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Effects of Welfare Participation on Marriage

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Abstract

We investigate the widely held premise that welfare participation causes women to refrain from marriage. Using data from the Fragile Families and Child Wellbeing study ($N = 3,219$), we employ an event history approach to study transitions to marriage among mothers who have had a non-marital birth. We find that welfare participation reduces the likelihood of transitioning to marriage (hazard ratio is .67, $p < .01$), but only while the mother is receiving benefits. Once the mother leaves welfare, past receipt has little effect on marriage. We infer that the negative association between welfare participation and subsequent marriage reflects temporary economic disincentives rather than an erosion of values.

Keywords

marriage; welfare; welfare reform

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, often referred to as welfare reform, ended entitlement to welfare benefits under Aid to Families with Dependent Children (AFDC) and replaced AFDC with Temporary Assistance for Needy Families (TANF) block grants to states. The broad goal of PRWORA was to reduce dependence on government benefits by promoting work, encouraging marriage, and reducing non-marital childbearing. The legislation represented a convergence of dissatisfaction with the welfare system on both sides of the political spectrum. Welfare participation was viewed by many as a cause of dependence rather than a consequence of disadvantage, and part of a “tangle of pathologies” (to borrow from Moynihan, 1965) alongside non-marital childbearing. The new legislation required mothers to work in exchange for cash benefits, imposed lifetime limits, and encouraged marriage—all with the goal of breaking the cycle of dependence and bringing an increasingly marginalized underclass to the mainstream.

In terms of reducing caseloads, welfare reform has been a resounding success; welfare rolls have declined by over 50% since their peak in 1994 and at least one third of the caseload decline can be explained by welfare reform. At the same time, employment rates of low-skilled mothers rose dramatically (Ziliak, 2006), and at least some of that increase was a result of welfare reform (Schoeni & Blank, 2000). The effects on family structure have been less dramatic. A large literature on the effects of welfare reform on marriage and a smaller

one on cohabitation reveal mixed findings, and the literature on non-marital childbearing and female headship indicates slightly negative but inconsistent effects of welfare reform (Blank, 2002; Moffitt, 1998; Grogger & Karoly, 2005; Gennetian & Knox, 2003; Peters, Plotnick, & Jeong, 2003; Ratcliffe, McKernan, & Rosenberg, 2002).

The fact that there were large reductions in welfare caseloads and increases in employment with little accompanying change in marriage and non-marital fertility casts doubt on the existence of a tight pathological knot involving those behaviors—a premise that has been taken as a given by policymakers and researchers alike. According to Blank (2007) in a recent synthesis article on the effects of welfare reform, “...there is continuing grist for the research mill of social scientists in all disciplines to understand both why one set of behaviors [work, earnings] was so responsive [to welfare reform] in the past decade, while other behaviors [marriage, non-marital fertility] have been relatively unchanged (p. 32).”

The two causal mechanisms most commonly assumed to operate are that welfare participation affects beliefs and values, and that there are economic disincentives to marrying while on welfare. In terms of the former, one of the very vocal arguments in favor of welfare reform invoked the value of work (Katz, 2001). The idea was that work builds character and positively affects attitudes toward family, whereas welfare reliance erodes family values (Mead, 1989). In terms of the latter, critics of AFDC pointed to the perverse financial incentives of the program. The logic was that AFDC discouraged marriage because benefits were more easily obtained by one-parent families, making women more likely to have children outside of marriage and remain unmarried. PRWORA eliminated some of the disincentives to marriage, but because the income of a cohabiting partner or spouse is factored into eligibility for TANF, disincentives to co-residing or marrying may still exist—particularly when family structure is difficult to conceal, as in the case of marriage (e.g., see Burstein (2007) for a good discussion of eligibility rules for 2-parent families under AFDC and TANF).

Direct links between welfare participation and marriage have rarely been explored—either under AFDC or TANF. The literature on effects of welfare *policy* on marriage does not directly test or further our understanding of mechanisms behind the assumption that participation in the welfare system discourages the formation of marital unions. Welfare participation could have small effects on marriage that become apparent only over a long period of time (longer than the time frame considered in most policy analyses) or delay marriage temporarily but have little effect on the likelihood of an individual ever marrying.

By design, most participants in TANF and its predecessor AFDC have been unmarried women, and the two behaviors (welfare participation and marriage) are therefore strongly associated. However, it is not clear that welfare causes non-marriage. Marriage could make women ineligible for welfare (reverse causality), or differences in marriage behavior between participants and non-participants could reflect unobserved (relatively stable) cultural or socioeconomic characteristics or (transitory) changes in circumstances. Studies that have used welfare participation as a control variable in analyses focusing on other determinants of marriage have generally found weak or insignificant associations with marriage (e.g., Lichter, McLaughlin, Kephart, & Landry, 1992; Brien, 1997; Smock & Manning, 1997).

