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Welfare recipients' involvement with child protective services after welfare reform

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Abstract

Objective— This study identifies factors associated with child protective services (CPS) involvement among current and former welfare recipients after welfare reform legislation was passed in the US in 1996.

Method— Data come from the Women's Employment Study, a longitudinal study of randomly selected welfare recipients living in a Michigan city in 1997 (N = 541). In order to identify risk factors for CPS involvement among current and former welfare recipients, multinomial logit analyses with 29 independent variables were employed on a trichotomous dependent variable: no CPS involvement, investigation only, and supervision by CPS after investigation.

Results— The relationship between work and involvement with CPS differs by work experience prior to welfare reform. As the percentage of months working after welfare reform increased, the risk of being investigated by CPS declined among those with prior work experience but the risk increased among those without prior work experience. However, work variables were not significant predictors of supervision by CPS after an initial investigation. Further, race, cohabitation, childhood welfare receipt, having a learning disability, having a large number of children, being newly divorced, living in a high problem neighborhood, and being convicted of a crime were associated with one's probability of being either investigated or supervised by CPS.

Conclusions— These findings suggest that employment could have increased the stress levels of current or former welfare recipients without prior work experience to the point where they were prone to minor child rearing mistakes that resulted in a CPS investigation, but were not severe enough to warrant opening the case for supervision. Supports should be provided to welfare mothers who are prone to involvement with CPS; expansions in the childcare subsidy and a reduction or delay in work requirements might also help these families.

Keywords

Child welfare; Maternal employment; Welfare (PRWORA)

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Introduction

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 (P.L. 104-93) ended low-income families' entitlement to cash assistance, and changed the United States' welfare program from an income support to a work-based program. The PRWORA abolished the Aid to Families with Dependent Children program (AFDC) and created the Temporary Assistance for Needy Families program (TANF). The Act imposes a 60-month limit on welfare receipt, requires welfare recipients to work within 24 months of initial enrollment, and allows states to cap benefits if a baby is born while on welfare. The Act also allows states to provide services and incentives that encourage welfare recipients' employment (Corcoran, Danziger, Kalil, & Seefeldt, 2000).

These changes in the welfare system have caused concern among child welfare professionals because a relatively high proportion of children from welfare-reliant families are reported to child protective services (CPS) (Courtney, Piliavin, & Power, 2001; Martin & Lindsey, 2003; Wells & Shafran, 2005). About half of all reported child maltreatment incidents occur in families receiving welfare, more than half of all foster children come from welfare-eligible families, and between 70% and 90% of families receiving in-home support services through CPS receive welfare (Geen, Fender, Leos-Urbel, & Markowitz, 2001; Pelton, 1994).

It is, however, unclear whether and how welfare reform is associated with recipients' involvement with CPS. Furthermore, little is known about the relationship between work and the degree of CPS involvement among those receiving welfare. To fill the gaps in previous research, this study examines the relationship between maternal employment and involvement with CPS among welfare recipients.

Background

Potential effects of welfare reform on involvement with CPS

Both child advocates and social work researchers anticipated that terminating poor families' entitlement to cash assistance and enforcing strict work requirements would affect child maltreatment in several ways (Hutson, 2001; Ovwigho, Leavitt, & Born, 2003; Slack, 2002; Waldfogel, 2004). First, welfare reform might influence the recipients' involvement with CPS through its effect on income. On the one hand, it was expected that some welfare recipients would lose benefits when they failed to meet work requirements or reached their 60-month time limit. On the other hand, some suggested that welfare reform might increase the income of some welfare recipients through new employment support programs and work incentives. Since income is one of the strongest predictors of child maltreatment (Pelton, 1994; Sedlak & Broadhurst, 1996; Thomlison, 2004), changes in income might affect welfare recipients' risk of involvement with CPS.

Second, the PRWORA includes strong work requirements. As a result, more low-income mothers have worked outside the home (Lichter & Jayakody, 2002). The effect of work on child abuse and neglect is, however, unclear. On the one hand, employment may increase welfare families' risk of involvement with CPS when they are not able to arrange appropriate child care or when they have difficulties balancing the demands of work and family (Geen et al., 2001; Slack, 2002; Shook, 1999; Waldfogel, 2004). On the other hand, studies have shown that employment may have a positive effect on a mother's psychological well-being and self-esteem, and therefore it may reduce her risk of child maltreatment (Elliott, 1996; Waldfogel, 2004).

Third, changes in welfare rules might increase child abuse and neglect reports. In some states, welfare agency staff are required to report those whose benefits are penalized for

noncompliance with program rules to CPS and have them assessed for potential child maltreatment. In addition, in most states, welfare workers have greater contacts with their clients under PRWORA than they did under the old welfare system; many are required to visit their clients' homes and identify barriers to self-sufficiency. As a result, welfare workers may now be more likely to notice child maltreatment, which may increase their reports of child abuse and neglect (Ehrle, Scarcella, & Green, 2004; Geen et al., 2001; Seefeldt, Leos-Urbel, McMahon, & Snyder, 2001).

