

DYNAMICS OF BEING DISCONNECTED FROM WORK AND TANF

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EXECUTIVE SUMMARY

Upon creation of the Temporary Assistance for Needy Families Program (TANF) in 1996, millions of single mothers left public assistance for work, caseloads fell and the labor force participation and earnings of single mothers increased substantially (Blank 2002). Yet a number of national and state studies began to note that a significant minority of former recipients left welfare without employment.¹ Other studies noted that despite gains in earnings and income for single mothers on average, the poorest single mothers, in particular those not cohabiting, did not see similar income gains (Haskins 2001, Zedlewski 2002). Over the same period, TANF take-up rates (the percent of mothers eligible for TANF that actually receive benefits) also fell (U.S. Department of Health and Human Services 2008), raising concerns about the well-being of eligible, nonparticipant families and why they are not participating. A number of studies explored the circumstances of these families without work or welfare—often referred to as “disconnected” families in reference to being disconnected from the labor market and public assistance programs.

Given the potential for hardship for these families with children without earnings or means-tested cash benefits, policy makers and researchers raised questions about how many of these families there are and what are their economic circumstances. By definition, they are not using certain benefits, but are there other benefits or income sources that they are receiving? Are there characteristics of these families that distinguish them from other single mothers, such as personal barriers that make work more difficult? Is this state of being disconnected a relatively temporary phenomenon or are some families chronically disconnected?

This paper addresses these questions using longitudinal data that allows observation of families’ changing circumstances over time. Specifically, we address the following questions:

- **What is the size of the disconnected population and how is it changing over time?**
- **What are the characteristics of disconnected low-income single mothers and do they differ significantly from other low-income single mothers?** Do they have different living arrangements that might help them to cope economically? Are they more likely to have personal barriers to work?
- **How are disconnected low-income single mothers doing economically and how does this compare to other low-income single mothers?** What are their income levels and sources of income? What other public program benefits do they receive?
- **How long do low-income single mothers remain disconnected?** What are the differences between those with shorter and longer spells of being disconnected?

¹ Acs and Loprest (2004) find that the median employment rate in the first quarter after TANF exit across different area studies of former TANF recipients is 57 percent, meaning median percent exiting TANF without work is 43 percent. Studies using national data from 1996 and 1997 (respectively) find similar rates of nonwork upon exiting TANF—36 percent in Acs et al (2001) and 37 percent in Loprest and Zedlewski (2006).

- **What factors are associated with movements into and out of disconnectedness?** What are the more common reasons for single mothers beginning and ending spells of being disconnected?

We present in this summary the key findings in each of these five question areas and then provide a brief summary of the implications for policy and further research. We start with a brief summary of our definitions and context.

KEY DEFINITIONS AND METHODS

We define disconnected in this paper as single mothers (with at least one child under 18 living with them) ages 15 to 54 with income less than 200 percent of poverty (referred to throughout as low-income) who have no own earnings, are not receiving TANF benefits or Supplemental Security Income (SSI) (disability benefits for low-income individuals), and do not report being in school as their primary activity. SSI is excluded because it is a means-tested cash benefit and mothers who moved from TANF onto this program still have public income support.

To be counted as disconnected, low-income single mothers must meet these criteria for four consecutive months. We do this to exclude short spells of non-receipt or being without a job that are due to misreporting, program administrative issues, or short periods without work between jobs that we do not think meet the conceptual definition of disconnected suggested by our policy questions.² Importantly, we restrict our definition of family for measuring income to just the single mother and her children. We separately discuss the income sources of other adults living with the single mother, both related and unrelated, in our analysis.³

The study relies on data from the Survey of Income and Program Participation (SIPP). Our descriptive statistics compare 2004 and 2008 and our dynamic analysis relies on the 2004 panel, individuals who were followed for up to 48 months, although the sample was reduced by half due to budgetary cuts after the 32nd month (after the eighth wave).

RESULTS

Key findings from the study are briefly outlined here.

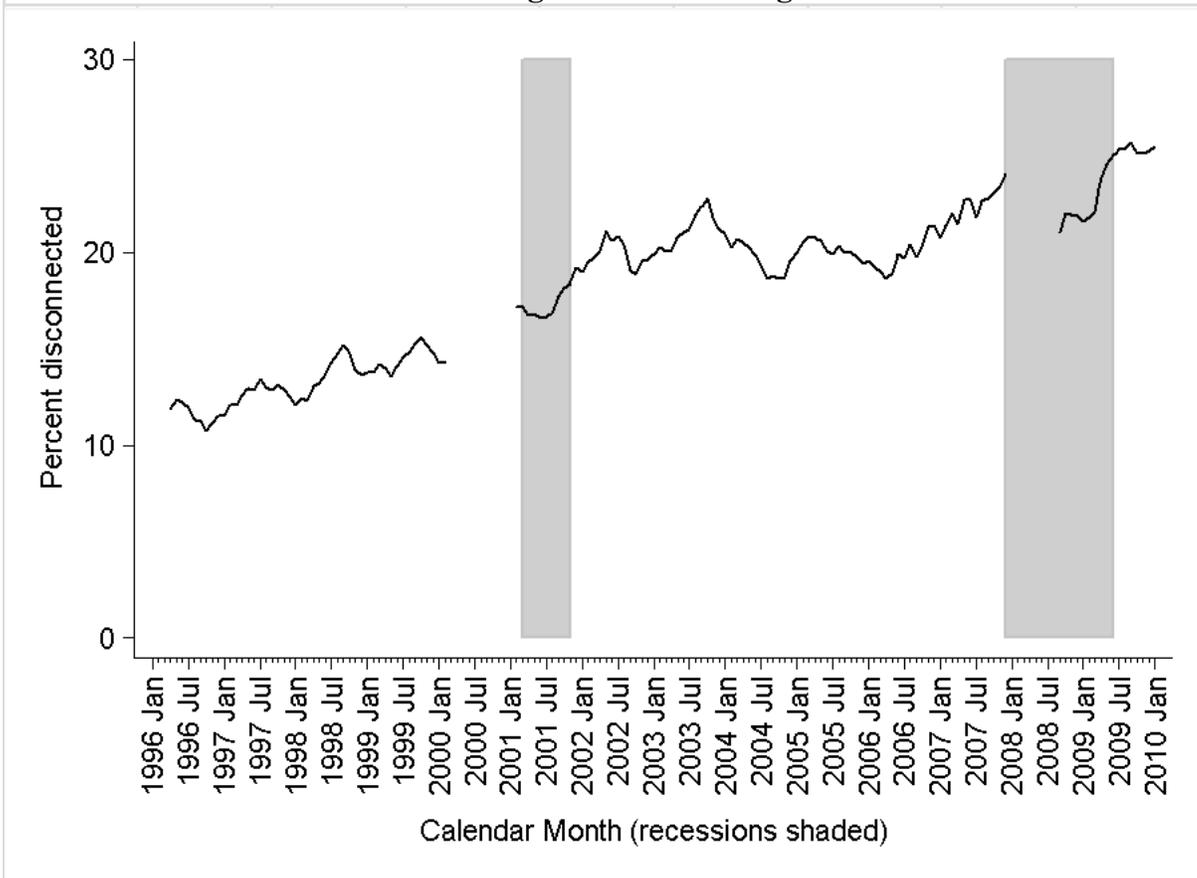
- **The percent of low-income single mothers who are disconnected has increased over the last fifteen years.** (Exhibit ES-1)

About one in eight low-income single mothers was disconnected in 1996, but about one in five was disconnected in the period 2004 to 2008. There is some suggestion in the newest data of continued increases into 2009 as well. Based on these percentages, approximately 1.2 million women were disconnected at a point in time in 2008.

² We choose four months (rather than two or three months) because the survey we use interviews individuals every four months, introducing a tendency toward more similar answers over that prior four months than across different interview periods. Our analysis suggests the four month requirement excludes 25 percent of all spells of disconnectedness, with 20 percent of spells being one or two month spells.

³This is an important difference from other studies, where family income often includes the income of other relatives in the household. Because we are interested in understanding disconnected single mothers' sources of income and support, we want to separate this income explicitly.

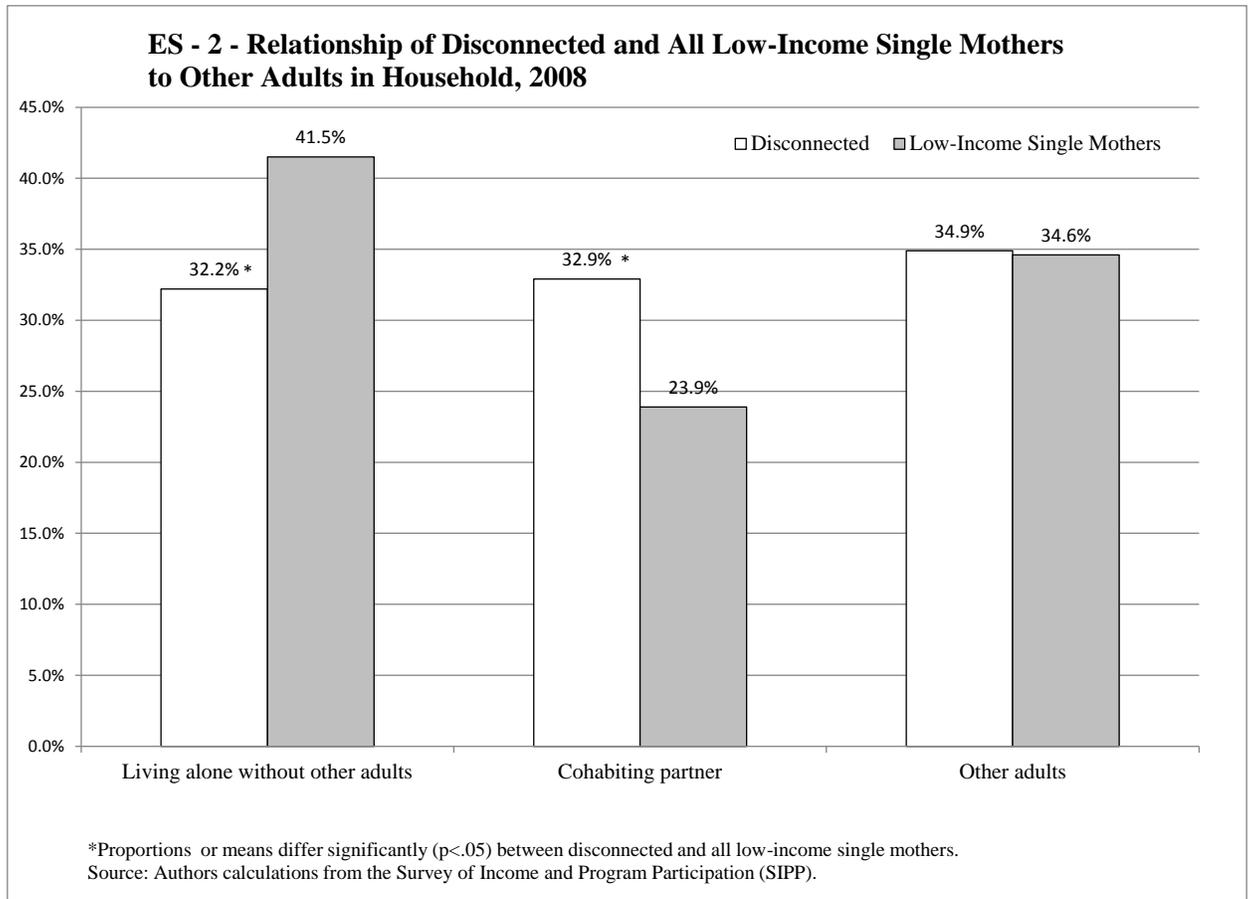
ES - 1 – Percent Disconnected Among Low-Income Single Mothers Over Time



Source: Authors' calculations from the Survey of Income and Program Participation. Based on four-month moving average of the proportion of low-income single mothers who are disconnected in a particular calendar month. Breaks in the line indicate months for which there is no SIPP panel data.

- One-third of disconnected mothers live alone without other adults. Another one-third are cohabiting. Disconnected mothers are less likely to live without other adults and more likely to live with a cohabiting partner than other low-income single mothers.** (Exhibit ES-2)

In both 2004 and 2008, almost a third of disconnected mothers live alone, without other adults in the household, which is approximately 350,000 families. Another third of this group lives with a cohabiting partner. This compares to about 50 percent of low-income single mothers who live alone (falling to two-fifths in the recession) and about one-fifth cohabiting. The distribution of other living arrangements (with parents, siblings, etc.) is similar for both groups.

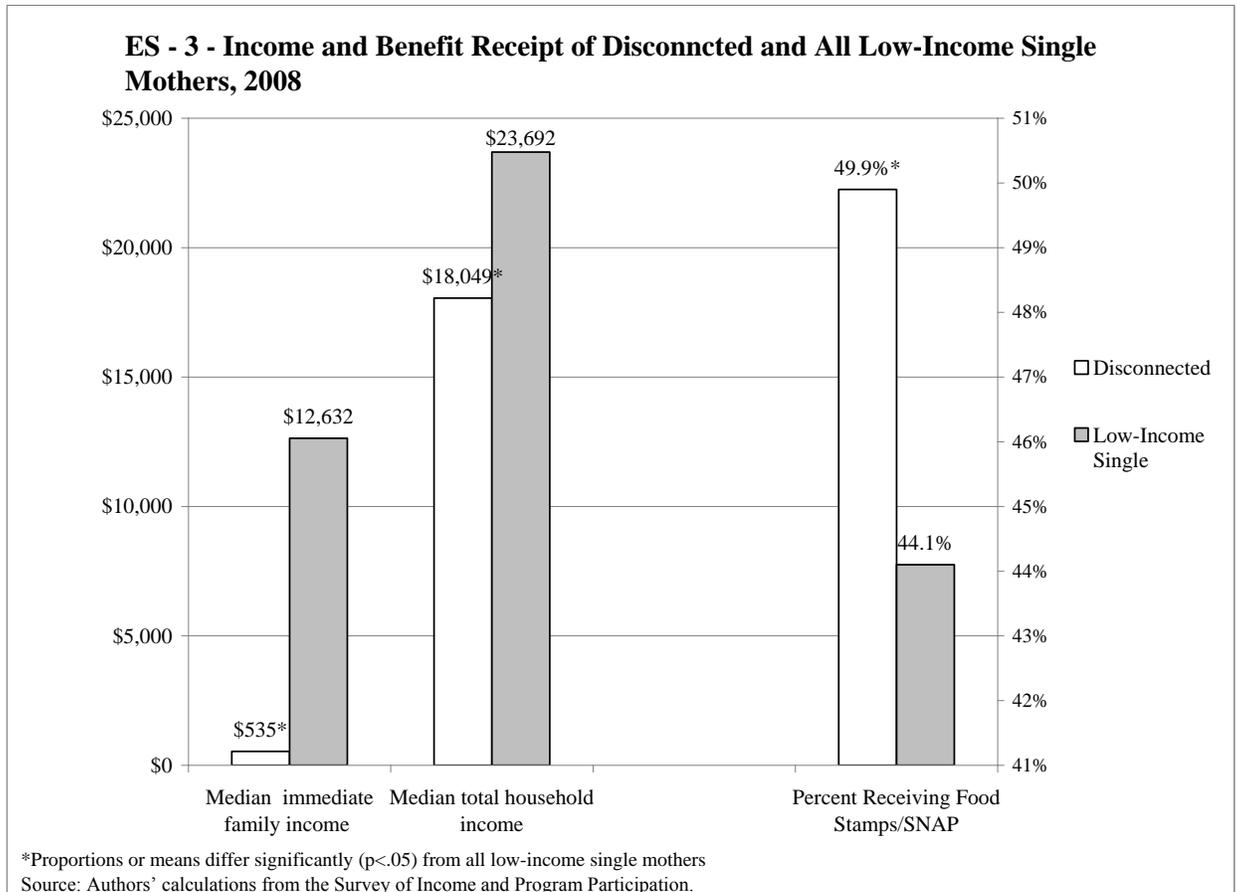


- **Disconnected mothers are more likely to have personal characteristics that could be potential challenges to working or accessing benefits.**

Disconnected mothers are more likely to have a child under one and a health problem that impacts work than other low-income single mothers. They also have substantially lower levels of education and are less likely to be a U.S. citizen.

- **Disconnected mothers have very low family income (including only their own and minor children's income), substantially less than low-income single mothers. Disconnected mothers' household income (including income of all household members) is substantially higher than their own income (ten times as high), although still less than household income for all low-income single mothers. (Exhibit ES-3)**

In 2004, annual median family income of disconnected mothers was \$2,203 and by 2008 it had fallen to \$535. Total median household income for disconnected mothers was \$20,415 in 2004 and \$18,049 in 2008 compared to roughly \$23,000 in both years for low-income single mothers.



