleaning area parks and ultimately revoked assistance because she refused to take the position. Such stories of over-qualified recipients working in menial jobs (sometimes unpaid) as a requirement of cash assistance are common in the literature and are more likely to involve black and Hispanic women (Gooden 2000; Davis et al. 2003; Davis 2004; Collins and Mayer 2010).

especially instructive in pointing out the fundamental problem hindering women's socioeconomic advancement in the program: recipients are expected to be 'good mothers' and 'good workers' simultaneously, despite the fact that these discursive norms are often at odds with each other (Collins and Mayer 2010; Edin and Lein 1997; Folbre 2008; Hays 2003; Morgen, Acker and Weigt 2010; Orloff 2002; Peterson 2002; Weigt 2006). As Fraser and Gordon (1994) and Gordon (2001) point out, the very notion of a 'self-sufficient' wage earner is based on historically variable norms, most prominent of which being the male breadwinner-headed nuclear family.

The philosophy guiding the PRWORA holds that every family – two-parent or not – should be headed by a self-sufficient wage earner. Thus, single mothers are expected to uphold norms of family economics which are themselves based on middle-class, white, and heteronormative assumptions of family structure; in other words, ideals of the breadwinning husband and the full-time domestic laboring wife are based on a household division of labor which simply did not exist for a large proportion of women, historically speaking. Significant numbers of poor white and minority mothers have been engaged in paid labor outside the home at least since the dawn of the industrial revolution (Davis 1977, 1981; Glenn 2002). This is in addition to the unpaid domestic labor such as childrearing and meal preparation still expected of these women. Ultimately, this speaks to the catch-22 experienced by mothers (again, most of whom are single) enrolled in TANF. Namely, TANF demands that mothers be breadwinners and domestic laborers simultaneously while prioritizing the former over the latter. This sends the message to poor mothers that social reproductive labor performed in the home – while utterly necessary – does not pay a wage and is therefore inferior (Brush 1999; Mies 1986).

Of course, another option stressed by the PRWORA is for recipients to marry or cohabitate with another wage earner. The strengthening of marriage and two-parent families is one of the central tenets of welfare reform and states are incentivized with federal dollars to reduce non-marital births and raise the number of two-parent households. Not only does this aspect of TANF follow in the tradition of poor relief programs regulating the family life and sexual behavior of low-income women<sup>6</sup>, but it also raises the possibility of women having to rely on a male partner for economic reasons (Christopher 2004). In the words of Sharon Hays, “[under TANF], marriage is pictured as little more than an economic transaction, and one where women are necessarily economic dependents... the burden of creating new nuclear families is placed squarely on the shoulders of individual women” (2003: 86).

Many TANF recipients report being compelled to enroll in the program because working full- or even part-time and raising children becomes simply too much to handle (Hays 2003; Collins and Mayer 2010; Morgen et al. 2010). However, these women, hoping that TANF will be a place of respite from the difficulties of low-paid service labor and carework, often find no such relief. Instead, what they find is what Peck (2001) refers to as a type of “boundary institution:” a space where the bottom end of the labor market and poor relief programs intersect so as to mediate the flow of workers into and out of certain types of jobs, which in the case of TANF involves poorly-compensated service work<sup>7</sup>. As others have shown, one of TANF’s structural goals is to reinforce work among the program’s target population (Piven and Cloward

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<sup>6</sup> For example, AFDC administrators’ use of “man-in-the-house” rules well into the 1960s throughout much of the country and current “child cap” rules in many states under TANF (see Piven and Cloward 1971, Rose 1993, and Neubeck and Cazenave 2001 for further discussion of the ways in which the moral ‘deservingness’ of AFDC applicants has been scrutinized and enforced, especially for racial and ethnic minorities).

<sup>7</sup> For further reading on the ways safety net programs for the poor help reinforce low-paying, undesirable sectors of the labor market, see Piven and Cloward (1971), Peck and Theodore (2000), Peck and Tickell (2002), and Wacquant (2010).

1993; Soss, Fording and Schram 2011), evidenced by the program's blurring of the line between cash assistance and wage labor.

As opposed to the solely means-tested AFDC program, TANF makes cash assistance contingent upon entry into the work force; so the question then becomes what kinds of jobs are recipients being compelled to engage in? Given the education and skill-sets of most recipients, the answer is jobs predominantly characterized by "...low wages ... irregular schedules and inflexibility" (Weigt 2006: 338). As a result, many of the TANF critiques which pivot around women's structural position within the welfare state – and the welfare state's relationship with the broader economy – are supported by much of the "leaver literature" reviewed above, which find that "the inspiring image of the welfare poor being moved into jobs that carry them out of poverty and toward self-sufficiency has borne little resemblance to what welfare program leavers actually experience" (Soss, Fording, and Schram 2011: 17).

The strain involved in balancing childcare and wage-earning often results in women dropping out of the program or being sanctioned for prioritizing parenting at the expense of work activity mandates, exacerbating the trend of cycling between welfare and work, or "bureaucratic churning" within this boundary institution (Broughton 2010; Kissane 2008). As noted above, Wood et al. (2008) demonstrate that statistics showing many TANF leavers' high employment and relatively high earned income at any given point in time typically mask a longitudinal dynamic of unstable engagement with the labor market, a trend which has negative impacts on the earnings trajectories of leavers over the long term.

The presence of young children is also a strong predictor of returning to TANF. Aside from other so-called 'barriers to employment' such as low educational attainment and physical or mental disability, caring for young children has proven to be a significant factor contributing to

TANF returns for upwards of 40 percent of former recipients (Born, Ovwigho and Cordero 2002; Wood, Moore and Rangarajan 2008). Because this cycling is often due to difficulties balancing employment with caregiving, women with young children are less likely to experience improved socioeconomic outcomes as a result of participation in TANF. Ultimately, socioeconomic advancement – or even stability – is difficult to obtain from a safety net program that systematically blocks access to postsecondary education (and in some cases, even the completion of a GED) (Davis et al. 2003; Gooden 1998; Mazzeo, Rab and Eachus 2003), mandates the acceptance of any job offer, regardless of a credential or skills mismatch (Hays 2003), and reinforces women’s participation in gender-segregated occupations – e.g. clerical work, food service, hotel housekeeping, etc. (Negrey et al. 2003; Christopher 2004; Gonzales et al. 2007; Collins and Mayer 2010; Underwood et al. 2010).

### **State-Level Policy Context & Race**

While most social science evaluations of TANF and its recipients are based on individualistic models of human or social capital, and while the race-centered and feminist critiques seek to move beyond such models by situating the unit of analysis within broader power structures, the last component to this study adds yet another layer of context to the study of TANF recipients’ socioeconomic condition. Namely, states’ policy choices have proven to be influential in determining one’s level of success after enrolling in TANF. This area of research is replete with models exploring the correlation between a states’ racial composition and its adoption of strict or lenient policies, but not enough attention has been given to the socioeconomic implications of such policy environments for those enrolled in the program (Allard 2006). However, the small amount of research explicitly addressing these issues does

show significant links between a state's policy choices and recipients' socioeconomic outcomes (Cheng 2007; Irving 2008; Lim, Coulton and Lalich 2009).

Thus, race continues to play an important role beyond caseworkers' treatment of individual women or discrimination in the labor market. As a result of welfare reform states were granted nearly complete autonomy in the implementation of TANF, including authority over who qualifies for assistance, benefit levels, work requirements, and a variety of other aspects, as long as they stay within broad federal guidelines (for example, even though the federal time limit on TANF receipt is five years, states are able to shorten this time limit on federally-funded assistance but not extend it). Much scholarly attention has since focused on what motivates state legislatures to adopt certain rules over others. Why, for example, did Virginia adopt a family cap<sup>8</sup> on benefits when Alabama did not? Or, why did Mississippi adopt permanent sanctions while Oklahoma removes a sanction as soon as recipients come back into compliance (Urban Institute 2012)? Exploring the role of race helps answer these questions.

The higher a state's black (and in some cases Hispanic) proportion of its welfare caseload, the more likely it is to have lower benefit levels (Fellowes and Rowe 2004; Johnson 2003; Orr 1976; Wright 1977), a family cap (Soss, Fording and Schram 2008), fewer exemptions from work activity requirements (Fellowes and Rowe 2004), and time limits shorter than the federal 60-month threshold (Brock 2009; Soss, Fording and Schram 2008; Soss et al. 2001). Other factors like Republican Party control over a state's legislature and high out-of-wedlock birth rates have also been shown to influence policy choices, and yet, after controlling for relevant variables the significance of race holds. For example, when examining time limits and family cap rules, Soss et al. concluded that "state adoption was unrelated to any factor other than

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<sup>8</sup> The "family cap" rule places a limit on additional cash assistance for each child born after the parent enrolls in TANF. In other words, states with no such cap raise the monthly cash grant amount if recipients have new children.



racial composition (including objective indicators of... allegedly problematic behaviors),” finding “significant effects associated with both the percentage of black recipients and the percentage of Latino recipients” (2001: 390).

Because not all states go down the path of TANF stringency, scholars have come up with various ways of categorizing states based on their policy choices. Such typologies are organized around broad aspects of TANF policy (e.g. work requirements, sanctioning, eligibility, etc.) which are in turn based on a multitude of specific rules and regulations, resulting in a state being ‘strict’ on eligibility requirements or ‘lenient’ on time limits, and so on. For example, Fellowes and Rowe (2004) classify state TANF regimes according to their “generosity” using eligibility and work requirements as their two categories of analysis, which are then based on twenty-eight and twelve individual policy choices, respectively. Joe Soss and his colleagues (2011), in their extensive work on state TANF policy contexts, have gone further in characterizing strict states (and welfare reform more broadly) as engaging in “neoliberal paternalism” as a form of poverty governance. While this demonstrates the complications inherent in any attempt at broad generalizations of a state’s TANF policies (see, for example, Howard 1999; McKernan et al. 2005; and De Jong et al. 2006) there is, nonetheless, general agreement on what it takes for a state to earn the label ‘strict’ or ‘lenient.’

What does this mean for recipients ‘on the ground?’ What does it matter to a low-income woman in need of assistance that the state she happens to live in has been classified as harsh or lenient by policy analysts? These questions have only begun to be addressed in the literature but important trends have already been reported. The relationship between TANF policies – particularly time limits, income incentives<sup>9</sup>, and work requirements – and employment outcomes

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<sup>9</sup> These are also referred to as earned income disregards. In other words, many states allow TANF recipients who are employed to keep their earned income and remain on assistance, even if their new

has garnered the most attention from researchers so far. Generally, while stricter time limits and work requirements are positively associated with an increase in the number of recipients exiting from TANF for employment, there are reasons to suspect that the quality of jobs being filled by these leavers is poor. Lim et al. (2009), for example, used longitudinal data from the immediate years following reform and found that recipients living in states with strict work requirements were more likely to leave TANF with a job compared to those living in more lenient states; however, strict work requirements were also negatively associated with the likelihood of recipients finding jobs with employer-provided health insurance. Income incentives were also shown to be positively correlated with employed leavers' hourly wages.

Similarly, in a pair of studies by Cheng (2007, 2010) following recipients during the economic boom years of the late 1990s, and using a broader measure of TANF strictness (i.e. in addition to work requirements, he included time limits and family cap rules), restrictive policies increase the likelihood of exiting the program for employment below the poverty level. In other words, "...for each additional restrictive policy an unemployed TANF mother is subject to, her chance of becoming employed below poverty level increases significantly, by 52 percent" (217). Notably, this effect was intensified as state unemployment levels rose.

Other important components which mediate the relationship between state policy and employment outcomes among leavers are region and urbanicity. Strict time limits (i.e. forcing recipients out of the program quicker than the five year limit on federal funds) tend to promote exits from TANF without employment for rural southerners, while such limits promote exits with employment for Rustbelt urbanites. Also, income incentive rules (which allow recipients to keep more earned income while on assistance) are correlated with increases in TANF spells for

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income level places them above the TANF eligibility threshold. This lets many recipients combine work with welfare for longer, easing the transition from assistance to sole reliance on earned income from a job.

southerners in poor rural areas, but for those in Rustbelt metropolitan areas these incentives are correlated with increased exits for employment (Irving 2008).

### **Chapter 3: Research Questions and Model**

The research questions put forth in this study are: 1) what can a comparison of socioeconomic outcomes between mothers who did and did not receive TANF tell us about the effects of work-first welfare assistance during the Great Recession of 2008? In other words, during a time of increased material hardship and economic insecurity, was TANF a positive, negative, or neutral force on the socioeconomic condition of families needing material assistance? 2) How important is race/ethnicity in predicting such outcomes? and 3) How much of the variation in socioeconomic outcomes among black, white, and Hispanic mothers is attributable to state-level policy contexts during this period (2005-2011)? Below I discuss how prior research influenced the formulation of these research questions.

The literatures discussed above have examined many important features of TANF and the program's impact on mothers. Because of the extensive amount of research carried out on mothers exiting TANF, for example, we know that evaluating TANF's performance is a highly complex task, producing equally complex results. While more low-income women are engaged in the labor force as a result of welfare reform, the type and quality of jobs being filled by TANF leavers, more often than not, fail to ensure financial stability for them or their children (Hennessy 2005; Medley et al. 2005; Slack et al. 2007; Wu and Eamon 2010a). These studies have also pointed out important dynamics such as the high frequency of leavers who cycle on and off the caseloads and who continue to rely on various forms of government assistance despite post-TANF employment (Wood et al. 2008). Finally, while the human capital-based approach to predicting socioeconomic success among leavers may be overly individualistic and leaves much to be desired in terms of situating TANF recipients within a broader context of structural relations, this area of research has shown us that educational attainment (Butler, Deprez and

Smith 2004; Connolly and Marston 2005), skill set maintenance (Kim 2012; Noonan and Heflin 2005), and other individual-level attributes do matter. Those with a high school diploma, for example, have significantly higher annual incomes under TANF than those without a diploma (Connolly and Marston 2005).

However, having assessed this particular literature the omission of race becomes apparent. Aside from a handful of studies showing that black and Hispanic mothers exiting TANF are more likely to return to the program than whites (Born et al. 2002; Loprest 2002; Wood et al. 2008), the specific focus on disparate outcomes between white, black, and Hispanic women has been largely absent from the social science literature on TANF (although see Cheng 2010 and Cherlin et al. 2009 for exceptions). I will address this gap in the literature by advancing research questions and hypotheses specifically concerned with how women of different races fare in terms of socioeconomic measures under the TANF system.

For this study, the terms socioeconomic ‘outcomes’ and ‘condition’ are used in reference to factors such as employment, income, wages, and health insurance coverage, which greatly affect individuals’ (and their families’) material well-being. In addition to the immediate necessities of life, however, the socioeconomic outcomes listed above imply – at least in the American context – that people can provide “the goods and services that are necessary to afford adequate and stable housing, find and hold a job (if physically able), participate as a citizen in the community, keep oneself and one’s family reasonably healthy, and provide the things that one’s children need to participate effectively in school” (Blank 2008: 234).

This is especially necessary in light of the voluminous evidence showing unequal rates of sanctioning, other disparities in caseworker treatment, and labor market discrimination faced by minority women. The race-centered literature has been valuable in directing attention toward

these experiences and placing them within a broader context; namely, the ways in which social welfare programs – particularly ADC, AFDC, and now TANF – have tended to contribute in one way or another to the marginalization of racial and ethnic minorities. And yet, there are still areas of the relationship between race and TANF that have not been explored. Again, as a way of bridging the two literatures, my study will use longitudinal data to examine 2009 and 2011 socioeconomic outcomes among black, Hispanic, and white women participating in TANF. Furthermore, the second component of the study’s model – comparing outcomes among these groups of women in different state policy environments – will also contribute to the literature by linking questions of state-level policy strictness with questions of racial and ethnic inequality.

After reviewing the two strands of state TANF policy research – studies exploring links between a state caseload’s racial composition and policy choices, and studies testing for policies’ influence on employment and earnings – one can make some logical inferences. If low-income black and Hispanic mothers in need of assistance are more likely to encounter a strict TANF policy regime compared to their white counterparts and if, as has been shown, stricter TANF policies increase the likelihood of exiting with a poverty-level job, then it is worth exploring how low-income minority women living in different state policy environments fared, socioeconomically speaking, after the Great Recession.

I propose to bring these two areas together through a research model and hypothesis that specifically asks how racial group membership affects employment, income, and other relevant outcome variables in strict states. This focus on strict (and not lenient) states is motivated by the evidence showing black and Hispanic women to be more likely to live in states with strict TANF policies (Soss et al. 2001; Fellowes and Rowe 2004; Soss, Fording, and Schram 2011). This context will be measured using a typology borrowed from Soss, Fording, and Schram (2011) and

is described in further detail below. Federal policy changes since 1996<sup>10</sup> have attracted the most scholarly attention – and with good reason – but variations at the state level are equally as deserving.

Further, the time period covered by this study – the Great Recession of 2008 – will be especially revealing of TANF’s ability to provide the much needed assistance to those in need. As I discussed above, the Great Recession is the event that many policy analysts feared because TANF’s safety net capabilities had yet to be fully tested up until the subprime mortgage-induced financial crisis. Finally, given the changes to welfare in the wake of the PRWORA it can legitimately be asked, is welfare even worth it? With extremely low benefit levels across the country<sup>11</sup>, a near-prohibition on the pursuit of further education for recipients (Johnson 2010; London 2005; London 2006; Mazzeo, Rab and Eachus 2003), diversionary tactics by state agencies (Gonzales, Hudson and Acker 2007; London 2003; Rosenberg et al. 2008), and an increased ‘hassle factor’<sup>12</sup> (Ybarra 2011), are low-income mothers genuinely better off, socioeconomically speaking, for having enrolled in the program compared to similarly situated women who did not enroll (also referred to as “non-entrants”(Moffitt et al. 2003))? This is the main motivation for using a comparison of TANF entrants with non-entrants.

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<sup>10</sup> Even before 1996 (since the Reagan administration), states have been allowed to experiment with work-based ‘waivers’ to the Social Security Act’s rules governing the administration of AFDC. Thus, the PRWORA was more the result of a steady transition in the direction of work-based welfare and not a sudden, unexpected ‘big bang’ of policy change. By 1996, 43 states had been granted some form of PRWORA-style waiver by the federal government (Handler and Hasenfeld 2007).

<sup>11</sup> TANF benefit levels are below one-half the poverty level in every state and the District of Columbia. For example, in 2011 the national median benefit amount for a family of three was \$428 per month – or \$5,136 per year (Center on Budget and Policy Priorities 2012). This highlights the importance of in-kind safety net programs like subsidized housing or the SCHIP for poor families’ material well-being.

<sup>12</sup> Examples of the increased hassle faced by applicants in the current post-reform period include signing personal responsibility contracts, proving paternity for children, providing children’s immunization and other health records, engaging in pre-enrollment job searches, and up to a 45-day waiting period in some states (Hays 2003; Ybarra 2011).

Based on trends from the literature and the research questions outlined above, I will test the following hypotheses:

### **Hypotheses**

*H1(a)*: TANF-eligible mothers who enrolled in TANF after 2005 will differ in their post-Great Recession socioeconomic condition (SEC) compared to TANF-eligible mothers who did not enroll in TANF after 2005.

*H1(b)*: White mothers who enrolled in TANF after 2005 will emerge with a higher post-Great Recession SEC than black and Hispanic mothers who enrolled in TANF after 2005.

*H1(c)*: White TANF-eligible mothers who did not enroll in TANF after 2005 will emerge with a higher post-Great Recession SEC than black and Hispanic TANF-eligible mothers who did not enroll in TANF after 2005.

*H2(a)*: Mothers who enrolled in TANF after 2005 in states with stricter TANF policies will have a lower post-Great Recession SEC than those living in states with relatively lenient TANF rules.

*H2(b)*: Black and Hispanic mothers who received TANF in states with strict policies will have a lower post-Great Recession SEC than white mothers in these states.



## Chapter 4: Methods

### Data and Sample

The data for this project come from the National Longitudinal Survey of Youth 1997 Cohort (NLSY-97), a survey commissioned by the U.S. Department of Labor's Bureau of Labor Statistics. The NLSY-97 is nationally representative of youth born between the years 1980-1984 and is designed to gather in-depth information on the transition from adolescence to adulthood. Topic areas covered in the NLSY-97 include educational experiences, labor market behavior, family background and formation, health issues, assets and income, and government program participation, among others. The survey consists of two independent probability samples: a cross-sectional sample and a supplementary oversample of black and Hispanic youth. This second sample was chosen in order to assure sufficient statistical representation of black and Hispanic adolescents (U.S. Department of Labor 2003).

The sampling procedure for both subsamples began with the selection of 147 primary sampling units<sup>13</sup> (PSUs), using stratified multistage area probability sampling. From these PSUs, 1,748 sample segments were yielded and a subset of 96,512 households were then chosen from these segments to provide the initial housing units to be screened for inclusion into both the cross-sectional sample and supplementary oversample. After the household screening process,

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<sup>13</sup> These primary sampling units were chosen from the National Opinion Research Center's (NORC) 1990 national sample. The exact composition of each PSU is proprietary information of the NORC and not available to the general public. Although I was able to apply for and be granted access to the BLS restricted geocoded data set – which identifies respondents' state, core-based statistical area, and county of residence – the information regarding exact PSU composition was not available (per correspondence with The Ohio State University's Center for Human Resource Research, the organization charged with designing and overseeing the NLSY-97). Official NLSY-97 sampling procedure documentation defines the cross-sectional PSUs as “represent[ing] either a metropolitan area or one or more non-metropolitan counties with a minimum of 2,000 housing units” (U.S. Department of Labor 2003). However, in an effort to help generate more eligible black and Hispanic participants, the supplementary sample defined PSUs as counties or combinations of two or more counties containing large numbers of minorities and which have a minimum of 2,000 households.

9,907 members of selected households were deemed eligible for participation in the survey. Ultimately 8,984 youths participated in the first round of interviews carried out in 1997, a response rate of 90.1 percent. As of the thirteenth round of survey interviews in 2009 sample attrition remained low – 7,561 of the original 8,984 first round participants were still actively participating (84.2 percent). Nonparticipation bias was dealt with using weights for cross-sectional/oversample, race/ethnicity, age, and sex<sup>14</sup> (Moore et al. 2000).

Interviews were carried out in person, when possible, using a computer-assisted personal interview (CAPI) method. Answers to questions involving sensitive topics (e.g. substance use, sexual behavior, etc.) were entered into the laptop computer directly by respondents. When respondents were not available to be interviewed in person they were contacted by telephone; the percent of those interviewed by telephone in any round has never exceeded fifteen. Also, when possible, the respondent’s parent or guardian was asked to participate and provide relevant background information for the youth (U.S. Department of Labor 2003)<sup>15</sup>.

Participants in the NLSY-97 are nationally representative of the United States’ civilian noninstitutionalized population born 1980-1984. By the fourteenth round of interviewing (2010-2011), respondents ranged in age from 25 to 31. In the initial survey round, the sample consisted of 4,385 (49 percent) females and 4,599 (51 percent) males. The racial composition included 5,232 white (58.2 percent), 2,388 black or African American (26.6 percent), 1,063 “other” (11.8 percent), 160 Asian/Pacific Islander (1.8 percent), and 61 American Indian/Eskimo/Aleut youths (0.7 percent).

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<sup>14</sup> The NLSY-97 technical sampling report points out that there is “no evidence of large substantive bias in the NLSY-97 samples,” however, there is evidence “of a modest downward shift in the location of the family income distribution” (Moore et al. 2000: 96).

<sup>15</sup> Both youths and parents who participated in the NLSY-97 were paid \$10 to \$20, depending on the survey round. Later rounds also presented participants with the option of receiving a gift card or other in-kind reward (in addition to the regular cash payment) to incentivize participation (U.S. Department of Labor 2003).

The unit of analysis for this project will be individual TANF-eligible mothers in the United States. TANF-eligibility is defined as including women with at least one child in 2005 and whose ratio of household income to the federal poverty threshold was 1.85 or lower. The ratio value of 1.85 (i.e., having an income at 185 percent of the poverty threshold) was used as the cutoff point for inclusion into the current study because it is the highest level at which some states still considered TANF applicants to be eligible (Urban Institute 2013). While each state has unique eligibility standards (income being just one among many types of eligibility criteria), no state allowed applicants with incomes above 185 percent of the federal poverty threshold, or a similar needs standard, to be considered for enrollment as of 2005.

The use of mothers' participation in the Supplemental Nutrition Assistance Program (SNAP, more commonly known as food stamps) as a proxy measure of TANF eligibility or material need is not used in the current study because using this threshold would result in the loss of some eligible mothers for inclusion into the sample. The income threshold used by the U.S. Department of Agriculture for SNAP is currently set at 130 percent of the federally-defined poverty threshold while, as noted above, many states allow families to enter TANF with incomes up to 185 percent of the poverty threshold. While gross income is not the only eligibility criterion used by either SNAP or TANF, it is the most commonly used measure of material need among different federal and state agencies (Urban Institute 2013).

Among mothers included into the final sample ( $N = 737$ ), 78.2 percent reported SNAP usage at some point between 2005 and September 2009. This percentage varies considerably, however, when looking specifically at TANF recipients. Nearly every mother who received TANF (97.2 percent) drew upon SNAP benefits to address food insecurity. By comparison, just

68.5 percent of mothers who did *not* report receiving TANF at any time during the study period enrolled in SNAP.

Individual heads of household will be used instead of households for three reasons. First, the NLSY-97 provides a much richer set of socioeconomic measures about the individual respondent when compared to household measures. This allows for a more comprehensive analysis of income, wages, employment status and history, poverty status, and program participation, among other variables, many of which are not available at the household level. Second, this choice is in agreement with the vast majority of literature on TANF participants, especially the leaver studies, which focus on individual level recipient outcomes as a way to evaluate the success of TANF.

Third, the central analytic goal of this study is to examine the socioeconomic outcomes of low-income mothers who, when enrolled in TANF, are participating in a system designed to improve individual human capital (i.e. state workfare programs are designed to impart experience in the workplace, practical skill-sets, and in cases where recipients have not completed high school it allows some to study towards the completion of a GED). Thus, while complementary analyses of household measures will be included in the project, the main focus is on individual recipients. Also, while men make up a large percentage of those in poverty overall, in 2009 only about fourteen percent of TANF recipients are men (most recent federal government statistics available, Department of Health and Human Services 2012) and they have historically been a small minority among welfare recipients (Quadagno 1994). Therefore, men will be excluded from the analyses altogether.

The study population is intended to be representative of low-income, TANF eligible black, Hispanic, and white mothers living in the U.S. from 2005-2011. In order to determine

TANF eligibility for those who did not enroll during the study period I will rely on the U.S. Census Bureau's poverty threshold definitions<sup>16</sup> (U.S. Census Bureau 2012). Each year the Census Bureau updates an income cutoff level, below which a household is officially defined as being in poverty according to the federal government<sup>17</sup>. Although each state is responsible for determining TANF eligibility and the official Census poverty thresholds are generally not used by the states, the Census measure nonetheless provides the closest and most feasible approximation for determining an individual's poverty status regardless of their state of residence. Use of the Census threshold may even be an overestimation of poverty status compared with some states' definitions (Schott and Finch 2010). Finally, while there is a significant amount of literature demonstrating the inadequacies and problematic nature of the federal poverty threshold it is nonetheless a standard measure used and referenced across the literature as well as the NLSY-97 (for important critiques of federal poverty calculations see Renwick and Bergmann 1993; Iceland and Bauman 2007; Blank 2008).