The effect of new welfare rules, however, may not be identical for every recipient. Previous research has demonstrated that the welfare population is not homogeneous: some welfare recipients use cash assistance programs for short periods while others, especially those with serious and/or multiple difficulties, stay on welfare for long periods (Bane & Ellwood, 1994; Danziger, Corcoran, Danziger, Heflin, Kalil, Levine, Rosen, Seefeldt, Siefert, & Tolman, 2000; Nam, 2005; Olson & Pavetti, 1996). Welfare reform might, therefore, have different effects on welfare recipients' involvement with CPS across different subgroups of recipients. In particular, previous work experience may moderate the effect of welfare reform on recipients' CPS involvement. Considering that managing child-rearing and work simultaneously is a new challenge for welfare recipients without work experience, it is plausible that they will encounter greater stress in dealing with work requirements, and, therefore, become more vulnerable to CPS involvement than their counterparts who have worked.

Thus, changes in welfare policies after the passage of the PRWORA may influence welfare recipients' risk of involvement in CPS. However, the direction of these changes is not clear, and the effect of these changes in welfare policy may not be identical for all welfare recipients.

Welfare, work and involvement with CPS: Current empirical knowledge

The empirical relationships between involvement with CPS and maternal employment and welfare status have been examined in only a few studies. Some studies have compared CPS involvement between pre- and post- welfare reform periods and across different welfare programs (Fein & Lee, 2003; Geen, et al., 2001; Goerge & Lee, 2000; Paxson & Waldfogel, 2003; Wells, Guo, Shafran, & Pearlmutter, 2003). It has been reported that CPS caseloads significantly increased after welfare reform (Wells et al., 2003) and that foster care entry rates among children from welfare families rose in the first year of full implementation of a state's welfare reform program (Goerge & Lee, 2000). One study showed that the rate of reported neglect was significantly higher among a group that faced strict work requirements and harsher penalty rules than among a group enrolled in a traditional welfare program (Fein & Lee, 2003). State-level analyses reported that the level of substantiated child maltreatment and the number of children in out-of-home care were higher in states with strict lifetime welfare limits and harsher penalty rules than in states with less strict rules (Paxson & Waldfogel, 2003). These studies suggest that welfare reform rules, especially work requirements and strict penalties, may increase welfare recipients' risk of being involved with CPS.

A number of studies have directly examined the relationship among welfare receipt, employment, and CPS outcomes using data collected before welfare reform. These studies have provided supporting evidence for a preventive effect of welfare benefits. Discontinuity of welfare receipt significantly increased one's risk of involvement in CPS among children in welfare recipient families (Needell, Cuccaro-Alamin, Brookhart, & Lee, 1999; Shook, 1999), while loss of welfare income after a child's foster care placement delayed mother-child reunification in a sample of children who entered foster care system in the late 1990s (Wells & Guo, 2003).

The relationship between maternal employment and involvement with CPS is not obvious. Shook (1999) reported that wage income significantly decreased one's risk of being involved

with CPS when a family lost welfare benefits of more than \$75 per month. And Wells and Guo (2003) found that the speed of mother-child reunification was not significantly different between working mothers and non-working mothers who lost welfare benefits after their children were moved into foster care placement.

A small number of studies have directly examined the relationship among mother's employment, welfare status, and CPS involvement based on data collected after the passage of PRWORA. Courtney, Piliavin, and Power (2001) showed that the risk of being investigated by CPS authorities was significantly associated with maternal employment but not with welfare receipt. Ovwigho et al.'s (2003) study of those who recently left the welfare rolls reported that a mother's employment status itself did not have a significant effect on involvement with CPS, although her higher earnings significantly decreased this risk. Slack et al. (2003) reported that the risk of CPS involvement was significantly higher for those who depended solely on welfare and significantly lower for those who combined welfare and work as sources of income than for those who neither worked nor received welfare. Those who worked without receiving welfare were not significantly different from those who did not work and did not receive welfare. Thus, the findings of previous studies are not consistent with each other, suggesting that there may be a complex relationship between involvement with CPS, maternal work, and welfare receipt.

Research on other risk factors for child maltreatment and CPS involvement

Numerous studies have examined four sets of other risk factors associated with child maltreatment and involvement with CPS---family characteristics, mothers' (or caretakers') characteristics, child-related factors, and environmental factors. Family risk factors include low family income, single parenthood, cohabitation with someone other than the children's biological father, and stressful family events (Barth & Blythe, 1983; Browne & Saqi, 1988; Needell et al., 1999; Pelton, 1994; Sedlak & Broadhurst, 1996; Shook, 1999; Thomlison, 2004).

Among mother's characteristics, race has a different relationship with CPS involvement in the general and welfare population. In studies of the general population, the effect of race disappears after controlling for family income and other characteristics (Pelton, 1994; Sedlak & Broadhurst, 1996; Thomlison, 2004). However, in studies of welfare recipients, Whites are more likely to be involved with CPS than their minority counterparts even after controlling for other factors (Needell et al., 1999; Goerge & Lee, 2000; Slack et al., 2003). In addition to race, mothers' younger age; having a child at an early age; lower educational achievement; having a learning disability; mothers' experience with violence both during childhood and as an adult; poor physical health, psychiatric symptoms, substance abuse, emotional fragility; and involvement with the criminal justice system have been associated with CPS involvement (Black, Heyman, & Slep, 2001; Browne & Saqi, 1988; Courtney et al., 2001; Needell et al., 1999; Shook, 1999; Thomlison, 2004).

