CARING FOR CHILDREN WITHIN STRUCTURES OF CONSTRAINT: THE EFFECTS OF CHILDCARE ON MOTHERS' SOCIAL MOBILITY

by

HEATHER MACPHERSON PARROTT

(Under the Direction of Linda Grant)

ABSTRACT

In this study, I use data from Panel Study of Income Dynamics (PSID) and the Early Childhood Program Participation (ECPP) surveys to explore the effects of childcare on mothers' social mobility. I specifically examine how childcare affects mothers' educational enrollment, wages, and welfare receipt across groups of women by race/ethnicity, class, and marital status. I test the extent to which variations in social mobility across groups are attributable to differences in human capital and the effects of childcare on human capital development, or whether variations are the result of structural constraints.

I find that although childcare may be helpful in some circumstances, childcare and specific childcare arrangements have uneven effects, at best, on mobility across groups of women. Mothers' opportunities for mobility are constrained by their locations within other structures (i.e. race/ethnicity, class, and marital status) in ways that typically exceed any impact that childcare may have on their human capital development and subsequent wage growth. Further, I reaffirm that human capital theories are insufficient for explaining the economic inequality of women or economic inequality among women—some groups of women experience persistent inequality even after accounting for differences in human capital. Black and Hispanic mothers appear to have particularly bleak prospects for economic stability and mobility

regardless of childcare type or human capital development. Though they do not experience motherhood wage penalties and are more likely than White mothers to be enrolled in further education as mothers, these groups have lower overall wages, higher rates of welfare receipt, and they do not experience wage increases commensurate with work experience.

INDEX WORDS: Child Care, Mothers, Social Mobility, Education, Wages, Welfare, Human Capital, Carework, Race, Ethnicity, Gender

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by

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and feelings about following an academic career. Linda expressed her support and understanding for whatever path I chose, for which I was and continue to be immensely grateful. Ultimately, she and Linda Renzulli helped me to carve out an academic path that better suited my personal and applied goals.

Linda Renzulli has also been an invaluable mentor in my graduate career. Linda's enthusiasm for sociological research is certainly contagious—working with her re-sparked my interest in both research and academia. Not only was she integral to the conceptualization of my dissertation project, Linda has also taught me the ins and outs of producing and publishing quantitative research and has provided me with a roadmap for generating quality scholarship. She has also given me extensive feedback on my work, assisted me in writing grants for my dissertation, and has been endlessly positive about my dissertation project and progress. I have especially appreciated Linda's thorough and constructive criticism, including her ability to balance rigorous critiques with words of encouragement. Linda has been an academic role model and a good friend. I have turned to her for advice on theoretically framing empirical findings and interpreting coefficients, as well as for advice on must-have baby registry items, breast-feeding, and potty-training. She has shared baby toys, clothes, books, and news about the latest kid-friendly events.

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Of our friends, Becky and Liz fill particularly unique and special roles in our family. Becky is like a sister to both Chris and I. In regard to her contributions to my graduate career, Becky was the first to get excited about my acceptance to graduate school (when she took the call from Mark Cooney) and helped me get set up in my first apartment in Athens. Since, she has also provided constant encouragement and support through all of my academic milestones. In addition to many lengthy phone conversations and weekend visits, she sent a "Comps Care Package" when I took my comprehensive exams, helped take care of Natalie when I had my ASA job interviews, and expressed how proud she was of me when I successfully defended my dissertation.

Liz has consistently given me both moral support and academic guidance throughout graduate school. In addition to being an outstanding friend, I see Liz as a model graduate student and colleague. She has always been willing to share her experiences and advice on thesis writing,

comprehensive exams, grant writing, teaching, publishing, and dissertation writing. Liz frequently shared news of grant or job opportunities, even when she too planned to apply to the same places. She has remained refreshingly noncompetitive throughout grad school, and I have tried to follow her example. I am glad that we had each other while we were on the job market and am even more glad that she has ended up in New York also.

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CHAPTER 1

INTRODUCTION

My dissertation topic grew out of my experiences of working with disadvantaged women. Over the past ten years, I have been continually involved in community service work that addresses the needs of women and their families. Most recently, I worked for four years at a local domestic violence shelter where, among other tasks, I ran a domestic violence support group for shelter residents. Like other women on staff, I regularly constructed financial budgets with domestic violence survivors as they struggled to become economically independent. This often-daunting task typically entailed devising strategies for how mothers could support their families on minimum wage pay. As a support group leader, I would provide emotional support when this challenge seemed all too overwhelming or even impossible. Though each mother faced a distinctive set of challenges, the economic costs of finding and maintaining care for their children proved to be a fairly consistent barrier to these women's economic stability and mobility. I found myself continually frustrated by the paucity of quality, affordable childcare options. The women I worked with wanted to move beyond their low hourly wages and, thus, reliance upon government assistance. In many cases, it seemed apparent that neither of these would be possible if they did not further their education. Yet for mothers, going to school and working both require some form of childcare, and as I continually found, the types of childcare that mothers use can have ramifications for their educational and work lives.

Childcare is an issue that is important to public policy, not just to the individual lives of women and families. Countries vary widely in their responses to caregiving needs, with a

handful of European welfare states providing significant support for children and working parents by way of extended paid parental leaves and nationally subsidized childcare. The United States, in contrast, has been identified as lagging well behind other Westernized nations on these issues (Misra, Moller, and Budig 2007; Williams and Cooper 2004). The resistance of the U.S. to implementing national policies that support the work/life balance of workers and the childcare industry serves to uphold outdated concepts of the ideal worker and assure the continued economic inequality of women. The notion of the ideal worker as an employee who is purely dedicated to his/her work, does not take time out of the labor force for childbearing, and has no competing personal life clashes with the demands of caregiving and thus remains an unachievable ideal for many female workers (Acker 1990, 2006; Elson 1999).

Women's economic disadvantage in the paid labor force, with women earning only 77 cents per male dollar, has been attributed in large part to their disproportionate responsibility that women still hold for carework, particularly childcare. For example, women's greater responsibility for the care of children can have a substantial impact on their occupational choices (Rosenberg and Spenner 1992; Shauman 2006; Spade and Reese 1991; Webber and Williams 2008), perceived dedication to their careers (Roscigno 2007; Williams and Cooper 2004), and the number of hours they are able to dedicate to paid labor (Bardasi and Gornick 2008; Glass 1996; Polachek 1981). However, the challenge of balancing work and family has essentially been cast as a personal problem rather than a public responsibility—assuring the continuation of limited public support for children and childcare, as well as persistence of gender inequality. While the U.S. has instituted some forms of childcare assistance for low-income parents, such as Head Start and childcare subsidies, critics argue that these programs fall far short of meeting the

needs of working parents (Adams and Rohacek 2002; Danziger, Ananat, and Browning 2006; Mezey, Greenberg, and Schumacher 2002).

One's gender, race, and ethnicity have implications for labor market success (e.g. occupational placement and wages) and mobility options (e.g. opportunities to build human capital) via systematic differences in social class, employment discrimination, and other such structural constraints. Altonji and Blank (1999: 3153) note that differences in the family and personal commitments of workers by both gender and race/ethnicity can also help to explain economic differences between groups:

> Whites are much more likely to be married; Hispanics have more children to care for; and Black females have greater childcare responsibilities than Black males. To the extent that family responsibilities influence labor market choices and create labor market constraints, these differences may be important in explaining differences in labor market outcomes.

Thus, women's family commitments, as measured by marital status and number of children, are influenced by the intersections of gender and race/ethnicity, which in turn affect labor market outcomes. Childcare is one mechanism of balancing work and family commitments, though childcare options and implications vary across groups of women. Black and Hispanic mothers' childcare options are shaped by structural constraints, primarily the intersection of race and class, that have led them to disproportionately adopt methods of balancing paid labor with caregiving responsibilities that rely on family support, government subsidized childcare, or a mixture of these arrangements (Laughlin 2008). Black and Hispanic mothers are also more likely to experience problems with childcare because of their disproportionate impoverishment. Poor women are more likely to have childcare problems than nonpoor women (Laughlin 2008), which likely affects their ability to build marketable human capital. Meyers (2003) found that 59

percent of low-income mothers missed work or school because of childcare problems. Middle-class, White mothers have been able to more readily participate in the paid labor force because of their greater ability to commodify their domestic labor, often hiring low-income minority women to complete housework and childcare (Glenn 1991; Hondagneu-Sotelo 2007; Rollins 1985; Touminen 1994). Not only does this care that minority women provide to others women's children often come at the expense of caring for their own children (Glenn 1991; Hondagneu-Sotelo 2007), but the very low wages that minority women are paid for this work serves to further reify stratification among women (Duffy 2005; Rollins 1985).

Thus, childcare is important as a personal, policy, and theoretical issue. Studying the effects of childcare on women's lives can serve to expand our understanding of economic stratification between men and women, as well as among women. In a labor market that values educational credentials, employment experience, and on-the-job training, (potential) employees who do not cultivate their human capital in these respects are penalized. Although numerous theorists have pointed out that unwaged carework is central to the functioning of our economy (Coleman 1993; Dalla-Costa and James 1972; England and Folbre 1999a; Folbre 1994, 2001, 2008; Lee and Miller 1990), such unwaged labor remains devalued in relation to "productive," market-based labor. In this context, caring for children can become a drag on the social mobility of mothers. In theory, nonparental childcare can alleviate women's carework burden, though the types of nonparental care used and the effects of this care may differ across groups of women.

Sociological scholars have only recently begun addressing childcare as a topic of theoretical interest. Research on childcare has been fairly limited in scope, focusing primarily on either carework as an occupation (England, Budig, and Folbre 2002; Murray 1998; Uttal and Tuominen 1999) or the dynamics of childcare choice (Hofferth and Chaplin 1998; Uttal 1997).