- Disconnected mothers are as likely in 2004 and slightly more likely in 2008 to receive public benefits such as Supplemental Nutrition Assistance Program (SNAP—formerly Food Stamps), housing subsidies, and health insurance than other low-income single mothers. Rates of receipt are relatively low.**

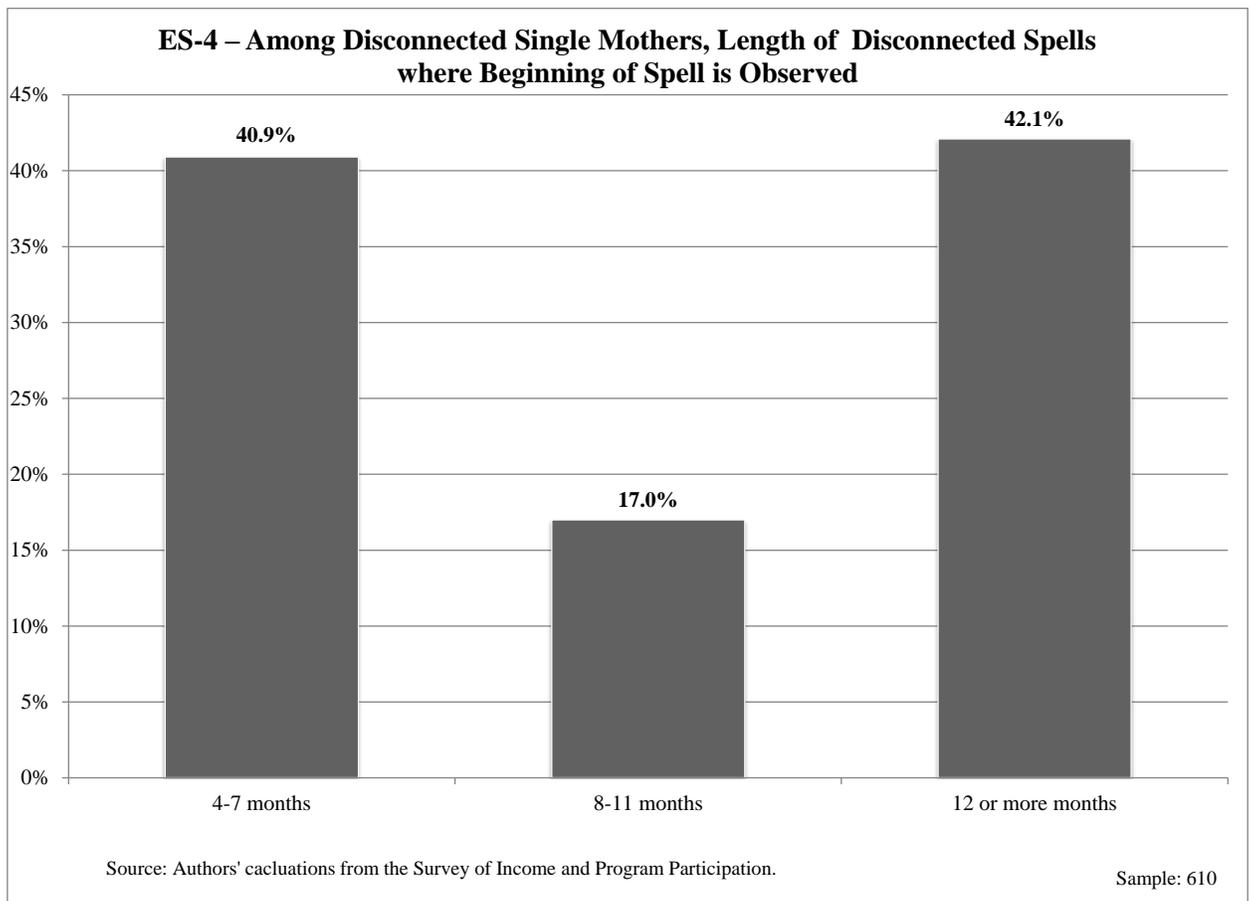
In 2008, almost half of disconnected mothers received SNAP and public health insurance. About one-fifth received public housing or housing subsidies.

- Disconnected mothers living alone have significantly lower household incomes than disconnected mothers living with other adults, but higher receipt of other benefits.**

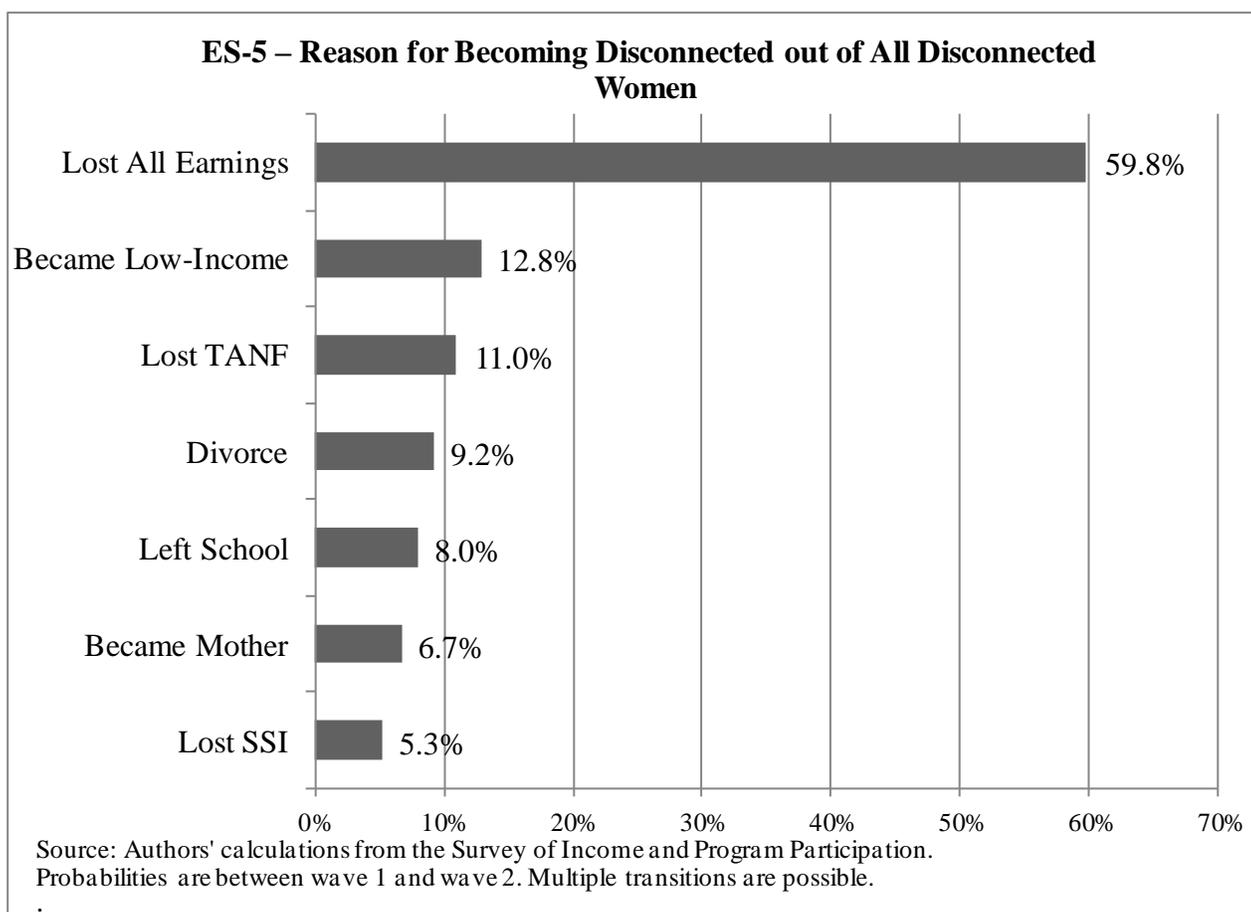
Disconnected mothers living alone had \$4,800 in median household income compared to disconnected mothers living with other adults that had \$28,000 in median household income. Disconnected mothers living alone have higher benefit receipt of SNAP, public housing or housing subsidies, and public health insurance than disconnected mothers living with other adults.

- Of all disconnected mothers (those with at least four contiguous months of no earnings, TANF, or SSI), more than 40 percent remain disconnected for over a year. (Exhibit ES-4).**

Slightly more than one-quarter of all low-income single mothers are disconnected at some time over a year.



- Disconnected mothers living alone have roughly the same disconnected spell lengths as disconnected mothers living with other adults.**
 About 40 percent of disconnected mothers living alone remain disconnected for more than a year, compared to about 43 percent of disconnected mothers living with other adults.
- Losing a job is the most common reason for becoming disconnected, roughly 5 times more likely than losing TANF benefits (Exhibit ES-5). Similarly, finding a job is the most common reasons for becoming reconnected.**
 Other reasons for becoming disconnected, such as losing SSI benefits, becoming low-income, getting divorced, having a child, or leaving school are less common than losing a job. Other reasons for becoming reconnected are gaining TANF or SSI benefits, getting married, becoming a student or no longer living with a child under age 18, but these events are less common than getting a job.
- Conditional on having lost (or left) TANF, about one-fifth of low-income single mothers become disconnected.**
 Losing TANF is a less common reason for becoming disconnected, in part because a low percentage of low-income single mothers receive TANF. But those who do lose TANF have a substantial probability of not working or receiving SSI for at least the next four months.



- Women with personal challenges such as health problems and low levels of education are more likely to become disconnected and to remain disconnected than women without these challenges.**

These characteristics could be associated with more difficulty finding and maintaining work or accessing and remaining on TANF or SSI benefits.
- Living with other adult earners increases the probability a woman will become disconnected and decreases the probability a disconnected mother will become reconnected compared to disconnected mothers living alone.**

These results suggest that disconnected mothers living in a household with other earners may be sharing resources with these household members, making it possible for the mother to go without work or benefits.
- Living with other adults who are not earners (or have only minimal earnings) decreases the probability a woman will become disconnected and increases the probability she will become reconnected compared to living alone.**

These results suggest that disconnected mothers living in a household with other non-earners have an added incentive to work, or access TANF or SSI benefits, possibly to

provide resources for her family and other household members. They may also be more able to work because other household members are providing child care.

- **Receipt of SNAP benefits decreases the probability of becoming disconnected and remaining disconnected for low-income single mothers living alone.**

Low-income single mothers living alone who receive SNAP benefits may have a higher propensity to receive public benefits, either due to knowledge of public benefit systems or less stigma around benefit receipt, and so are more likely to eventually gain access to TANF or SSI than women not receiving SNAP. We find no significant relationship between receipt of SNAP and disconnectedness for all low-income single mothers.

Discussion and Conclusions

The findings of this study support the notion that disconnected families are worse off economically than other low-income single mothers. They have lower personal incomes, are more likely to have personal barriers to work, and are only slightly more likely to receive other public benefits such as SNAP, public housing/subsidies or Medicaid than other low-income single mothers. Disconnected mothers remain disconnected for long periods as well—more than 40 percent for a year or more. However, our results also suggest that some of these mothers may be coping by living in households with other adults. Disconnected mothers are less likely to live on their own and more likely to be cohabiting, compared to other low-income single mothers. While we do not know the extent to which the resources of other household members are available to disconnected mothers and their children, our results show that living with other *working* household members increases a woman’s chance of becoming or remaining disconnected relative to living alone, suggesting some resource sharing. Living with nonworking household members has the opposite effect.

The one-third of disconnected mothers that do live alone (without other adults), appear to be economically vulnerable, with very low incomes (approximately \$5,000 a year). Although they are more likely to receive public benefits such as SNAP, public housing or subsidies, and Medicaid than disconnected mothers living with other adults, the majority of these mothers will be disconnected for eight months or more—40 percent for over a year. Disconnected mothers living alone are approximately 6 to 7 percent of all single mothers—roughly 350,000 mothers nationwide.

The study findings also provide some evidence for concerns about disconnected families’ ability to access benefits beyond TANF and SSI. Relatively low percentages of disconnected mothers receive other benefits, especially given their low incomes. Even among disconnected mothers living alone only two-thirds receive SNAP benefits. Our results suggest that receipt of SNAP may not be serving as an income “buffer” for disconnected women who aren’t on TANF or SSI. Rather, receipt of SNAP is associated with not being disconnected (either starting or continuing a spell of disconnectedness)—suggesting those who get SNAP are more likely to move onto TANF or SSI and those who do not get SNAP are less likely. This could be due to barriers to accessing all of these benefits or stigma or personal preference to not receive benefits, but for these very poor mothers, many with long durations of being disconnected, the impact on

children of going without these benefits is an important consideration. Continued study of how to improve access to benefits for these single mothers is important. In addition, the substantial percent (one-fifth) of women for whom ending receipt of TANF benefits is associated with becoming disconnected suggests continued need to study the potential role of TANF policies and practices in this transition.

Finally, the evidence in this paper shows that not working (loss of all earnings) is the dominant reason for becoming disconnected and gaining earnings is the primary way out of being disconnected for single mothers. This suggests that when we consider all low-income single women who are without work and welfare (as opposed to a focus on former TANF recipients) the issue is mostly about losing or gaining work. Attention to policies and programs that make work more attainable and sustainable for these low-income single mothers, including those with health problems and low education levels, is critical to reducing the likelihood and duration of being disconnected.

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Upon creation of the Temporary Assistance for Needy Families Program (TANF) in 1996, millions of single mothers left public assistance for work, caseloads fell and the labor force participation and earnings of single mothers increased substantially (Blank 2002). Yet a number of national and state studies began to note that a significant minority of former recipients left welfare without employment.⁴ Other studies noted that despite gains in earnings and income for single mothers on average, the poorest single mothers, in particular those not cohabiting, did not see similar income gains (Haskins 2001; Zedlewski 2002). Over the same period, TANF take-up rates (the percent of mothers eligible for TANF that actually receive benefits) also fell (U.S. Department of Health and Human Services 2008), raising concerns about the well-being of eligible, nonparticipant families and why they are not participating. A number of studies explored the circumstances of these families without work or welfare—often referred to as “disconnected” families in reference to being disconnected from the labor market and public assistance programs.

Given the potential for hardship for these families with children without earnings or means-tested cash benefits, policy makers and researchers raised questions about how many of these families there are and what are their economic circumstances. By definition, they are not using certain benefits, but are there other benefits or income sources that they are receiving? Are there characteristics of these families that distinguish them from other single mothers, such as personal barriers that make work more difficult? In addition, questions arose as to whether this state of being disconnected was a relatively temporary phenomenon or were some families chronically disconnected.

This paper addresses these questions using longitudinal data that allows observation of families’ changing circumstances over time. Specifically, we address the following questions:

- **What is the size of the disconnected population and how is it changing over time?**
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- **How are disconnected low-income single mothers doing economically and how does this compare to other low-income single mothers?** What are income levels? What are their sources of income including from other family members? What other public program benefits do they receive?

⁴ Acs and Loprest (2004) find that the median employment rate in the first quarter after TANF exit across different area studies of former TANF recipients is 57 percent, meaning median percent exiting TANF without work is 43 percent. Studies using national data from 1996 and 1997 (respectively) find similar rates of nonwork upon exiting TANF—36 percent in Acs et al. (2001) and 37 percent in Loprest and Zedlewski (2006).

- **How long do low-income single mothers remain disconnected?** What are the differences between those with shorter and longer spells of being disconnected?
- **What factors are associated with movements into and out of disconnectedness?** What are the more common reasons for single mothers beginning and ending spells of being disconnected?

The paper first provides a brief review of the literature and context for the questions being addressed. Then we discuss our data and methods, including our definition of disconnected and sensitivity analyses to this definition. We then discuss our findings in two sections: characteristics and economic circumstances of disconnected mothers, and dynamics of disconnected spells. We end with a discussion of our results and conclusions.

CONTEXT AND LITERATURE REVIEW

A number of studies demonstrate that a substantial minority of single mothers that left welfare find themselves disconnected at some point in time. Loprest (2003) estimates that 14 percent of welfare leavers in 2002 were without earnings and had not worked in the past year, received neither TANF nor Supplemental Security Income (SSI) benefits (cash assistance for low-income persons with disability), and did not have a working spouse/partner. Turner, Danziger, and Seefeldt (2006) find that about one-tenth of low-income women who had formerly received welfare in one county in Michigan were chronically disconnected; that is, they had not worked or received welfare for an entire quarter over a six and a half year period. Other state studies report a disconnected population of former TANF recipients ranging from 14 to 20 percent (Acs and Loprest 2004).