A number of child factors have also been identified as predictors of CPS involvement. Being younger, being part of a larger sibling group, and having physical and mental health problems have been related to involvement with CPS (Black et al., 2001; Brown & Saqi, 1988; Courtney et al., 2001; Roberts, 1988; Sedlak & Broadhurst, 1996; Shook, 1999; Thomlison, 2004).

Finally, some environmental factors have been identified as risk factors. Parents with weak support networks tend to have greater parenting difficulties and a higher risk of maltreatment (Browne & Saqi, 1988; Roberts, 1988; Thomlison, 2004). And those who live in neighborhoods with higher poverty rates and rates of single-parent households are more likely to maltreat their children (Black et al., 2001; Drake & Pandey, 1996).

In sum, previous studies present contradictory findings about whether the new welfare rules under PRWORA affect CPS involvement through mandating work, and none of these studies examines the wide array of other risk factors for CPS involvement that might mediate this relationship. To further knowledge in this area, this study tests whether increases in workforce participation lead to greater CPS involvement among welfare recipients even when controlling for other risk factors. In addition, it tests whether welfare program penalties result in greater CPS involvement when other risk factors are controlled.

Research questions

In order to begin to untangle the variance in welfare recipients' involvement with CPS after the passage of PRWORA, this paper addresses the following questions:

Is maternal employment significantly associated with welfare recipients' involvement with CPS?

Does the relationship between mother's work and CPS involvement differ between those with and without previous work experience?

Is a mother's experience with welfare penalties associated with becoming involved with CPS?

Are other variables related to involvement with CPS once work experience is taken into account?

Methodology

Data source and sample

This paper uses data from the Women's Employment Study (WES), a longitudinal study of a randomly selected sample of women who were on welfare as single parent cases and who lived in one urban Michigan county in February, 1997. The county is similar in demographics and economic conditions to many medium-sized Midwest cities in the U.S., and its welfare caseload was similar to that of the national welfare caseload with one exception; the county and the caseload have small proportions of persons of Hispanic ethnicity (see Danziger et al., 2000).

The sample was systematically selected with equal probability from an ordered list of welfare recipient cases in the county where the mother was between the ages of 18–54, a U.S. citizen, and either African American or White non-Hispanic (the size of the Hispanic group was insufficient for subgroup comparisons). To help ensure representativeness, cases were proportionally selected by zip code, race, and age.

Once selected, members of the sample were sent letters inviting them to participate in a study. In-home interviews were conducted by trained interviewers and included a comprehensive set of paper and pencil measures. The first set of interviews averaged 61 minutes but increased in length with new questions added in the later follow-up interviews; they lasted an average of 85 minutes by the fourth interview. Respondents were given \$25 for their participation in the study at each interview. Intensive, study-specific, interviewer training on the content and administration of the survey and on interviewing about sensitive topic areas was provided, and confidentiality of respondents assured. Study procedures were approved by the University of Michigan's Institutional Review Board.

In order to capture the dynamic picture of welfare recipients after welfare reform, the WES sample was interviewed four times over 5 years, approximately 12 months apart between the first 3 interviews and 2 years between interviews 3 and 4. The first interviews were conducted between September, 1997 and January, 1998 (N = 753, 86% response rate), the second

interview between September, 1998 and March, 1999 (N = 693, 92% response rate), the third interview between November, 1999 and March, 2000 (N = 632, 91% response rate), and the fourth between September, 2001 and February, 2002 (N = 577, 91% response rate).

Among the 753 respondents to the original interview, a total of 176 cases were excluded from the sample used in this study because they did not complete all four interviews. This was done because the dependent variable, involvement with CPS, and some of the independent variables rely on information collected at either the fourth interview or at all four interviews. Analysis revealed that there was no systematic bias in the data due to attrition; among the several techniques used to determine this, comparisons with administrative data on the entire county caseload and the sample at each interview on numerous variables showed few statistically significant differences (Pape, 2004).

In addition, one respondent was not included in this study because of missing information on her experience with CPS. Thirty-five additional cases were excluded because they were missing data for at least one of the independent variables. These cases were dropped rather than imputing missing values because imputation generally requires an assumption that the missing data are random (Little & Rubin, 1987), which could not be justified in this study. Thus, the final sample for this study consists of 541 women.

Sample characteristics

The respondents averaged about 30 years of age at the first interview, in 1997; 55% were African Americans and 45% Whites, similar to the racial distribution of the county caseload. All had received welfare in 1997, but the average percent of months in which respondents received cash assistance was 44% of the months over the observation period. Almost 30% had not completed high school and had not obtained a GED in 1997. At the first interview, three quarters of the respondents were single parents, neither married nor cohabiting with a partner. At that time, 43% had a child under age 2, and the average number of children was 2.3. Almost half (48.8%) had given birth to their first child before the age of 20.

Beyond these demographics, many in the sample had risk factors for CPS involvement. At the first interview, 36% met the criteria for being classified as having a mental health problem, and 19% had a physical health problem. About 17% had experienced severe domestic abuse, one in ten reported being in foster care as a child, and 5% had been convicted of a crime. Almost one quarter had a child with a physical, emotional, or learning problem.