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<sup>16</sup> The federal government recognizes two separate indicators of poverty: the federal poverty threshold and the federal poverty guidelines (the latter is often referred to as the federal poverty "level" or "line"). However, the two are used for different purposes. The threshold is used mainly by the Census Bureau in calculating and reporting its poverty statistics while the guidelines are used only for federal administrative purposes (e.g. determining program eligibility). The current study uses the threshold for two reasons. First, the NLSY-97 uses this particular measure in its derivation of poverty-related variables and second, the guidelines are derived from – and a simplification of – the thresholds (U.S. Census Bureau 2012). Also, while many states use the guidelines as part of their own calculations of eligibility determination, there is significant variation regarding what percentile an applicant's income must meet relative to the federal poverty level (e.g. while Connecticut's eligibility test requires an applicant's gross income to be below 100 percent of the federal poverty level, Florida's eligibility test requires an applicant's gross income to be below 185%; Urban Institute 2012). The federal poverty threshold is also a uniform statistic, irrespective of state or metropolitan area, making it the more feasible measure for this study.

<sup>17</sup> The income threshold is different depending on the number of adults and children present in the household. For example, in 2011 a husband and wife living together needed an income of more than \$14,657 to be above the poverty threshold, while that same couple with two children in the household would need \$23,021 to be above the poverty threshold. Income amounts used by the U.S. Census Bureau are calculated using an index adopted by a 1969 Federal Interagency Committee which are also updated annually to reflect changes in the Consumer Price Index (Current Population Survey Annual Social and Economic Supplement 2012).

In order to compare socioeconomic outcomes among black, white, and Hispanic mothers by state policy context I will be using a rating system that places states along a five-point scale of disciplinarity or, in the words of Soss, Fording, and Schram, “stringency of TANF paternalism” (2011: 135). While Joe Soss, Richard C. Fording, and Sanford F. Schram developed this particular typology, the types of policies that were used to determine the level of stringency and leniency among states were themselves taken from earlier works. Of the five types of policies used for this scale, three – lifetime benefit limits, the “family cap” rule, and use of a full-family sanction – are taken from Soss et al. (2001) and the other two –work requirement rigidity and eligibility strictness – from Fellowes and Rowe (2004).

Slight modifications were made by Soss, Fording and Schram (2011). Also, because the latest data presented by Soss, Fording, and Schram (2011) relies on state typology score data from 2001, I have updated the calculations involving state policy choices (replicating, to the extent possible, the process carried out in Soss, Fording, and Schram (2011)) in order to provide the current study with new TANF typology scores for the years 2009 and 2011, the years used in the following analyses as comparison points for socioeconomic outcome variables.

The scale “awards one point each for adoptions of a family cap, time limits shorter than the federal requirement, full-family sanctions, a work requirement rigidity score higher than the median, and an eligibility restriction score higher than the median” (Soss, Fording, and Schram 2011: 134). State legislatures’ decisions to adopt or reject certain policies – decisions which are liable to change in any given year – are tracked by the Urban Institute’s Welfare Rules Database. This is a publically-available database that provides up-to-date information on 30 different types of TANF policy for all 50 states and the District of Columbia.

In addition to data from the NLSY-97 and the Welfare Rules Database, this study also utilizes unemployment statistics from the Bureau of Labor Statistics' (BLS) Local Area Unemployment Statistics database as well as income data from the U.S. Census Bureau's Small Area Income and Poverty Estimates database (which in turn is based on the Census Bureau's annual American Community Survey). Using these data, two county-level measures – unemployment percentage and median household income – were used to control for the economic context in which sample mothers were living and working.

### **Analytic Strategy**

In this section I will outline the type of statistical analyses carried out in the current study as well as introduce and provide a descriptive analysis of the dependent, independent, and control variables. This study's primary concern is gauging the relative importance of TANF enrollment, race and ethnicity, and state TANF policy when accounting for variations in socioeconomic outcomes among low-income mothers and their families. In order to test the hypotheses listed above, both linear and logistic multiple regression modelling will be performed using SAS v.9.3 statistical software package. To estimate the effects of TANF enrollment, race and ethnicity, and state policies on the continuous dependent variables –individual income, household income, ratio of household income to the federal poverty threshold, wages, and hours worked – linear multiple regression will be used. To model the effects of these independent variables on the categorical outcomes – job income receipt, number of jobs held, health care coverage, and whether or not health care covers their children – binary and ordered logistic regression will be used. There are two outcome variables which measure household-level

characteristics (family income and the ratio of household income-to-poverty threshold<sup>18</sup>) while the other seven outcome variables are individual-level measurements. In the following analyses SAS utilizes the ordinary least squares (OLS) method for linear regression models and maximum likelihood estimation (MLE) for logistic models.

In order to take advantage of the longitudinal nature of the NLSY-97 survey data, I chose to carry out analyses on socioeconomic outcomes for two separate years, 2009 and 2011. This will provide the added dimension of measuring effects of the independent variables over time as opposed to a cross-sectional approach. Although the Great Recession was technically declared to be over in June of 2009 by the National Bureau of Economic Research, many Americans continue to feel the effects of one of the slowest economic recoveries on record. The nation's macroeconomic indicators may have eased beginning in 2009 but unemployment levels remain strikingly high, especially for African Americans, whose 13.1 percent unemployment is still over 4.0 percent higher than its pre-recession level, as of October 2013.

Of the 11.3 million people looking for work 4.1 million (over 36.0 percent) are members of the long-term unemployed<sup>19</sup>, the highest percentage in sixty years (Stone 2013). The motivations behind the 1996 federal welfare reform were not to alleviate poverty, per se, but rather to move recipients off the rolls quickly and into the labor force (Katz 2012). Thus, it is necessary to measure mothers' socioeconomic outcomes not just at the moment gross domestic product returned to positive growth, but also further out as these women continue coping with a historically anemic labor market, gauging TANF's influence at both points.

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<sup>18</sup> Although this variable was titled "household income-to-poverty threshold" by the NLSY-97, it was derived by asking respondents about the amount of *family* income present and comparing this to the federal poverty threshold, *taking household size into account*. Thus, while the NLSY-97 appears to conflate the terms "family" and "household," in practice, they are both in reference to (biological or non-biological) family attributes.

<sup>19</sup> Long-term unemployment is generally defined as being unemployed and actively looking for work for at least 27 consecutive weeks.



While some in the literature have used time series, discrete-time hazard, or event history modeling as techniques for examining dynamic trends in socioeconomic outcomes among women who have received TANF (e.g. Cheng 2008; Wood et al. 2008), my research questions are concerned primarily with outcomes – and not the dynamics of variables between baseline and later periods – making the more commonly used multiple and logistic regressions the appropriate techniques. Further, the variables used in this study are annual measures over a relatively short span which do not lend themselves to the other longitudinal techniques mentioned above, which often require more data points over time (i.e. variables measured at, say, monthly or weekly intervals).

Interaction effects will not be explored in testing my hypotheses for two reasons. First, effective sample sizes were, at times, too small to produce reliable parameter estimates given the number of control variables needed. Because SAS uses listwise deletion when carrying out its regression procedures, the number of respondents with valid data on all variables in the respective models fluctuated. Overloading a regression model with too many predictor variables, relative to the number of observations, results in an increase of the standard error which, in turn, leads to inefficient parameter estimates. As Berry and Feldman (1985) note, it is possible for an OLS model with few cases to produce unbiased estimators, but we still run into problems when these estimators' sampling distributions have large variances (i.e. they are inefficient). When this happens the parameter estimates produced by the regression model will not be particularly trustworthy.

Second, because of gaps in the state policy literature discussed earlier, the interactions most in need of exploration for this particular project are those between race/ethnicity, strict TANF policy environments, and region of the country. Historically, state and federal welfare

assistance has been used, in part, by whites as a mechanism to support regional social and economic hierarchies based on racial and ethnic group membership. Black mothers in the south and Hispanic mothers in the southwest in need of assistance were often confronted by welfare systems (ADC and its successor AFDC) designed, in part, to serve local labor markets and divert funds away from minority families (Glenn 2002; Katznelson 2005; Piven and Cloward 1993).

However, subsequent quantitative research on state TANF policies has not accounted for the interaction between region, race, and TANF policy; regression analysis has been a heavily used technique in this area of research but interaction terms are generally not included in estimation models. While it would have been desirable to include interaction terms for black and Hispanic women living in the south and west<sup>20</sup>, respectively, or terms for strict TANF states and region, this was not possible nor completely necessary given the regional distribution of low-income NLSY-97 respondents, particularly those living in states with strict TANF policies.

As Table 4 shows, nearly half of black women in the sample (48.2 percent) who received TANF at some point between the years 2005-2009 lived in the South<sup>21</sup> while over half of Hispanic women (56.5 percent) lived in the West<sup>22</sup>. Further, Table 6 shows that *among women of color who received TANF in 'somewhat strict' or 'strict' states* – a key intersection unexamined in the literature – 87.0 percent of black women (47 out of 54) were located in the South while none of the Hispanic women enrolled in strict programs were in the West (all were in the South). This is not surprising given that 10 of the 16 states with either somewhat strict or

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<sup>20</sup> The U.S. Census does not recognize the Southwest as a regional designation. The four regions identified by the Census Bureau – and also used by the NLSY-97 – are 'Northeast,' 'Midwest,' 'South,' and 'West.'

<sup>21</sup> The south region (per the U.S. Census Bureau and the NLSY-97) is comprised of Alabama, Arkansas, Delaware, the District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

<sup>22</sup> The west region is comprised of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

strict TANF typology scores (62.5 percent) were located in the South. In fact, every year between 2005 and 2011 saw the South account for at least 60.0 percent of somewhat strict or strict states<sup>23</sup>. Thus, both the linear and logistic regression models used to evaluate *H2(b)* (examining socioeconomic outcomes among black, white, and Hispanic women living in strict TANF policy environments) are reduced to include just one independent variable indicating whether respondents are non-Hispanic white, non-Hispanic black, or Hispanic.

[Table 4 about here]

[Table 6 about here]

Below, I discuss constructing the multiple regression models used to test each of the five hypotheses listed above. As with any regression model there are a set of assumptions regarding the nature of the data, variables, and especially the disturbance term before it is assured that linear (or logistic) regression will be appropriate. Formally, the Gauss-Markov assumptions state that a regression equation, given the standard linear form

$$Y_j = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_k X_{kj} + \varepsilon_j$$

include: theoretically relevant continuous or dummy independent variables with at least some variance in value (denoted above as  $X_{1j}, X_{2j}, \dots, X_{kj}$  for each case  $j$ ) and a continuous dependent variable ( $Y_j$ ), an absence of multicollinearity<sup>24</sup>, an error term ( $\varepsilon_j$ ) with a mean value of zero across each set of values of the independent variables, no correlation between the error term

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<sup>23</sup> In 2005, 10 of 16 states categorized as having strict or very strict TANF policies were southern states (62.5 percent); 2006: 9 of 15 (60.0 percent); 2007: 11 of 16 (68.8 percent); 2008: 12 of 17 (70.6 percent); 2009: 11 of 16 (68.8 percent); 2010: 9 of 15 (60.0 percent); 2011: 9 of 15 (60.0 percent).

<sup>24</sup> In other words, any combination of the independent variables should not exhibit a perfectly linear relationship. A moderate degree of collinearity among the independent variables, however, is tolerable under the Gauss-Markov theorem.

and independent variables, homoscedasticity<sup>25</sup>, and an absence (or at least significant lack) of autocorrelation<sup>26</sup>. Additionally, the “normality assumption” requires that the error term be normally distributed along each set of the independent variables’ values (Berry 1993). When these assumptions are satisfied, the Gauss-Markov theorem suggests that the resulting parameter estimates – using either OLS or MLE – will be unbiased<sup>27</sup> and efficient, allowing the researcher to draw reliable statistical inferences. Rarely, however, are these assumptions completely fulfilled in practice.

Luckily for the researcher, regression is a statistically robust procedure that can withstand moderate violations of the Gauss-Markov theorem (Achen 1982; Lewis-Beck 1980). As Lewis-Beck (1980) points out, some violations are more serious than others. Including the “wrong” (or not including the “right”) independent variables – i.e. specification error – is a more serious problem which leads to unpredictably biased estimates. Other assumptions – such as those involving multicollinearity, autocorrelation, or homoscedasticity – hinge more on the degree to which they are violated, each with varying thresholds for concern. Multicollinearity, for example, is generally recognized as a problem worth addressing only when there is either a perfect or high degree of linear correlation among the explanatory variables (in bivariate and/or multivariate instances; Allison 2012; O’Rourke, Hatcher and Stepanski 2005).

Logistic regression (both binomial and ordered logit are used for this study), which models the influence of explanatory variables on the odds of a categorical dependent variable’s outcome, is a similar type of analysis compared to linear regression. In explaining dependent

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<sup>25</sup> Homoscedasticity is desirable in that the error term’s variance is constant across each set of values of the independent variables. Diagnosing heteroscedasticity in SAS v9.3 involves use of the heteroscedasticity consistent covariance estimator which, for the current study, did not raise any concerns among any of the regression models.

<sup>26</sup> i.e., the error terms of any two observations should not be correlated.

<sup>27</sup> A parameter estimate is said to be unbiased if its mean value (taken over repeated random samples) is equal to that of the population parameter. In this case, the estimator is perfectly unbiased.

outcome measures, both types of regression allow for an assessment of significance and relative importance among explanatory variables; however, linear and logistic regression can also suffer from many of the same problems (e.g. multicollinearity, heteroscedasticity, non-random distribution of  $\varepsilon$  (Allison 2012)). The binary logistic regression model can be represented as:

$$\log[p_j(Y=1)/1-p_j(Y=1)] = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_k X_{kj}$$

with the left-hand side of the equation transforming the probability, for individual  $j$ , that the outcome of a dichotomous dependent variable  $Y_j$  will equal one (as opposed to zero) into an odds which is, in turn, subjected to a natural logarithmic transformation resulting in a log-odds value. The rest of the equation is similar to the linear version described above except for the absence of a disturbance term,  $\varepsilon$ . This does not imply a lack of random or unknowable error, but rather the error inherent in the logistic model lies within the “probabilistic relationship between  $p_j$  and  $Y_j$ ” (Allison 2012: 17). As we move from the binomial to the ordered model (i.e., when the dependent variable has three or more categories with a non-interval scale ordering) the model becomes:

$$\log[F_{jv}/1-F_{jv}] = \beta_{0v} + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_k X_{kj}$$

where the left side of the equation has changed to reflect log odds of falling into any number of ordered categories,  $v = 0, 1, 2, \dots, V$ . The term  $F_{jv}$  refers to the idea of cumulative probabilities – that individual  $j$  will fall into the  $v$ th category or lower.

Thus, there will be  $V - 1$  equations in which  $F_{jv}$  stands as a different dichotomization of the dependent variable. While interpretation of the estimates generated by a linear regression involves the amount of change in  $Y$  associated with a one-unit change in  $X$ , holding other explanatory variables constant, the interpretation of logistic regression coefficients is different. The easiest and most common way to present coefficients from the logistic model is in terms of

the odds ratios (Allison 2012; Liao 1994). In other words, how are the odds of  $Y$  falling into one of the two (or more) outcome categories affected by the value of  $X$ ? A more detailed discussion of interpreting linear and logistic regression coefficients is presented in the next chapter.

The data and variables used for the current study have undergone diagnostic testing using SAS v9.3 software to ensure that potential problems with multicollinearity, heteroscedasticity, and autocorrelation<sup>28</sup> were averted – or at the very least, minimized. Because the latter two are ultimately problems resulting from specification error (Berry 1993; Berry and Feldman 1985; Lewis-Beck 1980) I will go into more detail about the variable selection process used for this study. The decisions to include (or exclude) particular independent and control variables were guided by the literature as well as relevant theoretical considerations for the current regression models. Previous studies examining socioeconomic outcomes among women exiting TANF (the so-called “leaver studies”) tend to include similar independent and control variables concentrating on demographic, human capital, and family or household measures (Cancian et al. 2002; Cherlin et al. 2009; Danziger et al. 2002; Johnson and Corcoran 2003; Kwon and Meyer 2011; Wood, Moore and Rangarajan 2008; Wu, Cancian and Meyer 2008).

For example, the typical leaver study includes measures for a mother’s age, race, ethnicity, educational attainment, employment history, TANF history, marriage/cohabiting status, number and age of children, and often contextual variables such as county unemployment percentage. Measures of women’s health and/or possible experiences with domestic abuse can also be spotted in this area of the literature (see, for example, Cherlin et al. (2009), Danziger et

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<sup>28</sup> Autocorrelation, occurring when the disturbance term of two or more observations are related, is likely to be a concern to the researcher only in cases where time series regression is used. In the case of time series analysis, where observations are measured repeatedly over a fixed interval of time, explanatory variables excluded from the analysis as well as random influences on the dependent variable will keep reappearing at each interval of observation  $T_1, T_2, \dots T_k$ . Because the current study does not use time series regression, autocorrelation is not expected to be a concern.

al. (2002), and Wood, Moore and Rangarajan (2008)). In line with these previous studies which often pose similar research questions to those of the current study – e.g. To what extent does TANF improve the socioeconomic condition of mothers? – and have similar outcome measures I incorporate many of the same basic independent and control variables including race and ethnicity, educational attainment, TANF history, age of youngest child(ren), overall health, region, county unemployment percentage, and spouse's/partner's income in an effort to avoid specification error and its attendant problems.

The current study also requires another explanatory variable relevant to testing hypotheses  $H2(a)$  and  $H2(b)$ . In an effort to bridge the literature on state TANF policy environments with leaver studies, I include as an independent variable the state TANF typology ranking borrowed from Soss, Fording, and Schram (2011), placing NLSY-97 respondents' state of residence on a 5 point Likert-type scale ranging from 'strict' to 'lenient.' Also, respondents' TANF enrollment is used both as a dummy measure and continuously (as the total number of months enrolled in TANF between 2005 and September 2009). I am confident the inclusion of these particular explanatory variables will keep specification error to a minimum in the regression models elaborated below.

Tests for multicollinearity revealed almost no significant concerns among the explanatory variables. As table 17 shows, there are only two significantly powerful relationships among the eleven independent and control variables. First, the relationship between respondents' region and race/ethnicity is moderately high – given the degrees of freedom – with a chi-square value of 127.20 and significance at the  $p < .001$  threshold. This is a product of the fact that the sample drawn from the NLSY-97 for this particular study is somewhat skewed toward African Americans from the South (29.04 percent of the sample) and Hispanics from the West (10.44

percent). As I noted above, these percentages are even higher when the sample is limited to those who participated in TANF between 2005 and 2009. Second, and also discussed earlier, the relationship between state TANF policy strictness and region is strong significant (Kruskal-Wallis chi-square = 382.23,  $p < .001$ ). This correlation is not surprising given the Southern region's overrepresentation among strict and very strict states.

Neither of these instances of multicollinearity, however, affected the regression results in any meaningful way. In order to test for the possible influence of these relationships on the regression models both tolerance diagnostics and alternate regression models omitting the regional variable were implemented. As an aide in testing for the presence of multicollinearity SAS v9.3 offers the option to calculate a tolerance statistic which essentially runs separate regression equations for each explanatory variable on all other explanatory variables, subtracting the respective  $R^2$  values from 1 (where lower values indicate the presence of multicollinearity<sup>29</sup> (Allison 2012)). None of the models containing the region-race or region-TANF strictness variables produced tolerance levels that merited concern. Finally, alternate regression models which dropped the region variable were estimated, showing no discernable effect upon the parameter estimates and overall model significance. While overall  $R^2$  values were consistently lower without the region variable, statistical significance among the remaining explanatory variables, with and without the inclusion of region, remained unchanged (results not shown but are available from author upon request).

As mentioned above, the linear and logistic regression models for this study use the ordinary least squares and maximum likelihood estimation methods, respectively; here I present a short elaboration of the OLS and MLE regression procedures. When using regression to

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<sup>29</sup> Paul D. Allison (2012: 61) notes that, in terms of when to be concerned about the tolerance statistic's value, "[w]hile there's no strict cutpoint, I begin to get concerned when I see tolerances below .40." None of the tolerance values for any of the regression models in this study reached such cautionary levels.



determine the significance of explanatory variables ( $X_1, X_2 \dots X_k$ ) in relation to a dependent variable ( $Y$ ) it is necessary to derive parameter coefficients, or estimates, ( $a, b_1, b_2, \dots b_k$ ) which minimize prediction error. That is, for any regression equation giving us a plotted line through space which represents the relationship between two or more variables, the explanatory power of this line rests, in part, in its ability to reduce the total distance between the various observed and predicted values of  $Y$  ( $Y_j$  and  $\hat{Y}_j$ , respectively). Using OLS estimation, the minimization of prediction error is achieved by squaring the value of each error interval (i.e. the distance between  $Y_j$  and  $\hat{Y}_j$ ) in order to eliminate the distortion posed by having both negative and positive values when calculating the total prediction error. Thus, the parameter estimates produced using OLS estimation ( $a, b_1, b_2, \dots b_k$ ) are those which minimize the sum of the squared error values and, most importantly, do so more than other possible combinations of values for  $a, b_1, b_2, \dots b_k$  (Berry and Feldman 1985; Lewis-Beck 1980; O'Rourke, Hatcher and Stepanski 2005).

Maximum likelihood estimation, on the other hand, is a way of generating parameter estimates which reduce the randomness – or, error – one encounters when dealing with probabilistic relationships between  $Y$  and each  $X_k$ , as in the case of logistic regression. This technique computes, in an iterative fashion, values for  $\beta_k$  that maximize the model's probability of producing a value for  $Y$  which was indeed observed. One benefit of using MLE is that the coefficients it generates are reliably unbiased (i.e. the sample model's coefficients,  $b_k$ , will correctly estimate their respective population parameters,  $\beta_k$ , of the “true” model), especially with larger samples. Other advantages of using ML-generated estimates include their small standard errors and (approximately) normal sampling distributions (Allison 2012; Lewis-Beck 1980).

## **Dependent Variables**

Using the methods described above, this study seeks to determine the influence of eleven independent and control variables on nine dependent variables which measure various aspects of respondents' socioeconomic condition. As mentioned above, five of the dependent variables are measured continuously and four are categorical measures, thus requiring five linear regression models and four logistic regression models to test each of the five hypotheses. This study takes advantage of the yearly NLSY-97 data by modeling mothers' socioeconomic outcomes at two distinct points in time – 2009 and 2011 – which were chosen because of their contextual relevance to the Great Recession. The Great Recession was officially declared over in 2009 and yet most of those affected by the downturn are still struggling with unemployment or underemployment (Krugman 2012; Stone 2013).

A repeat of the analysis two years later, in 2011, is used both because it was the most recent round of data available from the NLSY-97 and for its ability to provide a kind of check-up on the mothers included in the sample; in other words, two years after macroeconomic indicators had bottomed out, had the socioeconomic situation faced by low-income mothers – TANF recipients or not – improved, worsened, or stayed about the same? The dependent variables – again, measured in 2009 and 2011 – include family income, individual income, the ratio of household income to the federal poverty threshold, hourly compensation, hours worked per week, number of jobs held during the year, whether or not income was received from a job in the past year, whether or not the individual had health insurance and, if so, were their children covered by this insurance?

The first outcome, family income, provides the total amount of pre-tax cash receipts for each family member residing in the household, including income from government assistance

programs like TANF, SNAP, and WIC (Bureau of Labor Statistics n.d.). This measure of income (as with the other dependent variables individual income, ratio of household income to poverty threshold, and hourly compensation) is entered into the regression models as a logarithmically transformed variable in order to artificially smooth out the positively skewed distribution that was observed in the raw data. Due to the selection criteria for the current study's sample (e.g. low-income women) many of the variables reporting income or wages and other variables derived from those values show clustering towards the low end of the distribution, unsurprisingly. In instances such as this, using the natural log values of raw variable data is a common technique to combat the effects of non-normal distributions on the effectiveness of regression modeling (Benoit 2011; Freund and Littell 2000). As shown in Table 1, the (untransformed) median family income for the sample is \$24,000 in 2009 ( $N = 629$ ) and \$27,942 in 2011 ( $N = 626$ ).

[Table 1 about here]

As opposed to the household-level measure of family income, the individual income variable is used to isolate the total amount of pre-tax wages, salary, commissions, and tips received by those respondents who reported earning income from a job over the past year. The reported 2009 median is \$14,082 ( $N = 411$ ) and \$17,707 in 2011 ( $N = 373$ ); as with family income this variable is logged in the regression models. The NLSY-97 also provides a measure comparing respondents' gross family income to the federal poverty threshold<sup>30</sup>, resulting in ratios so that a value of 1.00 means a family's income is exactly equal to the poverty threshold, a value of 2.00 means their income is double the threshold, and 0.50 equals half the threshold.

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<sup>30</sup> This NLSY-97-derived variable takes into account household size.

This variable is also logged in the regression equations and has 2009 and 2011 median values of 1.06 ( $N = 627$ ) and 1.19 ( $N = 624$ ), respectively.

Hourly compensation is also used to gauge mothers' socioeconomic condition. This particular measure was chosen over other NLSY-97 variables reporting hourly wages because it includes overtime and tips; thus, if a mother works as a waitress – a job which typically pays extremely low hourly wages in anticipation that the employee will earn additional money through customers' tips – then the complete amount of take-home pay is captured by this hourly compensation variable. Median hourly compensation among the sample was \$9.83 in 2009 ( $N = 515$ ), rising slightly to \$10.00 in 2011 ( $N = 466$ ). This is the final logged variable to be included in the final regression models. The measure of how many hours respondents worked per week only includes hours worked at a primary job and has median values of 36.0 in 2009 ( $N = 529$ ) and 37.0 in 2011 ( $N = 481$ ).

Mothers' employment was also examined using the number of jobs held during the past year. This variable was coded so that 0 = no jobs held over the past year, 1 = one job held over the past year, 2 = two jobs held over the past year, and 3 = three or more jobs were held over the past year. The mean was 0.99 in 2009 ( $N = 719$ ) and 0.864 in 2011 ( $N = 707$ ). Nearly three-quarters of the sample (72.6 percent) held at least one job during the course of 2009 and a significant portion worked in more than one job. However, NLSY-97 technical documentation makes no distinction between jobs worked concurrently or one at a time. Among the women who reported working more than one job over the course of the year, there are undoubtedly those who held multiple jobs simultaneously and others who worked in multiple jobs one at a time (i.e., non-simultaneously). By 2011, these numbers reflected a slight decline in overall

employment with 67.3 percent in at least one job. The number of women not employed in any jobs increased by roughly five percent to 32.7 percent of the sample.

A dummy variable indicating whether or not respondents received income from a job over the past year is also used (coded 0 = no, 1 = yes). Similar to the previous variable which reported the number of jobs held – whether income-generating or not – this variable showed a drop in paid employment between 2009 (68.1 percent received income from a job in that year out of a total  $n$  of 718) and 2011 (59.8 percent,  $N = 701$ ). Mothers in the sample were also asked whether they received health care insurance<sup>31</sup> (coded 0 = no, 1 = yes) and if so, did this health plan cover their children (coded 0 = no, 1 = yes)? In 2009, 68.5 percent of the sample mothers (total  $N = 718$ ) reported having some type of health insurance and, among the insured, 78.7 percent had a plan that included their children. Two years later, these percentages remained nearly identical (69.0 percent with coverage; 78.3 of the insured had children covered as well).

### **Independent and Control Variables**

All independent variables are individual-level measures except for the state TANF typology rating which is a state-level measure applied to individual respondents based on their state of residence. Perhaps the most central predictor variable to this study – TANF enrollment – is measured in two ways, resulting in two separate variables: 1) a dummy variable indicating if sample women either enrolled in TANF at some point during the study period (2005 through September 2009; coded as 1) or if they never enrolled in TANF at any point over the study period (coded as 0) and 2) as a continuous variable which gives the total number of months mothers enrolled in TANF, ranging from a minimum value of zero to a maximum of 57 months.

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<sup>31</sup> This includes coverage through Medicaid (or a state-run Medicaid equivalent such as California's Medi-Cal), employers, a spouse's employer, or any other type of pre-paid health maintenance organization plan.