In addition to the circumstances of women who left the TANF program, policymakers and researchers alike also raised questions about the circumstances of TANF-eligible single mothers who did not take-up the program. Studies show that a considerable number of low-income single mothers regardless of prior welfare receipt are disconnected. Loprest and Zedlewski (2006) find that about 12 percent of all low-income mothers (including married mothers) who have never received welfare were disconnected in 2002, where disconnected is defined as without earnings, disability benefits, or a working spouse, and no work in the past year. Using a less restrictive definition, Blank and Kovak (2009) find that 20 percent of low-income single mothers in 2005 had very low levels of earnings, TANF, and SSI in the prior year, and 14 percent were also without income from another adult in their family. They find the size of these groups has roughly doubled since 1990, when the comparable numbers were 9.9 and 7.4 percent, respectively.

One of the main reasons for concern about disconnected single mothers is their very low incomes and experience of material hardships. Research shows that disconnected women are much poorer than other low-income single mothers. Blank and Kovak (2009) find that in 2005 over 80 percent of disconnected mothers have incomes under the poverty line compared with about 50 percent of all low-income single mothers. Loprest and Zedlewski (2006) find that in 2002 average income among disconnected former TANF recipients was \$6,178 compared to an average income of \$17,681 for other former TANF recipients. In addition to having low incomes, these families face high levels of material hardships. Over 40 percent of all disconnected low-income mothers in 2002 faced food insecurities (difficulties feeding their

families), and a third were unable to pay rent or utilities at some point in the prior year. These low incomes and high levels of hardship raise concerns for the well-being of these mothers and children.

Disconnected women benefit from receipt of non-cash benefits such as food stamps and housing assistance. About half of disconnected low-income mothers in 2005 received food stamps (Blank and Kovak 2009). Focusing on disconnected TANF leavers, Loprest and Zedlewski (2006) find that a similar proportion of disconnected former TANF recipients received food stamps, and about one-quarter received public housing assistance. Receipt of these benefits suggests avenues for policymakers to reach out to disconnected women as these women are already interacting with the public benefit system.

Research also documents that a substantial number of low-income single mothers face personal challenges or barriers that make work more difficult. These include mental or physical health problems or disabilities, substance abuse, domestic violence, low literacy, learning disabilities, a criminal record, or the need to care for a disabled child or family member. For example, Loprest and Martinson (2008) find that of the 3.5 million low-income families with children in 2007 who have very low levels of work in the previous year, about a third report a parent's disability limits work. Studies of welfare recipients (Hauan and Douglas 2004) and former welfare recipients (Loprest and Zedlewski 2006) also find a high prevalence of challenges. Recent research from multiple national data sets suggests an increase in the prevalence of some challenges among current and former recipients during the TANF era (Acs and Loprest 2007). In addition to documenting the high prevalence of barriers to work among low-income single mothers, research clearly demonstrates that these barriers represent significant impediments to work (Hauan and Douglas 2004, Loprest and Zedlewski 2006).

Studies find high prevalence of barriers to work among disconnected populations as well. Blank and Kovak (2009) show that 10 to 20 percent of disconnected women experience barriers to work, and this percentage is higher for women who report multiple months of disconnectedness. Loprest and Zedlewski (2006) find that two-thirds of disconnected former welfare recipients and almost half of disconnected low-income mothers who have never received welfare experience barriers to work. Other studies confined to limited geographic areas also show similar findings (Turner, Danziger, Seefeldt 2006; Wood and Rangarajan 2003).

Although research shows that on average, disconnected women are economically worse off than other low-income single mothers, the extent to which disconnectedness adversely affects families is likely related to the time women spend in this status. Relatively little research examines the dynamics of being disconnected. Wood and Rangarajan (2003) focus on former welfare recipients in New Jersey and find that about 40 percent of those not working had not worked recently and were without other stable forms of income. However, only a third of these were disconnected a year later and an even smaller group was continuously disconnected for the entire year. These chronically disconnected women were the most economically disadvantaged. A national study of low-income single women who are not working or on welfare finds that women who were ever disconnected over a three year period were in this status for 7 months on average (Blank and Kovak 2009). However, about half of these women spent less than 4 months disconnected while about 5 percent spent more than two years in this status. The circumstances

and policy needs of these women are likely to differ. Research on what factors are associated with beginning and ending spells of disconnectedness is limited. A study of former welfare recipients in an urban county in Michigan shows that presence of barriers (low education, physical limitations, learning disabilities, and use of illegal drugs or alcohol dependence) significantly increases the likelihood that a former TANF recipient would enter a spell of disconnectedness and having multiple barriers has an even greater impact. We explore these questions further in this study.

DATA AND METHODS

The primary data used for this study are the 2004 panel of the Survey of Income and Program Participation (SIPP), which contains a nationally representative sample (of the civilian noninstitutionalized population) of 43,540 households. These were the most recent SIPP data available with a substantial panel length at the time this research was conducted. We also use the 2008 panel to create comparative descriptive statistics on the circumstances of low-income mothers. SIPP respondents are interviewed every four months about the previous four months, a period referred to as a “wave.” The 2004 SIPP is a 48-month panel (conducted in 12 waves), with the first interviews occurring in February 2004 and the last in January 2008. Our data for 2008 are taken from the second wave of the 2008 SIPP panel.

Longitudinal data are a key strength of the SIPP as is the large sample and oversample of low-income households. The longitudinal nature of the data allows for analysis of the dynamics of movement into and out of disconnected status in a way that analyses using CPS or other cross-sectional data cannot. Although the SIPP provides a great deal of detailed information, it has some limitations. Attrition bias is a concern as SIPP response rates generally decrease as the panel progresses. For example in the 2004 SIPP, the rates of attrition due to refusal or moving to an unknown address were 8 percent in wave 2 and 21 percent by wave 8 (cumulative to wave 8). In wave 9, the sample was reduced by more than half for budgetary reasons.⁵ In tabulations requiring continuously observed samples, we limit ourselves to no more than 8 waves (less than three years) but the structure of our hazard model estimation allows us to use information from all waves of data. We weight the data using SIPP weights to account for initial non-response, attrition, and the complex sample design.

Sample and Definitions

The paper focuses on the sample of low-income single mothers, where low-income single mothers is defined as women with at least one own child less than 18 living at home and family income is less than 200 percent of the poverty level. We define disconnected as a single low-income mother who is not working (without earnings) and not receiving TANF or SSI benefits⁶ for herself. Single means she is not married; she could be cohabiting, as seen in the results.

⁵ See Killion (2009) for more detail.

⁶ Transfer income receipt is self-reported and thought to be underreported (Meyer, Mok, and Sullivan 2009), though Czajka, Mabli, and Cody (2008) find reporting is better on the SIPP than the CPS. Marquis and Moore (1990) compared the 1984 SIPP with administrative records of transfer receipt in four states, and found that error rates for transfer program participation reports were extremely low.

We limit our definition of family income (referred to as immediate family income) to the sources of income of the single mother and her children. This is different from other studies that use a definition of family income that includes the income of other relatives living with the single mother. We exclude these other sources of income in defining low-income single mothers and disconnected low-income single mothers. This allows us to separately examine the prevalence of disconnected mothers with and without these sources. Our definition of total income for a wave is the average of each month's total income across the four months of the wave. This smooths over one-month anomalies of very low income for households that otherwise have income over 200 percent of poverty.

We define disconnected as without earnings and receiving no TANF or SSI income over the entire wave—a four-month period. We use the definition for two reasons—a data reason and a conceptual reason. The wave structure of the SIPP data (interviewing respondents every four months) creates a “seam phenomenon”—where transitions are more likely to occur between interview waves than months within the same wave as documented by Moore and Kasprzyk (1984) and Moore (2009). Therefore, for our analysis, we use the data grouped into four-month waves of data, using the wave as the time unit of analysis. This means that we do not allow for any spells of disconnectedness that are less than four months. This has the impact of cutting off the low-end of the distribution of disconnected spells.

In addition to the data considerations for not including short spells, there is also a policy (conceptual) argument for eliminating particularly short spells. Among all low-wage workers, short periods without work are common in between jobs and do not necessarily signal a significant lack of attachment to the labor market (Acs, Loprest, and Ratcliffe 2010). In addition, many studies of TANF receipt “smooth” one-month spells without benefits (e.g., consider these as part of the ongoing TANF spell) since women can lose TANF benefits for one month due to purely administrative reasons. This smoothing is common in prior TANF research. If the concept of disconnected is single mothers that lack attachment to the labor market and benefits, including short spells of one or two months without work and TANF goes against this concept. This reasoning combined with the four-month data collection period leads us to exclude less spells of disconnectedness that are shorter than four months.

We conduct sensitivity analysis to this cut-off to understand how many short spells we exclude. Blank and Kovak (2009) find that of all women ever disconnected over a three year period and for whom the beginning of the spell of being disconnected is observed, 65.4 percent have spells of four months or less. They do not break out four months and less than four months separately, and since they are using SIPP data we may expect that a substantial percentage are four months given the wave reporting bias described above. In our data, we examine all low-income mothers who have a spell of disconnectedness of any length that overlaps with wave 2. We find that 75 percent of all these spells last for four or more months.⁷ About 10 percent are one month, another 10 percent are two months, and 5 percent are three months. Thus our

⁷ There is also a question that defining disconnected by wave may miss some four-month spells that occur across waves, for example the last two months of one wave and the first two months of the next wave. Using a sample of mothers who are disconnected in at least one month of wave 2, we find that 94 percent of those with a spell four months or longer include the entirety of wave 1, 2, or 3.

definition is excluding 25 percent of spells of any length and only 5 percent of spells of three months or more.

Analytic Methods

The first part of this study uses descriptive statistics to examine the living arrangements, characteristics, barriers to work, economic circumstances, and other forms of support of disconnected single mothers compared to all low-income single mothers. For this analysis we rely on samples of low-income single mothers at a point in time (in the second wave of the 2004 and 2008 SIPP). Using the definition of disconnected described above, we have a sample size in 2004 of 2,465 low-income single mothers and 428 disconnected mothers and in 2008 a sample size of 2,372 low-income single mothers and 477 disconnected mothers. Our comparison of disconnected single mothers living alone to those living with other adults combines the samples of disconnected single mothers from both the 2004 and 2008 SIPP due to small sample sizes in each year alone. To examine the factors associated with movements in and out of being disconnected, we present a descriptive analysis of the time disconnected mothers spend in this status. For this analysis we rely on a sample of disconnected single mothers for whom we observe the beginning of the disconnected spell in the 2004 data. (We did not use the 2008 data for this analysis because only a few months of the 2008 panel were available when we conducted the analysis.) We require these mothers be in the sample for at least two additional waves after the initial wave of being disconnected, which allows observation for at least one year after becoming disconnected. This gives a sample of 610 mothers. We use this sample to examine differences in the characteristics of single mothers with short (less than 12 months, or less than three waves) and long spells (12 months or more, or more than two waves).

The second part of our analysis addresses two questions: the factors associated with beginning a spell of disconnectedness and the factors associated with ending a spell of disconnectedness. We use a multivariate technique for both of these questions known as survival or hazard analysis. In these models, exiting the data before experiencing the event (becoming disconnected or exiting disconnected) is referred to as right censoring. These models allow us to include useful information on single mothers who drop out of the sample in ways that a simple comparison of completed spells does not. In these models we assess the relative importance of factors associated with entry into and exit from the state of being a disconnected single mother. We estimate a discrete-time hazard model, using a logit regression on individuals at each point in time at which they are still at risk of experiencing an event (they exit the data when they experience an event or are censored).

The factors we focus on relate to the possible reasons associated with newly observed spells in the data and reasons associated with ending of spells in the data. Drawing on past research (Blank and Kovak 2009), we examine the following factors for a beginning of a spell of disconnectedness: end of marriage, became a mother (minor child added to family), loss of TANF income, loss of SSI income, loss of earnings, and no longer in school. For ending a spell, the reasons include: got married, aged out of sample, no more children under age 18, started working, gained TANF or SSI income, income increased over 200% of poverty, and entered school as a primary activity.

The explanatory variables used to predict rates of entry into and exit from the state of being disconnected in these survival models in addition to the key transitions described above include characteristics of individuals such as age, race/ethnicity, education, and health. We also control for receipt of benefits including Supplemental Nutrition Assistance Program (SNAP - formerly known as food stamps), child SSI, public housing or subsidized rent, and public or private health insurance. State-level policies and economic context variables we control for include maximum TANF benefit, maximum earned income tax credit (EITC) benefit, SNAP recertification periods, SNAP outreach spending, state minimum wage and state unemployment rate.

To examine factors associated with beginning a spell of disconnectedness, we use three samples: all women ages 18 to 54 in wave 1, all low-income single mothers ages 18 to 54 in wave 1, and all low-income single mothers ages 18 to 54 in wave 1 who are living alone without other adults for all observed waves. Examining the group of all women allows us to include the transitions of becoming single, becoming a mother, and becoming low-income, as well as losing all earnings, TANF benefits, SSI benefits, or leaving school. When we limit study to the sample of low-income single mothers, the possible transitions associated with becoming disconnected are just losing earnings, TANF or SSI benefits, or leaving school, since these women are already low-income single mothers. The third sample provides results for the subsample of low-income single mothers who are living alone.

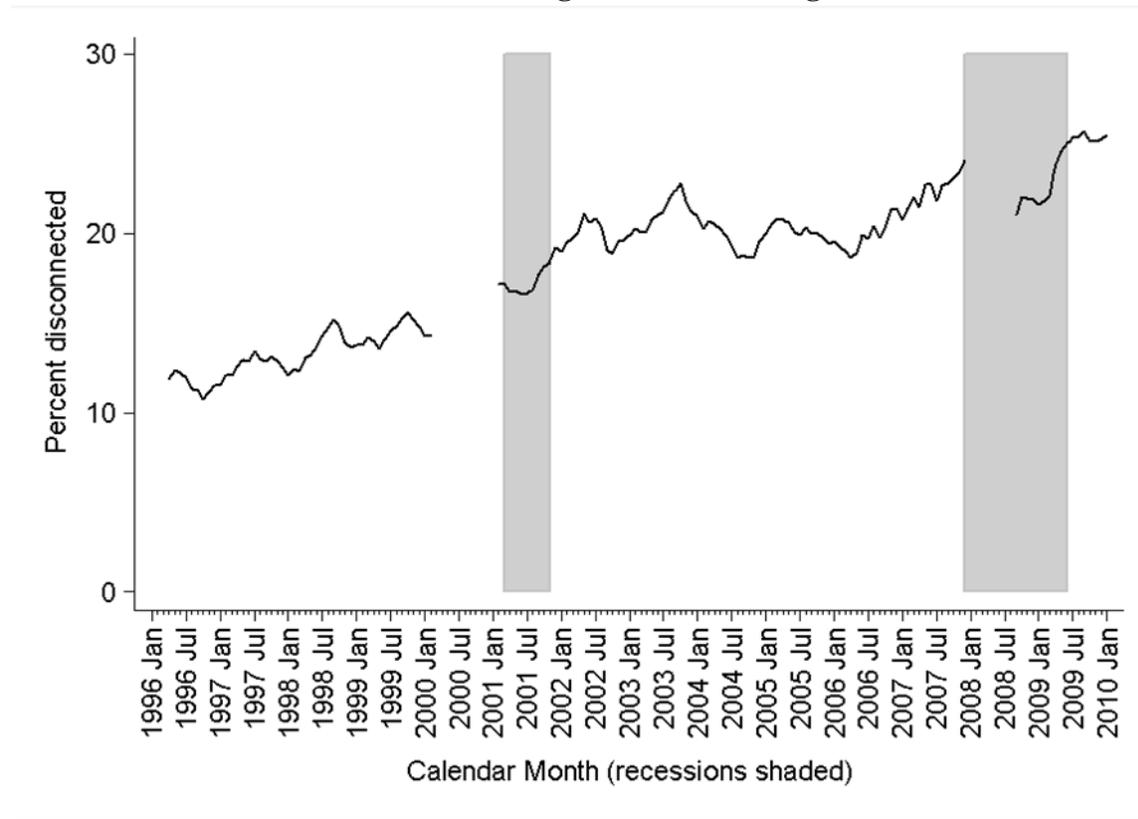
To examine factors associated with the end of a spell of disconnectedness, the sample includes newly observed spells of disconnectedness among low-income single mothers. In this analysis, we focus on exits from the disconnected state due to gaining earnings, TANF, or SSI. Again we estimate three models, one including all newly observed spells of disconnected, one including the spells only of women who were low-income single mothers in wave 1, and lastly, including only low-income single mothers who are living alone during all waves they are disconnected.