As far as we know, only two studies have explicitly investigated the effects of welfare participation on marriage. Both report findings based primarily on AFDC, so their results may not be applicable to TANF participation in the post-PRWORA environment. The first used data from the Panel Study of Income Dynamics to estimate the effects of AFDC participation on being married 10, 15, and 20 years later (Vartanian & McNamara, 2004).

The authors found a negative association between participation in AFDC for more than 2 years and being married 15 years later, a positive association between AFDC participation for less than 2 years and being married 20 years later, and no other significant associations. The inconsistent results, small sample sizes, and possible selection issues make it difficult to draw inferences from the study about the long-term effects of AFDC participation on marriage.

Using 1989 to 2000 data from the Survey of Income and Program Participation, Fitzgerald and Ribar (2004) found sizeable negative effects of current welfare participation (AFDC or TANF) on exits from female headship (the most common pathway being through marriage) in simultaneous models of welfare participation and headship. Their estimated effect sizes are larger than the associations found in other studies, perhaps reflecting their focus on the effect of being on welfare rather than having been on welfare at some point in the recent past.

Overall, a very small literature indicates that there are short-term (contemporaneous) negative effects of welfare participation on marriage, but that the effects in the longer term are unclear. To comprehensively explore the effects of welfare participation on marriage and to understand what underlies those potential effects, it is necessary to consider both short and long-term effects, which requires that the two be modeled simultaneously, or at least consistently (using the same data, control variables, and model specifications). Potential long-term effects are of particular interest to us, as they are more relevant to claims about a self-perpetuating culture of poverty.

We use post-welfare reform data to test the widely held, but as yet empirically unsupported, premise that participation in welfare deters marriage. We employ an event history approach to estimate the effects of TANF participation on the likelihood and timing of marriage among mothers who have had a non-marital birth, a group at high risk for welfare dependence. We estimate effects that are concurrent with TANF receipt and those that persist after spells on TANF have ended, and project effects over the life course. Specifically, we address the following questions: Is TANF participation associated with long term changes in marital behavior? Is TANF participation associated with marriage in the short term (while a participant is receiving benefits)? What are potential mechanisms? What is the role of selection? How large is would the sum of long term and short term effects be over the life course if the effects remained constant over time?

DATA AND MEASURES

The Fragile Families and Child Wellbeing Study follows a cohort of parents and their newborn children in 20 U.S. cities (located in 15 states). Mothers were interviewed in the hospital at the time of their child's birth (baseline) and over the telephone one, three, and five years later. Baseline interviews were conducted with a probability sample of 3,711 unmarried mothers and a comparison group of 1,196 married mothers from 1998 to 2000 (see Reichman, Teitler, Garfinkel, & McLanahan (2001) for details of the research design). Response rates of unmarried mothers were 87 percent at baseline, 89 percent (of baseline completed interviews) at the one year follow-up, 87 percent (of baseline completed interviews) at three years, and 84 percent (of baseline completed interviews) at five years (Bendheim-Thoman Center for Research on Child Wellbeing, 2008).

Of the 3,293 mothers who reported that they were unmarried at baseline and who completed follow-up interviews at one year, 39 (approximately 1%) were excluded from the analysis due to inconsistent or missing reports of marriage dates, 5 (< 1%) were excluded because of missing TANF participation dates, and 30 (approximately 1%) were excluded because of missing data on other covariates. The remaining 3,219 cases formed the analysis sample. A

comparison of the mothers in our analysis sample to the baseline unmarried mothers not in our analysis sample (primarily because they did not complete one year follow-up interviews) revealed the two groups to be very similar in terms of race/ethnicity, education, and baseline cohabitation status. Mothers who remained in the sample were more likely than those who were lost to follow-up to be less than 20 years old at the time of birth (23 versus 16%) and to be U.S. born (88 versus 79%).

We focused on whether, to what extent, and how TANF participation affects entry into marriage among mothers who had non-marital births. We used time-varying measures of marriage and welfare participation. All other analysis variables were measured at baseline and were non time-varying. The outcome of interest was marriage, either to the baby's father or to someone else. At each wave of the survey, mothers provided exact dates of marriage (when applicable), which were used to ascertain their marital status at each month of the observation period. The 527 observations for which there was no completed three or five year follow-up interview were right censored at the time of the mother's last interview.

Dates and numbers of months of welfare participation were asked about in each follow-up wave. Specifically, respondents were asked whether they were currently on TANF, whether they have received TANF in the past 12 months, and whether they had ever received TANF. They were also asked for how many months and when they last received TANF. We used those reports to construct monthly welfare histories from 1997 until the focal child was five years old (2003 to 2005, depending on the year the children were born). The TANF participation dates were used to construct two time-varying measures of TANF participation, allowing us to estimate short and long-term effects. The first was a measure of *current* TANF participation, which was coded 1 for months in which the respondent was on TANF and 0 for months in which she was not on TANF. The second was a measure of *past* TANF participation, which was coded 1 for any given month if the respondent had been on TANF at any time since 1997 but was not currently on TANF, and coded 0 otherwise. By considering welfare participation only since 1997, we excluded previous AFDC participation from our measure of past participation. It is therefore possible that a mother who relied on AFDC but not on TANF was coded as not having relied on TANF in the past. We tested for sensitivity of the results to this restriction, as described later. When exact TANF participation dates were missing at any point during the mother's observation period, we imputed dates based on information provided by the mother at all available survey waves and assessed the sensitivity of our findings to those imputations.