Looking again at Table 1 we see that out of a total  $N$  of 737, just over a third of the sample (33.7 percent) enrolled in TANF at some point in the nearly five year study period. This percentage parallels reported national trends. The most recent data provided by the federal Department of Health and Human Services (2013; based on Current Population Survey estimates) puts the percentage of eligible families enrolled in TANF during 2009 at 32.0, down from just over 40.0 percent in 2005. Similarly, Trisi and Pavetti (2012) estimate that as of 2010 about 27 out of every 100 families with children living in poverty were enrolled.

Continuous measurement of TANF participation is the more common approach taken in the literature, where researchers have typically found a significant and negative correlation between total number of months enrolled and post-TANF earnings (Connolly and Marston 2005; Wu, Cancian and Meyer 2008). Among the 248 sample women who did enroll, the average total number of months enrolled in TANF over the course of the study period was 20.4 ( $s.d.$  = 15.9), again, out of the possible maximum of 57 months between 2005 and September 2009. This is significantly lower than the 36.7 month average for 2007 enrollees reported by the U.S. Office of Family Assistance (2012a).

Identification of black, white, and Hispanic mothers – for use in hypotheses  $H1(b)$ ,  $H1(c)$ , and  $H2(b)$  – is provided by answers to two NLSY-97 questions: 1) “What is your race?” with the provided choices of white, black or African American, American Indian, Eskimo, or Aleut, Asian or Pacific Islander, and other; and 2) “Are you Hispanic?” with a simple yes/no response choice. Using these two questions, I created a variable identifying non-Hispanic white (hereafter referred to as white), non-Hispanic black or African American (hereafter referred to as black), and Hispanic (of any race) mothers for inclusion into the relevant regression models. Out of a total  $n$  of 717, the frequencies are: 339 (47.2 percent) black, 206 (28.7 percent) white, 174

(24.2 percent) Hispanic. I hypothesize that white women will exhibit higher levels on the socioeconomic outcome measures (i.e. higher incomes and wages, higher income-to-poverty ratios, etc.) than either black or Hispanic women.

The final independent variable – state TANF typology rating – provides a way to compare state-by-state TANF policy environments in terms of strictness and leniency toward those enrolled in TANF. The construction of this measure is described in more detail above. Using five separate dimensions of TANF policy, each state is placed on a five-point Likert-type scale coded as 0 = lenient, 1 = somewhat lenient, 2 = moderate, 3 = somewhat strict, 4 = strict. Scores are calculated for all 50 states plus the District of Columbia<sup>32</sup>. For women who enrolled in TANF ( $N = 248$ ) the mean state typology score was 1.85 ( $s.d. = 1.19$ ) in 2009.

By 2011, the mean score remained essentially the same at 1.84 ( $s.d. = 1.17$ )<sup>33</sup>, meaning that the average mother in the study sample who enrolled in the program experienced a slightly lenient TANF policy environment. As Table 3 shows, there were nine lenient states, 13 somewhat lenient states, 13 moderate states, 10 somewhat strict states, and six strict states in 2009. Almost no change in these frequencies occurred in the 2011 totals<sup>34</sup>. Higher scores on this variable (i.e. stricter TANF policy environments) are hypothesized to negatively impact mothers' socioeconomic condition, as proposed in *H2(a)*, especially for black and Hispanic mothers compared to whites (*H2(b)*).

[Table 3 about here]

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<sup>32</sup> While scores were calculated for all 50 states and Washington, D.C., not all states are represented by the final sample population. In order to protect respondent confidentiality, individual states are not identified (whether represented in the sample or not) in this project; the only geographic identifier is the respondent's region: Northeast, Northcentral, South, or West.

<sup>33</sup> Although the NLSY-97 does not contain TANF usage data past September 2009, I nonetheless calculated the state TANF score for the year 2011, assuming that some of the respondents who used TANF between 2005 and 2009 might have enrolled in the program between October 2009 through 2011.

<sup>34</sup> The only change included one state moving from "somewhat strict" to "moderate."

In testing the effects of TANF enrollment and race on socioeconomic outcomes, seven control variables are introduced into the regression models: total number of years a spouse or partner received income from a job from 2005 through 2011, number of children under age 6 living in the household, educational attainment, region, general health, county median household income, and county unemployment percentage. As discussed above, these controls are intended to introduce consistency in model specifications between the current study and previous leaver studies. Having controlled for similar family, human capital, geographic, and other contextual variables will allow for more meaningful comparisons across study outcomes.

Throughout the literature examining socioeconomic outcomes among welfare recipients and leavers, the importance of family members' contributions cannot be understated. As just one survival strategy among many, mothers often rely on significant others for help in meeting basic material needs (Edin and Lein 1997). In an effort to control for such familial support the current study employs a measure of the total number of years between 2005 and 2011 in which respondents' spouses or live-in partners earned income from a job. The mean value for this variable is 3.67 ( $N = 560$ ,  $s.d. = 2.36$ ), indicating a significant portion of the sample had at least some additional income within the household.

Another key dimension affecting low-income mother's socioeconomic condition is the presence of children in the household, especially young children. Having to care for young children<sup>35</sup> often poses a catch-22 to mothers – particularly single mothers – who are thrust into the roles of caretaker and income-earner simultaneously. Within the literature special attention is given to the effects of having children who are not yet old enough to be enrolled in school full-time (Butler, Deprez and Smith 2004; Kim 2012; Wu, Cancian and Meyer 2008). Johnson and Corcoran (2003), for example, find that the chances of being employed in a job that pays a living

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<sup>35</sup> Generally defined in the literature as being below the age of 6.



wage with health benefits are negatively impacted (though not significantly) by caring for children age two or younger among a cohort of TANF leavers. Young children are also positively associated with “churning” back into TANF participation as well as unemployment and post-TANF “disconnection<sup>36</sup>” among low-income mothers (Born, Ovwigho and Cordero 2002; Cherlin et al. 2009; Gonzales, Hudson and Acker 2007).

A control variable was thus included which gives the highest number of children under the age of six between 2005 and 2011. This is dummy coded so that 0 = the highest number of children under six in the household during the study period never exceeded two and 1 = for at least one year between 2005 and 2011 there were three or more children under the age of six living in the household. The percent of sample mothers who had three or more young children in the household is 47.6 ( $N = 737$ ).

Educational attainment – the quintessential measure of human capital – is included as an ordinal variable giving the respondent’s highest degree completed as of 2011<sup>37</sup>; the coding is as follows: 0 = no degree, 1 = high school diploma or GED, 2 = associate’s degree, 3 = bachelor’s degree or higher. Out of a total  $N$  of 735, 20.5 percent of women in the sample had not completed any degree, 67.8 percent had a high school diploma or GED, 6.0 percent completed an associate’s degree, and 5.7 percent completed a bachelor’s degree or higher. Inclusion of educational attainment as a predictor variable in the literature tends to produce the expected results in terms of effects on socioeconomic outcomes. In other words, educational attainment is significantly positively associated with outcomes like wages, income, and other employment dynamics (Danziger et al. 2002; Johnson and Corcoran 2003; London 2003; Noonan and Heflin

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<sup>36</sup> The idea of TANF leavers becoming “disconnected” has emerged in the literature as an analytical construct describing the situation in which leavers report no observable source of income or help from friends and family in follow-up assessments after having exited the TANF program.

<sup>37</sup> There were so few respondents in the sample who earned additional degrees between 2009 and 2011 that the category frequencies hardly fluctuated.

2005). It is important to note that these findings emerge not only for TANF leavers but also for women diverted from the application process as well as low-income women who did not apply for TANF assistance.

Respondents' region is also included using the NLSY-97 and U.S. Census Bureau designations Northeast<sup>38</sup>, Northcentral<sup>39</sup>, South, and West. As noted earlier, the final sample is disproportionately Southern (48.4 percent,  $N = 735$ ) with the next most represented regions being the Northcentral (20.4 percent) and the West (19.7 percent), followed by the Northeast (11.4 percent). This variable is measured in both 2009 and 2011 for inclusion into the regression models for these respective years' outcome variables.

The importance of controlling for overall health is underscored by Wood, Moore and Rangarajan (2008), who find that “[h]ealth is among the factors most strongly and consistently associated with sustaining benchmarks of economic success” among TANF leavers (20). Various aspects of health – in addition to one’s general health status – have been explored by previous studies. Danziger et al. (2002) and Johnson and Corcoran (2003), for example, each included measures of women’s experiences with domestic violence, child health problems, and mental health conditions, finding negative (albeit statistically insignificant) relationships with post-TANF income and job quality.

Predictably, being in overall good health and not having any work-limiting disability is (significantly) positively related to income and employment outcomes (Cherlin et al. 2009; Wood, Moore and Rangarajan 2008). As with educational attainment, these findings related to health status among TANF leavers have been echoed by low-income women who did not enroll

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<sup>38</sup> The Northeast region is comprised of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

<sup>39</sup> The Northcentral region (more commonly referred to as the Midwest) is comprised of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

in TANF (see, e.g., London's (2003) study of diverted TANF applicants). In this study I include a dummy variable reporting whether respondents' general health in 2005 was "fair" or worse (coded 1) as opposed to "good" or better (coded 0)<sup>40</sup>. Out of 736 sample mothers 111 (15.1 percent) described their general health as fair or poor at the start of the study period in 2005.

The final two controls used in this study attempt to account for the sample mothers' local area economic conditions. County unemployment percentage is included as a control variable in the regressions modeling the number of hours worked per week, job-based income receipt, health care coverage and coverage of children, and number of jobs held. County median household income is used as a control variable in regressions modeling family income, individual income, household income to poverty threshold ratio, and hourly compensation. The mean county unemployment level was 9.6 percent in 2009 (*s.d.* = 2.5) and dropped only slightly to 9.4 in 2011 (*s.d.* = 2.4). The median of county median household income likewise remained stable between 2009 and 2011 at \$46,739 and \$46,589, respectively (in unadjusted dollars).

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<sup>40</sup> NLSY-97 respondents, when asked to give their general health status, could choose either "excellent," "very good," "good," "fair," or "poor."

## Chapter 5: Analysis and Results

In addition to the descriptive statistics outlined above, this chapter presents results from the multivariate analyses conducted in order to test this study's five hypotheses. Each of the final regression models and their results are introduced in sequential order of the hypotheses (i.e., relevant data are presented beginning with  $H1(a)$ , then  $H1(b)$ ,  $H1(c)$ ,  $H2(a)$ , and lastly  $H2(b)$ ). With each set of results I devote most of the discussion to the linear regressions' beta coefficients and the logistic regressions' odds ratios; comparisons between regression results for 2009 outcomes and 2011 outcomes are made as well. The models' corresponding tables, however, provide more detailed information. Tables with results for the linear regressions display the model  $R^2$ , effective  $N$ ,  $F$ -value, and intercept along with the parameter estimates and standard errors. Results from logistic regressions include odds ratios and standard errors as well as each model's generalized  $R^2$ , likelihood ratio  $X^2$ , and effective  $N$ .

### **The Importance of TANF Enrollment in Determining Socioeconomic Outcomes**

The models used in this section were designed to test hypothesis  $H1(a)$  – that there will be a significant difference in the socioeconomic conditions between women who enrolled in TANF at any time between 2005 and 2009 and similar women who did not enroll during those years. As described above, the model operationalizes the idea of one's socioeconomic condition by using nine different outcome variables, assessing the impact of explanatory factors on family and individual income, poverty status, health care coverage, and employment variables. In addition to the use of both linear and logistic regressions, four of the continuous dependent variables – family income, individual income, household income to federal poverty threshold ratio, and hourly compensation – are logged. Specifically, they take the form

$$\begin{aligned} \log SEC_{jt} = & b_{0jt} + b_1(TANFParticipation)_{jt} + b_2(RaceEthnicity)_{jt} + b_3(SpouseIncome)_{jt} + \\ & b_4(YoungChildren)_{jt} + b_5(HighestDegree)_{jt} + b_6(Region)_{jt} + \\ & b_7(BelowAverageHealth)_{jt} + b_8(CountyEconomy)_{jt} + e_{jt} \end{aligned}$$

where  $\log SEC_{jt}$  represents one of the four logged socioeconomic condition outcomes for individual  $j$  at time  $t$  (i.e., the year 2009 or 2011). The fifth continuous outcome – hours worked per week – was not logged but otherwise follows the same model specification strategy as the logged outcomes. Because participation in TANF was measured as a dummy variable indicating enrollment/non-enrollment but also continuously, as the total number of months enrolled, each outcome was modeled with two specifications. The first specification – columns headed with ‘(1)’ in Tables 7a, 7b, 8a, and 8b – uses the dummy indicator of TANF enrollment while the second specification – labeled ‘(2)’ in these tables – uses the continuous measure, ranging from zero to 57 months.

The remainder of the regression equation introduces controls beginning with *RaceEthnicity*, which simply distinguishes between Hispanic, black, and white (the omitted category) mothers. The *SpouseIncome* term indicates a continuous measure of how many years between 2005-2011 the respondent’s spouse or partner (if applicable) earned an income. *YoungChildren* represents a dummy measure of whether or not sample mothers had three or more children under age six during any given year of the study period. *HighestDegree* and *Region* are each dummy coded categorical variables with ‘bachelor’s degree or higher’ and ‘Northeast’ being the omitted categories, respectfully. *BelowAverageHealth* indicates whether mother’s reported their general health to be ‘fair’ or ‘poor’ at the start of the study period. Finally, *CountyEconomy* stands in for one of two local economic context control variables; median household income was used in regressions for the four logged outcomes while

unemployment percentage was used as the local economic context control for the final unlogged linear regression outcome (hours worked per week).

The remaining outcome variables require logit modeling (three of which use binary logistic regression and the last outcome – number of jobs held in 2009/2011 – uses an ordered logit model because it contains more than two ordered response categories<sup>41</sup>). The binomial equations are specified as:

$$\log[p_j(SEC=1)/1-p_j(SEC=1)] = b_0 + b_1(TANFParticipation)_{jt} + b_2(RaceEthnicity)_{jt} + b_3(SpouseIncome)_{jt} + b_4(YoungChildren)_{jt} + b_5(HighestDegree)_{jt} + b_6(Region)_{jt} + b_7(BelowAverageHealth)_{jt} + b_8(CountyUnemployment)_{jt}$$

As with the linear regressions above, each of the four logistic models are run using two separate specifications for (1) the dummy measure of TANF enrollment and (2) the continuous measure of TANF months. County unemployment is used as the sole measure of local economic context as well; otherwise, the right-hand side of the logistic model is identical to the linear model outlined above.

There are marked differences, however, in how the linear and logistic model coefficients are interpreted, especially given that four of the outcome variables are logged. With an untransformed linear regression model (e.g., the ‘hours worked per week’ outcome) the parameter estimates, or  $b_1 \dots b_8$  in the above equation, convey slope. In other words, for every one-unit increase in the independent variable, holding the other explanatory variables constant, the dependent variable will change by  $b$  units (units of however the dependent variable is measured, that is). Looking at Table 7a, for example, we see that for each increase of one month

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<sup>41</sup> The choice of ordered logit modeling over sequential logit is made because of the dependent variable’s last response category. The variable ‘number of jobs held in 2009 (or 2011)’ is coded 0 = no jobs, 1 = one job, 2 = two jobs, and 3 = three or more jobs. This last category disrupts the interval nature of the ordering so I erred on the side of ordered logit, even though either type of logistic regression would have produced very similar results (Liao 1994).

that a woman was enrolled in TANF her total number of hours worked per week is negatively (and significantly) impacted by 0.149 hours ( $p < .05$ ). Parameter estimates resulting from the logged-outcome models, on the other hand, still convey information about the slope but require additional calculation in order to avoid interpretations which lead us to talk in terms of changes in the *logged* value of the dependent variable and, instead, make sense in terms of changes in the *unlogged* value of  $Y$ . To achieve this we compute  $100 * (e^{\beta} - 1)$  which gives the percentage change in (unlogged)  $Y$  for every one-unit increase in  $X_k$ . To take another example from Table 7a, the TANF enrollment coefficient from the logged family income model is -0.331 and using the conversion method mentioned above this equates to -28.179; in other words, having enrolled in TANF is correlated with just over a 28 percent reduction in mothers' family income ( $p < .01$ ).

While a logistic regression equation provides parameter estimates just as a linear regression does, the more intuitive approach in interpretation is to utilize the odds ratio estimates (Allison 2012). Odds ratios are simply calculated using the logistic regression's MLE-generated parameter estimates with the computation  $e^{\beta}$ . With binary explanatory variables, the resulting value gives us the predicted odds that the dependent variable will equal one with a one-unit increase in  $X_k$  (i.e. when the dummy explanatory variable goes from 0 to 1). Thus, as shown in Table 7b, the odds ratio for having enrolled in TANF contained in the equation modeling children's health care coverage is 3.062 ( $p < .01$ ). This indicates that the relative odds of mothers' health insurance covering their children are over three times as high if they enrolled in TANF compared with women who did not enroll.

With continuous explanatory variables we can use the same calculation as in the logged linear regression above ( $100 * (e^{\beta} - 1)$ ) to arrive at the percentage change in the odds of the dependent variable equaling one for every one-unit increase in  $X_k$ . Using the same Table 7b, the

odds ratio for total months in TANF's influence on having received income from a job over the past year is 0.967. This translates into a 3.3 percent reduction in the odds of receiving employment-based income for every added month spent enrolled in TANF. Finally, the interpretation for ordered logit models (e.g. those for the outcome 'number of jobs in 2009/2011') is very similar. In this case, the odds ratios refer to the influence of that particular  $X_k$  on the odds of the dependent variable taking the value of a lower (as opposed to higher) category, no matter which dichotomization of the dependent variable among the possible combinations is used (Allison 2012; Liao 1994).

So, for example, Table 7b shows that the odds ratio of having less than a high school diploma is 2.856 (under the second specification for number of jobs held in 2009). This means that not completing high school nearly triples the odds of having held 0 jobs instead of 1 or 2 or 3-plus jobs in 2009. Likewise, the odds of having held 0 *or* 1 job are nearly three times as high as for having held 2 *or* 3-plus jobs. Again, regardless of how the dependent variable categories are dummy coded, the odds ratio reflects the influence of that particular  $X_k$  on falling into the lower of the two dummy categories.

Having reviewed the various interpretations of linear and logistic regression coefficients, I now turn to an assessment of the level of support given to hypothesis  $H1(a)$ . The results displayed in Tables 7a, 7b, 8a, and 8b show considerable support for the non-directional hypothesis that mothers who enrolled in TANF and those who did not would differ in their post-Recession socioeconomic condition. Among the nine socioeconomic outcome variables measured at the end of 2009, TANF participation – when measured either dichotomously or continuously – proves to be significantly related to seven: family income, individual income,



income to poverty ratio, hours worked, job-based income receipt, health care coverage, and health coverage of children.

[Table 7a about here]

[Table 7b about here]

Further, all but two of these relationships are negative. Excepting the two outcomes related to health care coverage, participation in TANF is associated with lower family and individual incomes, poverty ratios, wages, and income receipt. The significant effect sizes of the independent variables are quite substantial; for example, when TANF participation is measured continuously, each added month of enrollment (out of 0 to 57 possible months) reduces the odds of having income from a job by 3.3 percent ( $p < .001$ ) and, when measured as a binary, TANF enrollment is associated with a 28.2 percent ( $p < .01$ ) drop in family income compared to those who did not enroll as well as a nearly identical reduction in individual income (28.3 percent,  $p < .05$ ).

Parameter estimates that did not achieve statistical significance remained negative, nonetheless. Specifically, models for 2009 hourly compensation and number of jobs held over the past year display small effect sizes in addition to insignificance. Interestingly, however, mothers' odds of having health care coverage and a plan that covers their children are significantly increased by TANF participation. The odds of health coverage are improved by 2.3 percent for each additional month in TANF ( $p < .05$ ) and the odds of covering children are over three times as high for TANF participants ( $p < .01$ ) relative to non-participants.

Turning to Tables 8a and 8b, which present *HI(a)* regression results for the 2011 outcomes, we see that the relationships between TANF participation and socioeconomic outcomes have remained negative but the effect sizes are reduced. TANF coefficients from both

specifications (1) and (2) were negative in 2011 but fell out of significance in the models for individual income and hours worked. Comparing the 2009 and 2011 logistic regressions, the negative effect of a one-month increase in TANF enrollment on the odds of receiving job-based income diminished slightly in the later year— from a 3.3 to 2.3 percent odds reduction ( $p < .001$  and  $p < .01$ , respectfully). However, the impact of continuously measured TANF enrollment on the number of jobs held became significant in 2011 ( $p < .01$ ), increasing the chances of falling into a lower category by 2.7 percent. While the relationship between TANF and health care coverage remained positive from 2009 to 2011, both coefficients for insuring children fell out of significance while the positive influence of added months in TANF on mothers' health insurance remained about the same as it was in 2009 (2.6 percent increase in 2011 odds,  $p < .05$ ).

[Table 8a about here]

[Table 8b about here]

The most consistently significant control variables included in the 2009 models proved to be the presence of spouse/partner income, having three or more young children, and educational attainment – in particular, having not completed high school. Also, the effect sizes for each control were very similar between specifications (1) and (2), thus for the sake of brevity I will report each control's first specification coefficient below. The coefficients for each control indicate an expected relationship. In other words, the more years a spouse or partner brought income into the household the higher the family's income (by 15.8 percent each year,  $p < .001$ ) as well as the ratio of household income to the federal poverty threshold (by 13.3 percent,  $p < .001$ ).

Similarly, mothers without a high school diploma or G.E.D. have individual incomes 55.1 percent lower than those with at least a bachelor's degree ( $p < .01$ ). Another important

factor that negatively impacts family income is the presence of three or more young children in the household for at least one year during the study period. The effect size of this control is quite large, showing a 20.4 percent reduction in family income ( $p < .05$ ) and an even larger negative impact on a family's income to poverty ratio (-39.8 percent,  $p < .001$ )

Race and ethnicity showed a consistent lack of significance as control variables in both 2009 and 2011 models, with just two significant parameter estimates generated from the black and Hispanic controls. Compared with whites, black mothers' family income is found to be 22.9 percent lower in 2009 ( $p < .05$ ) and their 2011 income to poverty ratio is also about 20 percent lower than whites' ( $p < .05$ ). Although not statistically significant, the coefficients for racial/ethnic minority status reveal a negative relationship with family income, income to poverty ratio, and hourly compensation in comparison with white women in 2009 and 2011. However, the odds of receiving job-based income were higher for black and Hispanic women relative to whites in both 2009 and 2011. Also, black women's odds of reporting that they were covered by some type of health insurance were around 1.5 times as high as those for whites in each of the observation years.

As with the TANF participation measures, between 2009 and 2011 relationships between the control and outcome measures generally remained in the same direction but with diminished effects. For example, having three or more young children in the household was correlated with a 39.8 percent decrease in the household income to poverty ratio in 2009 ( $p < .001$ ) but this effect fell to a 21.1 percent decrease in this ratio two years later ( $p < .01$ ). Controlling for mothers' general health failed to reach significance in all but two models, a finding that is consistent with the literature (Cherlin et al. 2009; Johnson and Corcoran 2003; London 2003). Having below average health shows a consistently negative relationship to socioeconomic

outcomes, particularly to the odds of having job-based income receipt in 2009 and individual income in 2011.

None of the regressions modeling hours worked per week in 2009 and 2011 as well as that for 2009 hourly compensation allowed for a rejection of the null hypothesis, as can be seen from the insignificant  $F$ -values at the bottom of Tables 7a and 8a, respectively. As a result, the handful of parameter estimates that reached significance on their own cannot be said to be meaningfully explaining variance in the outcome when in combination with the other explanatory variables. Regardless, the coefficient for months enrolled in TANF implies a decrease in mothers' 2009 hours worked per week by 0.15 hours ( $p < .05$ ) for each one month increase in total enrollment between 2005 and 2009. Also, each additional year of spousal/partner income decreases 2011 hours worked by 0.62 hours ( $p < .05$ ).

For the rest of the regressions which did reach overall model significance, the highest percentages of variance explained were found in the family income and income to poverty ratio models (this finding holds for both 2009 and 2011 outcomes), with  $R^2$  values of .23 and .26, respectively. While I report the generalized  $R^2$  for each of the logistic models, Paul Allison (2012) warns that this statistic is not exactly the same as its linear  $R^2$  cousin; even though it behaves similarly “it *cannot* be interpreted as a proportion of variance ‘explained’ by the independent variables” (69; emphasis in original). However, just as with the OLS  $R^2$ , higher values in the generalized  $R^2$  convey a good model fit and we can use the likelihood ratio  $X^2$  as its test of significance, i.e., as a test of the null hypothesis that all explanatory coefficients equal zero. Thus, the best “fitting” logistic models, based on the generalized  $R^2$ , are those for children’s health care coverage, with values of 0.11 for both 2009 ( $p < .001$ ) and 2011 ( $p < .001$ ). While the model fit statistics produced by the logistic models may not be very high, the

likelihood ratio  $X^2$  allows for a rejection of the null hypothesis in each model and nearly all of the 2009 models are significant at  $p < .001$ . It is also worth noting that overall the model specifications which included different measures of TANF enrollment did not produce even moderately different  $R^2$ , likelihood  $X^2$ , or  $F$  statistics.

Thus, the most notable trends emerging from this set of results include strong support for hypothesis  $H1(a)$  with a consistently negative relationship between TANF participation and 2009 socioeconomic outcomes. TANF enrollment is significantly lower family and individual incomes, household income to poverty ratios, and hours worked as well as lower odds of receiving job-based income. Health care outcomes – the odds of having health insurance and plans that covered their children – however, were improved as a result of TANF participation. The effects of TANF participation (both binary and continuous measures) remained negative in 2011 but diminished in intensity and significance.

The inclusion of controls for spouse/partner income, the presence of three or more young children in the household, and educational attainment added substantially to the explanatory power of the linear and logistic models. Again, the relationships observed between these controls and the outcome variables were as expected, with the strongest effect of these variables being the negative relationship between not completing high school and 2009 individual income. Controls for region and general health status were hardly significant in either 2009 or 2011, as were those for race/ethnicity. Like the independent variables, the controls generally diminished in effect size and significance as the socioeconomic outcome observations moved from 2009 to 2011.

## Differences in Socioeconomic Outcomes among Black, Hispanic, and White Mothers Enrolled in TANF

What happens when we shift the focus solely onto those mothers who received TANF assistance and what types of dynamics emerge from an analysis of race and ethnicity? In the following section, I present results associated with hypothesis  $HI(b)$  which says that white women who enrolled in TANF will have a significantly higher post-Great Recession socioeconomic condition than their Hispanic and black counterparts. The models used to test this hypothesis were modified only slightly from the specifications described in the above set of results. The biggest change from  $HI(a)$  involves the elimination of TANF participation's binary measure (while keeping the continuous measure) because the analysis in  $HI(b)$  is devoted to only those mothers who did participate in the program at some point between 2005-2009; this leaves just one specification for each outcome model.

Also, the current hypothesis' focus on race/ethnicity has moved this measure into the role of independent variable. Essentially, the continuous, monthly measure of TANF enrollment has traded places with race/ethnicity in terms of being re-specified from an independent to control variable. Thus, we are left with the linear model:

$$\begin{aligned} \log SEC_{jt} = & b_{0jt} + b_1(RaceEthnicity)_{jt} + b_2(MonthsEnrolledInTANF)_{jt} + b_3(SpouseIncome)_{jt} \\ & + b_4(YoungChildren)_{jt} + b_5(HighestDegree)_{jt} + b_6(Region)_{jt} + \\ & b_7(BelowAverageHealth)_{jt} + b_8(CountyEconomy)_{jt} + e_{jt} \end{aligned}$$

and the logistic model:

$$\begin{aligned} \log[p_j(SEC=1)/1-p_j(SEC=1)] = & b_{0jt} + b_1(RaceEthnicity)_{jt} + b_2(MonthsEnrolledInTANF)_{jt} \\ & + b_3(SpouseIncome)_{jt} + b_4(YoungChildren)_{jt} + b_5(HighestDegree)_{jt} + b_6(Region)_{jt} \\ & + b_7(BelowAverageHealth)_{jt} + b_8(CountyUnemployment)_{jt} \end{aligned}$$

As with the linear models of  $HI(a)$ , the family income, individual income, household income to poverty ratio, and hourly compensation outcome values were logged while the remaining continuous outcome – hours worked per week – was not transformed but otherwise follows the same model specification as the four logged outcomes. Because the focus of this hypothesis is limited to those who enrolled in TANF, the sample sizes for each model were reduced significantly from those testing hypothesis  $HI(a)$  – from an overall sample  $N$  of 737 to a sub-sample of 248 TANF enrollees. As an indirect result, the distribution of responses among some independent variables' categories caused minor procedural problems when running regressions on a smaller number of cases.