Only a small amount of research has explored the effects of childcare on the outcomes for mothers. The research that does exist in this area has either focused on the influence of childcare cost on women's economic outcomes (England and Folbre 1999b; Gennetian et al. 2004; Kimmel 1998; Maume 1991; Presser and Baldwin 1980) or explored the relationship between childcare and economic opportunity using qualitative interviews and relatively small sample sizes (Chaudry 2004; Edin and Lein 1997). I fill these holes in the literature by quantitatively examining how childcare type affects mothers' human capital development and subsequent social mobility, with a particular interest in women who are poor. I specifically focus on the ways that early childcare arrangements and childcare assistance influences women's ability to further their education, avoid welfare, and increase their wages. The availability of childcare has been identified as critical to these endeavors, yet little is known about the effects of specific childcare arrangements (e.g. center-based daycare, nonrelative care, and relative care) on these three measures of social mobility.

I also explore how these measures of mobility and the relationship between childcare and mobility differ for various groups of women. While stratification among different groups of women is becoming an increasing salient topic of inquiry (Hertz 1986; Hondagneu-Sotelo 2007; McCall 2001), sociological literature has largely overlooked non-maternal childcare as a means by which such social stratification is created and/or perpetuated. I examine how women's educational enrollment, wage growth, and welfare receipt vary according to their race/ethnicity, social class, and marital status, and how childcare influences these relationships. In doing this, I explore racial and ethnic differences in the development and marketability of human capital gains. I then assess the long-term effects of these differences on stratification among women. Thus, my overarching research questions for this dissertation are: How do early childcare

arrangements affect women's human capital development and subsequent social mobility? How do the relationships between childcare, human capital development, and mobility differ across groups of women and affect stratification among women?

The topics of educational enrollment, wages, and welfare use are addressed separately in the three analytical chapters of this dissertation. These three topics complement one another in their contribution to a greater understanding of the economic stability and social mobility of mothers with young children. American society typically views social mobility as an individual project—individuals succeed based on their own merit and effort. Education, wage growth and welfare use are all viewed as indicators of the merit of one's effort. However, these individual-oriented explanations fail to take into account social constraints that make it more or less likely that individuals have opportunities to build human capital that makes them valuable as workers, thus increasing their mobility options. Opportunities to build human capital can be affected by differences in carework responsibilities, which may be similarly unequally distributed by gender, race/ethnicity, marital status, and class.

THEORETICAL OVERVIEW

My research is grounded in economic literature on human capital, as well as in the sociological literatures on social stratification and carework. Economists have shed light on gender economic inequality through examining women's contributions to the workplace and assessing how gender differences in human capital influence the gender wage gap. Such human capital explanations are generally useful for understanding economic inequality—individuals who invest more in their marketable human capital reap greater economic benefits from these investments—and are easy to test quantitatively with survey data that usually includes information on factors such as years of education, years of work experience, and tenure in

current job. The importance of human capital for economic mobility has been well-documented, and is the basis of much of the policy-making (and critiques of those policies) surrounding issues of education and welfare. Indeed, the importance of education as a form of human capital is the basis of the fourth chapter of this dissertation.

As I discuss more thoroughly in the following literature review chapter, the basic insight of human capital theory in relation to gender inequality is that men and women invest different amounts of time and effort in education and training and thus get different returns to their work. According to the neoclassical version of this theory, men and women make rational decisions about personal investment in human capital based on their current or expected division of household labor—a division in which men and women choose their specialization (paid vs. household labor) in order to maximize the benefit to the household unit (Becker 1985). These decisions typically fall down gender lines, as women "naturally" choose to do more housework and childcare than men.

Theorists have frequently critiqued these human capital theories on a number of fronts, including the focus on the nuclear family, its poorly defined concept of rationality, and the idea that this division creates interdependence rather than female dependence (Ferber 2003; Folbre 1994; Huber and Spitze 1983). Additionally, feminist theorists have taken issue with the emphasis on individuals and individual decision-making in human capital theories, rather than taking into account the larger social context in which men and women make decisions about work/family balance and are judged according to their (actual or perceived) priorities in this regard. (England and Farakas 1986; Folbre 1994; Roos and Gatta 1999; Steinberg and Figart 1987). Social norms matter, especially gender norms about paid and unpaid work, and investments in human capital are thus not just based on economic calculations. These norms

have been established through systems of patriarchy and capitalism that have served to limit women's economic options (e.g. Hartmann 1981) and legitimate the inequitable division of labor in the home. However, as noted in Nancy Folbre's work (1994), individuals are entangled in a number of interlocking structures of constraint that include, but extend beyond, the categories of gender and class. I specifically examine four structures—gender, race/ethnicity, class, and marital status.

Women have disparate experiences within the labor market and home that affect their mobility opportunities, as discussed throughout the following chapters. Not only do opportunities to build human capital vary by race/ethnicity and social class (England, Christopher, and Reid 1999; Oliver and Shapiro 2006; Tomaskovic-Devey, Thomas, and Johnson 2005), but research has demonstrated racial and ethnic differences in the payoff of additional human capital such that White women have more success than Black or Hispanic women at turning such capital into economic gains (Hall 2008; McGuire and Reskin 1993; National Research Council 2004). Such differences are generally considered indicative of discrimination in labor markets. Though Pager and Shepard (2008: 184) note the story may be more complicated than blatant race or gender discrimination:

> …even after controlling for standard human capital variables (e.g. education, work experience), a whole host of employment related characteristics typically remain unaccounted for. Characteristics such as reliability, motivation, interpersonal skills, and punctuality, for example, are each important to finding and keeping a job.

As Roscigno (2007) found, differences in these employee characteristics or "soft skills" can provide a rationale for discriminatory employment practices—employers systematically associate deficits in soft skills with people of color. Many of these characteristics, or employer

perceptions of these characteristics, are likely to remain relatively constant over time for each individual. However, some of these characteristics (e.g. motivation, reliability, punctuality, attitude) may be dependent upon on-the-job treatment, such that persistent employer discrimination causes employees to lose interest or motivation in their job and ultimately fulfill their negative stereotypes (Roscigno 2007).

While studies have documented employer discrimination based on motherhood status across racial/ethnic groups, discrimination against single, Black mothers may be particularly severe. Several studies have found that employers make assumptions about Black women's marital, parental, and welfare statuses that result in a negative characterization and differential treatment of this group (Kennelly 1999; Roscigno 2007). Black and Hispanic women are additionally disproportionately confined to low-wage and less stable jobs (Anderson and Shapiro 1996; Maume 1999; Reid 2002; Reskin, McBrier, and Kmec 1999). Some studies have suggested that welfare recipients experience additional social and economic penalties that can be attributed to an increased stigmatization of welfare recipients as welfare rolls have become increasingly filled by women of color (Jarrett 1996; Monroe and Tiller 2001; Quadagno 1994; Seccombe, James, and Walters 1998); however, studies of the effects of welfare on wages have found that wage disparities can be explained by differences in human capital (DeBell et al. 1997; Fuller et al. 2004; Noonan and Heflin 2005). The lesser development of human capital, discrimination, perpetual low wage employment, and perhaps even welfare receipt experienced by Black and Hispanic women contributes to their disproportionate impoverishment and minited economic mobility.

Women may have different sorts of options and limitations with regard to both formal and informal carework that are tightly connected to, and may serve to perpetuate, their social

location in society. Low-income groups—minority women and single women—are likely to have a number of constraints related to childcare. They are more likely to be limited in their childcare choices due to transportation issues (Blumenberg 2004; Schintler and Kaplan 2000) and restrictions of subsidy use (Shlay et al. 2004). These groups are also more likely to work variable or nontraditional work schedules (Han 2004; Kimmel and Powell 2006a), are less likely to have (paid) sick leave in their jobs if their children get sick (Bond and Galinsky 2006), and are more likely to have limited finances to purchase regular or back-up care arrangements (Chaudry 2004; Children's Defense Fund 2005). While all women take on a greater proportion of childcare responsibilities than men even when nonparental care is used (Hondagneu-Sotelo 2007; Maume 2008), childcare issues may place a greater strain on single, poor, and minority women because of limited resources and systematically different responses to them and their family situations. Whether or not childcare problems actually affect women's employment performance and human capital development, employers may make gendered and racialized assumptions about certain women's ability to balance work and family responsibilities that serve to perpetuate their disadvantage (Crosby, Williams, and Biernat 2004; Kennelly 1999; Roscigno 2007; Williams and Cooper 2004).

The social hardships faced by low income groups have led to adaptations surrounding the informal division of household labor, such as a greater reliance upon practical extended family support (Cohen 2002b; Uttal 1999) and the labor of older children within the household (Dodson and Dickert 2004). In addition to these strategies for balancing household responsibilities, Black and Hispanic men are also more likely to contribute to household labor than White men (Coltrane, Parke, and Adams 2004; Cooksey and Fondell 1996). As a result, minority women are likely to receive assistance within the home from a variety of sources, while even well-off White

women are left to shoulder greater responsibility for household labor and/or seek avenues to commodify this labor (Blair-Loy 2005; Hertz 1986). These systematic differences in carework constraints and options, as well as employment trends and experiences, lead me to believe that there will be differences in the relationships between carework and mobility across groups of women that are not captured using human capital variables alone.