Measures

The dependent variable for this study is involvement with CPS, constructed from questions collected at the third and fourth interviews. These questions were developed in consultation with local CPS agency officials to ensure the respondents' understanding of the questions pertaining to involvement with CPS. At the third interview, respondents were asked "Has child protective services (CPS) ever contacted you about any of your children?" (If yes), "Since (the last interview date), has CPS contacted you about (your child/any of your children)?" and, "Was there ongoing supervision by CPS because of these contacts?" At the fourth interview, the questions were refined to cover the precise period of the study and to cover all the children for whom the respondent was responsible--- "Since 1997, has CPS contacted you about any of the children for whom you are the primary caregiver?" (If yes), "Did a CPS worker monitor your case because of these concerns?"

A respondent was coded as having a CPS investigation if she had been contacted by an agent of CPS but answered "no" to the question about monitoring/ongoing supervision. If the respondent answered "yes" to both contact and monitoring/supervision, she was coded as

having supervision after investigation. Thus three categories of involvement with CPS were created: 1) no CPS involvement; 2) being investigated by CPS but no further involvement after the initial investigation; and 3) being involved/supervised by CPS after the initial investigation was complete.

Participants' responses at the third interview to questions regarding CPS involvement were consistent with the responses at the fourth interview except in 20 cases. These 20 respondents reported at the third interview that they had been involved with CPS after the second interview but at the fourth interview answered that they had not been involved with CPS since 1997. It was assumed that these mothers either had a memory lapse or fear of social stigma. They were coded as involved according to their responses at the third interview.

The main independent variables in this study, measures of work and experience with being penalized by the welfare system, were created using information from all four interviews. Work effort after welfare reform was measured by the percentage of months in which respondents reported having worked between February 1997 and the fourth interview. The penalty variable was a measure of whether the respondent had ever been penalized or "sanctioned" by the welfare system for noncompliance with agency rules. It was created by using the respondent's self-report to a question asked in each interview, "Has your (welfare assistance) check ever been reduced or stopped because your caseworker said you didn't follow the rules?" The penalty variable was coded 1 if a respondent answered positively to this question at any interview and 0 if they did not. The work experience variable was created using questions at the first interview. Lack of work experience was coded 1 if a respondent reported that she worked for less than 20 % of the time between age 18 and the first interview, and 0 if she worked more. To examine whether the effect of work differs between women with and without work experience prior to welfare reform, an interaction term between previous work experience and percentage of months worked over the study period was created.

Some of the models tested in this study also include measures of the four sets of risk factors for CPS involvement identified in the literature. The family characteristics measured include the family's income to need ratio, family structure, and the occurrence of divorce during the observation period. The income-to-need ratio is the family's income divided by the poverty line, a more accurate indicator of economic well-being than family income alone. The income-to-need ratio variables at the four interviews were averaged to create the variable. Two dummy variables for family structure were created using the first interview data: married and cohabitating. The reference category for the family structure variable was being single without a cohabitating male partner. Whether a respondent was divorced during the observation period was coded as 1 if she reported becoming divorced since the previous interview at any time period and 0 if she did not. The analyses included 13 characteristics of the mother: race, age, formal education, presence of a learning disability, mother's childhood maltreatment experience, the presence of partner abuse, teen-birth, physical health, mental health, mastery level as a measure of psychological well-being, criminal conviction, transportation problem, and childhood experience of welfare receipt. Race was coded 1 if a respondent was African American and 0 if she was White. Two dummy variables were used to capture the respondent's age in 1997: 25–34 and 35 or over (with the reference category being under 25). Two human capital variables were low formal education (neither high school diploma nor high school certification test (GED) coded as 1 and any higher level of education coded as 0); and learning disability (being diagnosed as learning disabled while growing up coded as 1 and having no such diagnoses coded as 0). Mother's childhood maltreatment experience was based on her report of an out-of-home placement before age 18, coded 1 if she had had such an experience and 0 if she had not. The presence of interpersonal violence was measured using the Conflict Tactics Scale (Straus, 1979). It was coded 1 if a respondent reported experiencing severe partner abuse within the 12 months prior to the first interview and 0 if she did not. A teen birth variable

was based on when the respondent gave birth to her first child, coded 1 if before she turned age 20 and 0 if later. A question regarding being convicted of a crime other than a minor traffic offense was coded 1 if answered positively and 0 if “no.”

Three variables from the first interview measured the respondents’ physical, mental, and psychological well-being. Respondent’s physical health risk was constructed from the SF-36 Health Survey (Ware, Snow, & Kosinski, 1993). Respondents who rated their general health as poor or fair and who scored in the lowest age-specific quartile of the multiple-item physical functioning scale were defined as having a physical health problem (coded 1, all others coded 0). The mental health variable was assessed through the Composite International Diagnostic Interview screening batteries for the 12-month prevalence of five psychiatric disorders---major depression, post-traumatic stress disorder (PTSD), alcohol dependence, drug dependence, and general anxiety disorder (for measurement details, see Danziger et al., 2000; Kessler, McGonagle, & Zhao, 1994). A respondent was coded as 1, having a mental health problem, if her reports met the criteria for any of these five psychiatric disorders at the first interview, and 0 if they did not.

The respondent’s mastery, a measure of psychological well-being, was assessed with the Pearlin Mastery Scale (Pearlin, Lieberman, Menaghan, & Mullan, 1981), a seven-item summary scale that measures the extent to which the respondent felt efficacious. Items were scored on a four-point scale, from strongly disagree to strongly agree, with higher scores indicating greater mastery. Its Cronbach’s alpha was .75 for this sample.