First, multicollinearity did become an issue after the control for educational attainment was necessarily dummy-coded for the regression procedures. As with any multichotomous explanatory variable used in a linear regression, dummy coding is necessary to get parameter estimates corresponding to each level (minus the referent) of the categorical variable. In this case, the educational attainment variable was dummy-coded at the levels less than high school, high school diploma or G.E.D., associate's degree, and bachelor's degree or higher.

However, tolerance diagnostics revealed a significant amount of multicollinearity between the less than high school and high school/G.E.D. dummy variables of educational attainment. This warranted a recoding of the educational attainment variable for these particular regressions so that 1 = no degree or high school/G.E.D., 2 = associate's degree, and 3 = bachelor's degree or higher. Because multicollinearity is essentially a problem of two (or more) explanatory variables measuring the same phenomenon, collapsing these lower categories was the most efficient means of correcting the problem.

Also, three of the five 2011 socioeconomic outcome models (logged individual income, hourly compensation, and hours worked per week) exhibited problems with OLS estimation even with the collapsed recoding of educational attainment. The associate's degree category parameter estimate, in particular, was not estimable by the regression procedure. Presumably, this was caused by a lack of sample members with this level of education which eliminated the necessary level of information needed to generate a coefficient based on comparisons with the reference category (bachelor's degree or higher). With the associate's degree category taken away from this control the result was, essentially, a dummy variable comparing those with a high school diploma/G.E.D. or less to those with a bachelor's degree or higher for these three linear regression models. Thus, Table 10a displays three missing coefficients.

The logistic regressions also ran into problems with the use of educational attainment. In this case, however, it was not multicollinearity but rather an issue of quasi-complete separation. This happens when the iterative process used by MLE fails to generate beta coefficient approximations which converge (or come close to converging) on a single correct value<sup>42</sup>. The most common cause of quasi-complete separation is when cell sizes become too small. In this case, for example, there were not enough respondents of a certain educational attainment level who fell into one of the dependent outcome categories. Nearly every single mother in the sample who had either an associate's or bachelor's degree reported receiving income from a job in the past year (in both the 2009 and 2011 outcome models). When frequencies become extremely low in a certain category of the outcome variable among those responding one way in the independent variable, a problem arises because "the problem variables completely account for

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<sup>42</sup> This "single correct value" is the value of the explanatory variable which maximizes the log-likelihood of the dependent variable falling into a given categorical outcome, e.g. not having received income from a job in the past year = 0 or having received income from a job in the past year = 1. See Allison (2012) for a more detailed discussion of complete and quasi-complete separation in MLE.



the variation in the dependent variable [and] nothing is left for additional variables to explain” (Allison 2012: 52).

A common solution to the problem of quasi-complete separation – and the one I use here – is simply to recode the variable, educational attainment, so that categories are collapsed and cell sizes increase enough for the MLE process to achieve convergence among its approximations of the correct beta value. Because the educational attainment categories causing the problems were the associate’s and bachelor’s degree or higher levels, I merged these cases with the high school diploma/G.E.D. category to arrive at a dummy variable where 0 = less than high school and 1 = high school diploma/G.E.D. or higher<sup>43</sup>.

Finally, quasi-complete separation of the MLE estimators also appeared when modeling the 2009 odds of children being covered by their mothers’ health insurance. Specifically, there were not enough mothers with below average health who responded that their children were not covered by health insurance in order for the MLE approximations to converge on a beta value. This happened with the regional variables as well, where not enough of the sample mothers from any of the four census regions reported children as not being covered. In the case of the control for general health a recoding was not possible because of its binary nature and recoding was also not an option with the regional control since it made little theoretical sense to recode along dichotomizations of one’s region. Thus, these two variables were dropped altogether from the 2009 regression modelling the children’s health care coverage outcome (see Table 9b).

Having reviewed the statistical issues above, I now present the results as shown in Tables 9a, 9b, 10a, and 10b. Looking at the model-fit statistics overall, five out of the nine regression models for 2009 outcomes achieved statistical significance. Once again, the *F*- and Likelihood-

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<sup>43</sup> Collapsing just the associate’s degree and bachelor’s degree or higher categories would not have been sufficient because there were too few cases for either category to alleviate the problems with quasi-complete separation. It was thus necessary to merge them both in with the high school/G.E.D. category.

Ratio  $X^2$  values are low, although the model  $R^2$  and generalized  $R^2$  values fall within the range generally found in similar regression-based leaver studies; in this case the significant models for 2009 outcomes account for between 12.0 and 25.0 percent of outcome variance.

The independent variable – racial/ethnic minority status – provides almost no support to the hypothesis that black and Hispanic mothers who enrolled in TANF would emerge from the Great Recession with significantly lower socioeconomic outcomes than white mothers. As shown in Tables 9a and 9b, the parameter estimates for black and Hispanic (with white being the omitted category) failed to reach significance in eight of the nine models. The lone exception, 2009 hours worked per week, reveals a positive association with minority status. Both black and Hispanic mothers work, on average, about six and a half more hours per week than white mothers (6.57 /week,  $p < .05$  and 6.72 /week,  $p < .05$ , respectively).

[Table 9a about here]

[Table 9b about here]

The remainder of the relationships between race/ethnicity and 2009 socioeconomic outcomes are mixed. Family income, household income to poverty ratio, odds of children being covered by health care, and number of jobs held in 2009 are all diminished for black and Hispanic mothers relative to whites. On the other hand, minority status is associated with slightly higher hourly compensation and between 20.0 to 40.0 percent higher odds of job-based income receipt. Particularly notable are the effect sizes for Hispanicity on the family and individual income variables. While this group has 40.0 percent higher odds of receiving job-based income over the course of 2009 compared to whites, their individual income and income to poverty ratios were 42.0 percent and 40.0 percent lower, respectively, than whites'. Again, though, these beta coefficients did not reach statistical significance.

Turning to the control variables, the monthly measure of TANF participation was associated with a slight but significant decrease in individual income (2.2 percent decrease for each additional month in TANF,  $p < .05$ ) as well as reduced odds of receiving job-based income in 2009 (3.8 percent drop in odds,  $p < .01$ ). This last finding is seemingly contradictory with the positive relationship between months in TANF and the odds of having held a higher number of jobs (2.7 percent increase,  $p < .05$ ). The remaining significant parameter estimates are in the expected direction. As with the results from *HI(a)* above, more spousal/partner income is associated with a higher family income (by 22.4 percent for each added year,  $p < .001$ ) and a higher household income to poverty ratio (16.6 percent,  $p < .01$ ). Similarly, having three or more young children in the household dramatically reduces the odds of low-income mothers being covered by health insurance by 66.5 percent ( $p < .05$ ) while also negatively impacting income to poverty ratios by 40.0 percent ( $p < .05$ ). Being in below average health at the outset of the study period also substantially reduces health care coverage odds in 2009 (-76.8 percent,  $p < .01$ ).

Two years later, the explanatory variables' effects tended to either remain the same or reduce in size and statistical significance. While neither black nor Hispanic mothers who received TANF assistance differed *significantly* from their white counterparts on any of the 2011 outcomes, the directions of the relationships generally remained the same but with smaller effect sizes. That is, differences in family income, individual income, and household income to poverty ratio between whites and Hispanics shrank. The black disadvantage in income to poverty ratio diminished and that for family income actually switched signs and became a slight advantage over whites in 2011. The coefficients for hours worked per week, meanwhile, fell out of significance and imply more parity between black and white women's working hours.

[Table 10a about here]

[Table 10b about here]

Control variable parameter estimates also remained either about the same or reduced in effect size from 2009 to 2011. Spousal/partner income, for example, has nearly the exact same positive effect on family income and one's income to poverty ratio in 2011 ( $p < .001$  and  $p < .01$ , respectively). The total months enrolled in TANF likewise has a similar impact on the odds of receiving job-based income in 2011 (2.6 percent reduction in odds,  $p < .05$ ) and the number of jobs held (3.8 increase in odds,  $p < .02$ ) from 2009 to 2011.

Thus, the main findings regarding *HI(b)* include very weak support for the hypothesis and continued significance of the extent to which mothers enrolled in TANF. When judging only from the direction of the relationships between race/ethnicity and socioeconomic outcomes, results are mixed. Black and Hispanic mothers appear to be at a disadvantage to whites with regards to the majority of income-related parameter estimates. Hourly compensation and the odds of job-based income receipt, however, are higher for minority mothers. Once again, though, if we assess support for *HI(b)* along lines of statistical significance, the coefficient associated with 2009 hours worked per week was the lone significant estimate ( $p < .05$ ) among all 2009 and 2011 models. This provides almost no support for the idea that white mothers who received TANF assistance benefitted from a greater post-Recession socioeconomic condition compared with black and Hispanic mothers.

The number of months a mother received TANF also displayed both positive and negative relationships with socioeconomic outcomes. Most notable, though, are the negative and significant associations with individual income and job-based income receipt. It appears that the effect of two months of TANF receipt, for example, is not the same as 10 or 12 months in

explaining the observed variance in these outcomes, in addition to the increased odds in number of jobs held for both 2009 and 2011.

### **Differences in Socioeconomic Outcomes among Black, Hispanic, and White Non-Entrants**

In the following section, I discuss the results of regressions designed to test hypothesis *HI(c)*. As with *HI(b)*, the focus below is in testing the importance of race and ethnicity in explaining any possible disparities in socioeconomic outcomes; in this case, however, the sub-sample is restricted to mothers who did not receive TANF at any point during the years 2005-2009. The linear and logistic models used for this particular group of mothers resemble those of *HI(b)* although, owing to this group's larger *N* of 489 (and thus more normal distributions among the categorical independent variables), neither multicollinearity within each dummy-coded variable nor quasi-complete separation in the logistic models were detected. The monthly measure of TANF participation was removed from the regressions, leaving *HI(c)* linear models to take the form:

$$\begin{aligned} \log SEC_{jt} = & b_{0jt} + b_1(RaceEthnicity)_{jt} + b_2(SpouseIncome)_{jt} + b_3(YoungChildren)_{jt} + \\ & b_4(HighestDegree)_{jt} + b_5(Region)_{jt} + b_6(BelowAverageHealth)_{jt} + \\ & b_7(CountyEconomy)_{jt} + e_{jt} \end{aligned}$$

and the logistic models as

$$\begin{aligned} \log[p_j(SEC=1)/1-p_j(SEC=1)] = & b_0 + b_1(RaceEthnicity)_{jt} + b_2(SpouseIncome)_{jt} + \\ & b_3(YoungChildren)_{jt} + b_4(HighestDegree)_{jt} + b_5(Region)_{jt} + \\ & b_6(BelowAverageHealth)_{jt} + b_7(CountyUnemployment)_{jt} \end{aligned}$$

As with the models testing hypothesis *HI(b)*, race/ethnicity remains the only independent variable, while the remaining controls are unchanged.

As shown in Tables 11a, 11b, 12a, and 12b, there once again appear to be only slight differences in the socioeconomic outcomes among white, black, and Hispanic mothers, lending no real support to hypothesis *HI(c)*. Overall, the models are consistently significant with just three of the 18 regressions for both 2009 and 2011 failing to reach significance (the three being 2009 hourly compensation and 2009/2011 hours worked). Model  $R^2$  and generalized  $R^2$  values remain at similar levels compared with results from *HI(a)* and *HI(b)*.

While none of the 2009 parameter estimates related to race or ethnicity are significant, there is an overall positive relationship observed between Hispanicity and socioeconomic outcomes. Black status, on the other hand, leads to more mixed relationships with the various outcome measures. Effect sizes for these estimates range from small to moderate, with the largest being black mothers' increased odds of receiving health care and having a plan that covers their children, as seen in Table 11b. For these two outcomes, black mothers have 69.2 percent and 71.8 percent higher odds when compared with white mothers. Hispanic mothers have higher outcomes on each of the five linear models in Table 11a as well as two of the four logistic models – job-based income receipt and health care for children – in Table 11b. While the relationships between race and individual income, hours worked, job-based income receipt, and the health care-related outcomes suggest an advantage vis-à-vis whites, other outcome measures – including family income, household income to poverty ratio, and hourly compensation – suggest a relative disadvantage to their white counterparts. Again, though, none of these relationships reached significance.

[Table 11a about here]

[Table 11b about here]

Two years later, in 2011, these results (shown in Tables 12a and 12b) changed slightly, with two coefficients reaching significance. The Hispanicity variable maintained positive relationships with each of the linear regression outcomes except household income to poverty ratio, which changed signs and now suggests a slight relative disadvantage with white women. As with the 2009 results, the majority of effect sizes for Hispanic ethnicity cannot be said to be exceptionally large. Nonetheless, the coefficient for hours worked suggests Hispanic women work three hours per week more compared to white women – a noticeable difference.

[Table 12a about here]

[Table 12b about here]

Two linear regression estimates for black status reached statistical significance: family income ( $p < .05$ ) and household income to poverty ratio ( $p < .05$ ). The family income estimate in Table 12a shows a sizable 23.5 percent disadvantage while the household income to poverty ratio is similarly lower compared to whites' (-25.7 percent). The remaining beta coefficients – those that did not reach significance – show that black racial identity continues to have negative relationships with socioeconomic outcomes except for health care coverage and number of jobs held in 2011. The most sizeable effect among these estimates is the 26.2 percent reduction in the odds of having one's children covered by health insurance. Finally, and somewhat paradoxically, black women have greater odds of holding a higher number of jobs while also having lower odds of receiving job-based income in the past year compared to white women.

As with previous results, years of spousal/partner income, having three or more young children, and educational attainment – particularly, less than high school – were the most consistently important controls included in the regressions. For each additional year of spousal/partner income present in the household, 2009 family income and the household income

to poverty ratio increases by 14.1 percent and 11.9 percent, respectively (both significant at  $p < .001$ ), while the odds of holding a higher number of jobs also increase 13.8 percent ( $p < .01$ ). Two years later, these relationships remain positive while the effect size diminishes slightly. Though increases in spousal/partner income are associated with higher family income, such increases are negatively related to most of the individual outcomes, including 2009 individual income and both 2009 and 2011 hourly compensation, hours worked, and job-based income receipt.

Having young children in the household also shows an overall negative relationship with mothers' socioeconomic outcomes. Specifically, mothers' 2009 reported family income (-23.3 percent,  $p < .05$ ), income to poverty ratio (-43.3 percent,  $p < .001$ ), and odds of job-based income receipt (-46.6 percent,  $p < .05$ ) are each significantly and negatively impacted by having three or more children under the age of six in the household. The majority of the remaining coefficients – those that did not reach significance – are also negative.

Not surprisingly, those mothers with lower levels of educational attainment showed sizeable disadvantages relative to their more credentialed counterparts. Among those with just a high school diploma or G.E.D., 2011 hourly compensation was 31.7 percent lower ( $p < .001$ ) compared to those with a bachelor's degree or higher. Even for mothers with an associate's degree, 2009 individual income is 48.6 percent lower ( $p < .05$ ) than the most educated group in the sample. Contrary to previous results' pattern of effect sizes diminishing from 2009 to 2011 and coefficients falling out of statistical significance, the negative effects of lower educational attainment actually increased over the two year period. For example, the odds of someone with less than a high school education receiving job-based income in 2009 were 67.5 percent lower ( $p < .05$ ) compared with college graduates; by 2011 this percentage had reached 74.5 ( $p < .05$ ).



Mothers' below average health proved to be a negative influence on most of the income-related outcomes for both 2009 and 2011 but only produced one significantly negative parameter estimate. Like educational attainment, the effect of below average health increased over the two year period but was limited to individual income. In 2009, this control was associated with a 38.8 percent reduction ( $p < .05$ ) in individual income compared to those with average or above average health; the effect then grew substantially to become a 53.7 percent disadvantage in 2011 ( $p < .01$ ).

As with the previous analyses, the local economic context does not appear to exert any meaningful influence on low-income mothers' socioeconomic outcomes. An exception is the negative impact of living in the South on health care dependent variables. Compared with women living in the Northeast, Southerners have 74.0 percent smaller odds of having health insurance in 2009 ( $p < .05$ ) and a staggering 86.8 drop in the odds of their children being covered in 2011 ( $p < .01$ ).

Overall, the regression models showed little support for hypothesis *HI(c)*. A mere two coefficients reached statistical significance – both of which indicate a relative disadvantage for black mothers' family income and household income to poverty ratio compared to white mothers. In general, black racial identity showed a mixed set of relationships (in terms of being negative or positive) with socioeconomic outcomes in 2009 and 2011. Hispanic women, on the other hand, showed consistent advantages over whites on the various dependent variables even though the majority of these coefficients indicate rather small effect sizes. Additionally, control variables that appeared to exert a significant impact on earlier analyses continue to do so here. Spousal/partner income, the presence of three or more young children, and lower levels of educational attainment produced the largest and most statistically significant parameter

estimates, generally displaying negative relationships with the outcome measures. Unique to this set of results, however, is the observed increase in effect sizes from 2009 to 2011 among these three controls.

### **Do State TANF Policies Affect Recipients' Socioeconomic Outcomes?**

Regarding the final two hypotheses,  $H2(a)$  and  $H2(b)$ , the theoretical and analytical attention is directed toward those mothers who received TANF and the importance of each state's policy environment. Specifically, hypothesis  $H2(a)$  is concerned with state TANF policies and asserts that mothers who get assistance in states with stringent or strict policies will emerge from the Great Recession with a lower socioeconomic condition than their counterparts who received TANF in more lenient policy settings. As I discussed above, classifying states as strict or lenient (or somewhere in-between) was achieved through the use of a TANF typology rating system which ranked states along a five-point scale (coded 0 = lenient, 1 = somewhat lenient, 2 = moderate, 3 = somewhat strict, 4 = strict). This TANF typology variable is introduced into the regression models as the sole independent variable. Race/ethnicity is dropped from the models of  $H2(a)$  while total months of TANF receipt between 2005 and 2009 is reintroduced as a control for this sub-sample of TANF recipients. In this case the linear model is

$$\begin{aligned} \log SEC_{jt} = & b_{0jt} + b_1(TANFTypology)_{jt} + b_2(MonthsEnrolledInTANF)_{jt} + \\ & b_3(SpouseIncome)_{jt} + b_4(YoungChildren)_{jt} + b_5(HighestDegree)_{jt} + b_6(Region)_{jt} + \\ & b_7(BelowAverageHealth)_{jt} + b_8(CountyEconomy)_{jt} + e_{jt} \end{aligned}$$

and the logistic model is

$$\begin{aligned} \log[p_j(SEC=1)/1-p_j(SEC=1)] = & b_{0jt} + b_1(TANFTypology)_{jt} + b_2(MonthsEnrolledInTANF)_{jt} \\ & + b_3(SpouseIncome)_{jt} + b_4(YoungChildren)_{jt} + b_5(HighestDegree)_{jt} + b_6(Region)_{jt} \\ & + b_7(BelowAverageHealth)_{jt} + b_8(CountyUnemployment)_{jt} \end{aligned}$$

Because  $H2(a)$  is focused strictly on those mothers who received TANF, the sub-sample size again drops to  $N = 248$  which reintroduces some of the problems encountered earlier in  $H1(b)$ . Namely, both multicollinearity and quasi-complete separation appeared when running the current hypothesis' initial regressions. Again, the uneven distribution of responses among some independent variables' categories (as a result of having a dramatically reduced sample size as compared to that of  $H1(a)$ ) is likely to blame. The former occurred within each of the 2009 and 2011 outcome models' dummy-coding of the control for education attainment while the latter appeared only within the 2009 model for the odds of children being covered by their mother's health insurance. As with  $H1(b)$ , similar changes in the educational attainment control variable were made to combat multicollinearity in the current set of regressions; i.e., as opposed to breaking down mothers' highest degree into the usual three dummy variables with bachelor's degree or higher being the omitted category, the specifications for  $H2(a)$  collapse these categories resulting in a single dummy indicator where 0 = no degree and 1 = high school diploma/G.E.D. or higher. Likewise, the regional and general health control variables were both dropped from the 2009 model of children's health care, as seen by the blank cells in Table 13b.

Regression results for  $H2(a)$  can be found in Tables 13a, 13b, 14a, and 14b. By looking at the parameter estimates from these tables it cannot be said that  $H2(a)$  has support. The TANF typology variable generates just one statistically significant coefficient out of the 18 coefficients for both 2009 and 2011. Overall, though, the 2009 models generate robust fit statistics. Four of the five linear models show statistically significant  $F$ -values while two of the four logistic regressions have significant likelihood ratio  $X^2$  values. By 2011, however, all but two fail to reach significance. As with previous models, despite the relatively low  $F$  and  $X^2$  values, the significant  $R^2$  statistics fall within the normal range of 0.11-0.26.

Regarding Tables 13a and 13b, the parameter estimates for state policy strictness indicate negative relationships with both family and individual income, household income to poverty ratio, job-based income receipt, and health care coverage. Mothers' hours worked per week, hourly compensation, child health coverage, and number of jobs worked are positively related to state TANF strictness. The lone significant coefficient produces the largest effect size with a 52.4 percent reduction in the odds of being covered by health insurance for those women living in states with stricter policies ( $p < .01$ ). Of the remaining (non-significant) estimates, effect sizes range from weak to moderate in strength. Hourly compensation, for example, was positively related to state TANF policies by a factor of 0.9 percent for each one-unit increase in policy strictness. Such policies are also associated with a 22.8 percent rise in the odds of holding a higher number of jobs in 2009, although we cannot place too much confidence in these coefficients.

[Table 13a about here]

[Table 13b about here]

By 2011, however, many of the relationships between state TANF policy strictness and continuously measured socioeconomic outcomes had changed. Family income, individual income, the income to poverty ratio, and hourly compensation had all switched from being negatively related to policy strictness to being positively related (and vice versa for hourly compensation). Each of the 2011 logistic coefficients in Table 14b, on the other hand, retained the direction shown in the 2009 outcomes seen in Table 13b: state strictness exerts a negative influence on the odds of receiving job-based income and health care coverage but a positive influence on children's health coverage as well as the number of jobs held. While none of these

2011 estimates reached significance at the  $p < .05$  level, overall the effect sizes generally remained similar to the range seen in the 2009 values.

[Table 14a about here]

[Table 14b about here]

As for the control variables, total months enrolled in TANF and the presence of spousal/partner income continue to significantly impact – if only slightly – mothers’ socioeconomic conditions. Tables 13a and 13b show that each additional month of TANF assistance reduces individual income by 1.8 percent ( $p < .05$ ) and the odds of receiving income from a job in the past year by 3.5 percent ( $p < .01$ ). However, this control is shown to positively impact the odds of both health care coverage (3.6 percent increase for each additional month in TANF,  $p < .05$ ) and the number of jobs held in 2009 (2.5 percent increase,  $p < .05$ ). These two positive relationships persist and are slightly intensified in the 2011 results while the negative relationships with individual and job-based income drop out of significance. Yet, none of the effect sizes related to this control are especially large.

As with the previous results elaborated above, spousal/partner income has a significant and positive effect on both family income and household income to poverty ratio. From 2009 to 2011, these coefficients show similar effect sizes, with family income being increased by 23.1 percent ( $p < .001$ ) and 21.9 percent ( $p < .001$ ), respectively. Similarly, a one year increase in the presence of this additional familial income is associated with nearly an 18.0 percent increase in mothers’ income to poverty ratios in both observation periods (both coefficients significant at  $p < .001$ ). The remaining parameter estimates for this control show only weak impacts on the socioeconomic outcomes with three relationships switching signs, or directions (as in the case of

logistic regression odds ratios), from 2009 to 2011: individual income, odds of job-based income receipt, and health coverage.

Somewhat surprisingly, the binary measure of educational attainment (no degree vs. high school degree/G.E.D. or higher) only produced two significant estimates, both from the 2009 results shown in Table 13a. Women who received TANF and had at least a high school degree had 85.7 percent higher individual incomes compared with those with no degree ( $p < .01$ ) in addition to 23.1 percent higher wages ( $p < .05$ ). The only 2009 socioeconomic outcomes to be negatively related to this measure of educational attainment are mothers' odds of health care coverage and number of jobs held. Although statistically insignificant, parameter estimates seen in Tables 14a and 14b suggest that the impact of educational attainment declined and even became negative for 2011 hours worked per week and the odds of receiving job-based income.

Overall, state TANF policy strictness was not shown to significantly impact recipients' socioeconomic outcomes. Five of the nine parameter estimates imply relationships between state strictness and outcome measures in the hypothesized (negative) direction for 2009 results, producing just one significant estimate for the odds of being covered by health insurance. In 2011, however, only three coefficients were negative and none of the nine estimates reached statistical significance. State TANF strictness was positively associated – in both years – with hours worked, number of jobs held, and children's odds of health coverage. Among the control variables, the continuous measure of TANF participation and years of spousal/partner income were the most impactful. Controls for educational attainment, region, general health, and county economic context typically do not appear to significantly account for a meaningful amount of variation in mothers' socioeconomic condition.

## Combining Race/Ethnicity and TANF Policy Strictness

With the final hypothesis ( $H2(b)$ ), I introduce mothers' race and ethnicity back into the models to test whether white women who received TANF in states categorized as 'somewhat strict' or 'strict' show a higher post-Great Recession socioeconomic condition than black and Hispanic women. With the analytical focus narrowed even further, there was a subsequent reduction in the sample  $N$  for regression models testing  $H2(b)$ . With a total  $N$  of 81 and even smaller effective  $N$ s, each of the following regression models are reduced to the bivariate linear form

$$\log SEC_{jt} = b_{0jt} + b_1(RaceEthnicity)_{jt} + e_{jt}$$

and the bivariate logistic model

$$\log[p_j(SEC=1)/1-p_j(SEC=1)] = b_{0jt} + b_1(RaceEthnicity)_{jt}$$

Reducing the models in this manner allows for a test of the hypothesis while not overloading the small sub-sample  $N$ s with too many regressors. Even so, while estimating the binary logistic model for the odds of one's children being covered by health care, there was a reappearance of quasi-complete separation. For both the 2009 and 2011 equations too few respondents of one race/ethnicity category responded that their children were not covered by health insurance, thus eliminating the logistic equations' capability to produce valid ML estimators. As opposed to earlier instances of quasi-complete separation where collapsing categories within the explanatory variable was an option, the dichotomization of race/ethnicity (i.e., using 'black' and 'Hispanic' as dummy variables with 'white' as the omitted category) does not lend itself to a collapsing or re-categorization the independent variable. Thus, the 2009 and

2011 logistic models for odds of child health coverage are eliminated from the following analyses. Regression coefficients for  $H2(b)$  are shown in Tables 15a, 15b, 16a, and 16b.

Possibly owing to the very small effective  $N$ s in the regression models, there is little by way of statistical significance observed in both the model fit statistics and parameter estimates/odds ratios. The hypothesis that black and Hispanic TANF recipients in strict states would have a lower socioeconomic condition relative to whites is not supported by the evidence. Out of 16 models, just two contain model fit statistics that allow for a rejection of the null hypothesis: 2011 hourly compensation with an  $F$ -value of 4.1 ( $p < .05$ ) and 2011 odds of health care coverage (likelihood ratio  $X^2 = 9.5$ ,  $p < .01$ ). The model  $R^2$  and generalized  $R^2$  values are the lowest produced in the current study with the highest values reaching 0.18 and 0.12 for hourly compensation and health coverage, respectively.