Thus, in this dissertation, I use both individual-level and structural explanations of economic inequality to explore how carework affects differences in mobility among women based on class, racial/ethnic, and marital status differences. I only directly test individual level explanations, namely intra-group differences in the human capital characteristics (education, experience, training) that are valued within the labor market. However, in examining and controlling for individual differences in human capital, I am able to isolate the effects of individual level factors on women's opportunities for mobility. Drawing on Nancy Folbre's (1994) theory of structures of constraint, I argue that gender, race/ethnicity, social class, and marital status are attributes that place individuals in different structural places where they may have systematically different experiences within the home and workplace. Women make decisions about carework, work, education, and thus their investments in marketable human capital amidst these structural constraints.

Within this theoretical frame, I explore the ways in which childcare and household labor affect women's human capital development, including how these factors differentially impact the social mobility of White, Black, and Hispanic women. I am additionally interested in whether certain types of childcare, formal and/or informal, may serve to mitigate any negative effects of women's carework on their human capital development and consequent mobility, and how the relationships between childcare and mobility may differ across groups of women. As caring for

children increasingly moves out of the home and into the market-place, analyses of how childcare affects women's mobility are necessary for understanding stratification in a post-industrial society. Such analyses can help extend theoretical understandings of stratification that already place the unequal division of reproductive labor (housework and childcare) as a one central component in explaining differences in stratification processes between genders (e.g. Blumberg 1978; Chafetz 2004; Chafetz 1997; Collins et al. 1993; Kay and Hagan 1998). Thus in exploring the links between childcare and mobility options, this research contributes to a greater understanding of social stratification and, more specifically, how individual mobility opportunities are differentially constrained across groups of women. In addition to having sociological relevance by expanding knowledge about patterns of stratification affecting women, this line of research can also contribute to a sounder basis of empirical research that can be drawn upon for the development of public policy surrounding such issues as welfare and childcare.

EDUCATION, WAGES, AND WELFARE: PREVIOUS POLICY ATTENTION

The connections between childcare and these mobility options (education, wages, and welfare) have been explored, theoretically and from a policy standpoint, to varying degrees. Little research explores the links between childcare and maternal education apart from studies noting the importance of childcare for the continued education and consequent mobility of low-income women (Edin and Lein 1997; Polakow 2004). Scholars have addressed the topic of low-income women and education, aside from the impact of childcare, in light of the 1996 welfare reform restrictions on education as a work-related activity. Although welfare reform provides some support for mothers' education, it effectively provides only low-level education that qualifies women for low-wage work. Under welfare reform, there is no support for

postsecondary education or high levels of education, which have more power to produce social mobility for women and families. Although this piece of legislation effectively discourages school enrollment among low-income mothers, other legislation has made more positive steps toward meeting both the educational and childcare needs of this group. The most notable example is the institution of "Childcare Access Means Parents in School" government grants to support or establish campus-based childcare (Cohen 2001; U.S. Department of Education 2008). These grants, established as part of the 1998 amendment to the Higher Education Act, have been primarily directed toward serving the needs of low-income students enrolled in institutions of higher education. Approximately $15 million is allocated to this program yearly, with community colleges as the chief beneficiaries. Thus, while policy-makers have recognized and supported the need for childcare for the educational development of low-income mothers, public policies do not adequately support education as an avenue for social mobility.

Reseatchers have repeatedly examined the effects of motherhood on women's wage growth (Anderson, Binder, and Krause 2002; Avellar and Smock 2003; Budig and England 2001; Glauber 2007). Although studies have usually shown that mothers (but not fathers) suffer a wage penalty at work, these studies have not directly examined how types of childcare or childcare assistance affect the motherhood wage penalty. From a policy standpoint, little has been done to broadly address the carework needs of women workers. Many corporations have voluntarily established work-family policies for their employees, such as on-site childcare, paid leave, and flextime—though on-site childcare is among the more rare family-friendly workplace additions (Galinsky et al. 2008). These policies generally result in increased employee satisfaction and company loyalty, improve staff retention and recruitment, and reduce absenteeism (Friedman 2001). Despite the success of family-friendly policies on this level, at

least among the higher-paid workers who have access to such benefits, there are no widespread federal policies to support carework in the United States beyond the limited childcare assistance provided to low-income families and the unpaid leave allotted to some employees under the Family and Medical Leave Act of 1996.[1] The only all-inclusive governmental policy to assist with family carework is currently being implemented at the city-level in San Francisco, which has become a test case for potential future legislation at state and federal levels. As of February 5, 2007, San Francisco became the first city to order paid sick leave for all employers, which can include time taken of for care of a sick family member. On a national-level, the Obama administration has placed paid sick leave on their agenda of women's issues to address, citing that three out of four low-wage workers do not have paid sick leave (The White House 2008). This type of legislation could serve to establish greater employment consistency for women, leading to greater and more equitable pay.

Of the three topics, the relationship between childcare and welfare has received the most policy and scholarly attention. Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (also known as PRWORA, or welfare reform) instituted work requirements for welfare recipients, moving many mothers with young children into the paid labor force or training to prepare for work. The work requirement represented a shift from welfare polices of the past that encouraged women with dependent children not to work but to stay home to care for them.

[1] To be eligible for unpaid leave under Family and Medical Leave Act (FMLA), employees must have worked for their employer for at least 12 months, have worked at least 1,250 hours over the 12 month period preceding the leave, work in the United States or in a territory possessed by the United States, and be employed at workplaces with 50 or more regular employees working within a 75-mile radius of the workplace. The new regulations (2008) specify that, while the employee need not show 12 consecutive months of employment, the employee generally cannot count periods of employment preceding a break in service of seven years or more. Exceptions include where a seven or more year break in service was due to National Guard service or Reserve military service, or where otherwise provided under a collective bargaining agreement or other written agreement. Furthermore, "key" employees (i.e. those among the highest 10 percent of employees) may be denied reinstatement following their leave if this denial is deemed economically necessary (FMLA 29 CFR 825.216).

Scholars have argued that the shift came about in part because of a shift in rhetoric surrounding welfare and a change in characteristics of recipients (Mink 1995; Quadagno 1994) so that larger shares of recipients were younger, never-married women of color rather than the White widows who predominated among early welfare recipients. As part of the 1996 welfare reform bill, federal support for childcare increased dramatically. Not only did funding for childcare increase from approximately $2.8 billion in 1995 to $8 billion in 2000 (Fuller et al. 2002), but goals of the reform included allowing flexibility for states to develop childcare programs, promotion of parental choice with childcare, and the provision of childcare assistance as parents transitioning off welfare (Long et al. 1998; PRWORA 1996). Despite these positive steps, critics of welfare reform argue that the government still has fallen far short of meeting the childcare needs of low-income families (Adams and Rohacek 2002; Danziger, Ananat, and Browning 2006; Mezey, Greenberg, and Schumacher 2002).

DISSERTATION OVERVIEW

Each chapter of this dissertation contributes to a greater understanding of the how carework, particularly nonparental childcare, affects mother's ability to build the human capital necessary for economic stability and mobility of women. In the following chapter, chapter 2, I describe the overarching literature for the dissertation. I review the literature on human capital theory, links between social stratification and carework, and both formal and informal childcare. While each analytical chapter contains a separate methods section, chapter 3 provides an overview of the data and methods used for this dissertation. Chapters 4 through 6 discuss, respectively, the effects of childcare on mothers' education, welfare receipt, and wage growth.

In chapter 4, I use maternal education as an example of human capital that is valued within the labor force. Previous literature has found that education is indeed an effective

mechanism to assist women in becoming more upwardly mobile—often allowing women to increase their wages and transition off government assistance (Zhan and Pandey 2004b). However, as discussed in later chapters, educational credentials do not uniformly benefit women across racial and ethnic groups—Black and Hispanic women often have difficulty turning such credentials into promotions and higher earnings. In this first data chapter, I explore how women's role in carework and their choice of nonparental childcare affect women's education, and how the relationship between childcare and educational enrollment may differ across racial and ethnic groups.

Chapter 5 examines the motherhood penalty in wages, how childcare affects the penalty, and how the penalty differs across groups of women. I explore how having children may result in diminished wages for mothers by affecting women's human capital development and hours of household labor. Research on the motherhood penalty shows consistently that mothers experience a penalty in comparison to women without children, and that the penalty increases with each additional child (Anderson, Binder, and Krause 2002; Budig and England 2001; Correll, Benard, and Paik 2007; Glauber 2007). Men, in contrast, experience an increase in wages with fatherhood (Glauber 2008; Lincoln 2008). Not all research on this topic has been attentive to race and ethnicity, but where these factors have been included findings have been inconsistent about racial/ethnic differences in the penalty and have been unable to account for a large portion of the penalty that mothers (as a whole) face. Through examining the impact of nonparental childcare, maternal carework, and human capital variables, I am able to address both individual and structural barriers to mobility for mothers and explore similarities and differences across racial and ethnic lines.

In chapter 6, I explore welfare as both a measure of social mobility and a potential impediment to mobility. I investigate how childcare assistance and certain types of nonparental childcare are related to welfare receipt either directly or indirectly through work consistency. I also examine whether welfare then affects women's wages and their wage growth with work experience, and how the effects of welfare on wages may differ for White, Black, and Hispanic low-income mothers. Thus, in these analyses I am able to better understand how women's carework affects their social mobility through the effect that carework has on welfare. I expect that mothers who receive welfare are likely to have had unstable work experiences that affect their employment. Receiving welfare may then further impede their occupational choices and wage mobility, especially for Black mothers, as employers stigmatize welfare recipients. In the conclusion chapter, I discuss the theoretical and policy implications of the dissertation while also suggesting some directions for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

Examining the connections between childcare and women's social mobility options, specifically their ability to accumulate the human capital resources supportive of mobility, contributes to a greater understanding of social stratification in U.S. society. Sociological and economic literature on stratification, most of which has examined wage inequality, has relied heavily upon human capital, employment discrimination, or a combination of these explanations to frame arguments theoretically. I similarly draw upon both individual and structural level explanations to frame this study. I use human capital theories to explore the immediate proximate factors that affect education, welfare, and work, but not the sociocultural locations that allow certain groups to gain more human capital and use human capital more effectively than others. I use Nancy Folbre's (1994) structures of constraint to make sense of systematic differences in education, welfare, and wages that persist across groups of women after accounting for variations in human capital.