Table 1 shows the combinations of TANF statuses experienced by individual sample members. Over half (57%, groups B – F) of the mothers received TANF at some point during or before the observation period; of those (84%, groups B, C, F) experienced between 1 and 6 transitions onto or off of TANF (we were able to observe up to three separate TANF spells for a given mother) and most (70%, groups B, C) were also included in the reference group (never on TANF) for at least some of their exposure time.

We incorporated the following control variables (all measured at baseline) that past research indicates are associated with both welfare participation and transitions to marriage: mother's race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, and other non-White), mother's educational attainment (less than high school, high school or equivalent, or more than high school), mother's nativity (U.S.-born vs. foreign-born), whether the mother was cohabiting with the baby's father, parity (whether the birth of the focal child was the mother's first birth), the mother's age (whether she was at least 20 years old), whether the birth was covered by Medicaid, whether the mother lived with both of her biological parents at age 15, the mother's health (excellent, very good or good, compared to fair or poor), and whether the mother attended religious services at least several times per month.

We also included city indicators to control for state policies and other characteristics of mothers' cities and states (such as labor and marriage markets) that may be associated with both TANF participation and marriage. The city indicators also controlled for the amount of time mothers were exposed to the post-1996 welfare environment since births in each city were sampled within a short period of time (births in Oakland and Austin occurred in 1998; those in Philadelphia, Baltimore, Detroit, Richmond, and Newark occurred in 1999; and those in the remaining 13 cities occurred in 2000).

DESCRIPTIVE ANALYSIS

As shown in Figure 1, marriage rates were relatively low and declined slightly over the observation period. Approximately 9 percent of the sample married within 12 months after the birth of the child. The percentages marrying each subsequent year were 5, 4, 4, and 3, respectively (from life table estimates). After five years, 75 percent of the mothers remained unmarried. Applying national race-specific marriage rates for mothers with non-marital births, from Graefe and Lichter (2002), to the racial distribution of our sample, the percent marrying within 5 years of the birth would have been approximately 30%. Our slightly lower observed rate (25%) could reflect the fact that our sample is more recent and exclusively urban.

Marriage rates during the observation period differed considerably by TANF participation status. Of those in the sample who received TANF at some point between 1997 and when they were last interviewed, only 16 percent married within 5 years, compared to more than twice as many (37%) among those who were never on TANF. As explained earlier, these differences could reflect marriage delays associated with current TANF participation, delays resulting from having been on TANF in the past, or characteristics (observed or unobserved) of mothers that are associated both with TANF participation and marriage.

Characteristics of mothers by whether they ever participated in TANF between 1997 and their last interview are presented in Table 2. Overall, a large proportion of this sample of urban unmarried mothers was poor or near-poor (40 percent of mothers had less than a high school education, and 76 percent had births covered by Medicaid). However, there were notable differences between TANF participants and non-participants. Participants were less likely than non-participants to be non-Hispanic White, to have high educational attainment levels, to be foreign born, to have been cohabiting with the infant's father at the time of the birth, and to have lived with both parents at age 15. They were more likely to be having a second- or higher-order birth and to have relied on Medicaid to pay for the birth.

Fifty seven percent of the sample (1,846 out of 3,219 mothers) relied on TANF at any time between 1997 and when they were last interviewed (between 2003 and 2005 for most mothers in the study). For this group, the average length of the first TANF spell that occurred between the focal child's birth and the mother's last interview was 10.8 months; the median was 7.3 months (figures not shown in table). Six percent of participants were still on their first TANF spell when they were last interviewed (not shown in table). As would be expected given the time-limited nature of cash assistance since the PRWORA legislation, the TANF spells in our sample were substantially shorter than typical AFDC spells in the early 1990s; the latter had a median duration of about 2 years (U.S. DHHS, 1998).

MULTIVARIATE ANALYSIS

We employed event history analysis to model the effect of TANF participation on the likelihood and timing of marriage. Specifically, we estimated Cox proportional hazard models in which duration was measured in months from the child's birth. All baseline unmarried mothers who completed one-year follow-up interviews were included, whether or

not they completed subsequent interviews. Individuals who did not marry during the observation period were right-censored at the time of their last interview. Since the outcome of interest was marriage, mothers were included in the analyses only until the month they married. We employed the commonly used Breslow approximation method to handle ties (multiple marriages occurring in the same observation month), a technique that is appropriate when events are rare relative to the size of the at-risk sample.