Looking at the parameter estimates and odds ratios associated with race and ethnicity, there are mostly mixed results in terms of assessing the hypothesized direction of these relationships. Black identity, for example, shows an association with higher 2009 individual incomes compared with white mothers while Hispanics have lower incomes, on average. On the other hand, black mothers receiving TANF in strict states have lower family incomes than whites as opposed to Hispanics' relative advantage. The 2009 estimates show a positive relationship between both minority categories and hours worked, the odds of holding a higher number of jobs, plus hourly compensation. The odds of receiving job-based income and household income to poverty ratios, however, are negatively related to both racial/ethnic categories in 2009.

[Table 15a about here]

[Table 15b about here]



Turning to the 2011 results shown in Tables 16a and 16b, none of the linear regression coefficients changed signs for black mothers. Furthermore, their 23.0 percent advantage in hourly compensation is the lone significant parameter estimate among the results for  $H2(b)$  regressions ( $p < .01$ ). Contrary to the hypothesized disadvantage faced by black women, each of the three odds ratios in Table 16b display a comparative advantage in the odds of receiving job-based income, health care coverage, and holding a higher number of jobs in 2011. In the case of health coverage, the odds ratio suggests that black women are exactly twice as likely to be covered in comparison to whites. Although, again, these odds ratios failed to reach significance.

[Table 16a about here]

[Table 16b about here]

Half of the coefficients for Hispanicity change direction between 2009 and 2011, again revealing no clear pattern among the relationships with the dependent variables. The most notable effect size is seen in the odds of receiving job-based income over the course of 2011. Here, Hispanics show 161.9 percent higher odds compared to whites. Also, the estimate for health care coverage reveals a 83.3 percent reduction in these odds. The linear regression coefficients did not show any sizeable effects, however.

Testing hypothesis  $H2(b)$  and determining levels of relative significance for race/ethnicity proved difficult with such small  $N$ s available for the regression models. Nonetheless, there is little support for  $H2(b)$  shown in the relationships observed between black and Hispanic mothers and their socioeconomic condition relative to white mothers. Equally as many coefficients show positive associations between minority status and socioeconomic outcomes as negative associations. As supportive evidence of  $H2(b)$ , the regression coefficients suggest black mothers who received TANF in strict states have consistently (i.e., in both 2009

and 2011) lower family incomes and household income to poverty ratios. Hispanics, too, show a consistent disadvantage to whites in individual income and odds of health care coverage. The remaining coefficients, however, provide evidence to the contrary. Black mothers, for example, show consistently higher individual incomes, hours worked, hourly compensation, health coverage, and number of jobs worked. Likewise, Hispanic mothers show higher family incomes and hourly compensation.

### **What Types of Industries Employ Low-Income Mothers?**

In the following section, I present a descriptive analysis of the industries in which sample mothers worked; however, it is important to note that occupation-specific data was not utilized for this particular study. The importance of the particular industry and occupation in which low-income mothers work has been noted throughout the literature on TANF recipients and working-poor mothers in general. In their study of TANF applicants who were diverted away from assistance, Gonzales, Hudson, and Acker (2007), for example, find that most women in their sample worked in “highly feminized occupations that afford few opportunities for career mobility” such as sales clerk, nursing aide, and food service (98). Similarly, food service, retail, temporary agency work, and health services were by far the most common sectors employing TANF leavers in Cancian et al.’s (2002) study of Wisconsin mothers. Employment in food service and retail also proved to be the industries with the largest negative impact on these mothers’ gross earnings and poverty status. Not only are opportunities for career mobility lacking in these jobs, but wages and benefits are typically far too low to keep a family out of poverty as a primary source of income.

It is important to note, however, that one’s type of industry does not always have a significant impact on leavers’ socioeconomic condition. Upon finding little evidence of an

advantage in the odds of moving out of poverty among TANF leavers employed as professionals, craftsmen, clerical, or sales workers, Cheng (2010) asserts that industry “plays but a small role” in mothers’ socioeconomic success (171). Likewise, Kwon and Meyer (2011) find almost no empirical support for an advantage in employment stability among those working in manufacturing jobs at the time of their exit from TANF compared with women working in the service or trade sectors. Nonetheless, the industry in which a mother works is likely to provide important information about the conditions of her employment and a more complete picture of the prospects for socioeconomic advancement. In the words of Gonzales, Hudson, and Acker, “[w]omen and families with children who rely on the secondary labor market as the primary source of income are very likely to remain poor” (2007: 98).

As Figure 2 shows, the majority of women included in the current study – both those who received TANF and those who did not – who were employed in 2009<sup>44</sup> worked in education, health, and social services (32.7 percent) with entertainment, accommodations, and food services (18.2 percent) and retail services (16.7) coming in as the second and third most common industries, respectively. Manufacturing employed the least amount of sample mothers at just 2.4 percent. Looking at Figure 3, which displays the industry of employment for mothers who received TANF and non-recipients separately, interesting discrepancies emerge. TANF recipients are more likely to be represented in entertainment, accommodations, and food services, professional services, and other services while non-recipients are more likely to work in the better-paying sectors of finance, insurance, and real estate. The final set of bars, “other<sup>45</sup>”

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<sup>44</sup> A comparison of mothers’ industry of employment between 2009 and 2011 was made (results not shown). However, the difference in percentages between the two years was negligible. In other words, so few women changed industries that, for the sake of avoiding redundancy, I only show industry of employment descriptives for 2009.

<sup>45</sup> This category is comprised of the following industries: public administration, information and communication, transportation and warehousing, wholesale trade, construction, utilities, and agriculture,

industries, is also disproportionately filled by mothers who did not receive TANF during the study period. Already, we see overrepresentation by TANF recipients in the various service sectors, although both recipients and non-recipients are well-represented in the retail category.

[Figure 2 about here]

[Figure 3 about here]

Figures 4 and 5 offer a more detailed look at recipients and non-recipients alike by providing employment percentages for white, black, and Hispanic mothers separately. Among those who received TANF (Figure 4) we can see that exactly half of white women worked in retail and the entertainment, accommodations, and food service industries. Nearly 60.0 percent of black women were found in the education, health, and social service, and entertainment, accommodations, and food service industries. The majority of Hispanic recipients – 60.0 percent – were employed in retail and education, health, and social service industries. This latter group also had the highest percentage of manufacturing workers. In all, however, retail and the various service industries dominate the employment opportunities for TANF recipients in 2009.

[Figure 4 about here]

[Figure 5 about here]

Turning to the mothers who did not receive TANF, shown in Figure 5, there is more parity among white, black, and Hispanic women within most industries compared with mothers in Figure 4. Also, the industries most common among all TANF enrollees employed in 2009 – education, health, and social service, entertainment, accommodations, and food service, and retail – are likewise the most commonly reported industries of employment for non-enrollees.

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forestry and fishing. These industries were collapsed into a single category because of the rarity with which they were represented by employed mothers in the sample.

White, black, and Hispanic mothers are generally employed most frequently by the same industries whether or not they received TANF between 2005 and 2009.

Interestingly, however, both black and Hispanic mothers in Figure 5 (those not receiving TANF) increased their representation in finance, insurance, and real estate, as well as “other” industries. Employment in sectors like finance or real estate is likely to provide more opportunity for upward socioeconomic mobility when compared with the mainstay industries of low-income women such as retail or restaurant service. Occupations in the lower rungs of the service sector, in particular, are typically characterized by low wages, erratic scheduling, little or no benefits, and narrow odds of upward job mobility (Collins and Mayer 2010; Morgen, Acker and Weigt 2010).

Overall, employment in the various service sectors and retail was the norm among both mothers who received TANF and those who did not. Despite these industry similarities among TANF recipients and non-recipients, the latter group reported about \$6,000.00 more in median income and had median hourly wages of \$10.01 compared to recipients’ \$8.60. This trend persists even when separate statistics for white, black, and Hispanic mothers are examined. Each group is employed mostly by the same industries – retail, education, health, and social services, and entertainment, accommodations, and food services – yet within each of the three groups those who did not receive TANF between 2005-2009 reported higher median individual income and hourly compensation than those who received TANF at any point during these years.

For example, white women’s median hourly wages were \$2.65 higher at \$10.65 than non-recipient white women (\$8.00 per hour). Among non-recipient mothers, Hispanics had the highest 2009 median individual income at \$17,500 while both black and white women earned \$16,000. Whites, however, earned the highest median wages while the \$9.30 per hour earned by

blacks was the lowest amount. Further, black mothers show the smallest increase in median wages when moving from TANF recipients to non-recipients, with only a \$0.30 advantage for the latter group. Both white and Hispanic non-recipients, however, show considerably larger median wage advantages over their TANF-recipient peers with a \$10.65 to \$8.00 advantage for whites and a \$10.61 to \$8.75 advantage for non-recipient Hispanics. Thus, even though both TANF recipients and non-recipients in the current study may work in generally similar industries, there is nonetheless an observed advantage in hourly compensation and individual income for those women who did not receive TANF, whether white, black, or Hispanic.

## **Chapter 6: Discussion and Conclusions**

What is to be made of these results? Based on the preceding analysis, what kinds of inferences can be made about the post-Great Recession socioeconomic condition of low-income mothers and the impacts of race, ethnicity, TANF assistance, and state policy variations? In the following sections I give a summary of what amount of support, if any, was given to each of the five hypotheses. Table 18 provides a brief review of the study's main results as well. I then discuss how this study's results relate to the literature. Limitations of the study, implications for federal and state TANF policy, and possible avenues for future research are also presented below.

Considering the need for research which addresses the confluence of welfare assistance, state policies, and race and ethnicity, all taking place within the context of the Great Recession of 2008, this study asks three basic research questions. First, during one of the United States' worst economic downturns, how did welfare assistance, compared to an absence of such assistance, impact the socioeconomic condition of low-income mothers and their families? Second, how important is an account of race and ethnicity when determining socioeconomic advantage or disadvantage among mothers who received and did not receive TANF support? Finally, in looking at variations in the post-Great Recession socioeconomic conditions of black, Hispanic, and white mothers, did the level of state TANF policy strictness play a significant role?

The goal of these research questions and the study, more broadly, is to get an idea of the impact and consequence of the TANF program at a time of near-Depression-level unemployment and poverty across the nation. Adding further significance is the fact that our nation's welfare system underwent a profound transformation at both the federal and state levels in recent years. With the Personal Responsibility and Work Opportunity Reconciliation Act of 1996

(PRWORA), those in need of cash assistance and who turned to the newly created TANF program would be required to engage in workfare. In a departure from the purely means-tested character of Aid to Families with Dependent Children, TANF mandates that those receiving assistance find any kind of employment as quickly as possible while jumping through a dizzying array of bureaucratic hoops. Should mothers in the TANF program be deemed “non-compliant” by their case manager, sanctions in the form of aid withdrawal or re-application into the program are in place to make sure that no taxpayer dollars are “wasted” on women who do not want to “help themselves.”

And yet, prior to 2008, TANF had not been tested to the extent that it would with the onset of the Great Recession. While the PRWORA was able to make cash and in-kind assistance conditional upon mothers’ ability to find employment, the new law was enacted during the historic late-1990s economic boom and its record low unemployment levels. Further, one of the stated goals of federal welfare reform was to reduce state caseloads as quickly as possible by as much as possible. States are formally incentivized to reduce the number of women receiving TANF funds and, as Figure 1 shows, the years following 1996 saw historically low numbers of families enrolled in TANF. Finally, as long as the states comply with basic federal guidelines they now have considerable control over how these TANF dollars are used in addition to other aspects of welfare administration including eligibility thresholds, weekly work requirements, and sanctioning policy, among others. It is within this broader context that I examine the impact of welfare assistance on the socioeconomic condition of low-income black, white, and Hispanic mothers.



## Understanding the Results

Using longitudinal NLSY-97 data collected by the U.S. Bureau of Labor Statistics, I selected 737 mothers who were TANF-eligible (i.e., women with at least one child and with household incomes at or below 185 percent of the federal poverty threshold) for inclusion into this study. The NLSY-97 provides a wide range of socioeconomic, household, demographic, and life-course data which, in combination with the analytical methods outlined in Chapter 4, allow me to address the research questions by testing five hypotheses. Hypothesis  $HI(a)$  is non-directional and asserts that mothers who enrolled in TANF at any time between 2005 and 2009 will differ in their post-Great Recession socioeconomic condition compared to similarly situated mothers who did not enroll in the program during these years. Results show considerable support for  $HI(a)$ ; i.e., there are significant differences in seven of the nine 2009 socioeconomic outcomes between mothers who did and did not receive TANF.

The majority of the relationships between TANF participation – whether used as a binary or continuous measure – and socioeconomic outcomes are negative. Both family and individual incomes, household income to poverty ratio, hourly compensation, and the odds of job-based income receipt are each negatively and significantly associated with TANF participation. Interestingly, the two health care outcomes were positively related to TANF. This is likely because mothers who are able to get into TANF become better-informed about other state and federal programs designed to assist low-income families via case managers. Again, because states have engaged in efforts to reduce TANF caseloads as much as possible they often use welfare offices as outlets through which information about other programs can be disseminated to those most likely to apply for TANF. This is done in the hopes of diverting mothers away

from TANF and into programs like Medicaid or housing assistance, for example (Gonzales, Hudson, and Acker 2007; London 2003).

Results for  $HI(a)$  in 2011 generally display the same trends as those from 2009. While the effect sizes of negative relationships between TANF participation and socioeconomic outcomes diminished, the impact of each added month of participation on the odds of having worked in fewer jobs in 2011 became statistically significant. The odds of mothers and their children being covered by health insurance, while still positively influenced by TANF participation, fell out of significance in the 2011 models. This finding of diminished effect sizes is not unique to the results of  $HI(a)$ ; this phenomenon is seen throughout the study's results. This makes sense considering the shrinking disparities among many of the socioeconomic outcome measures between 2009 and 2011 among mothers who received TANF and those who did not. For example, TANF recipients closed the deficit with non-recipients in both median family and individual income within this two-year span. In 2009 the gaps in these outcome measures were \$12,174 and \$6,000, respectively, but by 2011 they were down to \$8,196 and \$3,500.

One of the unique features of the current study is the ability to assess the effects of TANF participation measured in two separate ways. Each of the models for 2009 and 2011 outcomes in  $HI(a)$  was split into two specifications, one using a dummy measure of TANF participation and the other using a continuous measure of how many months a mother received assistance. Interestingly, the results in Tables 7a, 7b, 8a, and 8b show that both specifications' coefficients are in the same direction for every outcome modeled and, unsurprisingly, that effects stemming from the dummy measure of TANF participation are always greater in scope than those for the

continuous, or monthly, measure of program participation. The continuous measure, however, reached significance nearly twice as often as the dummy measure.

Among the controls introduced into the  $HI(a)$  models, the most noteworthy include spousal/partner income, having three or more young children in the household for at least one year, and educational attainment. These controls are related to socioeconomic outcomes in the directions one might expect. Those with a bachelor's degree or higher earn significantly more than each of the three lower categories of degree attainment and the presence of spousal/partner income boosts family income as well as the household income to poverty ratio.

Also, mothers who reported taking care of three or more children under the age of 6 for at least one year suffered significant decreases in both individual and family income, the household income to poverty ratio, odds of job-based income receipt, and health care coverage. The increased demands on mothers' time that comes with caring for multiple children, especially infants and toddlers, and the negative impact this has on low-income mothers' chances of socioeconomic success is a consistent finding among similar studies (Cancian et al. 2002; Johnson and Corcoran 2003; Kwon and Meyer 2011; Wood, Moore, and Rangarajan 2008; Wu, Cancian, and Meyer 2008).

Beginning with hypothesis  $HI(b)$  and throughout the rest of the study, regression results should be interpreted with some caution. When restricting the analyses to certain sub-samples, the effective  $N$  for each of the regression models is significantly reduced which, in turn, diminishes the likelihood of model significance as well as OLS and MLE estimators' ability to remain unbiased and efficient. Owing to an almost complete lack of significance among the parameter estimates,  $HI(b)$  received no real support; in other words, among mothers who received TANF, whites do not exhibit a higher post-Great Recession socioeconomic condition

than either black or Hispanic mothers. In fact, both black and Hispanic identity are significantly associated with working more hours per week than white mothers in 2009, while the remaining statistically insignificant estimates show a mixture of positive and negative relationships between minority status and socioeconomic outcomes. Interestingly, the more months a mother was enrolled in TANF, the more her 2009 individual income and odds of receiving job-based income declined.

This lack of support for *HI(b)* is somewhat surprising given the previous work by Davis et al. (2003), Gooden (1998, 2000, and 2004), and Monnat (2010) (among others) which documents the institutional racism that minority recipients encounter in the form of disparities in sanctioning rates, benefit reductions, and discretionary caseworker assistance. Presuming that black and Hispanic women in the current sample experienced at least some of these problems during their periods of TANF assistance, they do not appear to show significantly worse socioeconomic outcomes because of it.

This lack of any substantive advantage for white mothers relative to black and Hispanic mothers is also seen when TANF receipt is removed from the analysis altogether. The results from regressions testing *HI(c)* do not lend support to this hypothesis although black women did show significantly lower 2011 family incomes and household income to poverty ratios. These two significant coefficients are reflections of the fact that just 10.9 percent of black mothers had a spouse or partner that earned income for each year of the study period while 28.1 percent of whites did. Further, 14.7 percent of black women had no such additional family income for any of the seven years in the study period compared to 3.4 percent of white women. Overall, there appears to be no significant disadvantage in terms of socioeconomic condition for black and Hispanic mothers relative to whites. As with earlier analyses, mothers who saw more years of

spousal/partner income in the household, had higher levels of education, and had only one or two young children show higher family and individual incomes, household income to poverty ratios, odds of receiving job-based income, hourly compensation, and number of jobs held during the study period.

Focusing once more only on mothers who enrolled in TANF at some point between 2005 and 2009, regressions for hypothesis  $H2(a)$  investigate whether those who entered the program in states with strict policies might have lower socioeconomic outcomes compared to those in lenient states. In addition to a lack of significance for all but one coefficient, the relationships between the presence of strict TANF policies and socioeconomic outcomes are mixed. Policy strictness is consistently associated (i.e. for both 2009 and 2011) with a reduction in the odds of receiving job-based income and health coverage but an increase in children's health coverage and holding a higher number of jobs. Also, most of the linear outcome estimates change signs between 2009 and 2011.

Thus, the decision by states to adopt policies like a family cap on benefits for additional children born during TANF enrollment or higher than average work activity requirements does not significantly influence the socioeconomic condition of mothers one way or another though, again, we must exercise some caution in the interpretation due to the small sample sizes. Nonetheless, if the impetus behind these strict policies is to further incentivize wage labor and instill a disciplined work ethic in the hopes of producing more employable mothers – mothers better attached to the labor market – there appears to be no significant pay-off to either states or mothers in the form of an improved socioeconomic condition compared with the implementation of more lenient policies.

If anything, the results reveal that policy strictness only contributes to the socioeconomic insecurity of low-income mothers by significantly reducing their odds of being covered by health insurance. This is consistent with previous studies that find stricter TANF policies fail to boost, or at least provide no discernible impact on, mothers' employment in "good" jobs (e.g., the kind that provides health care benefits; Lim, Coulton, and Lalich 2009), the likelihood of living above the poverty line post-TANF (Cheng 2007), or securing employment, in general, after leaving the program (Irving 2008).

Another unique aspect of this study is its attempt to connect two areas of TANF-related scholarship. Previous authors have asked what kinds of impacts state policies have on the socioeconomic fortunes of TANF recipients and others have examined racial and ethnic disparities in such outcomes. What is lacking in the literature, however, are studies making a concerted effort to assess socioeconomic outcomes among Hispanic, white, and black mothers living in strict states. The last hypothesis was designed to address this need by proposing that (as suggested by the two aforementioned areas of literature), among TANF recipients in strict states, black and Hispanic women will have lower post-Great Recession socioeconomic conditions than white women.

Interpretation of  $H2(b)$  coefficients, however, deserve added caution because of very low effective  $N$ s which forced the regression models to forego the inclusion of control variables. Unsurprisingly, these reduced models – in which race/ethnicity is the only explanatory variable – produced poor model fit statistics and just one statistically significant beta coefficient. There is no support for  $H2(b)$  which leads to the tentative conclusion that black and Hispanic mothers who receive TANF assistance in strict states do not have substantively different socioeconomic conditions compared to white mothers in these states.

While a larger sample  $N$  might reveal significance and allow for the inclusion of important control variables such as educational attainment or the number of young children present in the household, the current regressions still allow for a tentative assessment of the direction of these relationships. The picture is very mixed, however, as many of the coefficients change directions between 2009 and 2011. Those relationships that do not change direction suggest that black mothers have lower family incomes and household income to poverty ratios (as with other results presented above) compared to whites, but higher individual incomes, hourly compensation, hours worked per week, odds of health coverage, and odds of working in a higher number of jobs. Hispanic mothers also show consistent advantages relative to whites in family income and hourly compensation but negative associations with individual income and health coverage in both years.

Finally, a descriptive analysis of employed mothers' type of industry revealed findings consistent with earlier research. Namely, regardless of TANF participation or race and ethnicity, the majority of low-income mothers are employed in retail and various service sector jobs. Education, health, and social services was by far the most commonly reported industry among each group of mothers, followed by entertainment, accommodations, and food service, and retail. While this study did not take up the task of examining how employment in these industries might affect mothers' socioeconomic condition, these descriptive statistics nonetheless give a clear idea of what types of labor are available to the mothers included in this study.

Judging from the literature, we can infer that employment in these sectors makes socioeconomic stability, much less advancement, extremely difficult given the dual mandate felt by mothers to be "good workers" and "good mothers" simultaneously (Weigt 2006). While mothers across the socioeconomic spectrum may feel these competing demands, what is unique

to mothers living near or below the poverty line is the *type* of labor market they typically encounter and its impact on the ability of mothers to provide day-to-day stability in the duties that come with childcare. Occupations in the low-wage service and retail sectors (e.g. stocking shelves at Wal-Mart or other “big box” retailers, working in fast food, or being a cashier) are often described as the epitome of “flexible labor arrangements.”

This is a reference to the broader structure of employer-employee relations in which job tasks are deskilled to the point that worker talent is easily replaced, workers’ hours are kept below the level at which employer-provided benefits kick in, schedules are unpredictable, wages are at or near the poverty threshold, and opportunities for upward mobility are scarce. It is within this unforgiving labor market in which women must serve as income-providers, especially when compelled by the workfare mandates of TANF. As a further impediment to upward socioeconomic mobility, states generally make it very difficult for mothers to pursue further education while in TANF, opting instead to promote “rapid attachment” to the labor market and job readiness (London 2005, 2006).

Even in the case of TANF recipients without a high school diploma or G.E.D., the dominant message sent to mothers remains focused on finding paid employment as soon as possible and getting out of the TANF program quickly (Collins and Mayer 2010; London 2005). This work-first stance toward TANF recipients leads to the type of situation faced by mothers interviewed for Kissane’s (2008) study of participants in TANF-sponsored job training programs; one mother observed: “I have no G.E.D. I have no, you know, diploma. So common sense will tell these people, this is holding me back. Put me in classes! They don’t want to put me in classes [toward the completion of a] G.E.D.” (347).



Given that nearly one-third of mothers in the current study who received TANF (28.7 percent) do not have a high school diploma or G.E.D., the opportunity to obtain even this basic level of credentialing would be a significant help in the chances of improving mothers' socioeconomic condition. As the results shown above point out, even though mothers with or without a high school diploma had much lower socioeconomic outcome measures compared to those with a bachelor's degree or higher, the gap between those with no degree at all and the highest category of education was much larger than the gap between those with a high school diploma or G.E.D. and the highest category.

### **Limitations of the Study**

Although I am confident the current study was able to provide a thorough and accurate assessment of low-income mothers' socioeconomic condition following the Great Recession, there are some opportunities for improvement of the study design. Most importantly, it would greatly improve the operationalization of the TANF recipients/non-recipients conceptualization if it could be determined whether or not the mothers who did *not* enroll in TANF between 2005 and 2009 tried to enroll but were either ruled ineligible or diverted away from the application process. It has long been known that TANF has very low take-up rates and that a number of barriers (e.g. lack of knowledge or eligibility criteria) stand in the way of enrollment among families in need of assistance (Wu and Eamon 2010b).

Less commonly discussed in the literature, however, are the diversionary programs used by states to prevent families from enrolling in TANF in the first place. As a response to the federal pressure on states to continually reduce TANF caseloads, state administrators have begun offering applicants one-time lump sum cash payments, requiring pre-enrollment job search activities, and directing applicants to other types of assistance programs, among other tactics

(Gonzales, Hudson, and Acker 2007; Ridzi and London 2006; Rosenberg et al. 2008). These diversion efforts, in addition to tightening eligibility requirements, have largely been successful and explain much of the decline in post-PRWORA welfare caseloads.

In their study of caseload trends before and after the 1996 welfare reforms Acs, Phillips, and Nelson (2005) find that “[o]verall, the decline in welfare entry rates between the pre- and post-reform cohorts is larger than the decline in ineligibility rates. In addition, between the mid- and post-reform cohorts, the period of TANF implementation, entry rates fell while ineligibility rates remained stable. This indicates that [...] low-income single mothers became less likely to enter welfare but were no more likely to enjoy improved socioeconomic circumstances” (1077). Thus, while some of the mothers included as “non-entrants” in the current study are likely to have tried to enter TANF but were successfully diverted from the program by caseworkers, the NLSY-97 data do not allow for the identification of such cases. In-depth research on mothers (and their children) who were diverted is sorely lacking, although the available studies suggest that the only significant characteristics separating non-entrant mothers from entrants are higher levels of educational attainment and older age among non-entrants (Moffitt et al. 2003). Also, Gonzales, Hudson, and Acker (2007) find that women who were diverted tend to have similar poverty rates compared to those who successfully enrolled in TANF over the course of a 21-month period.

It would also be desirable to have program participation data on NLSY-97 sample mothers for a longer stretch of time. Citing cutbacks in funding, the administrators of the NLSY-97 decided to remove survey questions related to program participation making September 2009 the last month in which data for TANF, SNAP, and other government program participation is available. Because of this gap in TANF enrollment data, the results for 2011 socioeconomic

outcome measures presented above rely on the assumption that mothers who did not receive TANF between 2005 and September 2009 remained un-enrolled through 2011. Extending the enrollment data past 2009 would provide further confidence in the parameter estimates for 2011 results comparing non-entrant mothers with entrants.

Also, because of small sample sizes in the analyses related to TANF recipients and those recipients living in strict policy environments, regression interpretations were somewhat compromised. Having access to data containing a larger sample of low-income mothers who received TANF would allow for more detailed model specifications – recall the models for *H2(b)* were reduced to bivariate regressions with race/ethnicity being the lone explanatory variable – and greatly improve confidence regarding the interpretation of parameter estimates.

### **Policy Implications**

Based on the findings presented above there are obvious inferences to be made about improvements in current TANF policy. Again, the results shown in *H1(a)* suggest that participation in TANF is significantly associated with a decline in mothers' family income, individual income, poverty rates, wages, and the odds of receiving job-based income even after controlling for relevant characteristics like educational attainment. It should be considered a significant failure of public policy when a safety net program for the nation's poor is correlated with the worsening of its participants' socioeconomic condition. While there may be unobserved differences between the sample populations of mothers who received TANF and those who did not, the data suggests that TANF receipt acts as a significant drag on the socioeconomic success of low-income women and their families.

Coming to terms with the inability of TANF to foster even modest socioeconomic success ultimately requires an understanding of the program's relationship to intersections of

gender, race, class, the formal labor market, and social reproductive labor. As a reflection of broader trends in the gendered division of labor, it is no accident that the overwhelming majority of TANF recipients are women and that 73 percent of recipients are single mothers (Falk 2012). Under the logic of welfare reform, women and their children have two paths out of poverty available to them: marriage or full-time paid labor.