CHARACTERISTICS AND ECONOMIC CIRCUMSTANCES OF DISCONNECTED MOTHERS

The percent of low-income single mothers who are disconnected has increased over the last fifteen years. About one in eight low-income single mothers was disconnected in 1996, but about one in five was disconnected in the period 2004 to 2008 (Exhibit 1).⁸ There is some suggestion in the newest data of continued increases into 2009 as well. Based on these percentages, approximately 1.2 million women were disconnected at a point in time in 2008. These results are consistent with other research that found rising levels of disconnectedness from 1990 to the early 2000s (Blank and Kovak 2009; CDF 2003). This increase is coming primarily from an increase in the number of disconnected mothers, since the numbers of low-income single mothers have remained relatively steady as a proportion of the total population over several decades.

⁸ These figures are based on a four-month moving average of the proportion of low-income single mothers who are disconnected in a particular calendar month.

Exhibit 1 – Percent Disconnected Among Low-Income Single Mothers Over Time



Source: Authors' calculations from the Survey of Income and Program Participation.

Based on four-month moving average of the proportion of low-income single mothers who are disconnected in a particular calendar month. Breaks in the line indicate months for which there is no SIPP panel data.

Living Arrangements and other Demographics

Many low-income single mothers who are disconnected are living on their own. Exhibit 2 shows the percent of disconnected mothers who are living alone, only with other disconnected adults (those not working or receiving cash benefits), or with other connected adults. In both 2004 and 2008, about a third of disconnected mothers are living alone (without any other adults). However, this percentage is lower than among all low-income single mothers. Living with others may be one way disconnected mothers are able to get by without work or cash benefits (Besharov 2004). Living with others could indicate sharing of resources across household members—anything from reduced cost or free housing for the disconnected mother to being able to rely on a share of other household member(s) income. It could also indicate a less stable living arrangement as mothers move in with others as a last resort.

It is possible that resource sharing is more or less likely depending on the relationship of the disconnected mother to others in the household. There is limited evidence on this topic, but

one type of relationship that has received attention is single mothers living with cohabiting partners. Research shows that cohabiters share income although to a lesser extent than married couples (Bauman 1999; Oropesa, Landale, and Kenkre 2003).

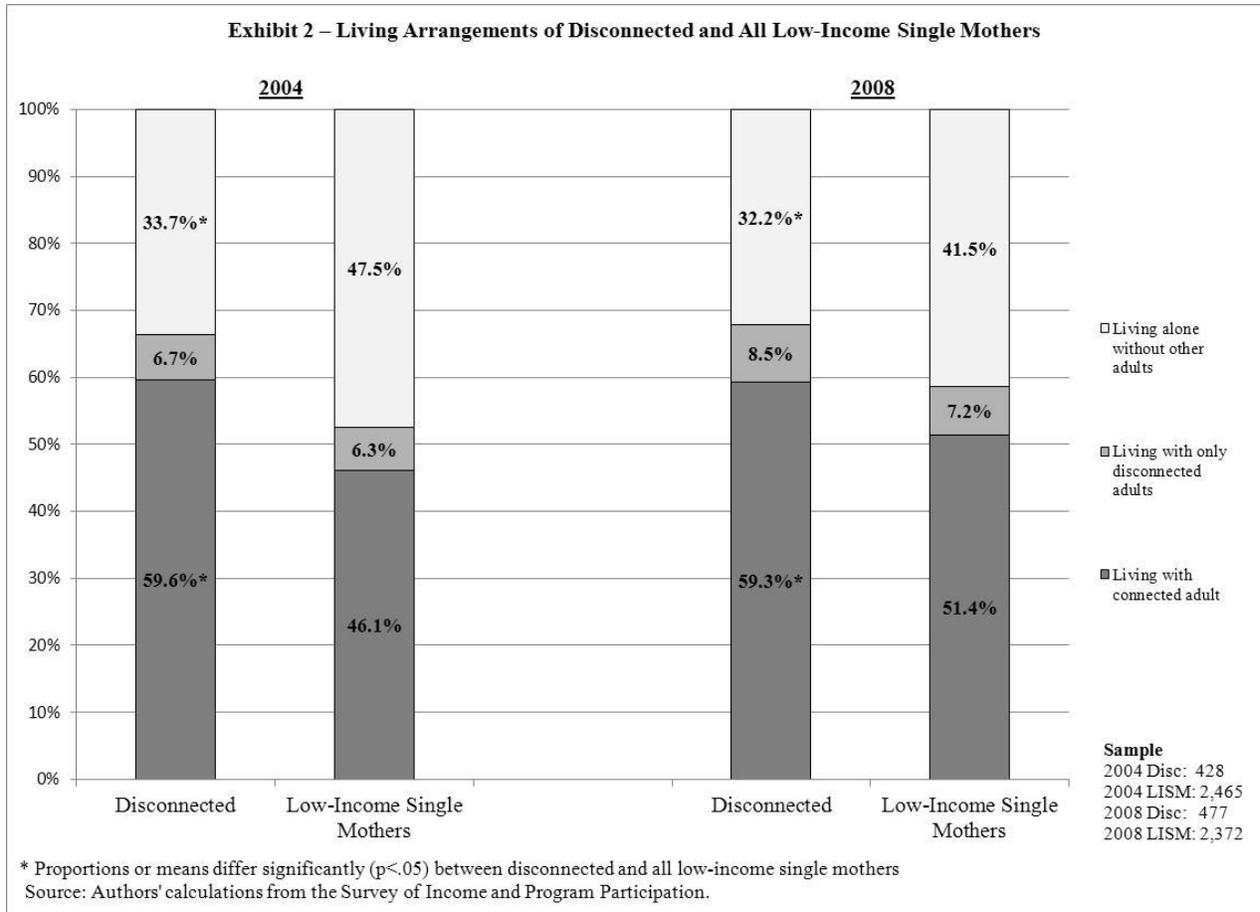
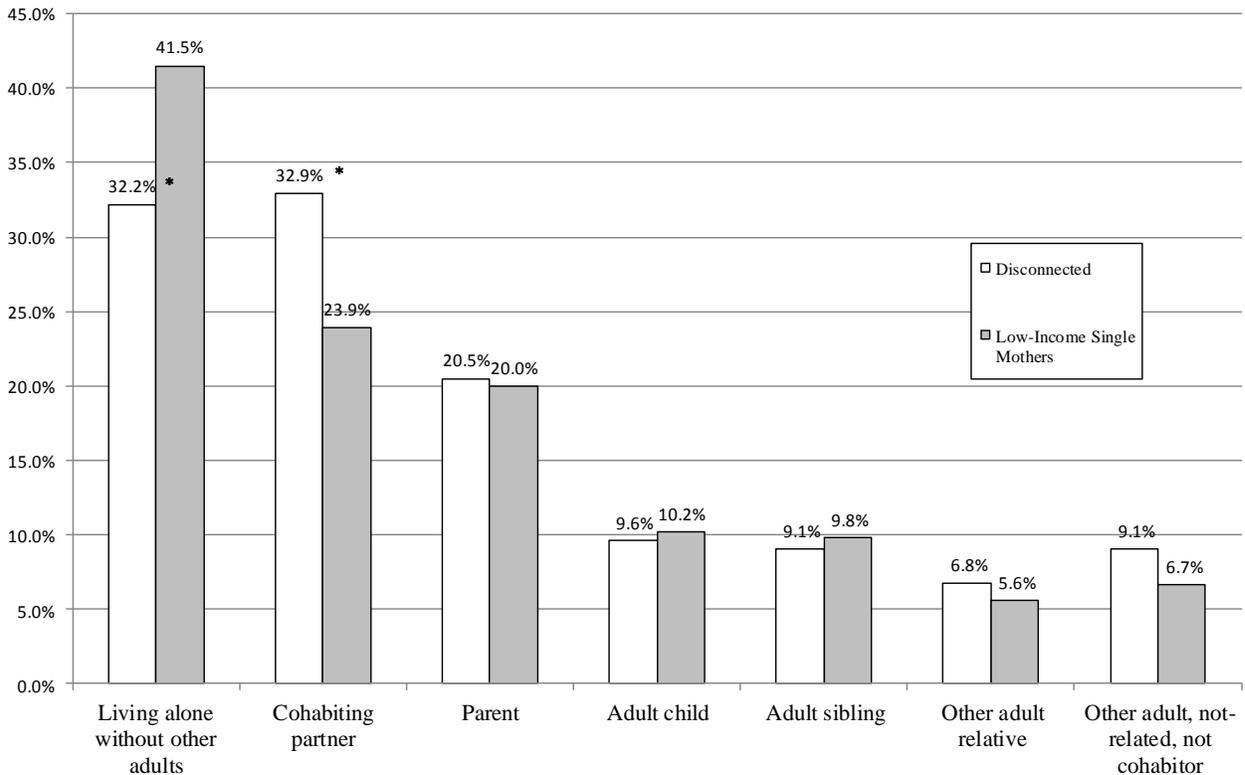


Exhibit 3 shows the relationship of the disconnected single mother to other adults in her household. Since she can live with multiple adults, the categories shown are not mutually exclusive. About one-third of disconnected mothers in 2004 and 2008 live with a cohabiting partner. This is significantly higher than all low-income single mothers; about one-fifth to one-quarter (increasing in 2008) of these mothers is cohabiting.⁹

⁹ This percentage of low-income single-mother families cohabiting is slightly higher than findings from the National Survey of America's Families for 2002 in Acs and Nelson (2003).

Exhibit 3 - Relationship of Disconnected and All Low-Income Single Mothers to Other Adults in Household, 2008



*Proportions or means differ significantly ($p < .05$) between disconnected and all low-income single mothers.
 Source: Authors calculations from the Survey of Income and Program Participation (SIPP).

The percentages of disconnected mothers living with other types of relations in the household are similar to those of all low-income single mothers. About one-fifth of disconnected mothers live with a parent. From 8 to 10 percent live with an adult child and a similar percent live with an adult sibling. About 6 or 7 percent of disconnected mothers live with another adult relative and almost 7 to 9 percent live with another adult who is not related to them, but is not a cohabiter. Most of the difference in living arrangements between low-income single mothers and disconnected mothers is due to a higher rate of cohabitation and lower rate of living alone among disconnected mothers.

Aside from living arrangements, disconnected mothers and all low-income single mothers have substantially similar other demographic characteristics. Exhibit 4 shows results for age, household size, number and age of children, and race/ethnicity. There is no difference in the average age (32 years), or number of children (1.8) in disconnected and low-income single mother families. The disconnected households are slightly larger, 4.2 compared to 3.8 people on average, consistent with results that fewer disconnected mothers live alone without other adults. Despite these similarities, we do find that a significantly larger percentage of disconnected mothers have children under age 5, 55.2 percent in 2004, than low-income single mothers, 49.4 percent. The difference remains in 2008.

Exhibit 4 – Demographic Characteristics of Disconnected and All Low-Income Single Mothers

	2004		2008	
	Disconnected	Low-Income Single Mothers	Disconnected	Low-Income Single Mothers
Average age in years	32.5	32.1	32.1	32.0
Household size	4.2*	3.8	4.2*	3.9
Mean number of children	1.8	1.8	1.9	1.8
Percent with child under 5	55.2%*	49.4%	55.5%*	50.2%
Percent with child under 1	15.3%*	10.5%	15.6%*	11.5%
Race/ethnicity				
White	44.0%	41.6%	42.8%	43.3%
Black	24.7%*	32.3%	25.9%	28.5%
Hispanic	23.1%	20.5%	26.1%	23.7%
Sample	428	2,465	477	2,372

* Proportions or means differ significantly ($p < .05$) from all low-income single mothers

Source: Authors' calculations from the Survey of Income and Program Participation.

Finally, there is some evidence that fewer disconnected mothers are black, non-Hispanic than low-income single mothers. In 2004, about a quarter of disconnected mothers are black, non-Hispanic compared to a third of low-income single mothers. In 2008, there is still a difference, but it is smaller.

Potential Barriers to Work

We are able to examine several factors that have been shown in prior studies to be associated with lower levels of work among different groups of low-income women (Loprest and Zedlewski 2006; Hauan and Douglas 2004; Danziger et al. 2000). These include lower educational levels, health problems, a child with a disability, and not being a U.S. citizen. These findings are presented in Exhibit 5.

Almost a third of disconnected mothers have less than a high school education in 2004. This is significantly higher than the one-fifth of low-income single mothers with this level of education. In addition, significantly fewer disconnected mothers than low-income single mothers have some years of college or more. The same pattern is true in 2008 relative to low-income single mothers, but the educational attainment of both groups increased. For example, in 2004, 27.5 percent of disconnected mothers had “some college” (but not a college degree) compared to 32.1 percent in 2008.

Exhibit 5 – Potential Barriers to Work for Disconnected and All Low-Income Single Mothers

	2004		2008	
	Disconnected	Low-Income Single Mothers	Disconnected	Low-Income Single Mothers
Education				
<i>Less than HS</i>	31.9%*	20.9%	28.8%*	18.4%
<i>HS Degree</i>	36.0%	33.4%	33.8%	34.9%
<i>Some College</i>	27.5%*	40.9%	32.1%*	40.3%
<i>College or More</i>	4.6%	4.8%	5.3%	6.3%
Health problem that limits work	21.8%*	13.6%	20.2%*	13.2%
Health problem that prevents work	18.5%*	8.6%	17.9%*	8.5%
Child SSI	4.6%	3.4%	4.4%	3.8%
U.S. Citizen	85.9%*	90.9%	82.6%*	90.0%
Any work in previous 4 months	0%	68.4%	0%	65.8%
If not working, reason given				
<i>Injury, disability, or health reason</i>	16.1%*	23.2%	16.1%*	21.8%
<i>Pregnant, taking care of children/others</i>	60.5%*	48.5%	56.9%*	45.2%
<i>Unable to find work, or on layoff</i>	15.3%*	12.3%	21.6%*	19.0%
<i>Not interested in working</i>	2.1%	1.5%	1.3%	1.0%
<i>Other^a</i>	5.9%*	14.5%	4.1%*	13.1%

^a Other includes school, but by definition schooling is not the primary activity of disconnected mothers.

* Proportions or means differ significantly (p<.05) from all low-income single mothers

Source: Authors' calculations from the Survey of Income and Program Participation.

About one-fifth of disconnected mothers report they have a health problem that limits their ability to work. This is significantly higher than the 13.6 percent of low-income single mothers reporting this problem. In addition, a higher proportion of disconnected mothers with a health problem report that it prevents work than low-income single mothers, suggesting more severe health issues. About double the percentage of disconnected mothers report a work-preventing health problem than low-income single mothers. In addition, slightly higher (but not significantly different) percentages of disconnected mothers report having a child receiving Supplemental Security Income (public disability benefits), a proxy for having a child with disabilities whose care may inhibit mother's work.¹⁰

Not being a US citizen may also pose a barrier to work and receipt of certain public benefits. A significantly higher percentage of disconnected mothers are not citizens than low-income single mothers. In 2008, 17.4 percent of disconnected mothers were not US citizens compared to 10 percent of all low-income single mothers.

¹⁰ It is possible that a higher percentage of children have a disability that requires parental care than is indicated by children receiving SSI. The stringency of the disability definition in the SSI program suggests this may be a lower bound, although evidence on the impact of child health on mothers' work suggests this is a good proxy (Loprest and Davidoff 2004).

In addition to these personal characteristics, information on impediments to work can be found in mothers' direct reports on the reason they are not working. We compare disconnected mothers' answers to those of low-income single mothers who were not working in the previous four months. In 2004, 31.6 percent of low-income single mothers had not worked in the previous four months, and in 2008 it was 34.2 percent. By far the most common reason for not working among disconnected mothers is that they are pregnant or taking care of children or others. About 60 percent of disconnected mothers give this reason for not working compared to a little less than half of non-working low-income single mothers. A smaller percentage of disconnected mothers reports health as a reason for not working, 16.1 percent. This is lower than the percent of low-income single mothers giving this reason. This is not inconsistent with the earlier reports of health differences, because the reasons for not working among low-income single mothers are only for the third who are not working, who likely have the higher rates of work-limiting health problems. Slightly higher rates of disconnected women than low-income single mothers report they are unable to find work or are on layoff, 15.3 percent vs. 12.3 percent in 2004. These numbers are higher in 2008 during the recession.