Using an event history framework had several advantages over standard regression techniques. First, by incorporating time varying measures of both welfare participation and marriage, we were able to establish the sequencing of the two. Second, we did not have to choose an arbitrary time point at which to assess marital status and could determine the extent to which TANF participation was associated with delays in marriage. Finally, we could make use of observations even when mothers did not complete all follow-up interviews.

We first estimated effects of current and past welfare participation on the likelihood and timing of marriage. By including both welfare statuses in our models, we were able to disentangle associations between TANF participation and marriage that were short-term (i.e., confined to the reciprocity period) and those that persisted beyond the period of welfare participation. The two potential mechanisms of interest, changes in values and responses to eligibility criteria, would predict effects of different duration. If welfare participation erodes family values, negative effects on marriage should have persisted beyond the reciprocity period (i.e., we should find evidence of past TANF participation effects). If economic disincentives related to eligibility deterred marriage, these should have operated primarily during the reciprocity period, leading to much stronger effects of current than of past TANF participation.

Next, we estimated an extensive set of auxiliary models. We assessed the sensitivity of the estimates to the coding of TANF participation, explored potential reverse causality, estimated effects for subpopulations at high risk of relying on welfare, examined the extent to which the effects varied by cumulative time spent on TANF, and assessed the sensitivity of the estimates to how we coded the dependent variable and to the inclusion of additional covariates.

Third, we explored potential selection explanations. We distinguished between two potential sources of selection—that on the basis of relatively fixed individual characteristics such as unobserved cultural or sociodemographic attributes, and that on the basis of variable factors such relationship breakups. The former would produce associations between *past* TANF participation and marriage similar to what would be expected based on the erosion of values hypothesis. The latter would produce positive associations between *current* TANF participation and marriage and weak or no associations between past TANF and marriage as would be expected based on the hypothesized TANF eligibility mechanism. We conducted analyses with stratified samples to explore the extent to which our findings appeared to reflect selection versus hypothesized causal effects.

Estimated effects of TANF participation on marriage

Table 3 shows estimates from an unadjusted model of the effects of current and past TANF participation on marriage, a model that adds city indicators, and a model that includes city indicators plus all of the covariates listed in Table 2. The hazard ratios in Model 1 (.68 and .45, for past and current TANF participation, respectively) indicate that both TANF statuses reduced the likelihood of marriage (hazard ratios are significant and less than 1). The estimates changed little when controlling for city (Model 2), indicating that policies or other characteristics of cities or states did not explain observed associations between TANF

participation and marriage. When also controlling for the individual level covariates (Model 3), the hazard of marrying while on TANF was two thirds that of marrying while not on TANF (hazard ratio was .67 and highly significant) and the effect of past TANF participation was close to 0 (hazard ratio was .94, $p = .52$).

We tested the proportionality assumption for all covariates using the Schoenfeld residual test. The test indicated that the effects of all but one variable (whether parents cohabited at baseline) were constant over time. Eliminating this variable from the model did not affect the estimate or significance of the TANF participation variables. For past and current TANF participation, our main analysis variables, the p -values from the Schoenfeld test were .25 and .42, respectively, suggesting that our analyses did not violate the proportionality assumption.

Alternative model specifications

Estimates from several additional model specifications are shown in Table 4. First, we estimated models in which only past TANF participation was included and in which only current TANF participation was included. The estimated effect of past TANF when included alone (hazard ratio = 1.04, $p = .63$) was similar to the corresponding estimate from Model 3 in Table 3, as was that of current TANF participation alone (hazard ratio = .69, $p < .01$), indicating that the estimates of past and current TANF participation were not biased due to collinearity between the two. Next, we show estimates from models that restricted the sample to cases for which we had complete information on TANF participation. We found that the estimates were insensitive to these sample restrictions and therefore to our imputations of TANF participation dates. This was not surprising given that the vast majority of imputations were made within very short time intervals. We also estimated models that dropped only the person months affected by the imputation (not shown) and the results were similar.

Next, we estimated models to investigate two potential types of reverse causality—the possibility that a mother left TANF because she became ineligible for benefits as a result of marrying and the possibility that she left TANF because she *planned* to marry. In terms of the former, our coding of both TANF participation and marriage was based on monthly rather than daily reports, so if a mother left TANF and married within a one month period, we could be certain which came first. Three mothers in our analysis sample had TANF exit and marriage dates that were within one month of one another, and excluding those cases from the analyses barely changed the results (the hazard ratios were .92 and .67 for past and current TANF participation, respectively; not shown in table). In terms of the latter, it is possible that a mother left TANF because she planned to marry, perhaps to avoid a negative stigma associated with being on welfare when one marries. If this were the case, marriage intentions would have affected TANF participation and our models would have overestimated the negative effects of current TANF participation on marriage and underestimated the effects of past participation. To address this issue, we estimated models in which TANF exits were coded as having occurred 1 month later and, separately, 3 months later than reported. That is, we coded mothers who went off of TANF during those periods (1 or 3 months prior to marriage) as still on TANF. The estimates of current and past TANF participation in this set of models were almost identical to those in Table 3, alleviating concerns about potential reverse causality to the extent that a 3-month lead time fully accounts for the anticipatory effect of marriage on TANF departures. With a 1-month lag (not shown), the Model 3 estimates were .95 ($p = .56$) and .65 ($p < .01$), respectively, for past and current TANF participation and with a 3-month lag, the corresponding estimates were 1.01 ($p = .93$) and .69 ($p < .01$), respectively (Table 4).