In this chapter, I begin with a review of the literature on human capital theory, including the key feminist critiques of this theory. I then discuss literature on stratification and carework, outlining the links between employment discrimination and perceived carework responsibilities. In this section on stratification and carework, I review carework theories and present Folbre's structures of constraint as a framework for understanding the ways in which carework differentially constrains women. I follow with an overview of childcare in the U.S., specifically

addressing informal carework, formal carework, the history of childcare, and existing literature on the effects of childcare type on women's mobility.

HUMAN CAPITAL THEORIES

Among the explanations that scholars have turned to in order to explain gender inequality in wages and in social mobility opportunities in the workforce,[2] human capital theories remain one of the primary individual-level explanations of wage inequality. Human capital explanations focus on the importance of workers' education, job training, and employment experience for success in the paid labor force (Becker 1964). Differential investments in human capital result in differences in job opportunities and wage structures. Human capital theories have not been applied directly to educational attainment, but human capital theorists see education, especially education beyond high school, as a primary resource that can enhance mobility. Investments in education (especially postsecondary education) are related to increased job mobility (Ahituv and Tienda 2004; Eckland 1965; Hauser et al. 2000), successful transitions off government assistance (London 2006; Meyer and Cancian 1998), protection from poverty (Nichols, Elman, and Feltey 2006; Pandey and Kim 2008), and even a greater ability to avoid maternal wage penalties (Amuedo-Dorantes and Kimmel 2005). In the most recent generation, women as a whole have come to meet or even surpass the educational attainment rates of men (Buchmann and DiPrete 2006; Buchmann, DiPrete, and McDaniel 2008), although variations exist among women. These patterns have long been the norm for Black women, and since the late 1980s have also been observed for White and Hispanic women (Peter and Horn 2005). However, employed women have yet to achieve wage parity with men.

[2] A brief survey of key individual and structural level explanations of gender disparities in paid labor can be found in chapter 6.

Previous studies of gender economic inequality and the division of household labor have usually been framed by human capital theory (Amuedo-Dorantes and Kimmel 2005; Okamoto and England 1999; Serneels 2008; Zhan and Pandey 2004b). Research has tended to attribute women's continued inequality to the lesser development of other forms of human capital in comparison to men. Human capital theorists stress the importance of labor force attachment, particularly early in one's career, for the development of valuable work experience and on-the-job training (Alon and Haberfeld 2007; Becker 1991; Mincer and Polachek 1974). The fact that key childbearing and career years overlap works to women's economic disadvantage. Taking time out of the labor force may restrict women to female-dominated occupations in the service sector where such absences can be more readily tolerated (Polachek 1981; Reskin 1993; Rosenberg and Spenner 1992; Tomaskovic-Devey and Skaggs 2002), but where wages are lower than in most other sectors.

The neoclassical version of human capital theory explains gender inequality and gender differences in human capital development as a product of the *rational* division of labor within the household (Becker 1991). According to his theory, men and women *choose* their area of specialty—market work versus housework—in order to maximize the their contributions to the family unit and family well-being. The gender differences in specialization result from both socially constructed and biological gender differences in the responsibility for bearing and raising children, such that women are more adept at and satisfied with caring for children in comparison to men. When husband and wife specialize in their given areas, in ways that likely replicate traditional gender roles and are dictated by an altruistic head-of-household, they form interdependencies, which lessen the likelihood of divorce. The assumptions of human capital

theory are largely consistent with the gendered division of labor envisioned by functionalist theorists (Parsons 1954).

Critiques of Human Capital Theories

These theories have met with frequent criticism by scholars, particularly feminist scholars. As Sawhill (1977) originally pointed out, the focus on rational choice without admitting the presence of larger structural influences (i.e., labor market discrimination or gender-inequitable divisions of domestic labor) generally involves relying upon circular reasoning. As summarized by Ferber (2003: 11):

> While many neoclassical economists reject the explanation that women's lower earnings are the result of discrimination, most are not prepared to claim that women are inherently less productive in the labor market than men. Instead, they fall back on the explanation that women acquire less human capital because they expect to spend less time in the labor market, accumulate less labor market experience, and have less energy for work in the labor market because they expend so much effort on housework… this essentially amounts to arguing that women spend more time in the household because men have a relative advantage in the labor market, and men have a relative advantage in the labor market because women spend more time in the household.

Sokoloff (1980) has pointed to the mutually reinforcing quality of labor force and domestic inequality. Because women do (or are stereotyped as doing) more domestic labor, they are paid less in the labor market. Because their earning power is limited, assigning them a greater share of domestic labor becomes a "rational" strategy within families. But the mutual reinforcing quality of domestic labor allocation and workplace discrimination means that women's human capital continues to diminish over time. This is especially the case when they work in areas where

technology rapidly makes their skills obsolete if they are absent from the workplace or investing less time in work than male counterparts for considerable periods of time. Therefore, the neoclassical economic theory does not adequately explain the gendered division of domestic labor, resulting in differences in human capital development, because the argument rests on the premises that there is a "natural" gendered division of labor based on reproductive roles and that individuals plan accordingly.

This critique leads to one of the primary arguments against human capital theories, namely they only focus on individuals and individual choice (England 1982; Folbre 1994; Padavic and Reskin 2002; Shin 2007; see review by Tomaskovic-Devey, Thomas, and Johnson 2005). Among the explanations for gender differences in human capital are suggestions that women invest in non-market human capital, capital that increases satisfaction rather than assuring a high return in wages, capital that depreciates more rapidly, or less specific human capital (Jacobsen 2003). In focusing on women's investments, rather than social norms or other structural conditions, human capital theory resorts to victim-blaming—women and specifically women's decision-making with regard to human capital investments is to blame for women's economic inequality. Padavic and Reskin (2002) point out that this approach to explaining gender inequality is becoming increasingly outdated as men and women increasingly have comparable work and educational experience.

Additionally, where there are gender differences in human capital, women's choices are not made within a vacuum. Their choices about participating in paid labor, and the extent of their participation in both paid and unpaid carework, are shaped by social norms and institutional restrictions (Acker 2006; Jacobsen 2003; Padavic and Reskin 2002; Risman 1998). More specifically, social expectations that women will care for children in combination with

institutional norms and barriers that often make the care of children more difficult (e.g. occupations with steep career ladders or prolonged educational requirements) can influence women's educational and career choices. Individual-level perspectives such as human capital theory do not take into account that "many social institutions reflect and reinforce the collective interests of men" in ways that limit the options and mobility of women (Folbre 1994:4)—individuals do not make decisions in isolation of social structure, and these decisions often to reify the existing gender order (Hartmann 1981). For example, a woman may choose to become a nurse rather than a doctor because the educational and career trajectories of nurses are more compatible with bearing and raising children. Her decision to invest less time into her education is not based on an economic decision about maximizing profit relative to investment, but is based on the anticipated division of household labor as shaped by social norms. This career decision reinforces gender inequality though maintaining occupational segregation and the gendered division of labor within the home.

In failing to adequately address social structure, human capital theory is also limited in its ability to explain variations in economic success by race/ethnicity. Human capital theory is built upon the assumption that all individuals have equal opportunities to build human capital, if they make the appropriate choices. The theory does not lend itself to such questions as "Who gets the opportunity to build human capital?" and "Do individuals get equitable payoff for human capital?" Pre-labor market discrimination affects human capital, as do systematic differences in home and school environments that lead minority groups to have less human capital advantage in comparison to Whites (Aaronson 1998; Altonji and Blank 1999; Coate and Loury 1993). Though some theorists using human capital theory have considered previous discrimination as a factor leading to differential opportunities (e.g. Tomaskovic-Devey 1993; Tomaskovic-Devey, Thomas,

and Johnson 2005), these approaches still fall short of accounting for the persistence of inequality for minority groups in that they still rely on explanations of individual choice.

Browne (1997) uses human capital theory as one possible theoretical explanation for why Black single mothers have lower labor force participation than White single mothers, laying out one application of human capital theory in regard to race and marital status. She suggests that Black single parents may make rational decisions about investing in the labor market. For example, in the absence of partners and with lesser marketable human capital than their White counterparts, Black single mothers may be more likely than Whites to choose government welfare assistance over work as the most efficient way to support their family's financial and carework needs. Ultimately, as found in other studies, Browne finds that human capital theory cannot fully account for labor market differences between groups. Individual-level explanations alone cannot adequately explain, for example, why Black and Hispanic women have more difficulty than White women turning human capital into economic gains (Baunach and Barnes 2003; Hall 2008; McGuire and Reskin 1993; National Research Council 2004). A combination of individual and structural level explanations that allow for the continued effects of discrimination may be most appropriate to address these issues.