Economic Circumstances and Supports

One of the key questions about disconnected families is how can they survive without work or cash means-tested benefits? What other sources of income and support might they rely on? We've already discussed the possibility of sharing housing/living expenses or other resources with others in the household. Here we examine disconnected mothers' income levels and sources of support, including their receipt of other noncash public benefit programs. Exhibit 6 shows different measures of income levels for disconnected and low-income single mothers using immediate family income (income of the mother and her minor children) and household income (income of all household members, including relatives and nonrelatives).

Both groups of mothers are very poor with the average ratio of income to the poverty line (income to needs ratio) less than one. Considering only the income of the immediate family, the average income to needs ratio for disconnected mothers is .33 in 2004 and .27 in 2008, well under the 50 percent of the poverty line usually taken as the standard of "deep" poverty. For low-income single mothers, the ratio is .85 in 2004 and falls to .79 in 2008. The median level of family income makes this same point: disconnected mothers have very low levels of immediate family income. In 2004, disconnected mothers median income was only \$2,203 annually¹¹ and in 2008 it was only \$535. Considering the income of all household members together, household income is considerably higher. For disconnected mothers in 2004, median household income was \$20,415 and in 2008 it was \$18,049. Household income of low-income single mothers is higher than disconnected mothers despite slightly smaller household sizes and higher likelihood of living alone. These differences show the large impact including other household members' income makes in understanding total resources in the households in which disconnected mothers live. It is important to note, however, that we do not know the extent to which this income is available to the disconnected mother.

¹¹ This is an annualized figure based on actual average of four-month income.

Exhibit 6 – Income of Disconnected and All Low-Income Single Mothers

	2004		2008	
	Disconnected	Low-Income Single Mothers	Disconnected	Low-Income Single Mothers
Income as a percent of poverty level (immediate family income)	32.8%*	85.0%	27.1%*	79.1%
Mean immediate family income	\$5,466*	\$14,189	\$4,701*	\$13,325
Median immediate family income	\$2,203*	\$13,842	\$535*	\$12,632
Mean total household income	\$28,642*	\$31,677	\$26,368*	\$32,592
Median total household income	\$20,415*	\$23,163	\$18,049*	\$23,692
Sample	428	2,465	477	2,372

* Proportions or means differ significantly ($p < .05$) from all low-income single mothers

Source: Authors' calculations from the Survey of Income and Program Participation.

Immediate family income includes all income sources of the single mother and her minor children, including unemployment insurance and child support. Household income includes income from all household members, relatives and nonrelatives. Income is the annualized value of the average income for the four-month period.

Although by definition disconnected mothers are not receiving TANF or SSI, it is possible that they are receiving other income sources or benefits, public or private, that help them support their family. Exhibit 7 shows the percentage of disconnected and low-income single mothers receiving different cash and in-kind supports. A substantial percentage of disconnected families, 38.9 percent in 2004 and 49.9 percent in 2008, receive SNAP benefits. In 2008, this is significantly higher than among low-income single mothers. However, given the differential in income levels and work, it is somewhat surprising that the receipt among disconnected families is not even higher. However, because SNAP is a household benefit, it is possible that other members of the household (and their income) are being considered in eligibility, reducing some disconnected mothers (and low-income single mothers) access to, and potentially need for, these benefits. About a fifth of disconnected mothers live in public housing or receive public housing subsidies, about the same percentage as all low-income single mothers. A relatively small percentage of disconnected mothers (4 percent in 2004 and 8 percent in 2008) receive unemployment benefits, suggesting past attachment to the labor market. About a third of disconnected mothers are receiving child support payments. In fact, child support makes up a large portion (almost 60 percent—not shown) of disconnected mothers' immediate family income among those who receive child support.

In addition, about half of disconnected mothers have public health insurance for themselves in 2004. The percentage actually falls slightly in 2008 to 46.6 percent. The level of receipt is not different from all low-income single mothers. Some mothers are covered by private health insurance, but as we would expect given differences in employment, low-income single mothers are substantially more likely to have this coverage, in 2008, 24.8 percent compared to 7.3 percent for disconnected mothers. Private health insurance for disconnected mothers could be

COBRA coverage (from past employment), on another person's employer policy (such as a domestic partner), or bought in the private market.

Exhibit 7 – Benefits and Other Sources of Support for Disconnected and All Low-Income Single Mothers

	2004		2008	
	Disconnected	Low-Income Single Mothers	Disconnected	Low-Income Single Mothers
Percent of Single Mothers Receiving Sources ^a				
Unemployment Benefits	4.1%*	2.1%	7.8%*	4.1%
Child Support	33.4%	31.5%	30.4%	28.6%
Percent of Single Mothers Receiving Other Benefits ^b				
Food Stamps/SNAP	38.9%	39.5%	49.9%*	44.1%
WIC	27.1%	24.2%	34.7%*	26.5%
Public Housing or subsidy	20.1%	22.7%	20.8%	20.3%
Public health insurance	50.8%	46.7%	46.6%	42.7%
Private health insurance	11.7%*	29.7%	7.3%*	24.8%
Adult Relative Receives SSI	4.3%	3.0%	3.3%	2.6%
Household TANF Receipt	1.8%*	11.8%	2.9%*	9.6%
Household Reports Transfer Income	14.8%*	23.7%	13.5%*	21.7%
Sample	428	2,465	477	2,372

* Proportions or means differ significantly (p<.05) from all low-income single mothers

Source: Authors' calculations from the Survey of Income and Program Participation.

a Dollar value of unemployment benefits and child support are included in immediate family income in Exhibit 6.

b Benefits are those received by the single mother. Household TANF receipt means some household member receives TANF.

Finally, we examine some of the transfer benefits received by other household members. Overall, the median level of household means-tested cash transfers for both groups is \$0 and the average is \$1,132 since so few other household members receive these benefits (including TANF and SSI—results not shown). Only 1.8 percent of disconnected mothers in 2004 and 2.9 percent in 2008 live with household members receiving TANF benefits and only three to four percent live with other related adults receiving SSI. In 2004, about 15 percent of disconnected mothers lived in a household where other adults receive transfer income. These numbers are significantly higher for low-income single mother households. Despite being less likely to live with other adults, 23.7 percent of low-income single mother households received transfer income in 2004.

Comparing Disconnected Families by Living Arrangements

The above results suggest there is a group of disconnected mothers who are living with other household members, including cohabiting partners, with whom they may be sharing expenses or resources. Another group of disconnected mothers are living without any other adults in the household. To better understand differences among disconnected mothers, in this

section we compare the circumstances of disconnected mothers who are living alone without other adults to those who are living with other adults.¹²

There are some significant differences in the characteristics of disconnected mothers living alone and those living with other adults (Exhibit 8). Disconnected mothers who are living alone are significantly older than other disconnected mothers. Almost half as many disconnected mothers living alone are under age 24 as are disconnected mothers living with others. In addition, their children are older. Only 40.9 percent have children under age 5 compared to 62.4 percent of disconnected mothers living with other adults. Disconnected mothers living alone have slightly more children than disconnected mothers living with other adults.

There are also differences in race and ethnicity. A greater percentage of disconnected mothers living alone are black, non-Hispanic, 38.9 percent compared to 18.8 percent among disconnected single mothers living with other adults. A smaller percentage is Hispanic, 17.5 percent compared to 28.4 percent.

Disconnected mothers living alone have some personal barriers that may make work more difficult. A larger percentage, more than a quarter, of all disconnected mothers living alone have a health problem that limits work compared to 17.8 percent of other disconnected mothers. In addition, they are much more likely to have a child receiving SSI. However, disconnected mothers living alone are more likely to be a US citizen and less likely to have a child under age 5 or under age 1.

Both groups of disconnected mothers have low own-family income and are very poor relative to the poverty line. The difference that is most pronounced is in household income. Total annual median household income of disconnected mothers living with others is just under \$28,000 compared to about \$4,800 for disconnected mothers living alone. Disconnected mothers living alone are much more likely to receive other benefits including SNAP, public housing or subsidies, and public health insurance. A higher percentage receives child support and unemployment benefits as well.

These results show that disconnected mothers living alone, one-third of all disconnected mothers, are extremely poor. Although they are more likely to receive public benefits, about two-thirds are receiving SNAP and Medicaid and only two-fifths receive public housing/subsidy benefits. This group has older children, which could potentially make going to work easier, but they also have high levels of health problems and more children than other disconnected mothers.

¹² A comparison of disconnected mothers who are living alone or with only disconnected adults to disconnected mothers living with connected adults yields similar results. Given relatively small sample sizes, we combine data from 2004 and 2008 SIPP for this section.

Exhibit 8 – Characteristics of Disconnected Mothers Living Alone and Living with Other Adults

	Lives Alone	Lives with Other Adults
Age		
18 to 24	16.0%*	29.7%
25 to 29	17.5%	21.8%
30 to 39	38.0%*	27.2%
40 to 49	22.4%	17.6%
50 to 54	6.1%	3.6%
Mean number of children	2.0*	1.7
Percent with child under 5	40.9%*	62.4%
Percent with child under 1	9.5%*	18.4%
Race/ethnicity		
White	39.7%	45.1%
Black	38.9%*	18.8%
Hispanic	17.5%*	28.4%
Education		
Less than HS	29.4%	30.6%
HS Degree	33.5%	35.3%
Some College	31.5%	29.4%
College or More	5.7%	4.7%
Health problem that limits work	27.2%*	17.8%
Health problem that prevents work	24.4%*	15.2%
U.S. Citizen	91.2%*	80.5%
Child SSI	9.3%*	2.2%
Income to poverty level ratio (family)	42.3%*	23.4%
Mean family income	\$7,195*	\$3,976
Median family income	\$4,763*	\$0
Mean household income	\$7,776*	\$36,935
Median household income	\$4,799*	\$27,837
Food stamps/SNAP	69.2%*	33.3%
Public housing or subsidies	43.8%*	9.1%
Unemployment benefits	9.0%*	4.8%
Child Support	42.7%*	26.3%
Public health insurance	61.3%*	42.1%
Household reports transfer income	14.8%	13.7%
Sample	303	602

Sample combines data from 2004 and 2008.

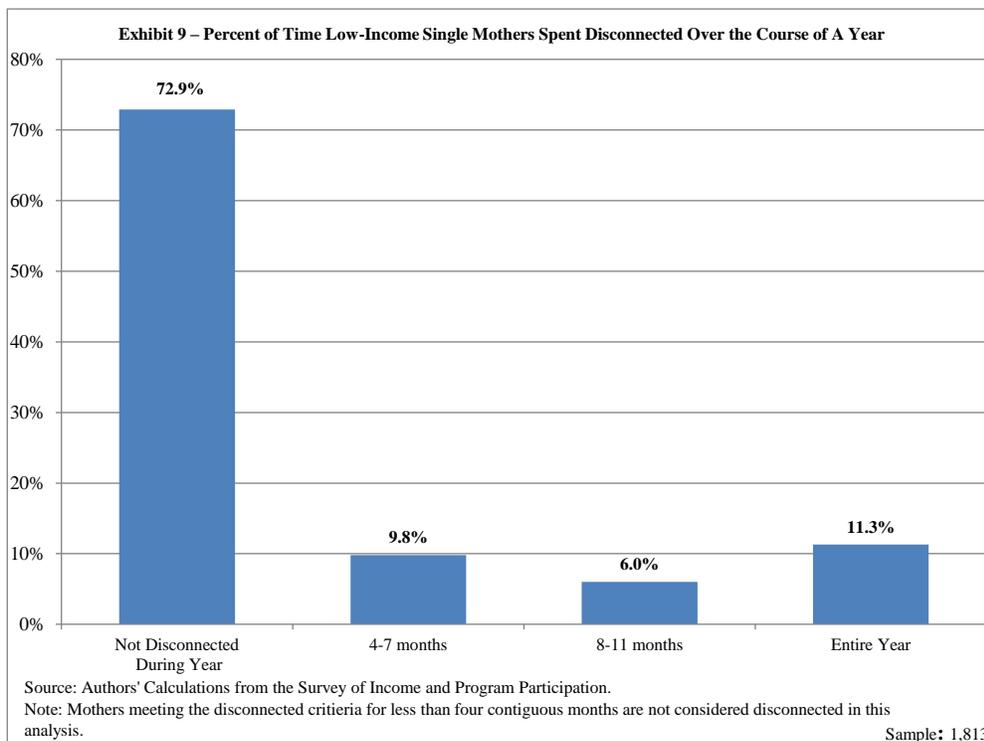
* Proportions or means differ significantly ($p < .05$) from all low-income single mothers

Source: Authors' calculations from the Survey of Income and Program Participation.

DYNAMICS OF DISCONNECTED SPELLS

It is clear from these descriptive results that many disconnected mothers are poor and have limited sources of support. In this section, we examine how long mothers remain in this disconnected state and what are the factors associated with becoming disconnected and exiting a spell of being disconnected, or “reconnecting.”

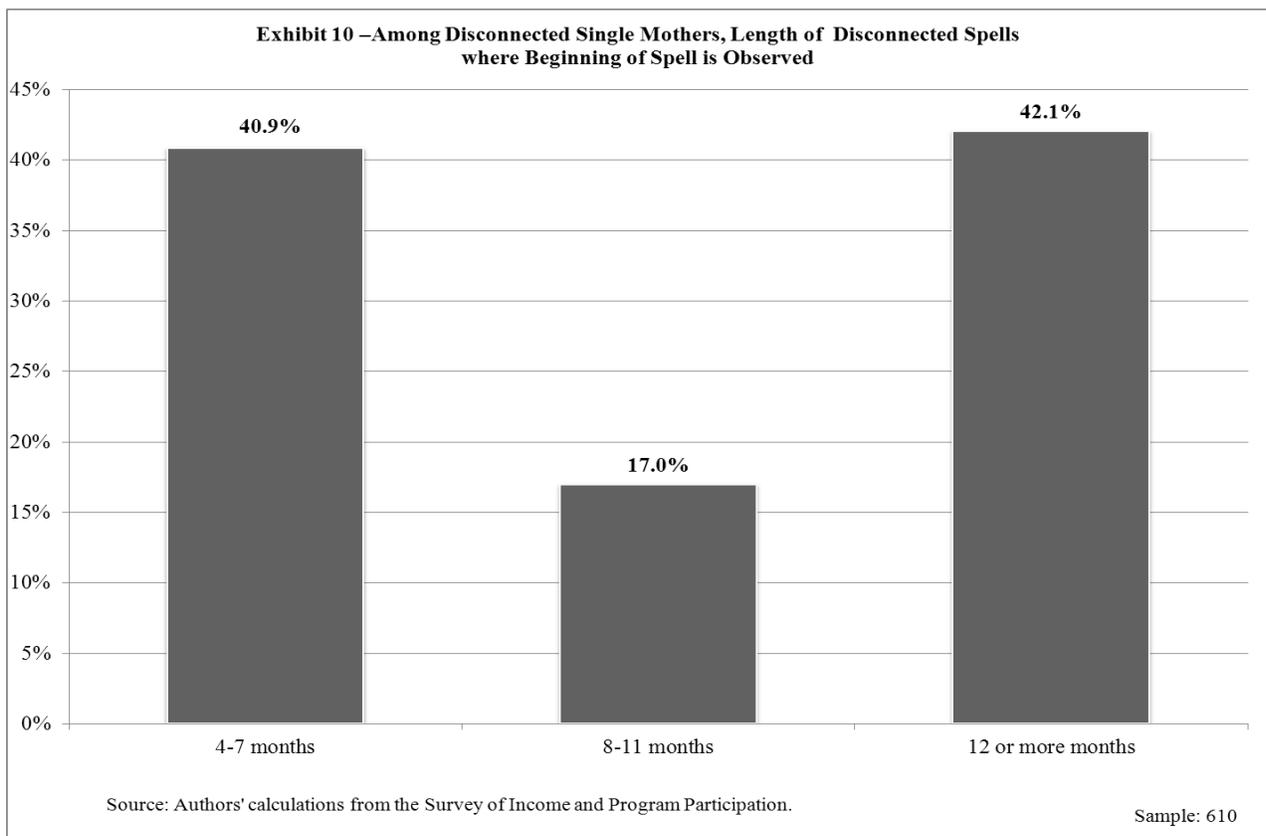
First, we consider the time spent disconnected over a year for all low-income single women, with results shown in Exhibit 9. We examine the data in four-month intervals or waves. Almost three-quarters (72.9 percent) of low-income single women are never disconnected for four contiguous months over the course of a year. This means over a quarter of low-income single mothers are disconnected for at least four contiguous months over a year. Almost a tenth are disconnected from 4 to 7 months in a row, 6.0 percent are disconnected from 8 to 11 months in a row, and 11.3 percent are disconnected for the entire year. For comparison, Blank and Kovak (2009) find that over a three year period, low-income mothers spend an average of 7.4 months disconnected (not necessarily contiguous). They find the average length of a spell is 5.3 months, even though they include short spell lengths of one month or more.¹³ As discussed earlier, our analysis does not consider spells of three months or less as disconnected.