In the bottom panel of Table 4, we present estimates from models that restricted the sample to women at relatively high risk of welfare participation—native born mothers, mothers who were eligible for TANF during the year after their child's birth, mothers who had births covered by Medicaid, and mothers who had at most a high school education (see Reichman, Teitler, Garfinkel, & Garcia (2004) for details on the TANF eligibility imputation method). For each of these subsamples, the hazard ratio for having been on TANF in the past was close to 1 and not statistically significant, and for all but the sample of women eligible for TANF, the effect of currently being on TANF was negative (hazard ratio < 1) and statistically significant.

In additional analyses (results not shown), we further confirmed the finding of no effect of past TANF participation on marriage by examining whether the effects varied according to cumulative time spent on TANF. Past research has identified the existence of a small group of chronic welfare participants whose behaviors differed distinctly from those of occasional users (Bane & Ellwood, 1983). Thus, while there may have been no effects of past TANF participation on average, there could have been effects for this particular group. Specifically, we interacted past TANF participation with a time varying measure of the cumulative number of months the mother was on TANF and, in separate models, with a time varying categorical variable indicating whether the mother had participated in TANF for at least 24 months. We found that the effect of past TANF participation did not increase with longer exposures to TANF (i.e., the hazard ratios of the interaction terms were close to one and not at all statistically significant). We also found no interactive effects between current TANF participation and time spent on TANF.

We further assessed the sensitivity of the estimates to how we coded current and past TANF participation (results not shown). Specifically, we estimated models with an alternative measure of past TANF participation that was coded as 1 when a mother was currently on TANF but had another completed welfare spell in the past and models that counted participation in AFDC (pre-1997) as past welfare participation. In both cases, the estimates were virtually unchanged. We also estimated models in which only one time varying measure of TANF participation (ever on TANF) was included. The hazard ratio for the measure of ever on TANF was significant and approximately half that for the estimate of currently on TANF in Table 3.

Finally, we estimated models that predicted marriage to the biological father of the focal child (as opposed to anyone) and models that included additional covariates—more detailed baseline relationship status measures, whether the mother had any children with another father, maternal employment, mother's intentions to marry, maternal mental health problem, sexually transmitted disease during pregnancy, unintended pregnancy, whether the father was ever incarcerated, and whether the child's father was physically or verbally abusive. In all cases, the results were substantively unchanged (results not shown).

Mechanisms

The very robust finding that there was no effect of *past* TANF participation is inconsistent with the hypothesis that welfare participation erodes values. This null finding also suggests that selection on the basis of fixed social, cultural, or demographic factors is not at play. The finding of a significant effect of *current* TANF participation suggests that either TANF discourages marriage through immediate financial disincentives (eligibility) or that selection on the basis of transient circumstances (as opposed to that based on fixed characteristics) underlies the observed association between TANF participation and marriage.

To further explore the role of eligibility, we re-estimated Model 3 of Table 3, separately, for mothers whose partners (the fathers of the focal children) had very low earnings potential at

the time of the baseline interview (as a proxy for future income, since time varying monthly income is not available) and for those whose partners had higher earnings potential. For the former group, we included mothers with partners who had a disability that prevented them from working, were not employed or in school during the week preceding the birth of the child, or had ever been incarcerated. The latter group consisted of mothers whose partners were employed or in school and had never been incarcerated. These analyses were restricted to couples who were romantically involved throughout the study period. We hypothesized that financial disincentives to marrying while on TANF would be smaller (and therefore that the current TANF participation effects on marriage would be smaller) for the mothers whose partners had low earnings potential, since their financial eligibility for TANF should be less affected by marriage. We found this to be the case, as there was no effect of current TANF participation for mothers whose partners had low earnings potential (hazard ratio = 1.17, $p = .55$) but a strong effect for women whose partners were more likely to contribute income to the household (hazard ratio = .51, $p = .03$). These results, which are presented in the top panel of Table 5, are consistent with the weak effects among TANF eligible mothers (from Table 4), almost none of whom could have had partners with significant income.

We also estimated models for mothers whose relationship with the child's father ended between the baseline and one year follow-up interviews and for those who remained involved with the child's father throughout that period. Relationship dissolution is a good example of a temporary change in circumstances that could simultaneously decrease the mother's likelihood of marrying and increase her likelihood of having to rely on TANF. As such, it could potentially explain some of the estimated effect of current TANF participation on marriage. We found that it did not. Whether we defined being in a relationship as living together or being romantically involved regardless of cohabitation status (results from the former are shown in the bottom panel of Table 5), estimates for the mothers who remained in a relationship with the father were as strong as those for both the full sample and for mothers whose relationship with the father ended.