As one of the more underreported aspects of TANF policy, one way in which states are encouraged to reduce caseloads is by promoting marriage among single mothers in the hopes of reviving the male-breadwinning nuclear family. This model, however, is largely a white, middle-class construct that presupposes the ability and desire of women to stay in the home as a source of the unpaid domestic labor which is absolutely necessary for social reproduction (Davis 1981; Morgen, Acker, and Weigt 2010). Working class and poor women – whether black, white, or Hispanic – have, in fact, long been involved in paid work outside the home out of economic necessity to their families (Glenn 2002).

What the authors of TANF fail to realize is that the other prescribed path out of poverty – full-time paid labor – is not only based on the false assumption that poor women abstain from work outside the home, but that this option too is based on the nuclear family model. In this case, the importance of what Joan Acker (2006) has described as the “unencumbered worker” is spotlighted by TANF policy. The full-time paid labor path assumes women have someone else in the home to serve as a reliable source of (free) reproductive labor, particularly in the form of childcare. In the case of single mothers, TANF mandates entry into the labor force while forgetting that women have children who need attentive care.

Thus, with low-wage service sector employers having “abrogated their responsibilities, offering no sick leave, no maternity leave, and no health insurance, while imposing insecure

[and] inflexible working conditions” (Collins and Mayer 2010: 112), my first policy recommendation would be the provision of safe and reliable childcare for children, especially those too young to be enrolled in school during the bulk of each weekday. If single mothers choose to support their families through paid labor – as they have every right – then access to quality daycare must be high on the list of policy improvements. Currently, many states offer vouchers to cover part of the cost of private daycare (such as Oregon’s Employment Related Day Care program) but the only affordable options available to mothers living in low-income neighborhoods are often of substandard quality and such programs do not always apply to mothers who are trying to complete a degree or are in a job-training program. Caseworkers may also use the revocation of such subsidies as sanctions aimed at “non-compliant” mothers. Day care subsidies need to be greatly increased and provided to TANF participants regardless of mothers’ employment or compliance status. This would free low-income mothers in TANF from the burden of relying on patchwork strategies of childcare such as family members or neighbors, which are often unreliable (Litt et al. 2000).

Also, TANF’s insistence upon rapid labor market attachment among its recipients supersedes support for mothers’ desire to gain additional education, whether post-secondary or completing a G.E.D. In order to receive the full federal block grant, states cannot have more than 30 percent of its caseload enrolled in educational classes or activities and *all* recipients must be involved in “work activities” after 12 months of TANF participation (Mazzeo, Rab, and Eachus 2003). This only serves to contribute toward socioeconomic instability and essentially closes off a crucial avenue of upward mobility for low-income mothers (though not all mothers as I discuss later on).

Discouraging educational attainment may not necessarily go against the stated goals of the Personal Responsibility and Work Opportunity Reconciliation Act – after all, there is no mention of a desire to reduce poverty through TANF; PRWORA authors instead focus on the elimination of “dependency” on government assistance and removing as many people as possible from state caseloads – but it does contribute to cycling in and out of TANF as well as the need for states to maintain robust diversion practices. The few TANF recipients who have managed to earn a post-secondary degree show dramatically lower poverty rates, higher incomes, and job-provided benefits after leaving TANF (Butler, Deprez, and Smith 2004; London 2006). State and federal TANF administrators would be wise to encourage mothers to seek post-secondary education – or, at the very least, to complete a G.E.D. – as a kind of win-win for both state efforts at caseload reduction and mothers’ chances at upward socioeconomic mobility. This could be done, first and foremost, by eliminating the cap on TANF participants’ schooling and allowing states to count those enrolled in school (whether secondary, vocational, or post-secondary classes) toward the percentage of recipients engaged in “work activities.” Actively discouraging mothers from pursuing educational opportunities will only serve to strengthen their ties to the low-wage service and retail jobs that offer no real chance at economic advancement and ultimately increase the likelihood of re-enrolling in TANF.

Although there is scant evidence in the current study of significant racial and ethnic differences in socioeconomic outcomes among TANF recipients, a large amount of scholarship suggests policy improvements are still needed with regards to the treatment of black and Hispanic women enrolled in the program. As I discussed in Chapter 2, one of the most alarming trends uncovered through qualitative research with TANF recipients is the favorable treatment of white mothers by frontline caseworkers (Bonds 2006; Gooden 1998, 2000, 2004). At nearly

every stage of TANF participation black women, in particular, often encounter racist practices from administrators and caseworkers.

Susan T. Gooden (2004), for example has documented that black and Hispanic applicants to TANF are systematically offered smaller diversionary lump-sum payments than whites. White mothers were also offered discretionary caseworker assistance in the form of car repair subsidies or help getting a driver's license. In terms of caseworkers' perceptions of minority clients' behavior, black and Hispanic women are significantly more likely to be deemed "non-compliant" and sanctioned as a result (Keiser, Mueser, and Choi 2004; Monnat 2010). Arguably the most damaging aspect of caseworker treatment, however, is the disproportionate encouragement and assistance given to white women who wish to pursue education while in TANF. Minority women consistently report that their caseworkers either never mentioned available schooling opportunities or that caseworkers openly dissuaded them from enrolling in classes and insisted on prioritizing immediate entry into the work force over education (Bonds 2006; Davis et al. 2003; Gooden 1998, 2004). With these practices, TANF caseworkers perpetuate long-held views that white women who do not conform to middle-class norms are ultimately worthy of redemption and a chance at upward mobility while women of color are not (Glenn 2002; Gordon 2001; Schram 2005).

The frequency with which caseworkers reserve scarce opportunities of educational attainment – and thus, increased chances for upward mobility – for white mothers while directing minorities back into dead-end jobs is something that needs immediate correction by the federal government and state TANF administrations. Individual caseworkers, but also states themselves, should be punished for such discriminatory behavior. The federal Department of Health and Human Services should withhold TANF block grant funding from states if they are found guilty

of such behavior by their caseworkers. This could be accomplished through an effort at generating feedback from TANF mothers regarding their individual experiences with caseworkers, but also through a broader data gathering effort which would convey how often states allowed mothers of different racial and ethnic groups to enroll in classes.

Finally, state TANF policy strictness was also found to have almost no significant impact on recipients' socioeconomic condition. Nor did black and Hispanic mothers who received TANF in strict states suffer any noticeable penalty in the study's outcome variables relative to whites. However, this does not mean policy strictness is an issue to be ignored. Even if there is no consistently positive or negative influence from strict policies the burden of proof, so to speak, should be placed on states' shoulders if they wish to implement unnecessarily strict policies. Sixteen states were categorized as either somewhat strict or strict in 2009 which means their TANF policies include rules like a lifetime limit on receipt shorter than the federal five-year limit, a family cap on benefits for mothers who have children while in TANF, and the use of a full-family sanction, among other policies. If policies such as these cannot be shown to positively impact the socioeconomic outcomes of mothers and families then there is no need to impose added hassle and stress or withhold precious financial assistance to families in need.

The same can be said for the federal TANF guidelines that limit benefit receipt to a 60-month lifetime limit and mandate that states sanction mothers who do not meet tedious bureaucratic requirements. For all of the faults associated with the nation's previous welfare program, Aid to Families with Dependent Children, it was a solely means-tested program with no limit placed on the amount of time a family could be enrolled. Provided that families met eligibility requirements, AFDC benefits continued as long as was necessary, assistance was not contingent upon meeting work activity requirements, and states were not required to punish



recipients for non-compliance. What has been termed “neoliberal paternalism” or the “criminalization of poverty” can be seen in these mandates which were crafted using the penal discourse of “compliance” and “sanctioning” but also racially-coded nods to “personal responsibility,” “dependence,” and the notion of a “family cap” in benefits (Omi and Winant 1994; Soss, Fording, and Schram 2011; Wacquant 2001, 2010). Restoring the exclusively means-tested status to welfare assistance (i.e. no workfare strings attached), eliminating the use of sanctions, and not requiring single mothers to prioritize unrewarding work over the care of their children would go a long way in restoring the full “economic citizenship” of low-income mothers and their families.

### **Directions for Future Research**

There are many opportunities for scholars to add to the existing research on TANF, poverty, and the intersections of race, class, and gender. As the Hispanic population continues to grow in the so-called new immigrant destinations of the South and Midwest, it will be interesting to see how TANF policymakers in these states respond to the increasing presence of this minority group. Will there be a shift one way or the other in the strictness of policies in these states? If so, what are the implications for low-income Hispanic mothers’ socioeconomic outcomes?

The availability of quality data is crucial for research addressing such broad topics. Often with TANF research, the author must decide between nationally representative data found through large-scale surveys such as the NLSY-97, the Survey of Income and Program Participation, or the Panel Study on Income Dynamics versus more in-depth state administrative data on TANF participants. While the NLSY-97 offers many advantages, state-gathered data on

TANF participants provides much more detailed information on recipients and even applicants regarding various aspects of TANF participation.

There is also an ongoing opportunity to assess the continued impact of the Great Recession on low-income families and the related trends in TANF enrollment. An examination of state caseload enrollments relative to TANF eligibility rates over the next few years could provide valuable insight into post-Recession dynamics of poverty in the United States. How long will the current “jobless recovery” continue and what types of survival strategies, TANF included, will poor families utilize to make ends meet? Further, considering that roughly half of all current TANF cases are child-only cases, what are the lasting impacts, if any, on the children of TANF recipients from this Great Recession period?

Finally, as qualitative research on low-income families and TANF has consistently revealed, one of the main contributors to a spell of poverty is when a family member falls ill or has a chronic health issue. Interestingly, the current study found an advantage for TANF participants’ odds of having health coverage. For those mothers who did not enroll in TANF, however, health insurance or Medicaid coverage can be elusive but is nonetheless important in providing socioeconomic stability. With the passage of the Affordable Care Act (ACA) in 2010 states are now encouraged to expand Medicaid in an effort to cover the very families who can least afford health care. Yet, many states are still resisting implementation of the ACA by refusing to accept federal funds directed at the Medicaid expansion. This situation has introduced the need for research examining the dynamics of poverty, TANF, and states’ willingness to implement key provisions of the ACA.

## Conclusion

This study is an attempt to gauge the impact of TANF participation on the post-Great Recession socioeconomic conditions of low-income black, Hispanic, and white mothers. Further, the study was designed to test the effects of variations in state TANF policies, comparing the outcomes of mothers receiving TANF in lenient policy environments with those in strict states. Only the first of five hypotheses is supported – in other words, enrolling in TANF is significantly associated with a decline in family income, individual income, household income to poverty ratios, and the odds of having received job-based income. Low-income mothers' and children's odds of being covered by health insurance, however, were positively influenced by TANF enrollment between 2005 and 2009.

Given the literature, it is somewhat surprising that no consistent differences in the socioeconomic conditions of white and minority mothers – regardless of TANF participation – came through in the regression analyses. Although coefficient signs made some general inferences about the direction of relationships between race/ethnicity and socioeconomic outcomes possible, the results were very mixed and generated almost no support for hypotheses *H1(b)* through *H2(b)*. Further, state TANF policy strictness does not appear to have a significant influence on mothers' socioeconomic outcomes either positively or negatively. Descriptive analyses also revealed that employment in retail, education, health, and social service, and entertainment, accommodations, and food service were the most commonly reported industries among all employed mothers in the sample, regardless of TANF participation or race and ethnicity.

One of the aspects of this study that presents a unique contribution to the literature is its ability to test for differences in the socioeconomic condition of black, Hispanic, and white

women who received TANF in strict states only. This interaction of TANF policy and race/ethnicity failed to produce significant estimates and does not support the hypothesis that white women enrolled in TANF in strict states somehow exhibit a relative advantage to black and Hispanic women along various socioeconomic outcome measures. However, the sample sizes obtained for this particular analysis were very low and may have obscured otherwise significant relationships between race/ethnicity and policy strictness. Future research could address this methodological problem by gathering data from a larger sample of low-income mothers receiving TANF in strict states than was available through the NLSY-97.

These results prompted many policy recommendations to improve upon the current structure of TANF and its ability to provide low-income families with meaningful economic and material support. First, enrollment in TANF should include access to quality and reliable daycare if mothers are expected to be full-time laborers outside the home. Too often, mothers must rely on extended family, friends, and neighbors to look after young children, which is not a viable long-term answer to many mothers' daycare needs. Second, opportunities for increasing educational attainment among TANF recipients need to be increased and states should not be incentivized to thwart low-income mothers' efforts at completing secondary or postsecondary schooling. Third, the discriminatory practices of TANF caseworkers aimed at black and Hispanic mothers needs to be eliminated. Punishments should be devised – possibly in the form of withheld federal funds – for state TANF administrators and caseworkers who systematically deny minorities the resources and opportunities needed to further their socioeconomic security.

Finally, neither the federal government nor states should be allowed to impose unnecessarily strict rules on TANF recipients. Unless policies such as the family cap, a 60-month lifetime limit on benefits, and punitive sanctioning can be proven to improve the

socioeconomic condition of recipient families – which current research suggests otherwise – then the purely means-tested status of welfare assistance should be reinstated as it was under AFDC. Also, by making assistance contingent upon work in the low-wage service and retail sectors and by requiring states to devise sanctioning procedures, TANF plays an integral role in the development of neoliberal paternalism and the criminalization of poverty, neither of which bodes well for improving the socioeconomic condition of low-income mothers or their children.

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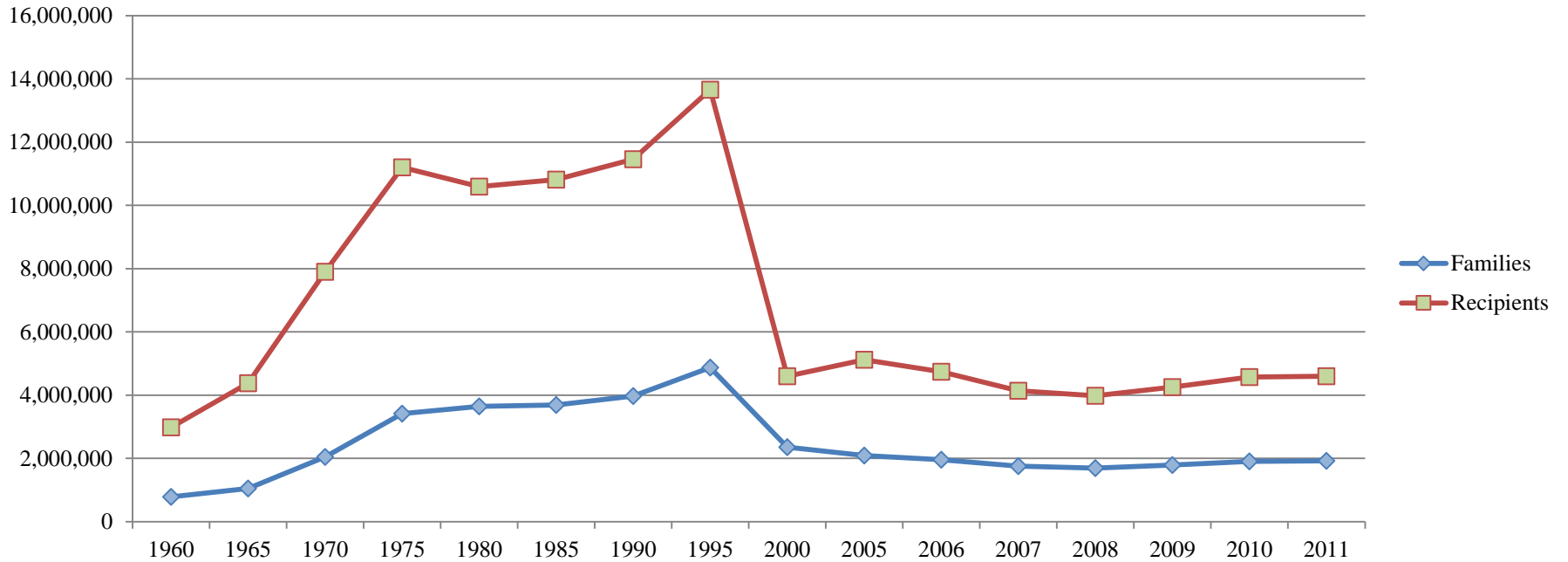
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## Appendix: Figures and Tables

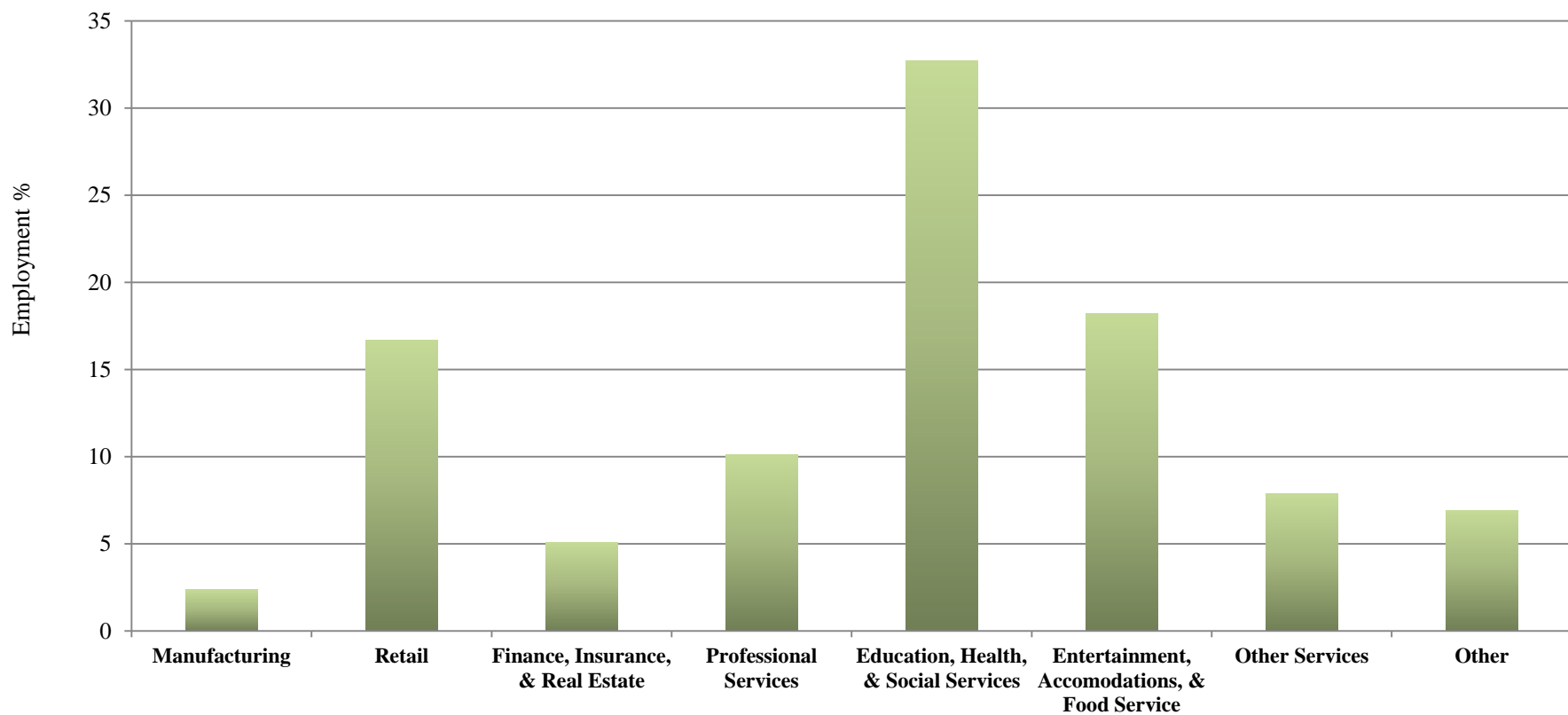
**Figure 1.** Average monthly AFDC/TANF caseload by year, 1960-2011



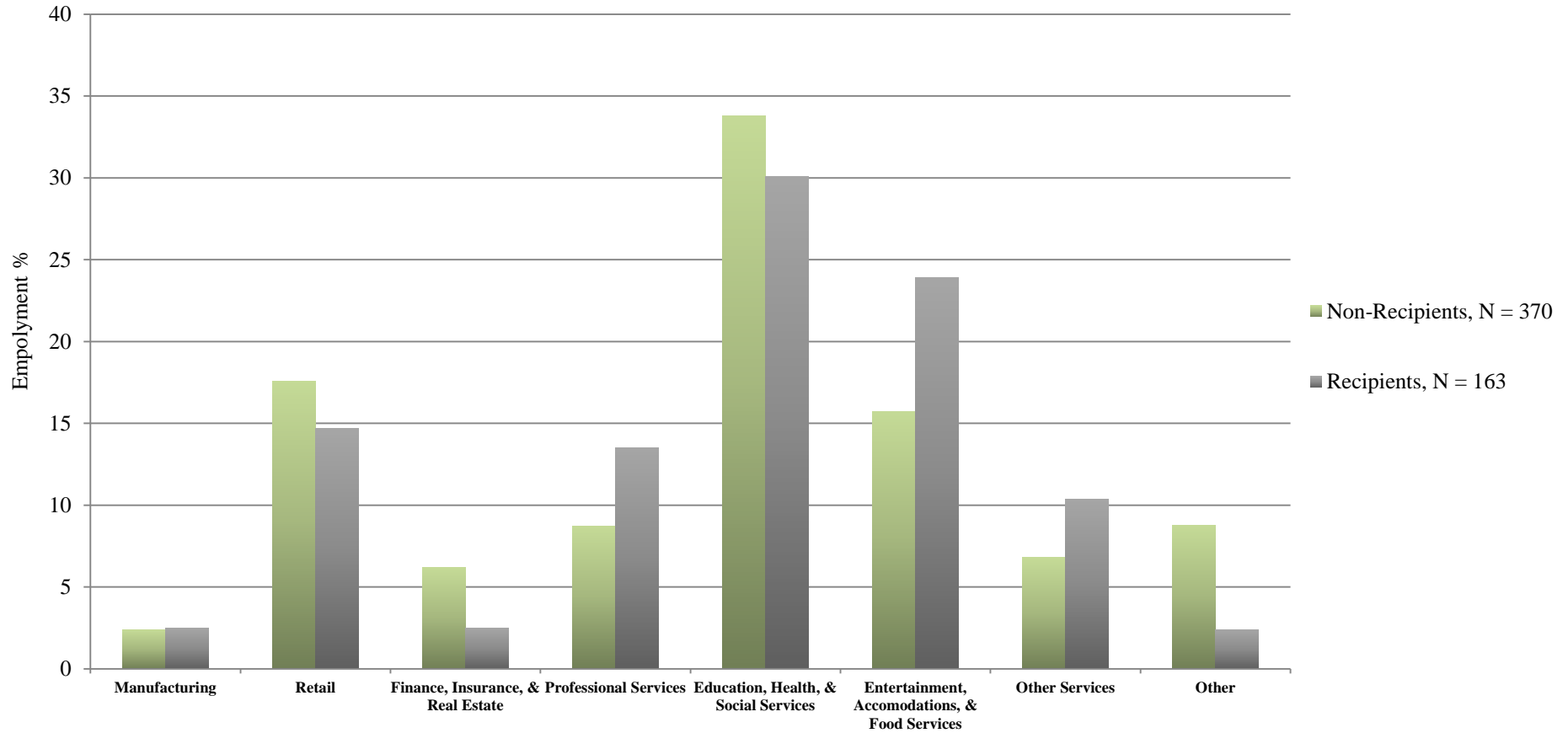
*Notes:* Caseload values also include recipients of separate state programs (SSPs). SSPs are state-run assistance programs funded through their required Maintenance-of-Effort (MOE) funds (because TANF is structured as a matching block grant to the states, states must spend a certain amount of their own money in the form of MOE in order to receive their full allotment of the TANF block grant). Although the point of these SSPs is to allow states even more flexibility in how they wish to provide assistance to low-income families, SSPs must be in line with the stated goals of TANF.