¹³ This average spell length is for the sample of non-left-censored spells (where the beginning of the spell is observed) in the 2001 SIPP. It may be an underestimate since it includes right censored spells (those still ongoing when the respondent is no longer in the data).

To understand the factors associated with becoming disconnected, we focus on a sample of mothers that we observe becoming disconnected in the data. If we include mothers who are already disconnected at the beginning of our data (i.e. those we do not observe becoming disconnected), we do not know how long they have already been disconnected and cannot combine them with mothers for whom we do know the total spell length.

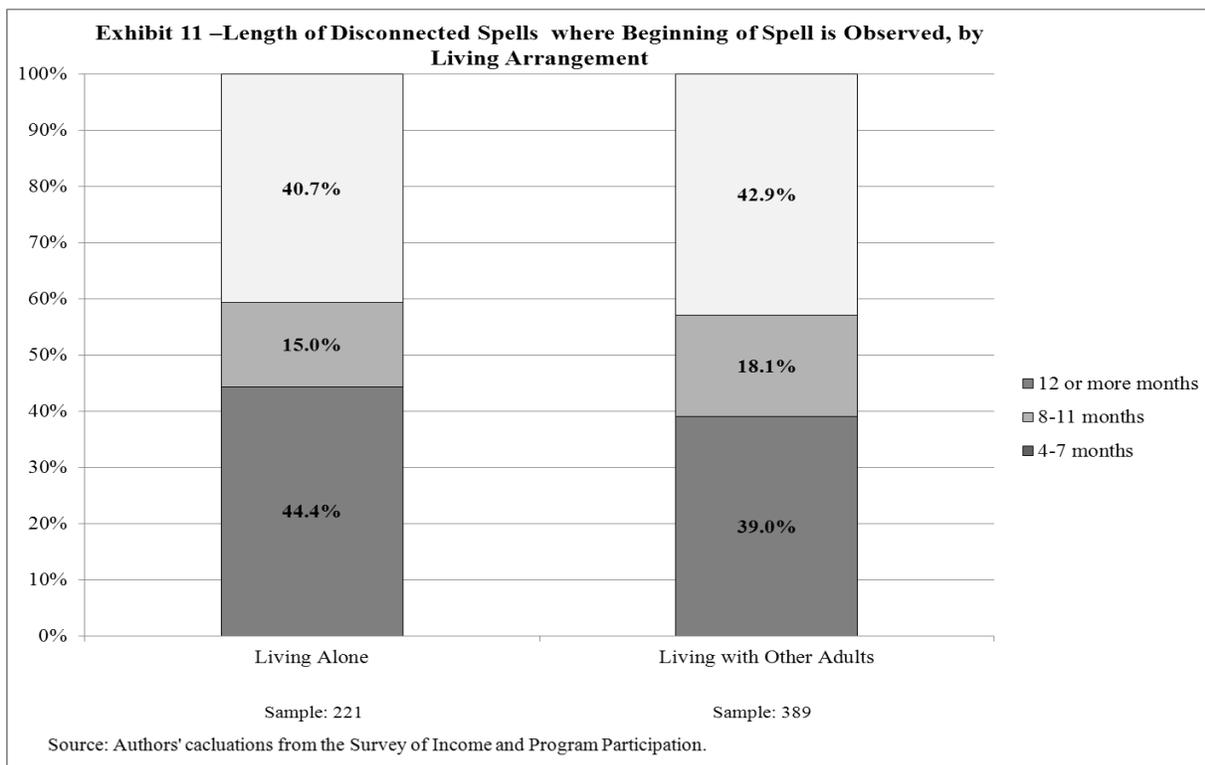
Exhibit 10 shows the distribution of the length of spells for this sample of newly beginning spells of being disconnected. Two-fifths of these disconnected mothers' spells last 4 to 7 months (only one wave). Seventeen percent have a spell that lasts 8 to 11 months (two waves) and 42.1 percent have a spell that lasts a year or more. This means that of those mothers who experience an initial period of being disconnected (of at least four months) a substantial percentage will remain disconnected for a year or more.¹⁴ These results also suggest that the probability of becoming reconnected is fairly constant over time (e.g., a similar probability of exiting the disconnected spell in each period) when we are not controlling for any other factors.¹⁵



¹⁴ For this descriptive analysis, we included all low-income single mothers for whom we observed the beginning of a spell of being disconnected and at least two additional waves (N=610). If we required at least three additional waves, the distribution is similar with 42 percent one wave, 16 percent two waves, 9.5 percent three waves, and 32.5 percent four waves or more (N=493).

¹⁵ These tabular results are consistent with a constant probability of exiting over time (a constant hazard). A constant hazard means that if the probability of exiting a spell of disconnectedness in a given wave is 41 percent, the probability of exiting after two waves should be the square of that rate (roughly 17 percent) and of remaining in a spell for 3 or more waves is 42 percent.

Given the differences in characteristics and household income of disconnected mothers living alone compared with those living with other adults, we also examine the length of time spent disconnected separately for mothers in these two types of living arrangements. As Exhibit 11 shows, there is relatively little difference in the distribution of spell lengths for disconnected mothers living alone and those living with other adults. A somewhat higher percentage of disconnected mothers living alone have shorter spells, 44 percent with 4 to 7 month spells compared to 39 percent living with other adults, but this is not statistically significant. We address this question more directly in our multivariate analysis.



Characteristics by short or long spells

The characteristics of disconnected mothers in shorter spells (four to 11 months) compared to longer spells (a year or more) are for the most part similar.¹⁶ The percentages living alone or with other adults in the household are similar (Exhibit 12). Disconnected mothers in shorter spells are somewhat younger than those in longer spells. However, race/ethnicity, household size and age of children are all similar. There are no significant differences in our measures of barriers to work (education, health problems, citizenship or

¹⁶ Shorter spells include those that are one or two waves disconnected and longer spells include those who are three or more waves disconnected. Results using the alternate definitions of shorter spells as one wave and longer spells as two or more waves yield similar results. Benefit receipt differences are no longer significant, in part because estimates are closer together and the sample with one wave disconnected is smaller.

Exhibit 12– Characteristics of Disconnected Mothers By Short and Long Spell

	Shorter Spell	Longer Spell
Living Arrangements		
Living alone	36.3%	34.2%
Living with other disconnected adults only	6.0%	3.0%
Living with other connected adults	57.8%	62.8%
Age		
18 to 24	35.6%	27.7%
25 to 29	18.6%*	27.7%
30 to 39	24.0%	25.7%
40 to 49	19.3%	17.4%
50 to 54	2.6%	1.5%
Household size	4.2	4.2
Mean number of children	1.8	1.8
Percent with child under 5	55.4%*	66.8%
Percent with child under 1	24.3%	27.6%
Race/ethnicity		
<i>White</i>	43.9%	42.3%
<i>Black</i>	27.9%	30.6%
<i>Hispanic</i>	21.9%	21.4%
Education		
<i>Less than HS</i>	27.7%	22.1%
<i>Some College</i>	30.2%	28.1%
<i>College or More</i>	5.0%	5.3%
Health problem that limits work	18.7%	18.9%
Health problem that prevents work	12.5%	13.6%
U.S. Citizen	88.2%	85.3%
Child SSI	3.0%	5.6%
Median family income	\$1,335*	\$0
Mean household income	\$25,904	\$30,126
Median household income	\$16,765	\$19,983
SNAP/Food stamps	46.9%*	35.1%
Public housing or subsidies	24.8%*	14.3%
Unemployment benefits	10.2%*	4.0%
Child Support	34.8%	28.6%
Public health insurance	57.3%*	45.4%
Household reports some transfer income	17.0%	13.6%
Sample	359	251

* Proportions or means differ significantly (p<.05) from all low-income single mothers

Source: Authors' calculations from the Survey of Income and Program Participation.

having a child receiving SSI). More disconnected mothers in shorter spells worked in the four-month period prior to being disconnected, 63.1 percent compared to 51.1 percent.

While family and household average income is not significantly different, disconnected mothers in shorter spells are significantly more likely to receive benefits, including food stamps, public housing subsidies, unemployment benefits, and public health insurance. A higher percentage also report child support and other household members receive some transfer income than those in longer spells, but the differences are not significant. We will be able to better understand this connection between benefit receipt and spell duration while controlling for other factors in the regression models below.

Events Associated with Becoming Disconnected

There are a number of events or transitions that can lead to the beginning of a disconnected spell. These include loss of TANF benefits, loss of SSI benefits, and loss of all earnings (losing a job and dropping to zero earnings). In addition, a woman can become disconnected through divorce, having a child, becoming a student or having her income dropping below the low-income threshold. Each of these events would have to happen in conjunction with other criteria to become disconnected. For example, a woman can become disconnected after a divorce if she is also a mother, low-income, not working and not receiving TANF or SSI. The overall probability of becoming disconnected between any two periods for all women ages 18 to 54 is relatively low—only .6 percent. This makes sense considering only a minority of women are low-income single mothers and only twenty percent of these at a point in time are disconnected. Therefore, the probabilities by transition type are correspondingly low.¹⁷

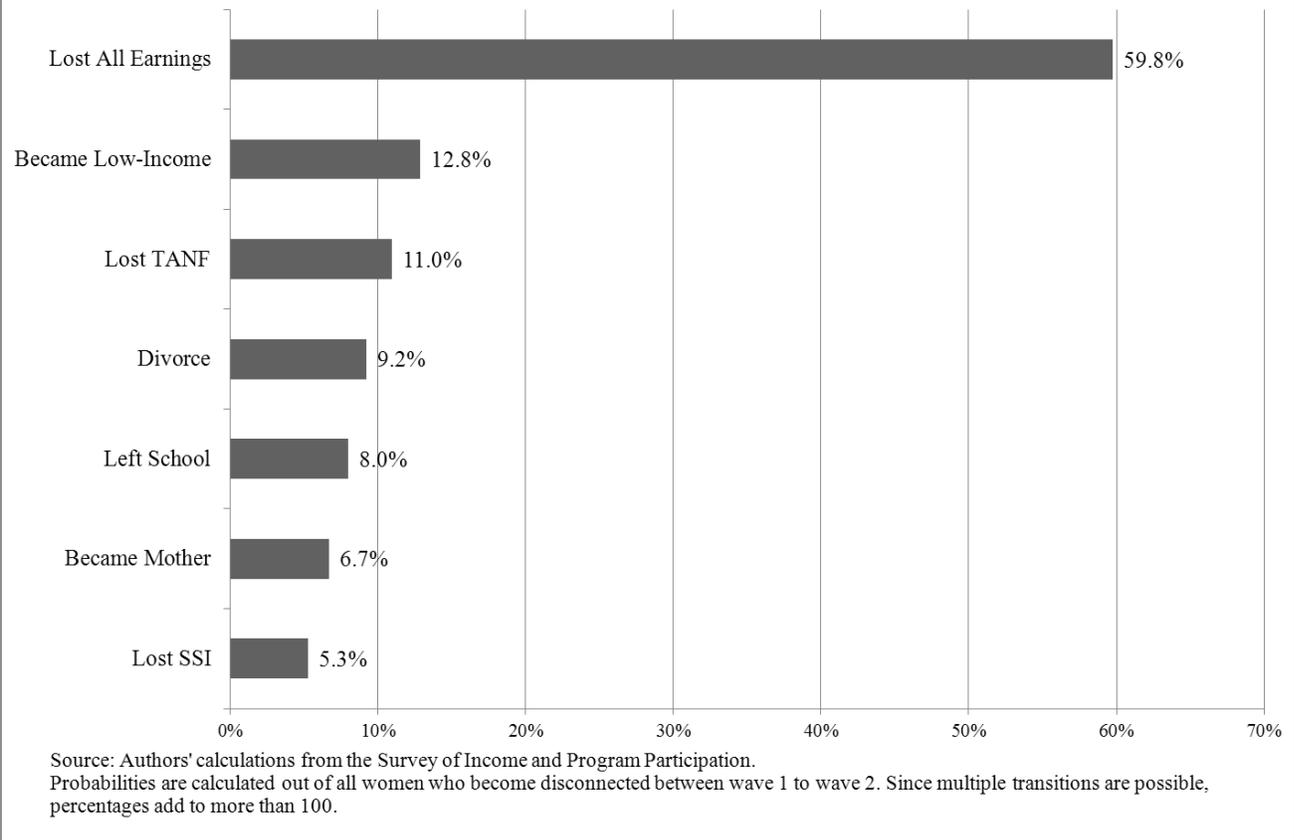
Exhibit 13 shows the relative likelihood of different reasons for becoming disconnected for all women who became disconnected between two four-month periods. For example, 5.3 percent of women who became disconnected lost SSI benefits.¹⁸ Since multiple transition events can happen at the same time (e.g., losing SSI and getting divorced) the percentages add to greater than 100 percent.

The most common transition event that leads to becoming disconnected is loss of all earnings. We find that between period 1 and period 2, out of all women ages 18 to 54 who become disconnected, 59.8 percent have lost all earnings. This probability is roughly 7 times larger than the probability of becoming disconnected through getting a divorce and roughly 5 times larger than through losing TANF benefits. This relatively smaller probability of becoming disconnected through losing TANF benefits makes sense given the smaller percentage of women who are eligible for or receive TANF benefits as compared with those working.

¹⁷ These transition events are not mutually exclusive. It is possible to become disconnected and to experience multiple transition events. For example, getting divorced, having income fall below the low-income threshold, and losing all earnings can all happen at once.

¹⁸ This percentage is calculated as the probability of experiencing the transition event between period 1 and period 2 divided by the total probability (.6) of becoming disconnected.

Exhibit 13 – Reason for Becoming Disconnected out of All Disconnected Women



Decomposing Probabilities. The probability of becoming disconnected is actually the combination of two different probabilities—the probability of experiencing the transition event and the probability of becoming disconnected given the event has happened (or conditional on that event having happened). It is possible to experience an event, such as getting divorced or losing TANF, and not become disconnected. A woman who loses TANF can go to work or begin receiving SSI and avoid being disconnected. It is illuminating to examine the different parts of the overall probability because they give us added insight into the importance of different events leading to becoming disconnected.¹⁹

Exhibit 14 shows the likelihood of experiencing each transition, the probability of becoming disconnected given that transition, and the total probability of becoming disconnected by type. The probability of losing all earnings between two four-month periods (i.e., having a job in one wave and no earnings in the next) is .91 percent. That is, .91 percent of all women in this age group experience this event over this time period. Similarly, the probability of becoming a mother or becoming low-income is also around 1 percent. The probabilities of losing TANF,

¹⁹ It is possible to do the same decomposition for the sample of low-income single mothers or for the sample of low-income single mothers living alone. Results give similar patterns, with higher probabilities. These results are available from the authors.

losing SSI, or becoming single are all less than half as large. The second column shows conditional on each of these events having happened, the probability of becoming disconnected.

Exhibit 14 – Probability of Experiencing Transition Events and Becoming Disconnected from Period 1 to 2

Transition	Probability of Transition Event (Percent)	Probability of Becoming Disconnected Given Transition (Percent)	Total Probability of Becoming Disconnected (Percent)
All Women Ages 18 to 54			
Lost TANF	0.35%	18.81%	0.07%
Lost SSI	0.31%	10.21%	0.03%
Lost All Earnings	0.91%	39.41%	0.36%
Divorce	0.45%	12.31%	0.06%
Left school	2.24%	2.14%	0.05%
Became Mother	1.01%	3.99%	0.04%
Became Low-Income	1.04%	7.41%	0.08%

Source: Authors' calculations from the Survey of Income and Program Participation.

Note: column 1 is Percent experiencing transition between wave 1 and wave 2; column 2 is Percent becoming disconnected in wave 2 conditional on transition; column 3 is the unconditional probability of becoming disconnected between wave 1 and 2 and experiencing a given transition, in percent (the product of columns 1 and 2).