While neither of the above tests is conclusive, the patterns of findings are consistent with a causal explanation that eligibility is driving the association between current TANF participation and marriage through financial disincentives.

ASSESSING THE MAGNITUDE OF EFFECTS

We used the results from Table 3 to project the effects of TANF participation on the probability of marriage and on the average delay in marriage over an 18-year period (the period of time before the focal child would reach majority age). The value of this exercise was to provide a sense of the magnitude of the effects, projected over the life course, rather than to predict long term rates of marriage in the cohort of women we observed for 5 years.

We applied the estimated participation effects to the expected number of years (out of the first 18 years of the focal child's life) mothers would spend on TANF. This calculation required that we make some assumptions about the proportion of mothers who would eventually marry, the proportion who would ever participate in the TANF program, and the average length of TANF spells. The calculations also assumed that there are no sleeper effects and that effects remain constant over the 18-year period. The assumptions and calculations are detailed in the Appendix. Given our assumptions, we project that TANF participation would decrease marriage rates by, at most, 3.7 to 4.9 percentage points over 18 years. That is, 61 to 62 percent of mothers who will have spent any time on TANF would marry within 18 years of the birth compared to 66 percent of those who will not have participated in TANF. We also project that TANF participation would result in an average delay in marriage of 12 to 16 months over the 18-year period.

DISCUSSION

We investigated the extent to which welfare participation is associated with the likelihood and timing of marriage among mothers with young children born out of wedlock—a population of substantial policy interest. We did not address the much-studied question of whether welfare *policies* affect marriage (and if so, by how much); rather, we focused on the less explored but important question of how *participation* in TANF affects transitions to marriage. We tested two theories that have been central to the debates surrounding welfare reform and PRWORA reauthorization—that welfare participation erodes family values (a culture of poverty argument) and that there are financial disincentives to marrying while on welfare (as would be predicted by economic theory).

We found evidence that TANF participation had a negative effect on the probability of marriage, but the effect appeared to be confined to the period of participation and would translate to only minor delays in marriage over the long run, assuming effects remained similar over time. Our estimated effects of current TANF participation were very similar in magnitude to those obtained by Fitzgerald and Ribar (2004), which combined participation in AFDC and TANF. Whether delays in marriage are harmful to mothers and their children is not clear. On the one hand, marriage is an important route out of poverty for many unwed mothers (Lichter, Graefe, & Brown, 2003), and delays may therefore have detrimental effects on mothers' and children's economic well-being. On the other hand, marriage delays could have favorable effects on family stability by leading to more selective searches for mates, which could result in higher quality or longer-term relationships.

The lack of evidence of effects of *past* TANF participation on marriage is a new finding and has important implications for theory and policy. Not only can we rule out the proposition that welfare participation, at least in the post welfare reform era, has toxic effects on morality and values that discourage marriage, we can also rule out the classic culture of poverty argument that reliance on government assistance and rejection of the institution of marriage are two aspects of a culturally embedded set of poverty norms that is transmitted across generations or communities. The reality is that once mothers leave welfare, their prospect of marriage reverts to that of mothers with similar socioeconomic characteristics who never were on welfare. In other words, poor women who have relied on welfare in the past are not less likely to marry than those who never relied on welfare. We cannot ascertain with our data whether this was the case under AFDC, but under the TANF program disincentives to marriage are at most very short lived.

The mechanisms behind the observed negative associations between *current* TANF participation and marriage are less clear cut but point to financial disincentives vis-à-vis eligibility as an underlying cause, as would be predicted by classic economic theory. We assessed the plausibility of eligibility and selection as drivers of those associations by comparing estimates of current TANF participation from stratified analyses. In doing so, we found more support for the eligibility theory than for selection. The effect of current TANF participation was smaller for women whose partners had low earnings potential (and who would therefore have less to lose in terms of eligibility by marrying) than for mothers with partners who were more likely to contribute to household income, suggesting that eligibility incentives play a role. In contrast, the effects of current TANF participation were similar for mothers whose romantic relationships with the father ended and those who maintained romantic relationships, suggesting that selection on the basis of transient circumstances does not underlie the negative association between current TANF participation and marriage. However, these tests are not conclusive and do not rule out other plausible explanations that are not testable with our data. For example, the stigmatization of welfare participation (e.g., Klugel & Smith, 1986; Rainwater, 1982) could deter potential marriage partners. Welfare

participation may also alter participants' perceptions of their own marriage worthiness (Stuber & Schlesinger, 2006), which could lead to difficulties in finding partners and maintaining relationships. The negative association between current TANF participation and marriage could also reflect a tendency for poor couples to delay marriage until they achieve self-imposed levels of economic self-sufficiency (Edin & Kafalas, 2005; Gibson, Edin, & McLanahan, 2005). Any of these explanations are consistent with short term effects of TANF participation.