*Source:* U.S. Department of Health and Human Services, TANF: Tenth Report to Congress (2013)

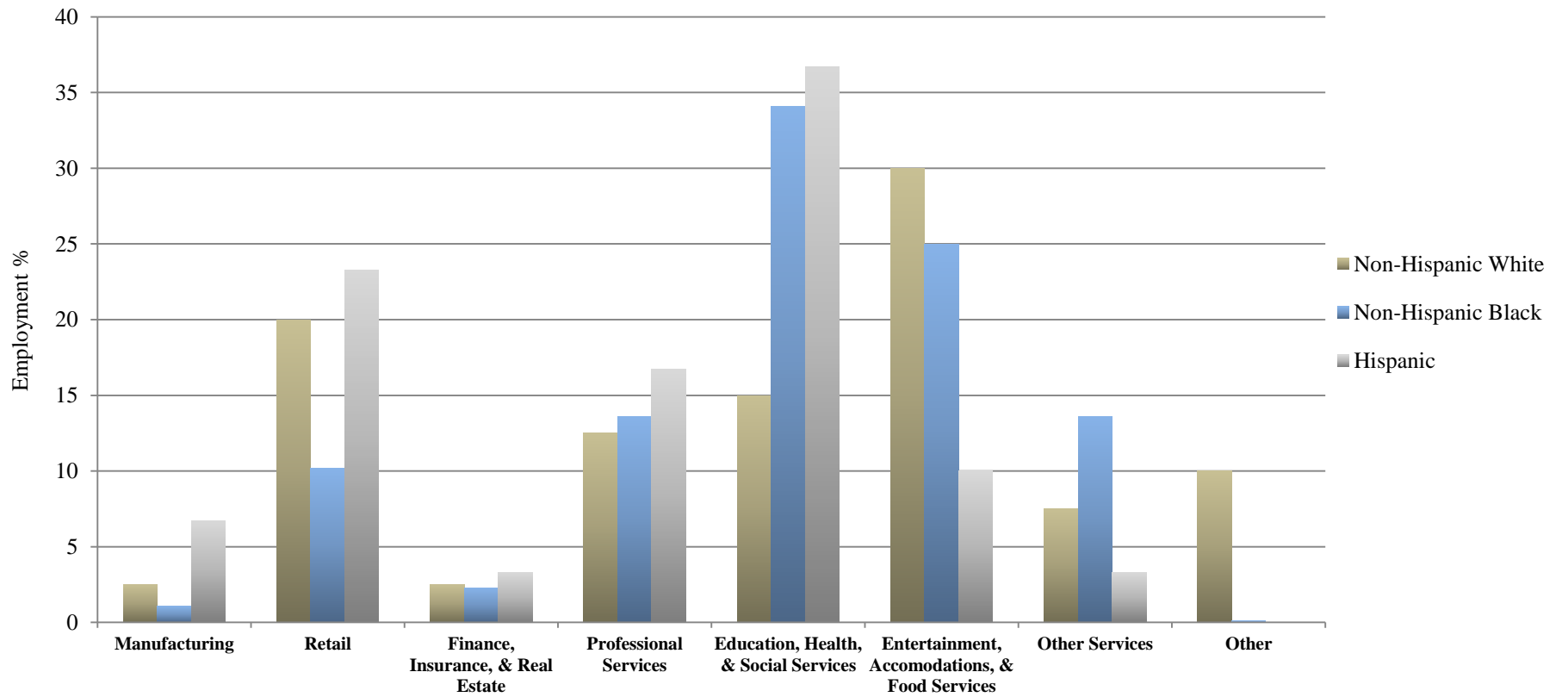
**Figure 2.** 2009 Industry of employment: all employed mothers,  $N = 533$



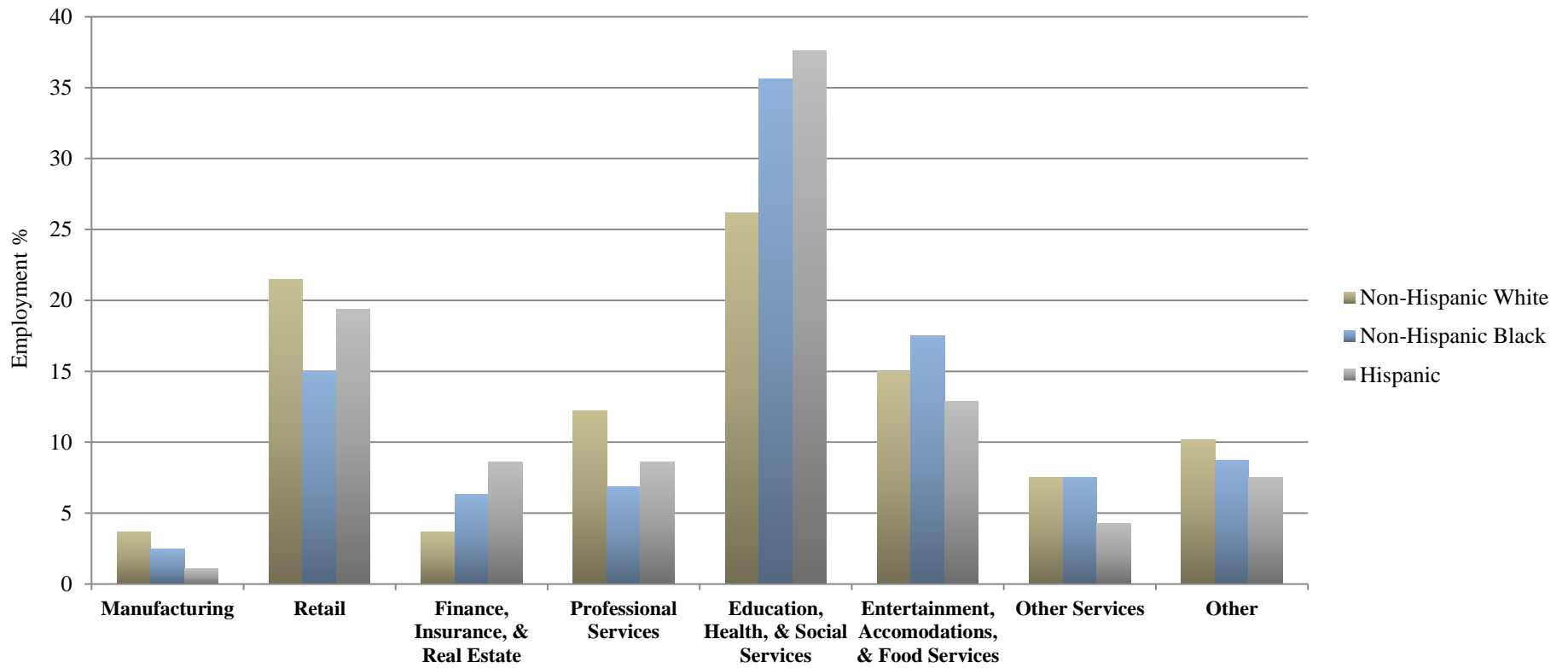
**Figure 3.** 2009 Industry of employment: TANF recipients and non-recipients



**Figure 4.** 2009 Industry of employment: TANF recipients only by race/ethnicity,  $N = 158$



**Figure 5.** 2009 Industry of employment: non-recipients only by race/ethnicity,  $N = 360$





**Table 1.** Descriptive statistics

	N	Mean	Med	SD	Min	Max
<i>Dependent Variables</i>						
Individual Income, 2009	411	16,312.18	14,082.00	13,369.89	0.00	121,993.00
Individual Income, 2011	373	17,707.09	16,000.00	12,009.84	0.00	82,000.00
Family Income, 2009	629	32,452.90	24,000.00	33,559.21	0.00	313,365.00
Family Income, 2011	626	35,689.29	27,942.00	30,331.49	0.00	193,500.00
Household Income-to-Poverty Level Ratio, 2009	627	1.45	1.06	1.66	0.00	19.22
Household Income-to-Poverty Level Ratio, 2011	624	1.53	1.19	1.32	0.00	7.49
Hourly Compensation, 2009	515	11.46	9.83	8.57	0.00	136.16
Hourly Compensation, 2011	466	12.06	10.00	7.82	0.00	83.33
Hours Worked Per Week, 2009	529	31.764	36.00	12.129	0.00	80.00
Hours Worked Per Week, 2011	481	32.356	37.00	11.531	0.00	65.00
Receive Income from Job This Year?, 2009 (1 = Yes)	718	0.681	1.00	0.466	0.00	1.00
Receive Income from Job This Year?, 2011 (1 = Yes)	701	0.598	1.00	0.491	0.00	1.00
Number of Jobs Held This Year, 2009	719	0.993	1.00	0.798	0.00	3.00
Number of Jobs Held This Year, 2011	707	0.864	1.00	0.742	0.00	3.00
Any Health Care Coverage?, 2009 (1 = Yes)	718	0.685	1.00	0.465	0.00	1.00
Any Health Care Coverage?, 2011 (1 = Yes)	702	0.689	1.00	0.463	0.00	1.00
Children Covered by Health Plan?, 2009 (1 = Yes)	492	0.787	1.00	0.410	0.00	1.00
Children Covered by Health Plan?, 2011 (1 = Yes)	484	0.783	1.00	0.413	0.00	1.00
<i>Independent Variables</i>						
Ever participate in TANF, 2005-2009? (1 = Yes)	737	0.337	0.00	0.473	0.00	1.00
Total Months of TANF Participation, 2005-	248	20.387	16.00	15.910	1.00	57.00

2009						
% Non-Hispanic Black	719	47.15	0.00	0.500	0.00	1.00
% Non-Hispanic White	719	28.65	0.00	0.452	0.00	1.00
% Hispanic	719	24.20	0.00	0.429	0.00	1.00
Mean State TANF Typology Score among Program Enrollees, 2009 (Max. = 4)	243	1.847	2.00	1.194	0.00	4.00
Mean State TANF Typology Score among Program Enrollees, 2011 (Max. = 4)	238	1.844	2.00	1.168	0.00	4.00
<i>Controls</i>						
Total Years Spouse/Partner Received Income from a Job, 2005-2011	560	3.668	4.00	2.357	0.00	7.00
Three or More Children Under Age 6?, 2005-2011 (1 = Yes)	737	0.476	0.00	0.500	0.00	1.00
No High School/GED, 2011 (%)	735	20.54	0.00	0.404	0.00	1.00
High School/GED, 2011 (%)	735	67.76	1.00	0.468	0.00	1.00
Junior College/Associate's Degree, 2011 (%)	735	5.99	0.00	0.237	0.00	1.00
Bachelor's or Higher, 2011 (%)	735	5.71	0.00	0.232	0.00	1.00
Northeast, 2005 (%)	735	11.43	0.00	0.318	0.00	1.00
Northcentral, 2005 (%)	735	20.41	0.00	0.403	0.00	1.00
South, 2005 (%)	735	48.44	0.00	0.500	0.00	1.00
West, 2005 (%)	735	19.73	0.00	0.398	0.00	1.00
% in Fair or Poor Health, 2005	736	15.08	0.00	0.358	0.00	1.00
County-Level Median Household Income, 2009	717	47,915.09	46,739.00	10,976.16	21,617.00	102,325.00
County-Level Median Household Income, 2011	699	47,799.02	46,589.00	11,012.25	22,623.00	105,409.00
County-Level Unemployment, 2009 (%)	717	9.611	9.400	2.518	3.700	20.200
County-Level Unemployment, 2011 (%)	699	9.435	9.300	2.470	2.900	18.300

*Notes:* The variable measuring the number of jobs held is top-coded so that the maximum value of '3' = respondent held three or more jobs that year. State TANF typology scores are coded so that the minimum value of '0' = very lenient TANF policies, while the maximum value of '4' = very strict TANF policies.

**Table 2.** Race/Ethnicity frequencies by region, 2009 ( $N = 699$ )

Region	Non-Hispanic White	Non-Hispanic Black	Hispanic	Total
Northeast	21	45	13	79
Midwest	61	66	15	142
South	80	203	65	348
West	38	19	73	130
Total	200	333	166	699

**Table 3.** State TANF typology frequencies by region, 2009 ( $N = 51$ )

Region	Lenient	Somewhat Lenient	Moderate	Somewhat Strict	Strict	Total
Northeast	3	4	2	0	0	9
Midwest	2	3	5	2	0	12
South	1	2	3	7	4	17
West	3	4	3	1	2	13
Total	9	13	13	10	6	51

**Table 4.** TANF recipient sample frequencies by race/ethnicity and region, 2009 ( $N = 236$ )

Region	Non-Hispanic White	Non-Hispanic Black	Hispanic	Total
Northeast	8	26	7	41
Midwest	12	27	4	43
South	21	65	9	95
West	14	17	26	57
Total	55	135	46	236

**Table 5.** TANF recipient sample frequencies by race/ethnicity and state typology, 2009 ( $N = 236$ )

Race/Ethnicity	Lenient	Somewhat Lenient	Moderate	Somewhat Strict	Strict	Total
Hispanic	5	28	4	7	2	46
Non-Hispanic Black	18	32	31	36	18	135
Non-Hispanic White	8	13	18	14	2	55
Total	31	73	53	57	22	236

**Table 6.** Frequencies of 2005-2009 TANF recipients in strict and somewhat strict states by race/ethnicity and region ( $N = 79$ )

Race/Ethnicity	Northeast	Midwest	South	West	Total
Hispanic	0	0	9	0	9
Non-Hispanic Black	0	7	47	0	54
Non-Hispanic White	0	4	12	0	16
Total	0	11	68	0	79

**Table 7a.** *HI(a)* 2009 socioeconomic outcomes, linear regression parameter estimates

	Family income ( $\log_e$ )		Individual income ( $\log_e$ )		Household income to poverty ratio ( $\log_e$ )		Hourly compensation ( $\log_e$ )		Hours worked/week	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
<i>Independent Variables</i>										
TANF enrollment	-0.331** (0.117)		-0.333* (0.142)		-0.338** (0.111)		-0.071 (0.065)		-1.964 (1.541)	
Total months in TANF		-0.007 (0.005)		-0.020** (0.007)		-0.010* (0.005)		-0.001 (0.003)		-0.149* (0.072)
<i>Control Variables</i>										
Black	-0.232 (0.124)	-0.260* (0.125)	0.042 (0.147)	0.053 (0.147)	-0.179 (0.117)	-0.198 (0.118)	-0.018 (0.069)	-0.021 (0.070)	1.770 (1.629)	2.079 (1.634)
Hispanic	-0.090 (0.129)	-0.095 (0.130)	0.112 (0.157)	0.112 (0.156)	-0.112 (0.122)	-0.120 (0.123)	0.065 (0.073)	0.067 (0.073)	1.897 (1.720)	1.971 (1.714)
Years of spousal/partner income	0.147*** (0.022)	0.153*** (0.022)	-0.035 (0.028)	-0.037 (0.028)	0.125*** (0.021)	0.128*** (0.021)	-0.002 (0.013)	-0.001 (0.013)	-0.344 (0.305)	-0.369 (0.303)
3 or more young children	-0.228* (0.101)	-0.236* (0.101)	-0.180 (0.123)	-0.175 (0.122)	-0.507*** (0.096)	-0.513*** (0.097)	-0.042 (0.057)	-0.045 (0.057)	-0.875 (1.343)	-0.934 (1.337)
Less than high school	-0.470* (0.225)	-0.540* (0.226)	-0.800** (0.255)	-0.790** (0.253)	-0.506* (0.213)	-0.557** (0.214)	-0.229 (0.127)	-0.246 (0.126)	-1.223 (2.976)	-0.828 (2.962)
High school	-0.222 (0.197)	-0.270 (0.198)	-0.206 (0.210)	-0.221 (0.208)	-0.185 (0.187)	-0.226 (0.187)	-0.141 (0.108)	-0.151 (0.107)	-1.421 (2.522)	-1.309 (2.508)
2-year degree	-0.346 (0.266)	-0.342 (0.268)	-0.614* (0.288)	-0.612* (0.287)	-0.265 (0.252)	-0.264 (0.254)	-0.033 (0.144)	-0.032 (0.145)	-3.026 (3.400)	-2.963 (3.388)
Northcentral	0.329 (0.189)	0.366 (0.190)	0.000 (0.239)	-0.000 (0.238)	0.383* (0.179)	0.420* (0.180)	0.150 (0.107)	0.163 (0.106)	-0.032 (2.460)	-0.077 (2.437)
South	0.217 (0.177)	0.260 (0.177)	0.044 (0.230)	0.027 (0.229)	0.236 (0.168)	0.273 (0.168)	0.051 (0.100)	0.064 (0.100)	1.346 (2.245)	1.226 (2.223)

West	0.323 (0.195)	0.308 (0.197)	-0.133 (0.247)	-0.161 (0.246)	0.312 (0.185)	0.304 (0.186)	0.055 (0.108)	0.054 (0.109)	1.631 (2.589)	1.545 (1.984)
Below average health	-0.163 (0.149)	-0.156 (0.150)	-0.376 (0.195)	-0.346 (0.195)	-0.184 (0.141)	-0.173 (0.142)	-0.104 (0.085)	-0.103 (0.085)	0.237 (1.987)	0.456 (1.984)
County median household income	0.000** (0.000)	0.000** (0.000)	0.000* (0.000)	0.000** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000* (0.000)	0.000* (0.000)		
County unemployment %									-0.008 (0.026)	-0.009 (0.026)
Intercept	9.123*** (0.369)	9.058*** (0.371)	9.173*** (0.471)	9.162*** (0.467)	3.887*** (0.350)	3.822*** (0.351)	6.736*** (0.214)	6.712*** (0.213)	33.957*** (4.072)	33.982*** (4.051)
Model $R^2$	0.233	0.222	0.140	0.148	0.256	0.246	0.053	0.051	0.019	0.026
$F$ -value	10.13***	9.52***	3.63***	3.86***	11.36***	10.82***	1.59	1.51	0.58	0.79
$N$	447	447	304	304	444	444	381	381	391	391

*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 7b.** *HI(a)* 2009 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year		Health care coverage		Children covered by health care		Number of jobs held in 2009	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
<i>Independent Variables</i>								
TANF enrollment	0.655 (0.227)		1.508 (0.233)		3.062** (0.380)		0.931 (0.199)	
Total months in TANF		0.967*** (0.009)		1.023* (0.011)		1.038* (0.019)		1.014 (0.008)
<i>Control Variables</i>								
Black	1.248 (0.252)	1.406 (0.258)	1.523 (0.250)	1.458 (0.251)	1.410 (0.363)	1.339 (0.360)	0.949 (0.214)	0.885 (0.215)
Hispanic	1.320 (0.277)	1.325 (0.264)	0.790 (0.250)	0.785 (0.250)	0.904 (0.380)	0.905 (0.375)	0.804 (0.224)	0.813 (0.224)
Years of spousal/partner income	0.961 (0.047)	0.942 (0.047)	1.010 (0.045)	1.013 (0.045)	1.034 (0.068)	1.019 (0.067)	1.070 (0.040)	1.088* (0.040)
3 or more young children	0.602* (0.204)	0.596* (0.206)	0.625* (0.199)	0.626* (0.199)	1.165 (0.295)	1.196 (0.293)	1.135 (0.172)	1.115 (0.173)
Less than high school	0.370 (0.513)	0.425 (0.514)	0.812 (0.468)	0.799 (0.467)	0.972 (0.621)	1.049 (0.618)	3.185** (0.390)	2.856** (0.389)
High school	0.632 (0.479)	0.651 (0.478)	0.577 (0.421)	0.584 (0.419)	0.901 (0.532)	0.956 (0.532)	1.585 (0.343)	1.509 (0.342)
2-year degree	0.916 (0.654)	0.911 (0.656)	0.750 (0.569)	0.751 (0.568)	0.365 (0.679)	0.356 (0.677)	1.291 (0.464)	1.304 (0.464)
Northcentral	1.804 (0.379)	1.748 (0.383)	0.893 (0.408)	0.892 (0.408)	1.074 (0.657)	1.007 (0.654)	0.724 (0.321)	0.785 (0.320)
South	1.108 (0.328)	1.027 (0.331)	0.425* (0.364)	0.433* (0.364)	0.255* (0.571)	0.253* (0.571)	0.733 (0.290)	0.804 (0.289)



West	1.327 (0.384)	1.343 (0.389)	0.641 (0.412)	0.641 (0.413)	0.452 (0.636)	0.465 (0.633)	0.593 (0.334)	0.597 (0.335)
Below average health	0.471** (0.275)	0.503* (0.281)	0.715 (0.280)	0.684 (0.282)	2.912 (0.562)	2.705 (0.563)	1.410 (0.249)	1.349 (0.250)
County unemployment %	0.993 (0.004)	0.993 (0.251)	1.001 (0.004)	1.001 (0.004)	1.005 (0.006)	1.006 (0.006)	1.008* (0.003)	1.008* (0.003)
Generalized $R^2$	0.076	0.095	0.068	0.071	0.112	0.100	0.055	0.061
Likelihood ratio $X^2$	41.667***	52.720***	37.148***	38.908***	41.422***	36.698***	29.950**	32.928**
$N$	531	531	531	531	349	349	528	528

*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 8a.** *HI(a)* 2011 socioeconomic outcomes, linear regression parameter estimates

	Family income ( $\log_e$ )		Individual income ( $\log_e$ )		Household income to poverty ratio ( $\log_e$ )		Hourly compensation ( $\log_e$ )		Hours worked/week	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
<i>Independent Variables</i>										
TANF enrollment	-0.213*		-0.015		-0.194		-0.093		-1.251	
	(0.102)		(0.160)		(0.104)		(0.055)		(1.528)	
Total months in TANF		-0.008*		-0.004		-0.009*		-0.003		-0.015
		(0.004)		(0.007)		(0.004)		(0.002)		(0.067)
<i>Control Variables</i>										
Black	-0.154	-0.145	-0.142	-0.133	-0.217*	-0.203	-0.013	-0.015	0.521	0.424
	(0.109)	(0.109)	(0.152)	(0.152)	(0.110)	(0.110)	(0.056)	(0.056)	(1.561)	(1.572)
Hispanic	-0.007	-0.004	0.078	0.079	-0.088	-0.085	0.001	-0.002	1.809	1.788
	(0.113)	(0.114)	(0.167)	(0.167)	(0.114)	(0.114)	(0.061)	(0.061)	(1.676)	(1.678)
Years of spousal/partner income	0.120***	0.119***	0.015	0.012	0.090***	0.088***	0.006	0.007	-0.621*	-0.587*
	(0.020)	(0.020)	(0.029)	(0.029)	(0.020)	(0.020)	(0.010)	(0.010)	(0.292)	(0.290)
3 or more young children	-0.027	-0.030	-0.265*	-0.264*	-0.237**	-0.238**	-0.026	-0.030	-0.490	-0.574
	(0.089)	(0.089)	(0.131)	(0.131)	(0.090)	(0.090)	(0.048)	(0.048)	(1.317)	(1.313)
Less than high school	-0.705***	-0.715***	-0.561*	-0.532*	-0.766***	-0.765***	-0.378***	-0.389***	-4.615	-4.945
	(0.195)	(0.194)	(0.257)	(0.257)	(0.196)	(0.195)	(0.099)	(0.098)	(2.730)	(2.724)
High school	-0.463**	-0.480**	-0.108	-0.100	-0.459**	-0.471**	-0.361***	-0.371***	-2.893	-3.117
	(0.173)	(0.172)	(0.214)	(0.213)	(0.174)	(0.173)	(0.086)	(0.086)	(2.358)	(2.346)
2-year degree	-0.293	-0.295	0.253	0.256	-0.224	-0.227	-0.142	-0.142	-3.102	-3.092
	(0.231)	(0.231)	(0.295)	(0.294)	(0.233)	(0.232)	(0.118)	(0.118)	(3.251)	(3.254)
Northcentral	0.174	0.191	-0.332	-0.348	0.222	0.233	-0.069	-0.067	-3.577	-3.412
	(0.170)	(0.169)	(0.233)	(0.231)	(0.172)	(0.170)	(0.083)	(0.083)	(2.285)	(2.287)
South	0.216	0.227	-0.006	-0.026	0.281	0.284	-0.123	-0.115	-1.461	-1.251
	(0.156)	(0.155)	(0.217)	(0.215)	(0.157)	(0.156)	(0.075)	(0.075)	(2.025)	(2.028)

West	0.281 (0.170)	0.278 (0.170)	-0.263 (0.244)	-0.269 (0.244)	0.280 (0.171)	0.275 (0.171)	-0.080 (0.085)	-0.079 (0.085)	-3.088 (2.377)	-3.034 (2.379)
Below average health	-0.031 (0.127)	-0.012 (0.127)	-0.531** (0.202)	-0.531** (0.202)	-0.071 (0.128)	-0.050 (0.122)	-0.010 (0.073)	-0.009 (0.074)	-1.734 (1.969)	-1.844 (1.978)
County median household income	0.000*** (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000** (0.000)	0.000** (0.000)		
County unemployment %									0.003 (0.027)	0.002 (0.027)
Intercept	9.297*** (0.318)	9.287*** (0.317)	9.496*** (0.452)	9.525*** (0.451)	4.041*** (0.320)	4.039*** (0.319)	7.174*** (0.164)	7.149*** (0.163)	39.170*** (3.840)	39.035*** (3.842)
Model $R^2$	0.228	0.228	0.125	0.127	0.208	0.210	0.126	0.123	0.041	0.040
$F$ -value	9.84***	9.83***	2.84***	2.88***	8.73***	8.85***	3.63***	3.51***	1.13	1.08
$N$	448	448	272	272	447	447	340	340	355	355

*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 8b.** *HI(a)* 2011 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year		Health care coverage		Children covered by health care		Number of jobs held in 2011	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
<i>Independent Variables</i>								
TANF enrollment	0.603*		1.308		1.923		1.379	
	(0.219)		(0.709)		(0.344)		(0.205)	
Total months in TANF		0.977**		1.026*		1.015		1.027**
		(0.009)		(0.012)		(0.013)		(0.008)
<i>Control Variables</i>								
Black	1.014	1.053	1.497	1.407	0.758	0.759	1.066	0.995
	(0.239)	(0.241)	(0.253)	(0.256)	(0.326)	(0.327)	(0.218)	(0.220)
Hispanic	1.025	1.027	0.775	0.774	1.228	1.185	1.041	1.053
	(0.252)	(0.252)	(0.257)	(0.258)	(0.410)	(0.407)	(0.231)	(0.232)
Years of spousal/partner income	0.985	0.982	1.015	1.027	1.034	1.027	1.077	1.092*
	(0.044)	(0.044)	(0.046)	(0.047)	(0.064)	(0.063)	(0.040)	(0.041)
3 or more young children	0.865	0.862	0.802	0.794	1.044	1.068	0.898	0.887
	(0.195)	(0.195)	(0.205)	(0.206)	(0.285)	(0.284)	(0.179)	(0.179)
Less than high school	0.350*	0.352*	0.491	0.455	1.200	1.350	3.636**	3.336**
	(0.485)	(0.484)	(0.497)	(0.495)	(0.583)	(0.582)	(0.395)	(0.394)
High school	0.494	0.477	0.434	0.427	1.057	1.125	3.098**	3.065**
	(0.448)	(0.446)	(0.453)	(0.451)	(0.493)	(0.493)	(0.351)	(0.350)
2-year degree	0.513	0.510	0.520	0.523	1.078	1.077	2.203	2.238
	(0.572)	(0.572)	(0.593)	(0.592)	(0.677)	(0.677)	(0.473)	(0.474)
Northcentral	0.871	0.886	0.641	0.674	0.728	0.670	1.316	1.370
	(0.359)	(0.358)	(0.444)	(0.444)	(0.578)	(0.576)	(0.326)	(0.326)
South	0.824	0.819	0.295**	0.315**	0.238**	0.223**	1.148	1.219
	(0.317)	(0.317)	(0.396)	(0.397)	(0.512)	(0.512)	(0.290)	(0.289)

West	0.864 (0.363)	0.852 (0.365)	0.459 (0.438)	0.468 (0.440)	0.796 (0.638)	0.815 (0.636)	1.397 (0.332)	1.413 (0.334)
Below average health	0.588 (0.274)	0.611 (0.277)	1.102 (0.301)	1.039 (0.305)	1.715 (0.451)	1.722 (0.452)	1.509 (0.257)	1.396 (0.260)
County unemployment %	0.994 (0.004)	0.994 (0.004)	1.004 (0.004)	1.004 (0.004)	1.009 (0.006)	1.009 (0.006)	1.004 (0.004)	1.004 (0.004)
Generalized $R^2$	0.048	0.051	0.064	0.072	0.105	0.099	0.047	0.063
Likelihood ratio $X^2$	25.414*	27.096*	33.836**	38.522***	38.330***	35.992***	25.018*	33.269**
$N$	515	515	516	516	347	347	515	515

*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 9a.** *HI(b)* 2009 socioeconomic outcomes (TANF participants only) linear regression parameter estimates

	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
<i>Independent Variables</i>					
Black	-0.256 (0.272)	0.062 (0.286)	-0.212 (0.253)	0.110 (0.117)	6.570* (2.985)
Hispanic	-0.407 (0.308)	-0.544 (0.311)	-0.514 (0.286)	0.003 (0.125)	6.721* (3.208)
<i>Control Variables</i>					
Total months in TANF	0.004 (0.008)	-0.022* (0.009)	-0.003 (0.008)	0.001 (0.004)	-0.185 (0.095)
Years of spousal/partner income	0.202*** (0.051)	-0.017 (0.055)	0.154** (0.048)	0.015 (0.023)	-0.450 (0.578)
3 or more young children	-0.232 (0.219)	0.012 (0.224)	-0.511* (0.204)	0.042 (0.092)	2.813 (2.352)
High school or less	-0.024 (1.195)	0.259 (0.940)	-0.007 (1.108)	-0.123 (0.456)	4.195 (11.692)
2-year degree	0.400 (1.697)	0.399 (1.148)	0.600 (1.573)	0.488 (0.558)	2.845 (14.306)
Northcentral	0.359 (0.379)	-0.491 (0.399)	0.591 (0.354)	0.171 (0.154)	-6.590 (3.942)
South	0.435 (0.342)	-0.079 (0.386)	0.376 (0.317)	0.098 (0.135)	-4.340 (3.460)
West	0.659 (0.362)	-0.447 (0.383)	0.586 (0.336)	0.192 (0.140)	-1.737 (3.599)
Below average health	-0.027 (0.314)	-0.041 (0.345)	-0.070 (0.232)	-0.192 (0.128)	1.431 (3.180)
County median household income	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)
Intercept	8.096*** (1.322)	8.556*** (1.205)	3.043* (1.227)	5.941*** (0.520)	32.009* (13.317)
Model $R^2$	0.197	0.237	0.203	0.247	0.139
$F$ -value	2.31*	1.63	2.38**	2.56**	1.27
$N$	126	76	125	107	108

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*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast. In each of these models, multicollinearity between the response categories 'no degree' and 'high school or G.E.D.' posed a significant enough problem to warrant a recoding of the educational attainment variable; the recoded values are: 1 = no degree or high school/G.E.D., 2 = associate's degree, and 3 = bachelor's degree or higher.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 9b.** *H1(b)* 2009 socioeconomic outcomes (TANF participants only), logistic regression odds ratios

	Income from job in the past year	Health care coverage	Children covered by health care	Number of jobs held in 2009
<i>Independent Variables</i>				
Black	1.239 (0.445)	1.022 (0.513)	0.637 (0.958)	0.915 (0.390)
Hispanic	1.402 (0.511)	0.753 (0.552)	0.385 (0.947)	0.890 (0.433)
<i>Control Variables</i>				
Total months in TANF	0.962** (0.014)	1.032 (0.017)	1.005 (0.025)	1.027* (0.012)
Years of spousal/partner income	1.035 (0.089)	1.025 (0.099)	0.822 (0.160)	0.991 (0.076)
3 or more young children	0.669 (0.369)	0.335* (0.433)	0.938 (0.669)	1.378 (0.313)
High school diploma/G.E.D. or higher	1.129 (0.395)	0.555 (0.464)	1.906 (0.679)	0.746 (0.345)
Northcentral	2.283 (0.650)	1.524 (0.725)		0.398 (0.535)
South	0.865 (0.505)	1.079 (0.587)		0.930 (0.443)
West	1.017 (0.581)	0.887 (0.665)		0.600 (0.503)
Below average health	0.467 (0.478)	0.232** (0.506)		0.871 (0.422)
County unemployment %	0.996 (0.007)	1.007 (0.008)	0.984 (0.012)	1.007 (0.006)
Generalized $R^2$	0.116	0.123	0.041	0.079
Likelihood ratio $X^2$	19.833*	21.199*	4.989	13.161
<i>N</i>	161	161	118	159