This study included two measures of mother’s characteristics that have rarely been included in previous studies of involvement with CPS: transportation barriers and childhood welfare receipt. Transportation problems were included because studies of welfare recipients have identified it as a major barrier to employment (Danziger et al., 2000; Ong, 2002) and because it was suspected that greater access to transportation might reduce child maltreatment by facilitating child care arrangements and reducing stress. A respondent was considered to have a transportation problem, coded 1, if she lacked access to a car and/or she did not have a driver’s license at the first interview; if she had both, the variable was coded 0. Receiving cash assistance while growing up was included because it was believed that the consequences of childhood poverty might increase a mother’s risk of child maltreatment. It was coded 1 if a respondent reported that her family had received welfare while she was growing up and 0 if not.

Five child-related risk factors included in this study were the number of children in the family, whether young children were in the home, children’s health problems, child-care problems, and parental stress. The total number of children is those under age 18 for whom the respondent had primary responsibility at the first interview. The presence of young children was coded 1 if she had a child under the age of 3 at the first interview and 0 if not. Children’s health problems are based on a respondent’s report of whether any child had a learning, mental, or physical health problem at the first interview, coded 1 if she answered positively and 0 if not. Child care problems were measured by two questions asked at the first interview: the number of times a respondent had lost or quit a job or a training activity because of child care problems and the number of times she was unable to take a job or participate in a training program due to child care problems in the previous year. If both questions were answered “never” a code of 0 was assigned; otherwise this variable was coded 1.

The parenting stress scale, derived from Abidin’s Parenting Stress Index (Abidin, 1990) and the New Chance Study (Morrison, Zaslow, & Dion, 1998), and included in the first interview, is a seven-item index, scored on a five-point scale, that measures the degree of stress/irritation mothers reported in relating to their children. Higher scores indicate greater parenting stress. The Cronbach’s alpha was .76 for this sample.

Finally, the study included measures of two environmental factors: social support and neighborhood problems. Five questions tapped the perceived availability of emotional, instrumental, and financial supports. The theoretical range of the scale is from zero to five, with higher scores indicating that there was greater social support available to the respondent. The Cronbach's alpha was .69 for this study. The neighborhood problems variable, based on items in the Census Bureau's American Housing Survey (US Census Bureau, 2002), was a dummy variable created with 11 questions that tapped perceptions of various aspects of the neighborhood environment, such as safety, transportation, and drug use. After summing up the 11 items, whose scores ranged from 1 to 3 and where higher scores indicate more serious problems, a score of 1 was assigned to those whose totals were as high as or higher than the top quartile of the sample and 0 assigned to the others in the sample.

Analysis

A multinomial logit model (MNLN) was employed because the dependent variable consisted of three discrete categories (no involvement with CPS, investigated by CPS, and supervised by CPS after initial investigation). This study treats the CPS outcome variable as a nominal variable with three distinct categories, not an ordinal variable because factors affecting one's probability of being investigated may differ from those influencing one's risk of having being supervised by CPS after an initial investigation (Long, 1997). Because there are three categories for the dependent variable and the reference category is no involvement with CPS, two sets of coefficients are produced from the MNLM: one set contrasts the probability of being investigated but not having further involvement with CPS against that of no involvement with CPS; the other set compares the probability of being involved with CPS beyond the initial investigation against having no involvement with CPS.

Two models for statistical analyses were developed. The first model includes only work and welfare penalty variables in order to assess their overall association with CPS involvement. This model employs the percentage of months a respondent worked between February 1997 and the fourth interview, welfare penalty experience between the first and fourth interviews, lack of work experience before the first interview, and the interaction between prior work experience and the percentage of months worked during the observation period. The second model includes these four variables and other control variables that measure maternal, family, child, and environmental risk factors of child maltreatment and involvement with CPS.

In addition to these two models, models with additional variables were run (including the percentage of months on welfare and having a new marriage between the first and fourth interviews) and models with different operationalizations of independent variables (average weekly working hours during the four interviews, an alternative to the percentage of months in which working was reported; continuous measures of respondents' age instead of the two dummy age variables; and the number of types of mental health problems instead of having any mental health problem). Results from these alternative models did not differ fundamentally from those reported in this article, indicating the robustness of these models.

Results

CPS involvement in the WES sample

Table 1 shows the distribution of the three categories of CPS involvement outcomes. About 80 % of the sample reported that they had not been contacted by anyone from CPS since the start of the study. Among those with CPS involvement at least once during the observation period, about half ($n = 54$) reported that CPS investigated and provided supervision of their families after the initial investigation, indicating that their cases were substantiated and considered serious enough to require further involvement with CPS. Thus, the percentage of

families with supervision among families that had been investigated in this study (50%) is comparable to national statistics, where about 60% of all reports to CPS are unsubstantiated (Administration for Children and Families, 2003).

Characteristics of the sample by CPS involvement outcomes

Table 2 compares the characteristics of respondents by their level of involvement with CPS. Families in the three groups differ on work and welfare measures. Months worked over the observation period is lowest among those involved with CPS beyond initial investigation and highest among those without any involvement with CPS. Respondents who were supervised by CPS after the investigation report a significantly higher rate of being penalized by a welfare office ($p < .05$). The percentage without prior work experience is much higher among those supervised by CPS than among the other two groups.

In terms of demographic and other characteristics, those involved with CPS tend to be more disadvantaged than those without such involvement. Consistent with the previously cited studies of welfare recipients, African Americans in this sample were significantly less likely to have CPS involvement than were White welfare recipients.