We offer several caveats. First, we focused primarily on post-1996 experiences as only a subset of women in our sample would have been eligible for benefits prior to the welfare reform legislation in 1996. It is possible that there were larger past and current participation effects on marriage under AFDC than under the contemporary regime. That said, TANF is more relevant than AFDC for welfare debates moving forward. Second, TANF participation was self-reported. Although self-reports of program participation do not appear to have systematic bias (Bound, Brown, & Mathiowetz, 2001), random noise in the measurement of its timing could lead to underestimated effects of TANF participation. Third, we cannot generalize our findings to women in non-urban areas. Finally, our projections of the effects of TANF participation over the life course are limited by the five year observation window. They are also based on a number of assumptions, one of which is that there has been little change since PRWORA in the average amount of time spent on welfare. If substantially less time is spent on welfare under the restrictive new regime (which is likely, because of lifetime limits and the shorter length of TANF spells as compared to AFDC), then our projections likely overestimate the cumulative effects of participation.

The findings from this study inform ongoing welfare policy debates and have two key policy implications. First, TANF participation has only a short term effect on marriage and appears inconsequential for women's marriage prospects in the long run. Even if it were possible to eliminate the effect entirely, doing so would result in negligible increases in marriage among low income parents. Second, the short term effects, if they are in fact due to TANF eligibility rules, could be reduced by implementing a grace period during which the earnings of a new spouse would be disregarded in participants' eligibility determinations.

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Appendix: Projections of TANF participation effects on marriage over 18 years

A. Assumptions about marriage rates

We computed an expected marriage rate for our sample over an 18-year period by applying race/ethnic-specific marriage rates of women with non-marital births (from Graefe & Lichter, 2002), which used the National Survey of Family Growth) to the composition of our sample. Graefe and Lichter estimated that 82% of Whites, 62% of Hispanics, and 59% of Black women with out-of-wedlock births will marry. Our sample was 15% White, 28% Hispanic, and 54% Black. We therefore obtain an estimated marriage rate of 62% over an 18-year period or an average marriage rate of 3.5% per year.

B. Assumptions about amount of time spent on TANF

Using data from the National Longitudinal Survey of Youth from 1979 to 1996, Moffitt (2002) found that welfare recipients received AFDC for an average of 39 months over a 10-year period. The average amount of time on TANF is likely to be somewhat lower than what it was on AFDC because of the time limits and other restrictions under PRWORA and a stronger labor market. However, because Moffitt's figures cover a shorter time period, we assumed 3 years (36 months) as a lower bound and 4 years (48 months) as an upper bound figure for average amount of time on TANF over an 18-year period.

Using the proportion of baseline unmarried mothers in our sample who were ever on TANF by the five year follow-up interview (.59) as a guide, we assumed 60% as a lower bound estimate of the percentage that will ever be on TANF over an 18 year period and 75% as an upper bound estimate. This translated into an average of 10 to 17% of baseline unmarried mothers being on TANF in any given year.

C. Annual marriage rates of participants and non-participants

From our assumptions above (on average, 3.5% would marry each year over the 18 year period; 10–17% would be on TANF in a given year) and from the estimated effect of current TANF participation on marriage from Model 3 in Table 3 (.67), we estimated the proportion of TANF non-participants and TANF participants who will marry each year; we call these M_{nt} and M_t , respectively. Our estimate of the annual proportion of TANF non-participants

who marry (M_{nt}) based on the assumption of 10% of mothers on TANF each year was calculated as follows:

$$\begin{aligned} .035 &= .67 M_{nt} * .10 + M_{nt} * .90 \\ M_{nt} &= .0362 \end{aligned} \quad (1)$$

Our estimate of the annual marriage rate of TANF non-participants (M_{nt}) based on the assumption of 17% of mothers on TANF each year was calculated as follows:

$$\begin{aligned} .035 &= .67 M_{nt} * .17 + M_{nt} * .83 \\ M_{nt} &= .0371 \end{aligned} \quad (2)$$

Since the .0362 and .0371 figures are so close, we used the mid-point, .0366, to derive the annual proportion of women on TANF who marry, as follows:

$$M_t = .0366 * .67 = .0245 \quad (3)$$

We assumed that the effect of past TANF participation is 0 because in our main and supplementary models the estimates of past TANF were highly insignificant and the hazard ratios were very close to 0.

D. Cumulative effect of TANF participation over 18 years

We calculated the expected marriage rate (within 18 years) of mothers who will never be on TANF (C_{nt}) as follows:

$$C_{nt} = M_{nt} * 18 = .659 \quad (4)$$

and the expected marriage rate of mothers who will have been on TANF at some point (C_t) as follows:

- (5)(a) $C_t = (M_t * 3) + (M_{nt} * 15) = .622$ (assuming that women who participate in TANF will do so for an average of 3 years in total), or
- (5)(b) $C_t = (M_t * 4) + (M_{nt} * 14) = .610$ (assuming that women who participate in TANF will do so for an average of 4 years in total)

E. Cumulative effect of TANF participation on marriage delay

To estimate the average delay in marriage, we divided ($C_{nt} - C_t$) by the percent of non-TANF recipients who marry each year (M_{nt}). We obtained an estimate of marriage delay ranging from 1.01 to 1.34 years, or 12 to 16 months.