SOCIAL STRATIFICATION AND CAREWORK

In economic literature, human capital theory is considered on of the primary supply-side explanation of stratification in labor markets. In contrast, employment discrimination is a key demand-side explanation. Sociological and economic studies of economic inequality have frequently pitted these supply-side and demand-side, individual and structural, explanations against each other (Budig and England 2001; Glauber 2007; Kay and Hagan 1998; see review by Leicht 2008), typically explaining residual economic penalties as evidence of employment

discrimination. In one such study about gender inequality in law firms, Kay and Hagan (1998) present a summary of "gender stratification theory" as the central competing demand-side/structural argument. They note that "differences in occupational success are the product of both inefficiency and constraint " (Kay and Hagan 1998: 729). Employers are inefficient if they fail to adequately reward the efforts of female employees, who invest often heavily in their careers despite family constraints and unequal treatment in labor markets (Kay and Hagan 1998; Padavic and Reskin 2002). Employers often may make and act upon assumptions about women's current or potential parental status and the effect that this will have on their employment and career dedication, a trend that affects women across racial/ethnic and class backgrounds (Kennelly 1999; Roscigno 2007). Women's greater contributions to household labor may serve to limit their occupational advancement, whether through such discrimination or by choice as they seek work trajectories that align more closely with domestic responsibilities (e.g. Coverdill 1988). To Kay and Hagan (1998) gender stratification theory also "views hierarchical work structures as inflexible sources of inequality" that make occupational advancement systematically difficult for women and, additionally, leave little time for parenting or childrearing. This component has been previously discussed theoretically (e.g. Acker 1990), and has been supported by a body of empirical work that has focused primarily on women in the professions (e.g. Blair-Loy 2005). Thus, as posited in a number of macro-level stratification theories that include gender (e.g. Blumberg 1978; Chafetz 2004; Chafetz 1997; Collins et al. 1993), the division of household labor and social/economic stratification are closely connected.

Gender scholars such as England (2005b), Folbre (1994; 2001), and Sokoloff (1980) have extended discrimination arguments beyond the level of individual employers to highlight the widespread, systematic devaluation of women's labor in our society. Women contribute a larger

proportion of both paid and unpaid carework,[3] and women's overrepresentation in this work is closely connected to their persistent economic inequality in comparison to men. As Natalie Sokoloff (1980) has argued, women not only do more unwaged domestic labor in their households, but they also perform more "carework" in their jobs—work that is neither recognized nor rewarded adequately but nonetheless contributes to economic gain. Women are over-represented in poorly paid jobs embodying carework, such as daycare or nursing home workers, and women in clerical and lower level administrative positions also perform carework on the job, usually for male bosses. It is normative, for example, that executive secretaries will entertain visitors to the office, tidy up the boss's desk, clean up grammatical errors in his memos and reports, and the like. These activities have an economic value that accrues largely to the boss, while the woman worker's efforts are overlooked as real work or thought to be the "natural" proclivities of all women and therefore not reflective of particular expertise worthy of notice or economic reward.

In her summary of emerging carework theories, England (2005a) outlines five general theoretical frameworks for understanding gender inequality and carework. The two most applicable theoretical frameworks to this study are the devaluation and public good frameworks. According to devaluation theory, the fact that jobs involving carework are under-rewarded is part of a larger trend of predominantly female jobs being compensated at lower rates than male jobs. Some argue that female dominated jobs involving carework are especially penalized because carework is seen as a "quintessentially female-identified activity" (quoted from Cancian and Oliker 2000; England 2005a; England and Folbre 1999b). Even when job characteristics such as skill, working conditions, and education level are taken into account, occupations that involve

[3] Carework, as described more in the following section, includes a wide range of paid and unpaid, formal and informal, care activities.

carework have relatively lower pay (e.g. Budig and England 2001; England 1998; England, Budig, and Folbre 2002). There are, however, variations in pay among carework occupations by race and ethnicity. As pointed out by England (2005), though White women fill most carework occupations that require a college degree, women of color and/or immigrant women are overrepresented in the low paid carework positions that do not require such qualifications (Hondagneu-Sotelo 2007; Misra 2003; Rollins 1985). The devaluation theory can also be used to shed light on the penalties in wages that women experience with motherhood, penalties not experienced by men or women without children (Budig and England 2001; Glauber 2007). Not only do women shoulder more responsibility and consequent economic vulnerability with caring for children, but since the passage of welfare reform in 1996, caring for children is not even seen as a viable option for poor women who need government assistance to support their families. Instead, mothers are required to work or be involved in a work-related activity while receiving welfare—a topic discussed further later in this chapter. The carework provided by mothers and paid careworkers is devalued, particularly for women of color who disproportionately work as domestic workers and/or collect welfare benefits.

In the public good theoretical framework, women's contributions to paid and unpaid carework are conceptualized as public goods—today's children will comprise our future labor force and, thus, their care has diffuse social benefits (England 2005a; England, Budig, and Folbre 2002; Folbre 1994). This theoretical approach has been used to frame public policy surrounding motherhood wage penalties (Budig and England 2001; Folbre 2001; Williams and Segal 2003), as scholars have argued for such solutions extended gender-neutral parental leave policies (Gornick and Meyers 2003) or stricter laws against discrimination toward mothers (Williams and Segal 2003). These broad theories of carework help shed light on difference in

pay between genders and gender-typed jobs, but cannot alone adequately explain why differences in the division and effects of carework across groups of women. For this, I turn to Nancy Folbre's theory of structures of constraint as a framework for understanding social stratification among women and the role that carework may play in this stratification.

In *Who Pays for the Kids?: Gender and the Structures of Constraint* (1994), Nancy Folbre (1994) develops the concept of structures of collective constraint and in doing so critiques the utility of neoclassical, feminist, and Marxist theories to explain larger economic questions related to economic development, political conflict, and the division of the costs of care within societies. Folbre argues that individuals make purposeful choices within intertwined structures of collective constraint (shortened to "structures of constraint") that correspond with gender, class, race, age, sexual orientation, and national inequalities and identities. A structure of constraint is defined by Folbre (1994:57) as "a set of assets, rules, norms, and preferences that fosters group identity and common group interests. It generates patterns of allegiance and encourages strategic behavior based on social constructions of difference." Importantly, the *combination* of asset distributions, political rules, cultural norms, and personal preferences is necessary in order to locate individuals within these structures, which draws attention to the complexity of collective identities and interests. For example, race inequality can be explained using this framework (albeit oversimplified for the sake of brevity). Partially as a result of former *rule*-based discrimination, Black individuals in the United States have had lesser access than White children to the *assets* necessary for racial equality—including equal opportunities to build human capital through education. Blacks are additionally affected by racist *norms* and *preferences* that limit their mobility options through such mechanisms as employment discrimination. These common experiences among Blacks, or alternatively of Whites who have more power and privilege in

regard to building and utilizing human capital, create collective identity but are also influenced by factors of gender, class, age, sexual orientation, and nation.

Folbre uses this theoretical frame to examine the distribution of socially reproductive labor in historical and cross-cultural context. She finds that commitments to family labor and social welfare suffer under economic development—development that has included women's increased representation in paid labor. The structure of gender has operated in such a way that men have resisted women's equal participation in paid labor, but men have been even more resistant to assisting in household labor. By not providing widespread, subsidized, pre-Kindergarten childcare or paid maternity leave, as examples, the state places full responsibility on families to either care for children within the home or pay for care outside of the home. Both fathers and the state promote a distribution in the costs of caring for children that places a disproportionate responsibility on women, and as the costs of care increase it becomes more difficult to integrate this care with market-based labor. This arrangement works to the disadvantage of women and children, in part because women become economically vulnerable in the process of constrained decision-making about work and family.

To Folbre, this conceptualization of the six structures of constraint is a useful alternative to the using the concepts of capitalism and patriarchy to explain the social inequality that affects women. She argues that the terms capitalism and patriarchy have become so broadly applied they have lost meaning, and that the structures and effects of capitalism and patriarchy vary significantly according to other variations (e.g. race, class, gender) within these systems. Through generating a framework that examines specific components of power/constraint along multiple axes of inequality, Folbre argues that she is able to address these problems. Notably, the concept of structures of constraint is akin to the feminist concept of intersectionality which is

based on the works of a number of Third-World, Black, and multicultural feminists (Baca-Zinn and Dill-Thorton 1996; Collins 1990; Glenn 1999; Mohanty 1991) and has become part of more mainstream theorizing about stratification (see review by Browne and Misra 2003).

I use this theory of structures of constraint to discuss how formal and informal types of carework affect women's mobility, with a focus on similarities and differences across race, social class, and even marital status. Gender theorists have disagreed about the extent to which women share a common set of experiences and constraints, and the degree to which their experiences are sharply differentiated by intersecting statuses such as race and social class. Women of differing statuses may be embedded in difference structures of constraint in that statuses such as race and gender may affect not simply their ability to build human capital but also the types of family structures in which they are involved, their options for hiring and promotion in the labor market, and the impact of social expectations about the quality of their work and parenting. In the following section, I review the literature on informal and formal carework, focusing predominantly on the effects of carework on mothers.

CAREWORK: INFORMAL AND FORMAL CHILDCARE

Formal carework, such as provided by workers in a daycare setting, typically involves economic payment, a more established organization of work (prearranged time, place, etc.), and a defined relationship between the person being cared for and person paid for services. Informal carework, in contrast, is largely unpaid with no formal organization or regulation. The most notable example is parental work (England 2005a; Simon and Owen 2006). Not only are women overrepresented in both formal and informal carework, but *mothers* are disproportionately constrained by the care of children, in relation to fathers. This tends to be the case even when

mothers make use of nonparental forms of carework support, as discussed in the following section.