Multivariate analysis results: Multinomial logit regressions

Table 3 shows the results from the multinomial logit regressions. The first and second columns report the results from Model 1 that includes only the work and welfare variables. The first column reports how each of these independent variables is associated with the probability of being investigated compared to having no CPS involvement, while the second column shows their association with the risk of being supervised by CPS compared to having no involvement. The third and fourth columns report outcomes from Model 2 that controls for additional independent variables.

Because the interaction term between months worked since 1997 and prior work experience is tested in the model, the three variables need to be interpreted simultaneously to report the results from these analyses. As shown in the first column in Table 3 (Model I, Investigation only), the percentage of months worked has a significant negative coefficient (coefficient is -1.25 with standard error of $.52$). The lack of previous work experience also has a significant negative coefficient (-1.80 with standard error of $.93$). The interaction term has a significant positive coefficient for the probability of being investigated by CPS (2.72 with standard error of 1.29). Thus, the significant and negative coefficient of the percentage of months worked suggests that among respondents with prior work experience, they were less likely to be investigated by CPS as their work efforts increased. The significant and negative coefficient of the lack of work experience suggests that welfare recipients without previous work experience were less likely to be contacted by CPS than those with work experience if both groups had not worked at all during the observation period. The significant coefficient of the interaction term indicates that the association between work efforts after welfare reform and CPS investigation was significantly different for those with and without prior work experience.

The second column in Table 3 (Model I, Supervision after investigation) shows that work variables were not significantly correlated with supervision by CPS after the initial investigation. However, the welfare penalty variable is significant and positive ($.79$, standard error $.31$), suggesting that those who had been penalized were more likely to be supervised by CPS after investigation than were respondents who had not been penalized.

In order to determine whether the relationships between CPS involvement outcomes and work-welfare remain the same when other variables were included in the model, additional analyses are reported in columns 3 (Model II, Investigation only) and 4 (Model II, Supervision after

investigation). The percentage of months worked during the observation period was no longer significantly associated with one's chance of being investigated, suggesting that the association of work effort with investigation was, in fact, due to its correlation with demographic and other risk factors.

Previous work experience remained significant and positive in the full model at the 0.1 level (-1.94 with standard error of 1.08), suggesting that the difference in being investigated by CPS between those with and without previous work experience was not accounted for by the other risk factors included in the model. In addition, the interaction term between previous work experience and the percentage of months worked since 1997 was still significant in this model, suggesting that the relationship between work and being investigated by CPS differed significantly between those with and without prior work experience even after considering other relevant risk factors in this model.

Column 4 in Table 3 shows the relationship between the work and welfare variables and being supervised by CPS after initial investigation when controlling for additional explanatory variables (Model 2, Supervision after investigation). The only statistically significant variable in Model 1 (column 2), being penalized by the welfare office, lost statistical significance in Model 2, suggesting that the initial relationship between being penalized and ongoing involvement with CPS was due to the this measure's correlation with other risk variables.

Figure 1 graphically illustrates the relationship between work and CPS involvement outcomes, using the predicted probabilities of being investigated and being supervised by CPS after investigation. The probabilities of the two CPS involvement outcomes were calculated by the percentage of months worked and by previous work experience. The mean values of other variables included in Model 2 were used when calculating these predicted probabilities. As demonstrated in Figure 1, the relationship between being investigated by the CPS and the percentage of months worked shows contrasting patterns between those with and without previous work experience. The predicted probability of being investigated rises as the percentage of months worked increases among those without previous work experience; it falls among those with previous work experience. The predicted probability of being supervised by CPS beyond investigation, however, changes only slightly as the percentage of months worked increases for both those with and without previous work experience.

The results from model 2, summarized in the last two columns in Table 3, provide useful information about other factors that are significantly associated with involvement with CPS. Race was significantly related to both investigation and being supervised by the CPS ($p < .05$), suggesting that African Americans were less likely to be involved with the CPS than Whites when other factors were held constant. Family income to needs ratio was negative and significant for being investigated by CPS ($p < .10$), while a mother's cohabitation with a male partner, learning disability, and her childhood experience of cash welfare receipt were significantly and positively related to being investigated by CPS ($p < .05$). Divorce during the observation period significantly increased the probability of being supervised by CPS ($p < .05$). Criminal conviction, a larger number of children, and living in a high problem neighborhood had statistically significant and positive associations with CPS supervision beyond investigation ($p < .05$).

Discussion

This study examined the factors associated with the probability of being involved with CPS among current and former welfare recipients using data collected after the US 1996 welfare reform. Special attention was paid to the relationship between work and CPS involvement because of strong new work requirements in the 1996 law. Our multivariate analyses showed

that the percentage of months mothers worked during the observation period was significant at the .05 level in explaining their probability of being investigated in a model that contained only work and welfare penalty variables (Model I). The months worked variable lost statistical significance in a model controlling for other risk factors (Model II). This variable was not significant in predicting one's chance of being supervised by CPS in either model.

This result is somewhat different from that of Courtney, Piliavin, and Power (2001) where current or recent work effort had a significant association with involvement in CPS after controlling for other relevant factors. This difference may be due to different statistical models (more comprehensive list of control variables in this study) or that the studies used different samples of cases from different areas (Michigan vs. Wisconsin).