Figure 1.
Kaplan-Meier Unmarried Survival Estimates

Table 1

Observed TANF Status Transitions (N=3,219)

Description	Observed TANF Status			N
	Never (reference group)	Current	Past	
A Never received TANF in past or during observation period	X			1373
B First transitioned to TANF during observation period and remained on throughout	X	X		199
C First transitioned to TANF during observation period and left TANF during observation period	X	X	X	1100
D On TANF throughout entire observation period		X		37
E On TANF only prior to observation period			X	252
F On TANF when or before observation period began, and left TANF during observation period		X	X	258
Total number of mothers ever observed in each status	2671	2967	1610	

Table 2

Sample Characteristics By TANF Participation Status

	Ever on TANF	Never on TANF	All Mothers
Married father or partner by 5 year or last interview	15	34	24
<i>Baseline characteristics:</i>			
Non-Hispanic White	11	20	15
Non-Hispanic Black	67	40	55
Hispanic	20	37	27
Other non-White	2	3	3
Less than high school	46	31	40
High school graduate	34	33	34
More than high school	19	36	26
Born in U.S.	94	79	88
Cohabiting with father of child	40	59	48
First birth	32	51	40
Age $\geq$ 20 years	76	79	77
Medicaid birth	84	65	76
Lived with both biological parents at age 15	29	45	36
Good, very good, or excellent health	90	93	91
N1	1,846	1,373	3,219

Figures are percentages.

Table 3

Effects of Past and Current TANF Participation on Hazard of Marriage (N = 3,219)

	Model 1	Model 2	Model 3
Received TANF in past	0.68*** (0.00)	0.74*** (0.00)	0.94 (0.52)
Currently on TANF	0.45*** (0.00)	0.48*** (0.00)	0.67*** (0.00)
Non-Hispanic Black			0.50*** (0.00)
Hispanic			0.72** (0.01)
Other non-White			0.76 (0.22)
High school graduate			1.16 (0.12)
More than high school			1.55*** (0.00)
Born in U.S.			0.73** (0.01)
Cohabiting with father of child			2.06*** (0.00)
First birth			0.95 (0.56)
Age >=20 years			0.94 (0.52)
Medicaid birth			0.95 (0.55)
Lived with both biological parents at age 15			1.02 (0.84)
Good, very good, or excellent health			1.12 (0.44)
Attends religious services several times/month			1.28*** (0.00)
City indicators	No	Yes	Yes
Log likelihood	-5922	-5881	-5791
LR chi square	61.22 (.00)	143.36 (.00)	322.29 (.00)

Figures are proportional hazard ratios (and *p*-values).

Asterisks denote significance levels:

*
p < .10,

**
p < .05,

p < .01

Table 4

Effects of Past and Current TANF Participation on Hazard of Marriage: Alternative Model Specifications and High Risk Subgroups

	Sample Size	Received TANF in Past	Currently on TANF
<i>Alternative specifications:</i>			
Past TANF only	3,219	1.04 (.63)	n.a.
Current TANF only	3,219	n.a.	.69*** (.00)
Non-imputed TANF dates	1,998	1.00 (.99)	.64** (.01)
TANF exit lagged 3 months	3,219	1.01 (.93)	.69*** (.00)
<i>Populations at relatively high risk of TANF participation:</i>			
U.S.-born mothers	2,819	0.87 (.18)	0.64** (.01)
Mothers eligible for TANF	1,299	1.05 (.79)	0.81 (.27)
Medicaid births	2,438	0.93 (.49)	0.70*** (.01)
Mothers with high school education or less	2,370	.92 (.48)	.72** (.02)

All models include the same set of covariates as in Model 3 of Table 3.

Figures are proportional hazard ratios (and *p*-values).

Asterisks denote significance levels:

*
p < .10,

**
p < .05,

p < .01

Table 5

Effects of Past and Current TANF Participation on Hazard of Marriage, According to Partner's Earnings Potential and According to Relationship Dissolution

	Sample Size	Received TANF in Past	Currently on TANF
<i>Partner with low earnings potential (among couples romantically involved throughout observation period)</i>			
Yes	451	1.03 (.90)	1.17 (.55)
No	700	1.01 (.97)	0.51** (.03)
<i>Relationship dissolution between baseline and 1 year follow-up (among baseline cohabitators)</i>			
Yes	396	1.37 (.40)	0.71 (.41)
No	1,148	0.96 (.74)	0.66** (.03)

All models include the same set of covariates as in Model 3 of Table 3.

Figures are proportional hazard ratios (and *p*-values).

Asterisks denote significance levels:

*
p < .10,

**
p < .05,

p < .01