Studies on wages and wage growth following parenthood draw attention to gender differences in the effects of children on adults' economic mobility. These studies also underscore the effects of parental carework on the lives of women. Where men generally experience an increase in wages with fatherhood (Cohen 2002a; Glauber 2008), women suffer a 7 percent decrease in wages per child (Budig and England 2001; Glauber 2007). This penalty, termed the motherhood penalty and discussed at length in chapter 6, is only partially explained by the cumulative loss of human capital that women undergo when they have children. Portions of the penalty are tied to occupational differences and changes in hours of employment when children are born. The residual penalty is typically attributed to such factors as employment discrimination. While not directly examining the effects on wages and wage growth, other research has found evidence of employer discrimination against women due to their (actual or perceived) parental status and assumptions about the effects that motherhood will have on their role as employee (Correll, Benard, and Paik 2007; Hamil-Luker 2005).

Informal Carework

Women often rely on nonparental, informal carework assistance to balance their work, family, and sometimes even their educational lives. The use of informal assistance from men, extended family, and older children often varies along class and racial/ethic lines (see review in Dodson and Dickert 2004; Penha-Lopes 2006). In regard to the contributions of men to household labor, including the care of children, research has repeatedly shown that Black husbands and fathers make more substantial contributions than men of other racial/ethnic groups (Cooksey and Fondell 1996; Kamo and Cohen 1998; Penha-Lopes 2006). Some scholars (e. g.

Penha-Lopes 2006) have attributed this difference to a cultural norm of shared responsibility within the Black community, but this trend could also be attributed to economic necessity (Taylor et al. 1990) or the lesser gap in male-female income levels among these groups as compared to Whites (Bittman et al. 2003; Ross 1987; Staples 1988). The majority of research comparing household labor among men has focused on Black and White men. The few studies including Hispanic men suggest that Hispanic men also contribute more to the running of the household than White men (though less than Black men), despite having more traditional orientations toward the division of household roles (Coltrane, Parke, and Adams 2004; Cooksey and Fondell 1996).

In addition to more help with housework and childcare from husbands and fathers, low-income families receive more informal carework assistance from extended family. Black and Hispanic mothers, groups that are disproportionately poor, are more likely than White mothers to use extended family support networks, including extended family households, as a strategy for overcoming economic hardship and caring for children (Cohen 2002b; Cohen and Casper 2002; Roschelle 1999; Sarkisian, Gerena, and Gerstel 2007; Uttal 1999). The type of support provided within Black and White families tends to be different. Black families are likely to provide substantial practical support to their kin, such as help with transportation, housework, and childcare, while White families are more likely to provide monetary support for family members (Jayakody 1998 ; Sarkisian and Gerstel 2004b). While part of these differences can be explained by racial differences in social class and residence (poor families tend to live nearer to kin), racial differences in cultural values help to explain differences in extended family support as well.

Finally, low-income parents often rely on the help of older children as a strategy for balancing work and family responsibilities (Dodson and Dickert 2004; Romich 2007). Though

this is common among low-income families across racial and ethnic groups, this practice is more prevalent among single and minority mothers because of their overrepresentation in poverty. Dodson and Dickert (2004) note that while the contributions of older children may help family stability in the short-run, this strategy will likely have detrimental effects on intergenerational mobility. The older children who help with housework and childcare may lose out on opportunities to develop their own human capital, limiting their chances for mobility. Nonetheless, mothers who receive informal help with carework from men, extended family, and/or older children may be able to mitigate some of the negative effects of carework on their mobility—a topic that is explored in the following chapters.

Formal Carework

According to the 2007 Census, women represented 46 percent of the total US labor force, and 63 percent of mothers with children under 6 were employed. With so many mothers working for pay, non-parental childcare has become part of the daily lives of many US families. Further, the cost of childcare has become one of the main family expenses. The expense of center-based care often is unaffordable for many low-income mothers (Chaudry 2004; Henly and Lyons 2000). Families making less than $18,000 per year spend a quarter of their income on childcare, and in some states center-based childcare costs up to 45.3 percent of the state median single-parent income (NACCRRA 2006). Connelly and Kimmel (2003) found that among single mothers, the cost of childcare has a positive effect on welfare receipt and a negative effect on employment. Understandably, the cost of care often influences childcare choice, yet women's choice in childcare can also affect women's work and wages— creating a cycle that perpetuates women's inequality.

Many theorists, policy-makers, and advocacy groups have called for more widespread childcare support for working parents—particularly for low-income families. Folbre (2001), for example, as a strategy for heading off what she believes is an impending carework crisis, advocates socializing the costs of care and establishing paid paternity leave. Understanding the state of childcare in the U.S. first requires a brief history of publicly funded childcare. I then briefly discuss the existing research on the effects of different types of formal childcare on women.

History of Childcare in the United States

The history of publicly funded childcare in the United States has been influenced by on-going public debates over public versus private responsibility for children and the roles of women society. In the early 1940s, in response to the growing need for women in defense plants during World War II, the US allocated substantial funding for the construction and operation of community-based childcare centers. The 3,102 childcare centers established between 1942 and 1946 served over 600,000 children of all ages and social backgrounds, though the extent of diversity of the childcare recipients remains debated (Riley 1994; Stoltzfus 2003; Thevenard 2003). However, communities received funds only if they could demonstrate that their need for childcare resulted from war production and such funding was regarded as a temporary solution to the wartime emergency. While it has been estimated that only 13 percent of those needing childcare were served by the programs (Cohen 1996; Stoltzfus 2003), the effort represented, prior to welfare reform in 1996, the federal government's "most comprehensive role in the field of childcare to date" (Cohen 1996: 30).

Most of the centers quickly closed at the end of the war, with the withdrawal of federal funding, but not without protest (Reese 1996; Stoltzfus 2003). Individuals who supported the

continuation of the centers saw them as filling a long-standing need among women, particularly low-income women. Supporters of the closing of the centers, many of whom opposed their existence or saw them as a necessary evil amidst a time of war, advocated traditional gender roles and wanted women out of the paid labor force. They believed that women's role as citizen was in the private sphere, as mother and caregiver (Stoltzfus 2003). There was also a concern that women needed to vacate jobs to provide places in the labor market for returning male veterns, alleviating a potential political crisis resulting from substantial unemployment for men (Reese 1996). Even as proportions of women working outside the home increased, largely as a result of economic necessity, the responsibility for childcare remained understood as a private problem instead of a public responsibility.

Under the 1996 the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), informally referred to as "welfare reform," welfare recipients had to either work or be involved in other pre-approved activities, most commonly education or job training, to receive benefits. Typically exemptions are made only for women with young infants. Thus, low-income women had to balance their work and family lives. Many scholars argue that the federal push for large numbers of women to enter the workforce has not been met with an adequate governmental response to the growing childcare needs (Adams and Rohacek 2002; Adams, Snyder, and Sandfort 2002; Danziger, Ananat, and Browning 2006; Mezey, Greenberg, and Schumacher 2002). Despite increases in childcare funding, arranging childcare remains a personal responsibility that individual mothers must negotiate and manage on their own. However, the federal government does have two main programs to assist low-income parents with childcare: (a) Head Start and (b) the allocation of childcare subsidies.

Since 1965, Head Start has provided early education to low-income preschool children, along with health screenings, nutritional services, social services, and parenting resources (Hamm and Ewen 2006). With their high quality teachers and classrooms, Head Start programs have been shown to enhance children's development and school readiness, and studies show a significant improvement in participants' verbal and writing skills (Zill 2001). In comparison to other types of nonmaternal childcare, Head Start has been rated the highest in overall developmental quality (Li-Grining and Coley 2006). However, Head Start and other center-based programs often are not accessible for mothers, nor flexible enough to accommodate the needs of low-income mothers who work non-standard work hours, such as evening, night, and weekend shifts, and do not have access to reliable transportation (Li-Grining and Coley 2006). Additionally, the program has been continually under funded. The National Education Association argues that, though highly effective, Head Start only serves 60 percent of eligible children due to program under-funding (NEA), and the Head Start Bureau estimates that Head Start only serves 48 percent of those eligible (Head Start Bureau Head Start Bureau 2005). Early Head Start, an extension developed to provide early childcare and educational services for children under 3 years old, has also been shown to be effective for low-income families (Hamm and Ewen 2006; Love 2005), yet this program serves less than four percent of eligible participants (Head Start Bureau 2005).

As part of 1996 welfare reform, the federal government began allocating money to states, tribes, and territories to provide childcare assistance to low-income children whose parents are involved in employment, job training, or educational programs. This money is primarily provided through the Child Care Development Fund (CCFD), and eligible families may receive childcare subsidies, or vouchers for childcare. While childcare voucher systems vary by state, the

state must use CCFD money for vouchers and parents have some flexibility for choosing a legally operated childcare provider. The amount of childcare spending in the US has increased dramatically since the mid-1990s, with significant variation in spending from state-to-state (Crawford 2003). Research has shown that child care subsidies have helped parents afford childcare, assisting them in transitions off of welfare (Gennetian et al. 2004; Kisker and Ross 1997) and increasing their likelihood of employment (Crawford 2003). Additionally, Press, Fagan, and Laughlin (2006) note that receipt of childcare subsidies reduces employment problems by allowing low-income employees to comply with employer demands related to work hours; however, other studies find that subsidies make little difference on hours worked (Berger and Black 1992) and only have a small effect on employment- related childcare problems (Gennetian et al. 2004). In terms of the relationship between subsidies and employment promotion, subsidies appear to be particularly helpful for parents with very young children or with large families, and they are most effective for parents with inconsistent prior employment (Huston, Chang, and Gennetian 2002).

Despite increases in public spending on childcare, many scholars argue that the childcare subsidy system is insufficient. While Meyers, Heintz, and Wolf (2002) recognized a link between childcare subsidy use and increased probability of labor force involvement, they found that the receipt of childcare subsidies remains rare and unstable. Access to childcare remains a barrier to subsidy receipt for many parents, particularly the working poor. One study found that the only programs effective in both increasing subsidy use and decreasing out-of-pocket expenditures are those that provide expanded affordability and access (Gennetian et al. 2004). Other barriers include beliefs among low-income parents that they did not need or were not

eligible for subsidies, and confusion about the regulations and restrictions surrounding subsidy use (Shlay et al. 2004).