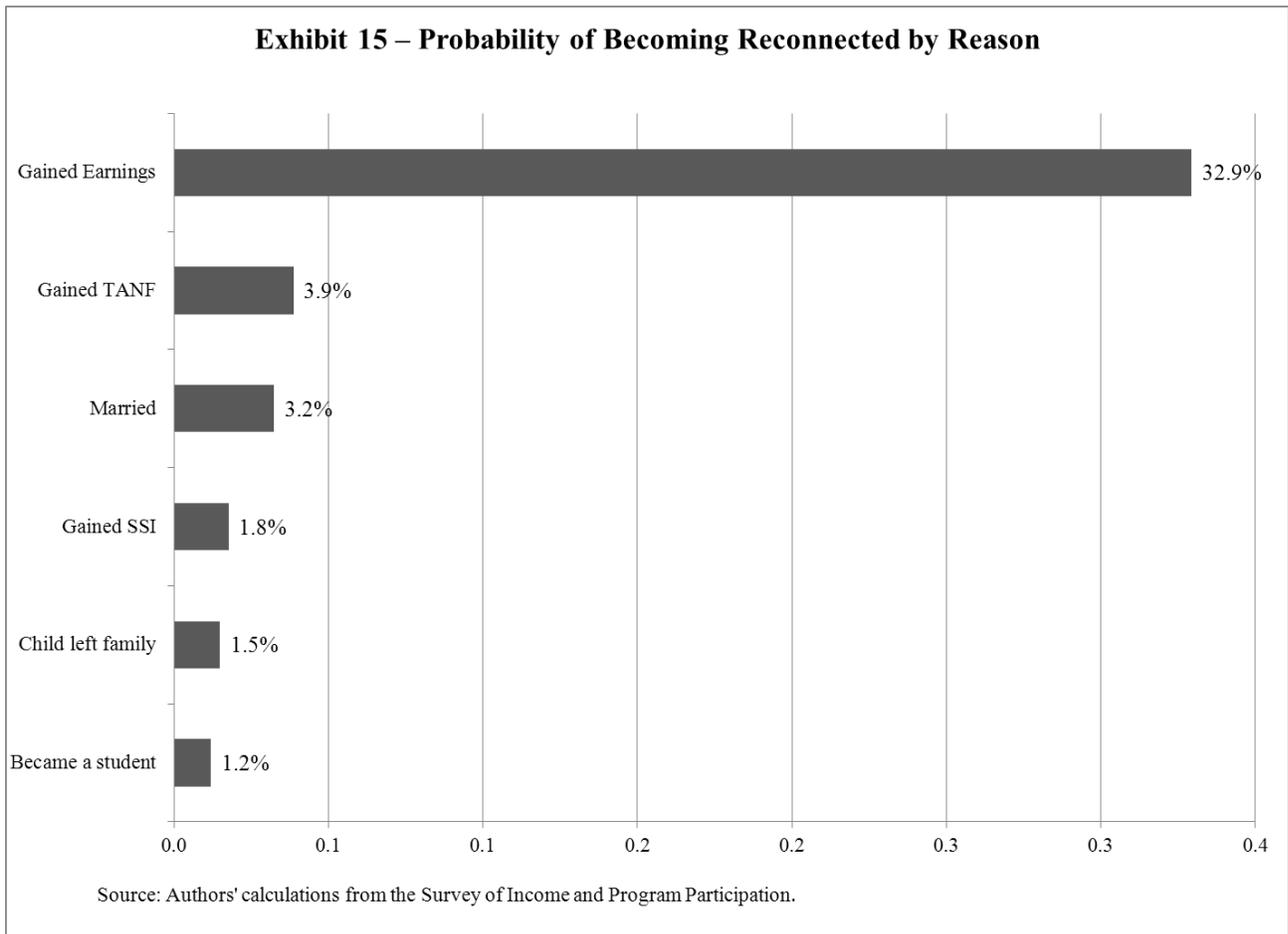
Again, the probability of becoming disconnected when losing all earnings is much larger than the probabilities for the other transitions. Almost 40 percent of those who lose all earnings become disconnected, meaning they do not at the same time go onto TANF or SSI, go to school or get married.

Despite the low probabilities of losing TANF or SSI among all women, a substantial percent of those who do experience these events become disconnected. Almost one-fifth of those who lose TANF benefits become disconnected and 10 percent of those who lose SSI become disconnected. This means that one-fifth of those losing TANF do not get a job, get married, go to school or go on SSI. So even though losing TANF is a low probability event, if a woman does lose TANF she has a relatively high probability of becoming disconnected.

Getting divorced is another low probability event that is associated with a not insignificant probability of becoming disconnected, 12 percent. On the other hand, only seven percent of women who become low-income also become disconnected and only four percent of women who become a mother also become disconnected.

Events Associated with Becoming Reconnected

Moving from zero to some earnings (“gaining earnings”) is also the most common transition associated with becoming reconnected. Exhibit 15 shows that of all disconnected mothers at a point in time, 32.9 percent gain earnings and are reconnected in the next four-month period. Gaining TANF benefits is the next most common event associated with becoming reconnected, with a probability of 3.9 percent. Getting married, gaining SSI benefits, no longer having a minor child, or becoming a student are all somewhat less likely events associated with becoming reconnected.



Overall, the patterns in Exhibit 13 and Exhibit 15 point to changes in earnings (i.e. losing or gaining work) as being the most important transitions associated with movement into or out of being disconnected. However, these transitions may be associated with many other changes, such as changes in household composition or health insurance, and we would like to examine the separate contributions of other factors, which we do in the context of a multivariate model.

Multivariate Hazard Analysis of Becoming Disconnected

We estimate a multivariate hazard model to examine the relationship between important factors and the likelihood of becoming disconnected. The results from this estimation are shown in Exhibit 16. The regression model includes indicators for the transition events that can lead to becoming disconnected²⁰ as well as variables measuring age, education, race, health status, household composition, receipt of public benefits (SNAP, child SSI, public housing or housing subsidy, health insurance coverage) and state characteristics (the unemployment rate, minimum wage, maximum EITC and TANF benefit). The sample is all women ages 18 to 54. Analogous results for a sample limited to those women who are low-income single mothers at baseline (in the first wave observed) are reported in column 2, and results for only those women who are low-income single mothers living alone in each period are reported in column 3. The only area where results differ substantially across these samples is public benefit receipt. Therefore, we focus our discussion on the results shown in column 1 except for in the section below on public benefit receipt.

The most important regressors which predict the onset of a spell of disconnectedness (conditional on not being disconnected) are the transition events discussed above. The largest coefficient is on “lost all earnings” as would be expected from the above results. However, the overwhelming dominance of that pathway is less obvious in these hazard models that also control for many other characteristics of women.

The interpretation of the other coefficients is as factors mitigating or exacerbating the likelihood of becoming disconnected, controlling for these transition events. For example, suppose a woman loses her job and therefore all her earnings—in some cases she will become a disconnected single mother and sometimes not (for example if she goes on TANF). Negative coefficients on other variables in this setting represent mitigating factors associated with a lower risk of becoming disconnected given the job loss. Positive coefficients represent exacerbating factors associated with a higher risk of becoming disconnected given the job loss.

The factors that have a substantial connection to becoming disconnected include age, education, health status, household composition, public benefit receipt, and health insurance. Other factors including race and state level variables were largely insignificant. We discuss each of these sets of results in turn.

Age, Education, and Health Status. Older women, ages 40 and older, are significantly less likely to become disconnected, all other factors equal, than younger women. Women with less than a high school degree are significantly more likely to become disconnected than women with a high school degree (the omitted category in the regression models). For example, a woman without a high school degree whose characteristics would predict a 10 percent probability of becoming disconnected would face a 7.7 percent probability of becoming disconnected if she were otherwise identical but had a high school degree.

²⁰ The transition “drop in family income to below 200 percent of the poverty line” is excluded. To enable estimation one category must be omitted.

Exhibit 16 - Coefficients from a Discrete-Time Hazard Model of Entry into Disconnected State

	1	2	3
	All women	Low-Income Single Mothers at Baseline	Low-Income Single Mothers Living Alone†
Became_single	0.510** (2.21)	2.344*** (3.39)	1.140 (0.78)
Became_mom	0.237 (1.02)	-0.323 (-0.40)	-2.19* (-1.83)
Became_single_mom	4.811*** (24.31)	0.421 (0.61)	2.987*** (5.91)
Left_school	1.980*** (9.78)	2.480*** (9.44)	0.918*** (3.45)
Lost_earn	5.932*** (49.86)	4.497*** (31.24)	3.257*** (20.61)
Lost_SSI	3.400*** (11.38)	3.884*** (13.16)	2.529*** (7.47)
Lost_TANF	3.521*** (11.71)	2.955*** (11.04)	1.772*** (7.09)
White	-0.0552 (-0.26)	-0.216 (-0.87)	-0.0145 (-0.06)
Black	0.0353 (0.16)	-0.243 (-0.94)	-0.240 (-0.97)
Hispanic	0.118 (0.52)	-0.289 (-1.03)	-0.0991 (-0.36)
Age 25-29	0.0876 (0.61)	0.191 (1.06)	0.288 (1.30)
Age 30-34	-0.0784 (-0.52)	0.0291 (0.15)	0.468*** (2.18)
Age 35-39	0.0565 (0.39)	0.219 (1.17)	0.302 (1.33)
Age 40-44	-0.279* (-1.72)	-0.107 (-0.50)	0.769*** (3.35)
Age 45-49	-0.257 (-1.53)	-0.203 (-0.89)	0.492* (1.81)
Age 50-54	-0.833*** (-3.33)	-0.454 (-1.18)	0.163 (0.46)
Less than HS degree	0.318** (2.45)	0.467*** (2.97)	0.319* (1.91)
Some Postsec Educ	-0.169 (-1.64)	-0.162 (-1.26)	0.0481 (0.36)
BA or better	-0.203 (-1.15)	-0.0259 (-0.08)	-0.251 (-0.82)
Other adults in household, none connected	-0.967*** (-5.21)	-0.748*** (-3.84)	
Other connected adults in household, minimal earnings	-0.376* (-1.67)	-0.350 (-1.56)	
Other connected adults in household, earnings at least \$400	0.442*** (3.09)	0.617*** (3.19)	
SNAP (food stamps)	0.239** (2.02)	0.000790 (0.01)	-0.485*** (-3.24)
Any Child SSI	0.867*** (3.46)	0.316 (1.26)	0.242 (0.87)
Subsidized Rent or Public Housing	-0.139 (-0.97)	-0.196 (-1.29)	-0.342** (-2.48)
State Unem Rate	0.0418 (0.87)	0.0293 (0.47)	-0.159** (-2.37)
Max TANF	-0.000174 (-0.44)	-0.000340 (-0.69)	-0.000728 (-1.42)
Max EITC (thous)	0.0542 (0.59)	0.0775 (0.69)	0.171 (1.37)
State Min Wage	-0.0772 (-0.96)	-0.0420 (-0.39)	0.200* (1.82)
Time dependence	0.0512 (0.65)	-0.246** (-2.03)	-0.145* (-1.66)
Constant	-7.017*** (-13.72)	-4.570*** (-6.89)	-3.138*** (-4.64)
Observations	180122	14602	5265

* $p < .1$, ** $p < 0.05$, *** $p < .01$

† Column 3 includes all low-income single mothers at baseline who are living alone for all waves they are observed.

All columns limited to women ages 18 to 54.

Women who report a health condition that prevents work are also much more likely to become disconnected, controlling for other factors. A woman with a health condition that prevents work is 58 percent more likely to become disconnected compared to women without a health condition that prevents work.²¹

Household Composition. Our main concern for household composition is to understand the relationship of living with other adults, both connected and disconnected, to becoming disconnected. We examine this by separately controlling for three types of households with other adults—those where none of the adults are connected; where other adults are connected but not through earnings (that is other adults are receiving TANF or SSI benefits); and where other adults are connected through earnings.²² “Women living alone without other adults” is the omitted comparison category in the model.

The effect of living with other household members on the probability of becoming disconnected depends on whether or not those adults have earnings. Women living only with disconnected adults (i.e. without earnings, TANF, or SSI) are significantly less likely to become disconnected themselves compared with women living without other adults. They are only 37 percent as likely to become disconnected. Similarly, the likelihood of becoming disconnected for women living with other connected adults who receive TANF or SSI but not earnings is lower than those living without any other adults (although not statistically significant). However, women living with other connected adults who have earnings are more likely to become disconnected than those living alone. The odds are 50 percent higher compared to women with no other adults present in the household.

This pattern of results may reflect the incentives to work of women who live with other adults. Women who live with working adults may be more likely to be disconnected because they have access to those earnings or may be engaged in home production. On the other hand, women living with other disconnected adults or adults receiving public benefits may have more incentive to go to work because they are helping to support other household members. They may be more able to go to work because other nonworking household members are providing child care. Alternately, they may be more likely to receive TANF or SSI themselves because of shared knowledge around how to access benefits or low stigma attached to receipt of benefits.

Public Benefit Receipt. We examine the relationship of SNAP (formerly Food Stamp) benefits, child SSI, and subsidized rent or public housing on becoming disconnected.

Women receiving SNAP or with a child receiving SSI are more likely to become disconnected. For example, women whose child receives SSI are 127 percent more likely to

²¹ To aid in the interpretation of the estimated logit coefficients, we present in our discussion the odds ratios implied by the coefficients. The odds ratio is calculated as the exponentiation of the coefficients presented in Exhibit 16. For example, a coefficient such as 0.46 on health conditions preventing work can be translated into an odds ratio of 1.58, indicating the odds of becoming disconnected are 58 percent higher for the group with health conditions preventing work than those without such a condition. Whenever we report “percent as likely” or “percent less likely” in this discussion we are referring to the odds ratio translation of the coefficients presented in the results tables.

²² We count the household as having other adults connected through earnings when household earnings are above \$400 in a four-month period. When other adults have SSI or TANF and household earnings are less than \$400, we classify this as a household with other connected adults, not through earnings.

become disconnected than women without a child receiving SSI. Receiving subsidized rent or residing in public housing has small effects that are not statistically significant.

When we limit our sample to low-income single mothers at baseline (in the beginning of our data), those who receive SNAP or child SSI are no more likely to become disconnected than those who don't (column 2 of Exhibit 16). This could suggest that receipt of SNAP or child SSI in the larger sample of all women is a proxy for being low-income (since these are means-tested benefits) and for the related factors (not controlled for) that increase the odds of becoming disconnected. Once the sample is limited to those who are low-income single mothers, there is no specific connection of receipt of these benefits to becoming disconnected.

Our results for the sample of low-income single mothers living alone show those who are receiving SNAP benefits or housing benefits are significantly less likely to become disconnected (column 3 of Exhibit 16). For example, a low-income single mother living alone and receiving SNAP is 61 percent less likely to become disconnected than if not receiving SNAP. These results could signify that low-income single mothers who live alone and receive these public benefits are more able or knowledgeable about accessing TANF and SSI or have lower stigma associated with receipt of these benefits and are therefore less likely to become disconnected.

Health Insurance. Women covered by Medicaid are generally more likely to become disconnected than those who have private health insurance. Those who have neither Medicaid nor private health insurance (who for the most part are uninsured), are also more likely to become disconnected than those who have private health insurance.²³ For example, a woman without Medicaid or private health insurance (a coefficient of 0.935 in column 1) has nearly a fivefold higher likelihood of becoming disconnected compared to a woman with some months of private coverage but no Medicaid (a coefficient of -0.683 in column 1). Similarly, a woman with Medicaid (a coefficient of 0.603 in column 1) is 3.5 times more likely to become disconnected than a woman with some months of private coverage and no Medicaid. Our results also show that a woman who has some months of Medicaid and some months uninsured over the course of a four-month period has a much higher likelihood of becoming disconnected than a woman who is on Medicaid all four months. This could reflect women in transition, for example, those who are losing TANF and Medicaid and becoming disconnected.

Multivariate Hazard Analysis of Becoming Reconnected

We estimate a multivariate hazard model to examine the relationship between various factors and the likelihood of exiting the disconnected state, i.e., becoming reconnected. The results from this estimation are shown in Exhibit 17.²⁴ The smaller sample sizes in this table

²³ Given that individuals can have various mixes of insurance coverage over a four-month period, the model divides people into those who ever have Medicaid in the period, ever have private health insurance in the period, and are ever uninsured (without Medicaid and private health insurance) in the period. All individuals in the sample fall into at least one of these categories, but can be in more than one category. This section discusses comparisons across these categories with the understanding the coverage referred to is at any time in the four-month period.

²⁴ We do not condition on events since any event associated with transitions out of the disconnected state would perfectly predict exit. Any transition (e.g., in school, with earnings, with income in excess of twice the poverty line, etc.) implies a person is no longer a disconnected low-income single mother by definition.