To our knowledge, this is the first study that pays special attention to the interaction between previous work experience and current work effort in explaining CPS involvement. This study explored whether strict work requirements have disparate effects on CPS involvement for welfare recipients with and without previous work experience. It was suspected that welfare recipients without prior work experience would have more difficulties in handling the dual responsibilities of child care and employment, and therefore would be more vulnerable to involvement in the CPS.

The results of the multivariate analyses confirmed these expectations: as the percentage of months worked increased, the risk of being investigated by CPS decreased among those with prior work experience while it increased among those with very little prior work experience. The interaction term maintained its statistical significance even when controlling for a broad range of risk factors identified by previous studies. The interaction term, however, was not significant in predicting whether a family would be supervised by CPS beyond initial investigation.

It is not clear why the interaction term was significant for the chances of being investigated but not for being supervised. Perhaps employment increases the stress levels of those with little or no prior work experience to the point where they are prone to minor child rearing mistakes that result in a CPS investigation but are not severe enough to warrant the opening of a case for supervision. In addition, the time frame of the study and its geographic location may also provide a potential explanation for these results. The study started at the beginning of welfare reform and continued for 55–60 months. Due to an economic expansion, the labor market was favorable even for low-skilled workers during the observation period. In addition, Michigan does not have a 60-month lifetime limit on welfare receipt (Seefeldt et al., 2001). Accordingly, these welfare recipients may not have experienced material and psychological difficulties serious enough to make them vulnerable to a severity of child maltreatment that warrants continuing supervision by CPS agency officials.

The different association of the interaction term on investigation versus supervision may also have been due simply to a growth in child abuse and neglect reports from welfare offices that could not be substantiated by CPS. Increased contact between welfare workers and recipients after welfare reform (e.g., home visits) may cause the former to report situations to CPS that do not rise to the level of severity necessary for formally opening a case. These explanations are, however, speculative and warrant further investigation.

In addition to its special attention to work and welfare status, this study used a broad range of independent variables in its attempt to model CPS involvement. A number of factors were identified as significant for welfare recipients' involvement with CPS. African American recipients were less likely to be investigated and supervised by CPS than Whites when other factors were held constant. This finding is consistent with previous studies of welfare populations where African American welfare recipients are less likely to be involved with CPS

than their White counterparts (Goerge & Lee, 2000;Needell et al., 1999;Slack et al., 2003). In addition to race, low income-to-needs ratio, cohabitation, childhood welfare receipt, or having a learning disability were significantly and positively related to one's chances of being reported to CPS. Such parents may have temporary but not serious lapses in ensuring the safety of their children.

Having a large number of children, being newly divorced, living in a high problem neighborhood, and having a criminal conviction were significant and positive for being supervised by CPS after its investigation. These results are consistent with other studies (Courtney et al., 2001;Slack et al., 2003) and suggest that parents with seriously troubled pasts and/or ongoing family or neighborhood stressors may be more likely to have more severe difficulties with their children and thus may be more likely to have their case investigated and opened.

Limitations

This study relied solely on respondents' self-reports to estimate involvement with CPS. Some respondents might not have reported their CPS involvement because such contact inherently involves social stigma. Or, such contact may have been so brief as to not have been remembered. This same reporting bias could have been present in other sensitive areas that constitute some of the risk factors for child maltreatment and CPS involvement.

Whether such bias actually existed in this study is impossible to determine, but procedures used and previous research would suggest it would be minimal. As noted, questions used to determine whether a mother was classified as being involved in CPS were derived in consultation with CPS officials, enhancing their validity and their ability to obtain reliable information. Further, the respondents were generally consistent in their reports of involvement with CPS over two interviews. In addition, some past research has found that families receiving in-home services through CPS were able to recall the services they received accurately (McCroskey & Meezan, 1997).

Second, it is plausible that the employment status and welfare penalty experience of a respondent were affected by her involvement with CPS. Since a caretaker reported for maltreatment is required to attend hearings and to participate in other time-consuming activities, she may either lose her job or cut down on her work hours in order to meet CPS' demands on her time. Such behaviors might incur penalties from the welfare system. This reverse causality may have produced biased estimates.

Third, this study was not able to include a number of potentially influential variables in the analyses because of data limitations. WES does not have information on respondents' involvement in CPS prior to 1997, the source of the CPS referral, and the type of work in which the respondents engaged. Although we recognize that these variables are likely to be correlated with involvement in CPS, labor market participation, and welfare receipt, we were not able to control for them in these analyses.

Lastly, the study sample was drawn from one urban area that may not represent the population of current and former welfare recipients. Therefore, the generalizability of the findings may be limited.

Implications

These findings suggest that there is a need to develop social services to help welfare recipients balance their dual responsibility of child care and employment, especially for those without work experience. Welfare recipients who have little work experience may be overwhelmed by requirements to support their families financially while meeting their children's physical and

emotional needs; such demands may place them at risk of child maltreatment. Thus, expansions in the child care subsidy and interventions aimed at time and stress management may be helpful in reducing their involvement with CPS. It may also be important to reduce or delay work requirements among these welfare recipients until they adjust to new work demands.