*Notes:* Standard errors in parentheses. Omitted categories are white and Northeast. In each of these logistic models, quasi-complete separation of data posed a significant enough problem to warrant a recoding of the educational attainment variable into a dummy variable where 0 = no degree and 1 = high school diploma/G.E.D. or above. Quasi-complete separation also appeared in when modeling the odds of children being covered by health insurance, which required the health and regional variables to be dropped from this particular regression.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$



**Table 10a.** *HI(b)* 2011 socioeconomic outcomes (TANF participants only), linear regression parameter estimates

	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
<i>Independent Variables</i>					
Black	0.077 (0.252)	-0.338 (0.331)	-0.056 (0.244)	0.102 (0.097)	1.090 (2.808)
Hispanic	-0.051 (0.282)	-0.027 (0.366)	-0.149 (0.273)	-0.099 (0.116)	-3.004 (3.248)
<i>Control Variables</i>					
Total months in TANF	-0.005 (0.007)	-0.010 (0.010)	-0.007 (0.007)	-0.001 (0.003)	-0.031 (0.086)
Years of spousal/partner income	0.192*** (0.048)	0.044 (0.067)	0.152** (0.047)	0.040* (0.019)	-0.934 (0.552)
3 or more young children	0.100 (0.206)	-0.371 (0.270)	-0.091 (0.200)	-0.084 (0.086)	1.560 (2.424)
High school or less	-0.326 (1.129)	-1.459 (0.938)	-0.060 (1.094)	-0.248 (0.365)	-14.399 (10.778)
2-year degree	0.364 (1.377)		0.903 (1.334)		
Northcentral	0.008 (0.345)	-0.273 (0.414)	0.040 (0.337)	0.059 (0.131)	-6.945 (3.779)
South	0.163 (0.286)	-0.076 (0.353)	0.208 (0.278)	-0.093 (0.108)	-6.692* (3.112)
West	0.403 (0.307)	-0.073 (0.432)	0.334 (0.298)	0.035 (0.122)	-2.596 (3.466)
Below average health	0.183 (0.262)	0.010 (0.323)	0.142 (0.254)	-0.065 (0.102)	-2.752 (2.861)
County median household income	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)
Intercept	8.932*** (1.199)	10.195*** (1.173)	3.528** (1.163)	6.728*** (0.427)	50.509*** (12.402)
Model $R^2$	0.201	0.202	0.173	0.180	0.130
$F$ -value	2.52**	1.11	2.07*	1.54	1.14

<i>N</i>	133	60	132	89	96
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*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast. In each of these models, multicollinearity between the response categories 'no degree' and 'high school or G.E.D.' posed a significant enough problem to warrant a recoding of the educational attainment variable; the recoded values are: 1 = no degree or high school/G.E.D., 2 = associate's degree, and 3 = bachelor's degree or higher.' Even with this recoding the models for individual income, hourly compensation, and hours worked/week encountered problems with the educational attainment variable; the 'associate's degree' category was not uniquely estimable, resulting in the blank cells above.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 10b.** *HI(b)* 2011 socioeconomic outcomes (TANF participants only), logistic regression odds ratios

	Income from job in the past year	Health care coverage	Children covered by health care	Number of jobs held in 2011
<i>Independent Variables</i>				
Black	1.405 (0.427)	2.175 (0.502)	0.864 (0.722)	0.838 (0.407)
Hispanic	1.444 (0.491)	0.562 (0.540)	0.744 (0.912)	0.705 (0.464)
<i>Control Variables</i>				
Total months in TANF	0.974* (0.013)	1.032 (0.018)	0.986 (0.020)	1.038** (0.013)
Years of spousal/partner income	0.977 (0.083)	1.067 (0.100)	0.869 (0.135)	1.065 (0.078)
3 or more young children	1.017 (0.356)	0.697 (0.430)	0.738 (0.591)	0.933 (0.337)
High school diploma/G.E.D. or higher	0.860 (0.375)	0.516 (0.466)	1.215 (0.586)	0.908 (0.354)
Northcentral	0.923 (0.589)	0.585 (0.766)	1.671 (1.051)	1.129 (0.557)
South	0.912 (0.483)	0.386 (0.625)	0.495 (0.802)	0.935 (0.455)
West	0.679 (0.529)	0.754 (0.669)	1.861 (0.990)	1.818 (0.501)
Below average health	1.501 (0.468)	0.786 (0.545)	1.820 (0.853)	0.516 (0.438)
County unemployment %	1.002 (0.007)	1.006 (0.008)	0.989 (0.014)	0.991 (0.007)
Generalized $R^2$	0.034	0.120	0.049	0.089
Likelihood ratio $X^2$	5.377	19.940*	5.738	14.423
<i>N</i>	155	156	114	155

*Notes:* Standard errors in parentheses. Omitted categories are white and Northeast. In each of these logistic models, quasi-complete separation of data posed a significant enough problem to warrant a recoding of the educational attainment variable into a dummy variable where 0 = no degree and 1 = high school diploma/G.E.D. or above.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 11a.** *HI(c)* 2009 socioeconomic outcomes, linear regression parameter estimates

	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
<i>Independent Variables</i>					
Black	-0.245 (0.140)	0.075 (0.176)	-0.190 (0.135)	-0.087 (0.086)	1.124 (1.986)
Hispanic	0.042 (0.141)	0.312 (0.184)	0.030 (0.136)	0.099 (0.089)	0.865 (2.047)
<i>Control Variables</i>					
Years of spousal/partner income	0.132*** (0.025)	-0.046 (0.033)	0.112*** (0.024)	-0.007 (0.016)	-0.255 (0.372)
3 or more young children	-0.265* (0.113)	-0.217 (0.147)	-0.567*** (0.109)	-0.090 (0.071)	-2.256 (1.642)
Less than high school	-0.550* (0.232)	-0.765* (0.296)	-0.559* (0.224)	-0.180 (0.149)	-0.773 (3.452)
High school	-0.216 (0.191)	-0.219 (0.222)	-0.173 (0.184)	-0.142 (0.116)	-1.616 (2.672)
2-year degree	-0.383 (0.256)	-0.665* (0.307)	-0.299 (0.246)	-0.090 (0.156)	-3.718 (3.609)
Northcentral	0.209 (0.225)	0.242 (0.306)	0.212 (0.216)	0.054 (0.147)	2.148 (3.240)
South	0.029 (0.213)	0.164 (0.294)	0.078 (0.205)	-0.050 (0.140)	3.630 (3.005)
West	0.085 (0.244)	0.093 (0.329)	0.119 (0.234)	-0.106 (0.156)	3.171 (3.529)
Below average health	-0.247 (0.169)	-0.491* (0.237)	-0.239 (0.163)	-0.075 (0.109)	0.316 (2.527)
County median household income	0.000* (0.000)	0.000* (0.000)	0.000* (0.000)	0.000 (0.000)	-0.033 (0.032)
Intercept	9.517*** (0.413)	9.041*** (0.566)	4.277*** (0.397)	7.128*** (0.270)	35.216*** (4.877)
Model $R^2$	0.202	0.128	0.226	0.036	0.025
$F$ -value	6.49***	2.63**	7.43***	0.82	0.57

<i>N</i>	321	228	319	274	283
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*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 11b.** *HI(c)* 2009 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year	Health care coverage	Children covered by health care	Number of jobs held in 2009
<i>Independent Variables</i>				
Black	1.392 (0.327)	1.692 (0.301)	1.718 (0.411)	0.952 (0.267)
Hispanic	1.230 (0.317)	0.801 (0.289)	1.128 (0.428)	0.823 (0.268)
<i>Control Variables</i>				
Years of spousal/partner income	0.896 (0.060)	1.008 (0.054)	1.071 (0.076)	1.138** (0.049)
3 or more young children	0.534* (0.256)	0.743 (0.234)	1.211 (0.332)	1.107 (0.213)
Less than high school	0.325* (0.548)	0.686 (0.501)	1.265 (0.688)	4.506*** (0.439)
High school	0.722 (0.488)	0.612 (0.427)	0.897 (0.544)	1.693 (0.360)
2-year degree	0.818 (0.667)	0.843 (0.587)	0.355 (0.693)	1.435 (0.487)
Northcentral	1.490 (0.505)	0.593 (0.562)	1.686 (0.693)	0.916 (0.430)
South	1.149 (0.458)	0.260* (0.523)	0.320 (0.598)	0.686 (0.398)
West	1.689 (0.546)	0.446 (0.583)	0.809 (0.712)	0.532 (0.467)
Below average health	0.576 (0.354)	1.137 (0.359)	2.309 (0.585)	1.617 (0.318)
County unemployment %	0.990* (0.005)	1.000 (0.005)	1.010 (0.007)	1.010* (0.004)
Generalized $R^2$	0.085	0.070	0.106	0.089
Likelihood ratio $X^2$	32.885**	26.830**	25.812*	34.509***
<i>N</i>	370	370	231	369

*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 12a.** *HI(c)* 2011 socioeconomic outcomes, linear regression parameter estimates

	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
<i>Independent Variables</i>					
Black	-0.268* (0.119)	-0.089 (0.174)	-0.297* (0.123)	-0.073 (0.068)	-0.135 (1.883)
Hispanic	0.026 (0.119)	0.103 (0.190)	-0.051 (0.124)	0.030 (0.072)	3.209 (1.963)
<i>Control Variables</i>					
Years of spousal/partner income	0.088*** (0.021)	0.003 (0.034)	0.061** (0.022)	-0.007 (0.013)	-0.636 (0.351)
3 or more young children	-0.116 (0.095)	-0.232 (0.155)	-0.339*** (0.099)	-0.024 (0.059)	-0.923 (1.610)
Less than high school	-0.727*** (0.190)	-0.726* (0.293)	-0.794*** (0.198)	-0.379*** (0.111)	-7.212* (3.076)
High school	-0.465** (0.158)	-0.079 (0.219)	-0.464** (0.165)	-0.381*** (0.090)	-2.268 (2.437)
2-year degree	-0.362 (0.212)	0.238 (0.305)	-0.315 (0.220)	-0.161 (0.125)	-3.431 (3.383)
Northcentral	0.119 (0.205)	-0.363 (0.299)	0.176 (0.213)	-0.134 (0.110)	-2.265 (2.965)
South	0.152 (0.196)	-0.035 (0.286)	0.223 (0.204)	-0.158 (0.101)	0.520 (2.668)
West	0.160 (0.215)	-0.327 (0.324)	0.194 (0.224)	-0.116 (0.116)	-2.659 (3.187)
Below average health	-0.122 (0.143)	-0.770** (0.254)	-0.149 (0.149)	0.042 (0.100)	-1.922 (2.660)
County median household income	0.000*** (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000 (0.000)	0.003 (0.032)
Intercept	9.521*** (0.367)	9.830*** (0.562)	4.254*** (0.382)	7.351*** (0.203)	37.902*** (4.530)
Model $R^2$	0.222	0.144	0.204	0.122	0.063
<i>F</i> -value	7.18***	2.78**	6.46***	2.75**	1.38
<i>N</i>	315	212	315	251	259

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*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$



**Table 12b.** *HI(c)* 2011 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year	Health care coverage	Children covered by health care	Number of jobs held in 2011
<i>Independent Variables</i>				
Black	0.949 (0.305)	1.176 (0.305)	0.738 (0.384)	1.064 (0.271)
Hispanic	0.930 (0.304)	0.892 (0.299)	1.391 (0.474)	1.217 (0.274)
<i>Control Variables</i>				
Years of spousal/partner income	0.973 (0.055)	0.997 (0.055)	1.078 (0.074)	1.092 (0.050)
3 or more young children	0.767 (0.242)	0.794 (0.241)	1.146 (0.342)	0.910 (0.218)
Less than high school	0.255* (0.544)	0.366 (0.526)	1.438 (0.674)	3.858** (0.439)
High school	0.446 (0.485)	0.477 (0.458)	1.042 (0.523)	3.675*** (0.365)
2-year degree	0.446 (0.615)	0.501 (0.601)	1.436 (0.731)	2.268 (0.491)
Northcentral	0.669 (0.503)	0.530 (0.610)	0.470 (0.824)	1.496 (0.434)
South	0.664 (0.464)	0.234* (0.567)	0.132** (0.771)	1.290 (0.398)
West	0.781 (0.541)	0.317 (0.625)	0.513 (0.936)	1.363 (0.466)
Below average health	0.384 (0.350)	1.208 (0.378)	1.588 (0.555)	2.457** (0.331)
County unemployment %	0.990* (0.005)	1.004 (0.005)	1.016* (0.007)	1.008 (0.004)
Generalized $R^2$	0.067	0.060	0.139	0.081
Likelihood ratio $X^2$	24.797*	22.161*	34.823***	30.527**
<i>N</i>	360	360	233	360

*Notes:* Standard errors in parentheses. Omitted categories are white, bachelor's degree or higher, and Northeast.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 13a.** *H2(a)* 2009 socioeconomic outcomes, linear regression parameter estimates

<i>Independent Variable</i>	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
Strict TANF policies	-0.212 (0.122)	-0.085 (0.137)	-0.127 (0.116)	0.009 (0.055)	0.593 (1.436)
<i>Control Variables</i>					
Total months in TANF	0.007 (0.008)	-0.019* (0.009)	0.002 (0.008)	0.003 (0.004)	-0.118 (0.095)
Years of spousal/partner income	0.208*** (0.048)	-0.032 (0.050)	0.160*** (0.046)	0.022 (0.021)	-0.637 (0.563)
3 or more young children	-0.112 (0.213)	-0.149 (0.206)	-0.388 (0.202)	0.054 (0.088)	3.376 (2.353)
High school diploma/G.E.D. or higher	0.300 (0.238)	0.619** (0.232)	0.366 (0.224)	0.208* (0.099)	0.303 (2.613)
Northcentral	0.338 (0.366)	-0.455 (0.367)	0.553 (0.348)	0.224 (0.149)	-6.065 (3.990)
South	0.739* (0.368)	0.138 (0.433)	0.594 (0.348)	0.137 (0.155)	-3.990 (4.123)
West	0.463 (0.336)	-0.570 (0.346)	0.405 (0.317)	0.192 (0.131)	-2.639 (3.793)
Below average health	-0.091 (0.298)	0.062 (0.333)	-0.136 (0.281)	-0.231 (0.122)	0.324 (3.187)
County median household income	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)	0.000*** (0.000)	0.058 (0.050)
Intercept	7.911*** (0.722)	8.111*** (0.779)	2.585*** (0.681)	5.540*** (0.313)	28.840*** (6.472)
Model $R^2$	0.212	0.260	0.199	0.250	0.084
<i>F</i> -value	3.26***	2.42*	2.98**	3.33***	0.92
<i>N</i>	132	80	131	111	112

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*Notes:* Standard errors in parentheses. Omitted categories are white and Northeast. In each of these linear models multicollinearity posed a significant enough problem to warrant a recoding of the educational attainment variable into a dummy variable where 0 = no degree and 1 = high school diploma/G.E.D. or above.  
\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 13b.** *H2(a)* 2009 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year	Health care coverage	Children covered by health care	Number of jobs held in 2009
<i>Independent Variable</i>				
Strict TANF policies	0.873 (0.214)	0.476** (0.286)	1.150 (0.283)	1.228 (0.183)
<i>Control Variables</i>				
Total months in TANF	0.965** (0.013)	1.036* (0.016)	1.007 (0.024)	1.025* (0.011)
Years of spousal/partner income	1.017 (0.085)	1.022 (0.097)	0.834 (0.158)	1.012 (0.073)
3 or more young children	0.776 (0.359)	0.322** (0.440)	0.854 (0.667)	1.202 (0.306)
High school diploma/G.E.D. or higher	1.249 (0.394)	0.687 (0.481)	1.792 (0.668)	0.691 (0.344)
Northcentral	1.877 (0.628)	1.985 (0.769)		0.459 (0.525)
South	1.085 (0.594)	3.978 (0.782)		0.676 (0.516)
West	0.999 (0.568)	0.542 (0.678)		0.695 (0.497)
Below average health	0.414 (0.466)	0.200** (0.508)		0.974 (0.413)
County unemployment %	0.997 (0.007)	1.010 (0.008)	0.984 (0.012)	1.006 (0.006)
Generalized $R^2$	0.105	0.167	0.034	0.071
Likelihood ratio $X^2$	18.589*	30.546***	4.249	12.074
<i>N</i>	167	167	123	164

*Notes:* Standard errors in parentheses. Omitted categories are white and Northeast. In each of these logistic models multicollinearity posed a significant enough problem to warrant a recoding of the educational attainment variable into a dummy variable where 0 = no degree and 1 = high school diploma/G.E.D. or above. Quasi-complete separation also appeared in when modeling the odds of children being covered by health insurance, which required the health and regional variables to be dropped from this particular regression.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 14a.** *H2(a)* 2011 socioeconomic outcomes, linear regression parameter estimates

<i>Independent Variable</i>	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
Strict TANF policies	0.018 (0.108)	0.010 (0.170)	0.019 (0.106)	-0.069 (0.045)	2.267 (1.348)
<i>Control Variables</i>					
Total months in TANF	-0.002 (0.007)	-0.004 (0.010)	-0.004 (0.007)	0.001 (0.003)	0.026 (0.086)
Years of spousal/partner income	0.198*** (0.045)	0.086 (0.063)	0.164*** (0.044)	0.037 (0.019)	-1.125 (0.560)
3 or more young children	0.154 (0.198)	-0.261 (0.258)	-0.033 (0.193)	-0.093 (0.078)	0.170 (2.333)
High school diploma/G.E.D. or higher	0.269 (0.210)	0.145 (0.282)	0.312 (0.205)	0.141 (0.086)	-3.520 (2.508)
Northcentral	0.051 (0.329)	-0.398 (0.419)	0.080 (0.322)	0.061 (0.125)	-4.707 (3.762)
South	0.233 (0.311)	-0.010 (0.440)	0.279 (0.303)	0.047 (0.120)	-8.800* (3.635)
West	0.405 (0.292)	0.092 (0.378)	0.353 (0.284)	-0.085 (0.112)	-0.611 (3.496)
Below average health	0.067 (0.251)	-0.010 (0.329)	0.016 (0.244)	-0.043 (0.101)	-4.356 (2.921)
County median household income	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)	0.000* (0.000)	-0.011 (0.048)
Intercept	8.126*** (0.595)	8.222*** (0.762)	2.819*** (0.579)	6.454*** (0.240)	39.189*** (6.444)
Model $R^2$	0.205	0.162	0.179	0.176	0.117
<i>F</i> -value	3.29***	1.01	2.78**	1.76	1.19
<i>N</i>	139	63	138	93	101

*Notes:* Standard errors in parentheses. Omitted categories are white and Northeast. In each of these linear models multicollinearity posed a significant enough problem to warrant a recoding of the educational attainment variable into a dummy variable where 0 = no degree and 1 = high school diploma/G.E.D. or above. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 14b.** *H2(a)* 2011 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year	Health care coverage	Children covered by health care	Number of jobs held in 2011
<i>Independent Variable</i>				
Strict TANF policies	0.898 (0.193)	0.939 (0.221)	1.226 (0.338)	1.178 (0.185)
<i>Control Variables</i>				
Total months in TANF	0.979 (0.012)	1.040* (0.017)	0.989 (0.019)	1.037** (0.012)
Years of spousal/partner income	0.956 (0.080)	0.995 (0.091)	0.868 (0.135)	1.055 (0.076)
3 or more young children	1.143 (0.345)	0.745 (0.402)	0.667 (0.610)	0.891 (0.329)
High school diploma/G.E.D. or higher	0.959 (0.368)	0.600 (0.448)	1.177 (0.587)	0.826 (0.349)
Northcentral	0.840 (0.570)	0.631 (0.705)	1.774 (1.045)	1.111 (0.541)
South	1.071 (0.545)	0.523 (0.673)	0.416 (0.894)	0.752 (0.514)
West	0.681 (0.515)	0.573 (0.645)	2.332 (1.002)	1.913 (0.497)
Below average health	1.274 (0.453)	0.618 (0.502)	1.618 (0.852)	0.589 (0.429)
County unemployment %	1.002 (0.007)	1.005 (0.008)	0.988 (0.014)	0.991 (0.007)
Generalized $R^2$	0.024	0.079	0.051	0.081
Likelihood ratio $X^2$	3.898	13.344	6.194	13.508
<i>N</i>	161	162	118	160

*Notes:* Standard errors in parentheses. Omitted categories are white and Northeast. In each of these logistic models multicollinearity posed a significant enough problem to warrant a recoding of the educational attainment variable into a dummy variable where 0 = no degree and 1 = high school diploma/G.E.D. or above.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 15a.** *H2(b)* 2009 socioeconomic outcomes, linear regression parameter estimates

	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
<i>Independent Variables</i>					
Black	-0.533 (0.463)	0.110 (0.317)	-0.301 (0.427)	0.181 (0.100)	0.381 (4.132)
Hispanic	0.061 (0.649)	-0.670 (0.317)	-0.123 (0.597)	0.102 (0.149)	2.000 (6.176)
Intercept	9.596*** (0.410)	9.165*** (0.275)	4.130*** (0.378)	6.650*** (0.086)	27.333*** (3.566)
Model $R^2$	0.034	0.109	0.009	0.064	0.002
<i>F</i> -value	1.06	2.09	0.28	1.65	0.06
<i>N</i>	64	37	63	51	53

*Notes:* Standard errors in parentheses. White is the omitted category.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 15b.** *H2(b)* 2009 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year	Health care coverage	Number of jobs held in 2009
<i>Independent Variables</i>			
Black	0.809 (0.585)	2.453 (0.596)	1.947 (0.532)
Hispanic	0.750 (0.847)	0.972 (0.839)	1.109 (0.764)
Generalized $R^2$	0.002	0.039	0.025
Likelihood ratio $X^2$	0.163	3.116	1.922
<i>N</i>	79	79	76

*Notes:* Standard errors in parentheses. White is the omitted category.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 16a.** *H2(b)* 2011 socioeconomic outcomes, linear regression parameter estimates

	Family income ( $\log_e$ )	Individual income ( $\log_e$ )	Household income to poverty ratio ( $\log_e$ )	Hourly compensation ( $\log_e$ )	Hours worked/week
<i>Independent Variables</i>					
Black	-0.211 (0.421)	0.201 (0.568)	-0.219 (0.386)	0.207** (0.074)	1.710 (4.336)
Hispanic	0.386 (0.604)	-0.260 (0.744)	0.156 (0.554)	0.098 (0.101)	-1.970 (6.118)
Intercept	9.699*** (0.364)	9.046*** (0.496)	4.326*** (0.334)	6.659*** (0.062)	29.636*** (3.634)
Model $R^2$	0.022	0.026	0.013	0.181	0.013
<i>F</i> -value	0.68	0.30	0.39	4.09*	0.26
<i>N</i>	64	25	64	40	43

*Notes:* Standard errors in parentheses. White is the omitted category.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 16b.** *H2(b)* 2011 socioeconomic outcomes, logistic regression odds ratios

	Income from job in the past year	Health care coverage	Number of jobs held in 2011
<i>Independent Variables</i>			
Black	1.451 (0.560)	2.000 (0.612)	1.509 (0.533)
Hispanic	2.619 (0.876)	0.167 (0.957)	0.724 (0.802)
Generalized $R^2$	0.017	0.118	0.018
Likelihood ratio $X^2$	1.271	9.503**	1.321
<i>N</i>	76	76	74

*Notes:* Standard errors in parentheses. White is the omitted category.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$



**Table 17.** Explanatory variable bivariate correlations

	Race/Ethnicity	TANF Participation, dummy	Region	Below Average Health	State Policy Strictness	3+ Young Children	Highest Degree	TANF Participation, continuous	Spousal Income	County Med. HH Income	County Unemployment
Race/Ethnicity	-										
TANF Participation, dummy	12.576**	-									
Region	127.202***	25.217***	-								
Below Average Health	1.325	2.167	9.015*	-							
State Policy Strictness	20.184***	14.844***	382.226***	0.152	-						
3+ Young Children	10.167**	0.368	6.085	1.956	0.073	-					
Highest Degree	5.415	30.809***	2.029	1.778	0.031	-0.221***	-				
TANF Participation, continuous	12.29***	n/a	6.6***	5.76*	-0.151***	0.028	-0.210***	-			
Spousal Income	46.55***	42.08***	3.09*	1.05	0.620	0.145***	0.087*	-0.287***	-		
County Med. HH Income	5.87**	4.22*	34.32***	1.75	-0.360***	-0.052	-0.041	0.104**	0.004	-	
County Unemployment	1.23	10.94***	24.02***	0.01	-0.168***	0.004	-0.078*	0.084*	-0.098*	n/a	-

Two-tailed Significance Tests: \* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Figures given for correlations between nominal variables (RACEETH1, TANFATALL, REGION, and FAIRPOORDUMMY05) are chi-square values.

Figures given for correlations between ordinal variables (TANFTYPE09, HIGHESTYOUNGSDUMMY, and HIGHESTDEG) and nominal variables are Kruskal-Wallis chi-square values.

Figures given for correlations between ordinal variables are Spearman coefficients.

Figures given for correlations between continuous variables (TOTALTANF, TOTALSPINC, COMEDHHINC09, and COUNEMP09) and nominal variables are one-way ANOVA F-values.

Figures given for correlations between continuous variables and ordinal variables are Spearman coefficients

Figures given for correlations between continuous variables are Pearson coefficients

**Table 18.** Summary of main findings by hypothesis

	Overall level of support	Significant and negative relationships	Significant and positive relationships
<i>Hypothesis H1(a):</i> TANF-eligible mothers who enrolled in TANF after 2005 will differ in their post-Great Recession socioeconomic condition compared to TANF-eligible mothers who did not enroll in TANF after 2005	Strong <sup>a</sup>	<p>TANF participation (binary measure) negatively associated with:</p> <ul style="list-style-type: none"> <li>* 2009 family income (-28.2%, <math>p &lt; .01</math>)</li> <li>* 2009 individual income (-28.3%, <math>p &lt; .05</math>)</li> <li>* 2009 household income-to-poverty ratio (-28.7%, <math>p &lt; .01</math>)</li> </ul> <p>TANF participation (continuous measure) negatively associated with:</p> <ul style="list-style-type: none"> <li>* 2009 individual income (-2.0%, <math>p &lt; .01</math>)</li> <li>* 2009 household income-to-poverty ratio (-1.0%, <math>p &lt; .05</math>)</li> <li>* 2009 hours worked per week (-0.15 hrs., <math>p &lt; .05</math>)</li> <li>* 2009 odds of receiving income from a job (3.3% reduction in odds, <math>p &lt; .001</math>)</li> </ul>	<p>TANF participation (binary measure) positively associated with:</p> <ul style="list-style-type: none"> <li>* 2009 odds of children being covered by health plan (206.2% increase in odds, <math>p &lt; .01</math>)</li> </ul> <p>TANF participation (continuous measure) positively associated with:</p> <ul style="list-style-type: none"> <li>* 2009 odds of having health coverage (2.3% increase in odds, <math>p &lt; .05</math>)</li> <li>* 2009 odds of children being covered by health plan (3.8% increase in odds, <math>p &lt; .05</math>)</li> </ul>



<sup>a</sup> Effects of TANF participation on 2011 socioeconomic outcomes generally were in the same direction as 2009 estimates, only with diminished significance and effect sizes