Exhibit 17- Coefficients from a Discrete-Time Hazard Model of Exiting the Disconnected State

	1	2
	All Disconnected Mothers	Disconnected Mothers Living Alone†
White	0.108 (0.39)	-0.227 (-0.52)
Black	-0.0489 (-0.17)	-0.154 (-0.35)
Hispanic	0.145 (0.49)	0.0464 (0.09)
Age 25-29	-0.0372 (-0.22)	-0.143 (-0.37)
Age 30-34	0.0693 (0.35)	-0.0540 (-0.14)
Age 35-39	-0.0455 (-0.24)	0.301 (0.75)
Age 40-44	0.0481 (0.23)	0.334 (0.80)
Age 45-49	0.101 (0.44)	-0.567 (-1.00)
Age 50-54	0.501 (1.34)	0.201 (0.31)
Less than HS degree	0.131 (0.83)	0.112 (0.39)
Some Postsec Educ	0.307** (2.12)	-0.0121 (-0.05)
BA or better	0.264 (0.97)	-1.277* (-1.95)
Health prevents work	-0.532*** (-2.74)	-0.328 (-0.95)
Other adults in household, none connected	1.859*** (9.30)	
Other connected adults in household, minimal earnings	1.063*** (5.83)	
Other connected adults in household, earnings at least \$400	-0.578** (-2.29)	
SNAP (food stamps)	0.218 (1.48)	1.008*** (3.16)
Any Child SSI	-0.256 (-0.80)	-0.284 (-0.72)
Subsidized Rent or Public Housing	-0.225 (-1.34)	-0.0121 (-0.05)
Ever (in 4 mos) without Medicaid or Private HI	0.360 (1.62)	1.292*** (2.99)
Ever (in 4 mos) with Private HI	0.684*** (3.21)	-0.542 (-1.11)
State Unem Rate	-0.0113 (-0.17)	0.284*** (2.76)
Max TANF	0.000525 (1.07)	0.00103 (1.01)
Max EITC (thous)	0.0437 (0.38)	-0.0277 (-0.13)
State Min Wage	-0.200* (-1.95)	-0.167 (-0.97)
Time dependence	-0.648*** (-5.90)	-0.704*** (-3.48)

† Column 2 includes all low-income single mothers at baseline who are living alone for all waves they are disconnected.

All columns limited to women ages 18 to 54.

emphasize that of the total population only a relatively small proportion is a low-income disconnected single mother at any point over several years.²⁵ Column 1 includes all spells of being disconnected that we observe in the data. Column 2 shows results for the sample of disconnected women who are living alone without other adults for all waves of their disconnected spell. We first discuss results from the sample of all disconnected single mothers, and then discuss differences in results for disconnected single mothers living alone.

The factors included in the model that are associated with becoming reconnected include education, health status, household composition, public benefit receipt, and health insurance. We discuss these in turn. Race, age, and state policy variables are not significantly associated with becoming reconnected. In addition, time dependence is significantly negative, meaning that the longer a mother remains disconnected the less likely she is to become reconnected in any period.

Education and Health Status. Disconnected women with less than a high school degree do not have a significantly different likelihood of becoming reconnected than women with a high school degree (the omitted category in our model). However, those with some postsecondary education are significantly more likely to become reconnected (more than 35 percent). Disconnected women with a health condition preventing work are far more likely to remain disconnected than those without a health condition, all else equal.

Household Composition. Household composition plays an important role in becoming reconnected. We control for the same measures of household composition in this model as in the model of becoming disconnected—households where none of the adults are connected; households where other adults are connected through receipt of TANF or SSI benefits, but not earnings; and households where other adults are connected through earnings.²⁶ “Women living alone without other adults” is the omitted comparison category in the model.

Women with other disconnected adults present in the household are significantly more likely to become reconnected relative to those with no other adults present in the household. Those living with other disconnected adults are 6.4 times more likely to become reconnected. Similarly, women living with other connected adults who receive TANF or SSI but are not working are also more likely to become reconnected relative to those with no other adults present in the household. Both of these results may reflect incentives to work, or proclivity to take up benefits, or a combination of both factors. Women with other nonworking adults present may feel a greater need to work to provide a stable source of income and may go to work and become connected at higher rates. On the other hand, the presence of other disconnected adults may result in greater measured need and higher potential benefits from taking up public assistance. Receipt of benefits by others in the household may also signal knowledge of how to access benefits or lower stigma to benefit receipt. So both ways of reconnecting may be more prevalent for those with other disconnected or nonworking connected adults present than for those living alone.

²⁵ This sample size limits our ability to look at subsequent events, such as reentry into the disconnected state after exit (cycling out and back in).

²⁶ We count the household as having other adults connected through earnings when household earnings are above \$400 in a four-month period. When other adults have SSI or TANF and household earnings are less than \$400, we classify this as a household with other connected adults, not through earnings.

Women living with other connected adults with earnings are far less likely to become reconnected relative to those living alone. These women are only 56 percent as likely to become reconnected as those living alone. This may reflect the lower need to acquire earnings or public assistance if another adult has some attachment to the labor force and is contributing to household resources. These results on living arrangements reinforce our findings on becoming disconnected.

Public Benefit Receipt and Health Insurance. SNAP, child SSI receipt, and housing benefits have no clear effect on the likelihood of becoming reconnected, either positive or negative. Results are statistically insignificant. We might have expected that receipt of public benefits would be associated with higher rates of reconnection, given knowledge about benefit access and potentially lower stigma.

Regarding health insurance, we find that disconnected mothers who are covered by Medicaid are less likely to become reconnected than those with private health insurance. Also, disconnected mothers without Medicaid or private health insurance coverage (for the most part uninsured), are less likely to become reconnected than those with private health insurance.²⁷

Disconnected Mothers Living Alone. Results from the separate model limited to disconnected mothers who live alone (without other adults) for the whole time they are disconnected is shown in column 2 of Exhibit 17.

Many coefficients are of the same sign as in the larger sample, suggesting similar relationships between factors and becoming reconnected. However, having a health condition that prevents work and postsecondary education are no longer statistically significant. This could be due to the smaller sample size. Race and age remain statistically insignificant as well.

One difference for disconnected mothers living alone is that receipt of SNAP has a substantial positive relationship to becoming reconnected. This parallels our finding that receipt of SNAP reduces the probability of becoming disconnected for low-income single mothers living alone. This result may reflect a greater underlying propensity of some of these mothers to seek benefits from public programs, which leads to SNAP benefit receipt and later to another type of public benefit receipt (TANF or SSI). Having a child receiving SSI or housing supports are both statistically insignificant.

Results for health insurance differ dramatically for disconnected mothers living alone. Those disconnected mothers living alone who are covered by Medicaid are more likely to become reconnected than those with private health insurance. Those without Medicaid or private health insurance (mostly uninsured) are also more likely to become reconnected than those with private health insurance. This is opposite from the results for all disconnected mothers and our results for becoming disconnected. The reason behind this result is unclear. It may be that disconnected mothers living alone with private health insurance are a selected group and this result is reflecting some other aspect of that select groups' lower likelihood of becoming reconnected.

²⁷ This model uses the same variables to measure health insurance as the estimation of becoming disconnected. See earlier footnote 25.

DISCUSSION AND CONCLUSIONS

Initial research into the circumstances of disconnected mothers, those without work or welfare benefits, was prompted by the observation after welfare reform that some women were leaving TANF without work. Concerns arose as to the well-being of these families and whether TANF policies and procedures played any role in these exits. There is some evidence that these mothers do have lower incomes, higher levels of personal barriers to work and experience of material hardships than other single mothers. As the number of TANF recipients has decreased over time, these concerns remain, and have been added to by the increasing number of low-income single mothers that are income eligible for TANF but not receiving this benefit. In response to this increase and the general instability of work among low-income single mothers (mirroring the general low-wage labor market), the focus of this research has broadened to all single mothers who are not working or receiving government cash assistance. Our study addresses this broader set of single-mother families who are disconnected—that is, not working or receiving TANF or SSI benefits.

The percent of low-income single mothers who are disconnected has increased over the last fifteen years. About one in eight low-income single mothers was disconnected in 1996, but about one in five was disconnected in the period 2004 to 2008. There is some suggestion in the newest data of continued increases into 2009 as well. Based on these percentages, approximately 1.2 million women were disconnected at a point in time in 2008.

We address whether disconnected families are worse off economically than other low-income single mothers or simply receiving different types of supports. We examine the other sources of income and supports of disconnected families compared to other low-income single mothers. Perhaps not surprisingly given the importance of earnings as a source of income for all single mothers, we find that these mothers who are not working or receiving TANF or SSI have significantly lower income. We also find that some disconnected mothers receive other benefits such as SNAP, WIC (Women, Infants, and Children program)²⁸, public housing or housing subsidies and Medicaid, although not at a substantially higher rate than other low-income single mothers. When focusing on the disconnected mothers' income alone, they do seem to be economically worse off.

Another potential source of support we examine is from living with other adults. We find that about one-third of disconnected mothers live alone (without other adults), representing approximately 350,000 families. This is higher than the percent living alone among all low-income single mothers. About one-third of disconnected mothers are cohabiting and one-third live with other non-cohabiting adults. For any of these roughly two-thirds of disconnected single mothers living with other adults, these arrangements could mean mothers are receiving free or discounted housing, sharing living expenses, or directly benefitting from the other adults' income. When we include the income of these other adults and consider household incomes, disconnected mothers still have lower household incomes than other low-income single mothers, but the levels are considerably higher than when looking at family income only. Further, our findings on factors associated with entering or exiting a spell of being disconnected show that living with other adult earners increases the likelihood of becoming disconnected and, once

²⁸ WIC provides food and nutrition services to low-income women who are pregnant or with young children.

disconnected, decreases the likelihood of becoming reconnected. These results suggest that earnings from other household members are serving as a buffer for some disconnected mothers, potentially lessening the harm of not working/not receiving TANF or SSI or at least reducing the incentives to change status.

Living with other adults who are not earners has an opposite effect; it reduces the probability of becoming disconnected and increases the probability of becoming reconnected relative to mothers living alone. This suggests the single mother may be partially responsible for the economic well-being of these other adults, outweighing any expense sharing benefits. An alternate explanation is that those living with other non-working adults are more able to go to work (and avoid becoming disconnected or more quickly reconnect) because these other adults provide child care.

Another question is whether disconnected mothers are more likely to have personal barriers that have been shown in past research to be related to lower employment and to be more prevalent among women who have been sanctioned off TANF or reached time limits. We find evidence that disconnected mothers are more likely to have personal characteristics that affect ability to work including less education, more health problems, less likely to be a citizen and more likely to have young children (under age 5 and under age 1). Our research also finds that some of these characteristics (having a health problem and lacking a high school degree) are directly associated with a greater likelihood of becoming disconnected and remaining disconnected, even after controlling for losing a job, TANF, or SSI. These characteristics could be related to difficulties in finding or keeping employment or they could indicate greater difficulties in accessing TANF or SSI benefits or meeting requirements once on TANF.

We also find some evidence for concerns about disconnected families' ability to access benefits beyond TANF and SSI. Relatively low percentages of disconnected mothers receive other benefits, especially given their low incomes. Half or fewer disconnected mothers receive benefits such as SNAP (40 percent), housing subsidies (20 percent) or Medicaid (50 percent) in 2004. In that year, disconnected mothers are essentially no more likely to receive other benefits than other low-income single mothers. In 2008, during the recession, the percentage of disconnected mothers receiving some benefits increases, for example 50 percent receive SNAP and 7 percent receive unemployment insurance, but the percentages are still relatively low. We also find that receipt of SNAP benefits is not related to becoming or remaining disconnected for low-income single mothers, but is negatively related to both for low-income single mothers living alone. For these mothers, who have extremely low incomes, these results are consistent with the hypothesis that receipt of SNAP benefits signals those who are more adept at accessing benefits (have the requisite knowledge and familiarity with benefit systems) or are less adverse to receiving public benefits (lower stigma). These mothers may be more likely to receive TANF or SSI and thus avoid becoming disconnected or become reconnected more rapidly. The flip side is those not receiving SNAP, even controlling for some personal characteristics, may be less able to access TANF or SSI or want to avoid receipt of public benefits.

Past literature has focused on disconnected mothers at a point in time and raised the question that if disconnected mothers spend relatively short periods in this state they may be less different on average than other low-income single mothers and possibly at lower risk of serious

hardship than if they remain disconnected for longer periods. We find that the experience of being disconnected for a four-month contiguous period is not uncommon among low-income single mothers. Somewhat more than one quarter of low-income single mothers are disconnected for four months over the course of a year. Furthermore, of those who experience a period of being disconnected, the time spent disconnected is relatively long—40 percent remain disconnected for more than a year. When we compare disconnected mothers living alone to those living with other adults, the length of time spent disconnected is similar—roughly 40 percent of both groups are disconnected for a year or more. This may be especially problematic since we find that disconnected mothers living alone have extremely low incomes (roughly \$5,000 a year). They are more likely than other disconnected mothers to receive SNAP, housing, and Medicaid benefits—about half to two-thirds receive these benefits. This is a relatively small group. Disconnected mothers living alone (without other adults) are approximately 6 to 7 percent of all single mothers—roughly 350,000 mothers nationwide.

Finally, the evidence in this paper shows that not working (loss of all earnings) is the dominant reason for becoming disconnected and gaining earnings is the primary way out of being disconnected for single mothers. Broadening the research frame to all low-income single mothers, not just those who were formerly on TANF, leads to a shift toward work instability being the primary issue as opposed to loss of TANF benefits. However, that is mainly because receipt of TANF (and therefore losing/leaving TANF benefits) is a less likely event. Our results show that for those women who do stop receiving TANF benefits, about one-fifth become disconnected. These results suggest that there is continued need for tracking mothers leaving TANF, understanding potential interactions between TANF policies and practices and mothers leaving the rolls without work, and examining the well-being of children in these families.

Going forward, it is important to discuss some of the limitations of research on disconnected mothers and where new research might be most profitable. Research addressing how best to help low-income single mothers avoid or get out of a spell of being disconnected is made somewhat more difficult because this status combines both work and benefit receipt. Avenues to promote and retain work can be different from avenues to improve access to benefits. Of course, some policy concerns pertain both to work and benefit access—for example addressing the issues of women with multiple personal characteristics that affect ability to work. Research that addresses these characteristics—how to best serve women facing them and measurement of their impact on outcomes—is enhanced by considering both work and benefit access as outcomes. In general, our understanding would benefit from separate consideration of impacts on and policy solutions to finding and retaining work and accessing benefits.

Another focus of research on disconnected mothers is the identification of a group of families who are the most vulnerable, not only poor but without connection to systems that might help them gain other needed economic and service supports. Our findings show that even within the group of low-income single mothers without work and welfare for significant periods of time, there is variation in how needy these families are. We identify a group of disconnected low-income single mothers who are living alone (without other adults) for significant periods of time. While these families are certainly economically vulnerable, there are limitations in the survey data used to identify and analyze such a small (both in reality and survey sample size) subset of single mothers. Limitations include the possibility that income sources are misreported

or underreported by respondents because they are infrequent or don't fit easily into survey categories or are not asked about in the survey (e.g., infrequent off-the-books work, one-time or inconsistent help from friends or family). This is in addition to underreporting of public benefits in household surveys generally.²⁹ These limitations call into question the ability to truly say one small subgroup of single mothers is more economically vulnerable than another small group. Analysis of the circumstances of economically vulnerable single mothers might be well-served by using a more common definition such as those in deep poverty.

Specific areas for concern that have been highlighted by the research on disconnected mothers would benefit from further direct research. The relatively high prevalence of characteristics that affect the ability to work among these mothers suggests that further research on ways to serve "hard-to-employ" mothers is needed, and that this research needs to include thinking on how to make sure those who are not receiving TANF benefits have access to the kinds of services and supports they need. In addition, our results suggest the need for additional research on how to improve access to benefits for very low-income mothers who are not only not receiving TANF or SSI but also not receiving SNAP or Medicaid. Research to better understand why these mothers are not receiving these benefits is important.

These results also suggest the need for more research about the stability of more complex household living arrangements of some single mothers (including cohabitation), the role these arrangements play in providing positive economic supports for very low-income non-working single mothers (including lower housing costs, income sharing, and child care provision) and the impact on children of these arrangements. Finally, the finding that losing work and remaining without work for significant periods of time is relatively common among low-income single mothers suggests the importance of continuing research that focuses on how to best support all of these mothers in finding and maintaining work.

²⁹ For more discussion of misreporting and underreporting of data by families observed to have little or no income in household surveys (the National Survey of America's Families) and the sources of support they do rely on see Nelson et al. (2003).

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