Childcare Type and Women's Mobility

Research consistently finds links between childcare for the social stability and mobility of mothers (eg. Edin and Lein 1997), a point long recognized among policy-makers. The establishment of programs to help with the childcare needs of welfare recipients or low-income mothers returning to school, as discussed above and in the prior chapter, are testaments to this recognition. Research on the effectiveness of different forms of childcare on the mobility of *mothers* is scarce at best. Literature on the effects of childcare on mothers has focused more on the effects of *qualities* of care (Hofferth and Collins 2000) and the differences in *choices* of care (The NICHD Early Child Care Research Network 1997), rather than investigating which specific care *arrangements* are most beneficial to mothers. Families make choices about the type of childcare arrangement they use based on a host of factors, such as cost, quality, location, reliability, and flexibility (Johansen, Leibowitz, and Waite 1996). Type of care is also closely related to factors as race/ethnicity and family composition, though the research is inconsistent about the effects of race/ethnicity on childcare choice (Harris, Raley, and Rindfuss 2002; The NICHD Early Child Care Research Network 1997). For example, a study by Radey and Brewster (2007) found that among predominantly low-income mothers Black children were most likely to be in organized centers and Hispanic children were most likely to be cared for by relatives, while other studies have found that Black children are more likely than children of other racial groups to be cared for by relatives (Early 2001). According to a study of job stability by Hofferth and Collins (2000), the *qualities* of the childcare care arrangements affect mothers' exits from the labor force differently based on their income. The stability of the childcare arrangement had the

strongest effect on work exits for mothers with moderate to high wages, while flexibility was the most important childcare characteristic for mothers earning low-wages.

Certain qualities of care may prove more beneficial than others to mothers and children, but not all parents have access to the full range of childcare options. For example, parents of all race and social class backgrounds have similar definitions of what constitutes quality childcare, but not all parents have access or can afford the care they desire (Shlay et al. 2005; Weinraub et al. 2005). Similarly, affordable child-care arrangements may not be stable or appropriately flexible for parents' working schedules (Scott, London, and Hurst 2005). As a result, low-income mothers often rely on multiple caregivers, including relatives, in order to accommodate long and changing work schedules amidst limited economic resources (Chaudry 2004). These "patchworks" of care are less expensive than center-based care, yet they tend to be less reliable, less stable, and less educationally focused for the children (Chaudry 2004; Scott, London, and Hurst 2005). The instability of childcare arrangements for poorer mothers result from factors such as changes in provider availability and the search for childcare arrangements that better suit mothers' needs and preferences (Scott, London, and Hurst 2005). In contrast, other research suggests that multiple arrangements may provide more flexibility for working mothers and a greater ability to adapt to work/family demands (Folk and Yi 1994).

Publicly subsidized childcare in the United States, focused exclusively on low-income families, has concentrated mainly on center-based care solutions (Fuller et al. 2002; Love 2005). The focus on center-based care with subsidies occurs as a result of many factors, from states' contracting with center-based daycares to current and potential recipients' lack of understanding about subsidy use (Adams and Rohacek 2002; Fuller et al. 2002). The disproportionate use of subsidies for center-care allows me to hypothesize that some of the previously discussed

maternal benefits to subsidy use (e.g. welfare transitions) may be attributed to the use of center-based care. Previous research has uncovered both advantages and disadvantages to center-based care. Among the main disadvantages are that center care does not provide sick-child care (Early and Burchinal 2001) and may operate under restrictive schedules (Willer et al. 1990). Each of these factors, in different manners, may place a strain on women's education or work schedules. They may cause absences from these obligations, or place constraints on mothers' ability to pick up additional work hours or classes. So while center-based care may be more stable and educational, this form of care may have repercussions on women's options for stability and mobility.

CONCLUSION

Women complete a disproportionate amount of carework in U.S. society and remain unpaid or underpaid as a result. The role that women play in carework provides one explanation for the gap in wages between men and women. Human capital theory has traditionally been helpful but not sufficient to explain economic inequality, which I expect to again find in this study. Systematic differences in pay between groups cannot be explained solely by individual-level explanations, but are part of larger trends of structured inequality. Although carework theories can provide a means of conceptualizing the under-compensation of carework (devaluation theory) or highlighting the importance of such care for the sake of public policy (public good framework), these theories fall short of providing a framework for understanding differences in mobility and the effects of carework on mobility among women. For this, Nancy Folbre's (1994) concept of structures of constraint is a useful framework for understanding economic disadvantage and the ways in which women are constrained along multiple axes of inequality (e.g. gender, race/ethnicity, class). Women's constraints lead them to adopt different

strategies for caring for children, and I predict that these strategies will in turn affect their opportunities to build human capital and achieve upward mobility through paid work. Thus, in each of the data chapters, I explore women's positions within these multiple structures of constraint and how each affects mobility. Before I present my results on how types of childcare affect mothers' educational enrollment, welfare receipt, and wage growth, I first discuss my data sources for my study and my general analytical approach in the next chapter.

CHAPTER 3

DATA AND METHODS

To explore the relationship between childcare and mothers' mobility options, I use two datasets— the Early Childhood Program Participation Survey (ECPP) and the Panel Study of Income Dynamics (PSID). The ECPP is a cross-sectional data set gathered from a nationally representative sample of families with children under 6 years old who have not yet enrolled in kindergarten. The second dataset, the PSID, is a nationally representative, longitudinal survey of American individuals and families that has been administered since 1968.

I am aware of only three datasets that contain information about childcare type *and* mothers' economic and educational situation: the ECPP, the PSID, and the Fragile Families and Child Well-Being Survey. None of these could alone address my research questions. The longitudinal PSID data is the best of the three for assessing wage growth over time because the sample is large and spans a significant time period. Indeed, the PSID has thus become central to the study of social mobility. The PSID, however, is not well suited for studying how childcare influences educational attainment or welfare receipt. The PSID does contain a supplement on childcare (the Child Development Supplement, or CDS). Unfortunately, the supplement only contains an adequate number of women to study the relationship between childcare and the motherhood wage penalty. The numbers of women enrolled in education or women having ever received welfare are too small—165 women and 121 women respectively—to examine the effects of childcare on either educational enrollment or welfare receipt. The supplement also lacked sufficient diversity in childcare type and race/ethnicity to sufficiently examine the

relationships between childcare, race/ethnicity and these dependent variables. The cross-sectional ECPP data, in contrast, was much better equipped to explore these connections. It contains larger samples of both women enrolled in school and women on welfare than the PSID supplement or the Fragile Families data. Therefore, the combination of PSID and ECPP datasets provided the best means through which to explore the relationships between childcare and mothers' mobility. Because the dependent variables and datasets are not consistent throughout the dissertation, each subsequent chapter contains a separate methods section that discuss the particular research questions, variables, and methods used for the analyses in that chapter. In this chapter, I describe each of these datasets and the methods that I use in this dissertation.

DATA SOURCES

Early Childhood Program Participation Survey (ECPP)

The ECPP is part of the 2005 National Household Education Surveys Program (NHES), a series of telephone interviews developed by the National Center for Education Statistics and supported by the U.S. Department of Education. Households were chosen through random-digit dialing methods. After a series of preliminary screening questions, respondents were asked to participate in at least one of three distinctive NHES surveys: the ECPP, the After-school Programs and Activities Survey (APAS), or the Adult Education (AE) survey. The screener interviews were completed on 58,140 households, for a weighed response rate of 66.9 percent. The number of individuals sampled in each household was dependent upon the relative scarcity of the particular subgroup in the larger population. For example, the ECPP survey was always conducted when there was a preschool aged child (ages 3 to 6) in the home who was not yet enrolled in Kindergarten. On the other hand, a maximum of two individuals were sampled for families with infants or toddlers (ages 0-2) or elementary school children because those

populations are more easily found in screening interviews. A total of 7,209 ECPP interviews were completed with the parent or guardian in the household who knew the most about the child's care and education, for a 84.4 percent weighed unit response rate. These interviews represent a weighed total of 20,690,936 U.S. children. Since the focus of my study is on mothers and families where mothers are present, I limited the ECPP sample to birth mothers, adopted mothers, and stepmothers. In doing this, I eliminated 277 cases (3.8 percent of the sample) where there was either no mother present or the mother-figure was the unmarried partner of the father, a foster mother, or another guardian. For the chapter on childcare and maternal education, the final sample included information on 6,932 mothers with young children. For the chapter on welfare, the sample was further reduced to 2,373 low-income mothers, as described further in Chapter 6.

The questions for the ECPP interview include basic demographic information on the child, as well as questions about early childhood care, parental characteristics, household composition, factors in parental choice of care, household income, sources of childcare assistance, and the work/educational lives of the parents. There are two main benefits to using ECPP data. First, the ECPP focuses on the childcare of pre-Kindergarten children, which is rarely studied in nationally representative datasets. Second, these data provide childcare information on a large sample of families. Though the PSID sample includes information on a larger range of childcare options and provides information on a larger range of child ages, the ECPP has a larger sample of children for each main category of care—relative care, nonrelative care, and center-based care. This is beneficial for analyzing how these types of childcare affect mothers with young children.