Second, this study identifies a broader range of risk factors for involvement with CPS than previous studies. Those on welfare who may need special services include mothers who grew up in a welfare-reliant family, have a learning disability, become divorced, have a large number of children, live in high-problem neighborhoods, and/or have been convicted of a crime. Supports should be provided to these welfare recipients, and welfare agency workers should be informed about these risks and trained to identify and work effectively with those with multiple risk factors. However, welfare agency workers must also be trained to avoid unnecessary reports to child protective services, a potential consequence of their increased scrutiny of these families. When welfare workers identify such risk factors within a family, but child maltreatment is not evident, referrals to community-based, family support services should be made to help mothers cope with the increased stressors they face as they become involved in the workplace.

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Figure 1.
Predicted probabilities of child welfare investigation and supervision

Table 1

Child welfare outcomes among WES respondents

	Frequency	%
No child welfare system involvement	431	79.7
Child welfare investigation only	56	10.4
Supervision by the child welfare system after investigation	54	10.0
Total	541	100.00

Table 2
 Characteristics of sample by child welfare system involvement

Variable	Total (N=541)	No child welfare involvement (N=431)	Investigation only (N=56)	Ongoing Supervision (N=54)
	% or M (SD)	% or M (SD)	% or M (SD)	% or M (SD)
Welfare/Work Variables				
Percent months worked btw 1997-4 th interview	67.8	69.0	64.0	62.2
Penalized btw interviews 1 & 4 ***	22.9	21.8	16.1	38.9
Lack of previous work experience	14.8	13.98	12.58	24.1
Family Variables				
Family income to needs ratio **	1.0 (0.5)	1.0 (0.5)	0.9 (0.5)	0.8 (0.4)
Family structure: Married	10.4	9.7	14.3	11.1
Family structure: Cohabiting ***	14.8	12.8	28.6	16.7
Divorce btw interviews 1 & 4 **	4.1	3.0	7.1	9.3
Maternal Characteristics				
African American ***	55.3	61.0	28.6	37.0
Age in 1997	30.0 (7.4)	30.10 (7.5)	28.61 (6.1)	30.24 (7.1)
Less than high school diploma	29.9	29.0	28.6	38.9
Learning disability ***	14.69	11.89	26.8	24.1
Own foster care experience ***	9.1	7.9	7.19	20.4
Domestic violence	16.5	14.9	21.49	24.1
Teen birth	48.8	48.7	41.1	57.4
Physical health barrier **	18.5	16.5	23.2	29.6
Mental health barrier	35.9	35.3	37.5	38.9
Mastery scale	21.9 (3.2)	22.0 (3.2)	21.9 (3.7)	21.4 (3.3)
Convicted of a crime ***	5.0	3.3	5.4	18.5
Transportation barrier *	42.5	42.0	33.9	55.6
Welfare while growing up	45.6	44.36	53.6	46.36
Child-Related Characteristics				
Total number of children **	2.3 (1.3)	2.2 (1.3)	2.4 (1.1)	2.7 (1.4)
Having a young child (0-2 years)	43.3	42.9	48.2	40.7
Child health problem	23.3	22.0	23.2	33.3
Child care problem **	43.4	40.8	51.8	55.6
Parental stress scale	20.7 (5.5)	20.6 (5.5)	21.1 (5.1)	21.26 (5.8)
Environmental Factors				
Social support scale	4.4 (1.1)	4.4 (1.1)	4.3 (1.1)	4.3 (1.1)
High problem neighborhood *	19.8	18.8	16.1	31.5

* p < 0.1

** p < 0.05

*** p < 0.01

Table 3

Multinomial logit regression

Variable name	Model I		Model II	
	Investigation only	Supervision after investigation	Investigation only	Supervision after investigation
	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
Percent months worked btw 1997- 4 th interview	-1.25 (.52) **	-.17 (.61)	-.67 (.66)	.73 (.81)
Penalized btw interviews 1 & 4	-.55 (.39)	.79 (.31) **	-.24 (.44)	.58 (.38)
Lack of previous work experience	-1.80 (.93) *	.66 (.66)	-1.94 (1.08) *	.62 (.77)
Interaction of work and previous work experience	2.72 (1.29) **	-.11 (1.08)	3.30 (1.53) **	-.33 (1.20)
Family income to needs ratio			-.84 (.44) *	-.53 (.49)
Family structure: Married			.33 (.58)	-.96 (.69)
Family structure: Cohabiting			.80 (.41) **	-.37 (.48)
Divorce between interviews 1 & 4			.27 (.81)	1.83 (.81) **
Race (African American)			-1.47 (.38) ***	-1.38 (0.37) ***
Learning disability			.95 (.42) **	.35 (.46)
Convicted of a crime			.17 (.76)	1.57 (.54) ***
Welfare while growing up			.80 (.36) **	-.21 (0.37)
Total number of children			.12 (0.14)	.39 (0.14) ***
High problem neighborhood			-.32 (.45)	.80 (.39) **
Constant	-1.06 (.39) ***	-2.32 (.49) ***	-1.61 (1.74)	-2.95 (1.87)
N	541		541	
LR chi2 (DF)	19.75 (8)		126.23 (58)	

* p < 0.1

** p < 0.05

*** p < 0.01

In addition to the variables listed in the table, Model II includes the following variables: age (ages 25–34 and 35 or older in comparison to ages 18–24); less than high school diploma; own foster care experience; domestic violence; teen birth; physical health barrier; mental health barrier; mastery scale; transportation barrier; having a young child; child health problem; child care problem; parental stress scale; and social support scale. None of these variables are statistically significant at the 0.10 level.