Panel Study of Income Dynamics (PSID)

I use Panel Study of Income Dynamics (PSID) main family data from 1985 to 2005 in order to examine the effects of welfare and motherhood on women's wages over time. For the chapter on the motherhood wage penalty, I also use childcare data from the PSID Child Development Supplement (CDS) data collected in 1997 and 2002/2003. The PSID data are particularly useful for studying the effect of childcare on mothers' wages because they include detailed longitudinal information on the economic, educational, and home lives of parents *and* on the childcare experiences of children. Other datasets tend to provide information on only one of these components, but PSID data are unique in that they address both parents and childcare. Additionally, the core PSID data, originally containing a sample from the Survey Research Center (SRC) and a national sample of low-income families from the Survey of Economic Opportunity (SEO), is a nationally representative sample of U.S. families with an oversample of low-income families. This oversample is helpful for exploring motherhood penalty differences between groups of women, and they allow for analyses of overlaps of race and class.

From 1968 to 1997, PSID data were collected yearly on the same sample of individuals and families. Several changes to data collection took place in 1997 due to funding issues and efforts to keep the sample nationally representative. The changes included limiting the collection to every two years rather than annually, reducing the original core sample from 8,500 families to 6,168 families,[4] and adding a sample of post-1968 immigrant families and their adult children. Thus, the 1985 to 2003 samples in this study contain 15 years of main family data (yearly data from 1985 to 1997, plus data from 1999 and 2003) and a shift in part of the sample in 1997. I use

[4] These families came from the SEO sample. In 1997, the SEO sample was reduced by two-thirds; however, 609 African-American headed families with children under 12 were promptly reinstated with the help of additional funding sources. These families are a supplemental sample used for the Child Development Supplement.

main family data, instead of just individual data,[5] because it provides information on the maximum number of women. I chose 1985 as the first year of data because the first children born in the Child Development Supplement sample, described below, were born in this period.

Using the main family data for these analyses required a transformation of the data from *following families* to *following women* over time. My interest in this dissertation is with women, moreso than with families, and it is important that I follow the same woman across data years in order to properly assess women's wage growth over time. If I were to merely take wage data from the mother figure in the house, without running checks to assure that the woman is the same across years, I could be collecting and conflating wage data from numerous women and thus producing inaccurate estimates of wage growth. The PSID categorizes adult males and females in one of two ways, as "head of household" or as "wife." The term "wife" denotes a female who is either the legal spouse of the head of household or has been a cohabitating partner of the head for at least one year. If a man is present, and the couple is married or has been cohabitating for more than one year, he is considered the head of household. Over the 1985-2005 period, it is not uncommon for the male head to have had more than one wife, or cohabitating female of more than one year who is considered a "wife." The data contain a variable about family composition changes. If the wife was new in a given year, I assigned her a new identification number and created a new line of data for her.

Even after this adjustment, there were several inconsistencies with women between years (e.g., a woman's reported age dropped significantly between data years). Because of this, I used three other methods to be sure that I was following the same woman. First, I matched the

[5] The PSID Main Family data contains detailed information on the adult members of the surveyed family. The PSID Individual data are much more limited and ask only basic questions about education, health insurance, TANF receipt, etc. These data contain an average of 48 variables, which amounts to approximately one percent of the variables included in the Main Family data.

individual data files to the family data to check for consistency in date of birth for those women who were included in the individual data collection. In cases where differences seemed due to interviewer or reporting error—for example, if the year of birth was consistent over time except for data collection when it was reported as one year higher or lower—I assumed that the woman was in fact the same. Second, I tracked the woman's age over time making sure that it advanced logically. I considered the person to be new if her age decreased between years or increased more than two years, and then advanced sequentially after that point. Third, I considered the woman as new if her racial identification changed between years. If any of these three methods suggested that the woman was different, I would treat her as a new case. I had a total of 20,113 women and 111,292 person-years after making these changes and reshaping the data to include a line of data for each woman for each year. From this point, the data are further limited for theoretical and methodological reasons that are specific to the welfare and motherhood penalty analyses. The particular samples are described further within these substantive chapters.

This transformed main family data were merged with CDS data for the motherhood penalty chapter. The sample was restricted to those answering the supplement and an analysis of the relationship between childcare and the motherhood penalty was conducted on this smaller sample. The CDS contains a separate set of questions on childcare that was administered to a subsample of families with children under the age of 12 during the initial wave of the supplement. Of the 2,705 families chosen for the initial 1997 survey (the CDS-I), 2,394 families (88 percent) participated, providing information on 3,563 children. These families were recontacted in 2002-2003 and 2,017 of them were successfully interviewed for the second wave of the CDS. I restricted the sample to families where the mother[6] was the primary caregiver, eliminating 158 families. Also, I only included mothers who were also followed in the main

[6] "Mother" in this case is defined as biological, adopted, or step-mothers.

motherhood penalty analysis (see data section of Chapter 5 for further description). I further restrict these data by only examining the effects of childcare for White and Black mothers, rather than including Hispanic women as well, because the data only contained childcare information for only about 66 Hispanic mothers. Ultimately, the sample for this section included information on 1,738 women over 11,437 person-years of data.

METHODS

I use three forms of regression analyses in this dissertation: logistic regression, pooled-OLS regression, and fixed-effects regression. I use logistic regression with the analyses that use cross-sectional ECPP data. The dependent variables for the ECPP analyses in the education (Chapter 4) and welfare (Chapter 6) chapters are both dichotomous, educational enrollment and welfare receipt respectively, and thus as suitable for logistic regression. While this methodological approach is fairly straightforward given their common use in sociology, the methods used with the PSID panel data require further explanation.

To prepare the PSID data for analysis, I organized it into a pooled cross-section. In other words, a woman will have multiple lines of data that correspond to each year that she is in the sample, rather than having one line of data that contains multiple years of data. In pooled-OLS regression, each year of data is essentially treated as a unique observation, and the standard errors are adjusted in order to account for non-independence of cases. I adjust standard errors by using Huber-White standard errors and clustering around the person identification number in the instances where I use pooled-OLS in this study. Although this method is used here and by other authors (e.g. Budig and England 2001), fixed-effects models produce more accurate estimates because of their ability to control for all observed and unobserved stable characteristics. The

comparison of pooled-OLS and fixed-effects models, however, is helpful for getting a sense for how much the earning potential among mothers is due to characteristics that are stable over-time.

Fixed-effects and random-effects regression models are the two primary methodological options for analyzing panel data. I ran the Hausman (1978) specification test on all models to determine which regression model was more appropriate. In all cases, there were systematic differences in the coefficients between within-effects and between-effects estimates, indicating that fixed-effects (rather than random effects) is the best methodological choice. Although random effects models may be more efficient because they use within and between person differences to estimate effects, the coefficients will be biased if the Hausman test is violated. Fixed-effects models are used to examine variations within cases or individuals over time, rather than between individuals. The primary advantage of this type of model is that is makes it easier to make causal arguments using nonexperimental data, because it controls for all observed and unobserved characteristics that do not change over time (Johnson 1995).

There are two main downfalls with fixed-effect methods. First, the standard fixed-effects models do not produce estimates for variables that are consistent over time. Second, in some cases the standard errors will be higher and p-values consequently larger than in random-effects models because fixed-effects models do not account for between individual differences (Allison 2005). Fixed-effects can be used to explore categorical differences between people for characteristics that remain constant over time, such as race, by using one of two strategies: interacting variables that do not change over time with a variable that does vary over time within individuals, or using separate models for the different sub-groups. While this partially resolves the first disadvantage, it does not address the second. Despite these disadvantages, fixed-effects is the best method for many analyses (including the analyses with the panel data in this study)

because of its ability to control for unmeasured or even immeasurable stable differences between individuals (Halaby 2004; Allison 2005).

As previously discussed, this research is divided into three data chapters that explore the effects of childcare on mothers' education, welfare receipt, and wages. Each of these chapters contains a methods section that discussed the particular research questions, variables, and methods. The following chapter explores the effects of childcare on mothers' enrollment in education.

CHAPTER 4

THE RELATIONSHIPS BETWEEN CHILDCARE AND MATERNAL EDUCATION BY RACE/ETHNICITY AND MARITAL STATUS

Education is considered to be an important pathway to upward mobility in the United States. Educational credentials are a significant source of human capital in the labor force, leaving those with less education typically confined to low-skilled, low-paying jobs. Recent studies have shown growing *within*-gender economic stratification based on educational attainment—especially between college educated and non-college educated groups (McCall 2001). Educational credentials are particularly important for women, as women currently need an extra level of education to approach wage parity with men (American Community Survey 2007; DiPrete and Buchmann 2006). In addition to being an important form of human capital, increased education can also be seen as a measure of social mobility. Indicators of socioeconomic status have traditionally been constructed using measures of occupation, income, and education; thus, an increase in educational credentials can amount to a higher assessment of socioeconomic or class status. Though a gender wage gap still exists, women as a group have made great strides within education in recent years—surpassing men in both educational achievement and college completion rates (Buchmann and DiPrete 2006; Buchmann, DiPrete, and McDaniel 2008). Yet not all women, or men for that matter, have the same opportunities and experiences within or beyond the educational system.

Minority women face a unique set of educational challenges in comparison to White women. Black and Hispanic students as a whole have lower educational attainment than Whites.

This attainment gap has been attributed to a number of factors, including the differential expectations and treatment of minority students (Farkas 2003; Ferguson 2001), and the intersection of race/ethnicity and class, whereby minority students disproportionately live in impoverished neighborhoods and attend poorer quality schools (Rumberger and Palardy 2005). While Black and Hispanic women have higher educational attainment than their male counterparts, they are significantly less likely than White women to complete high school or enroll in postsecondary education (Greene and Winters 2006). Minority women are also significantly more likely to become pregnant outside of marriage and/or as teenagers, often causing interruptions in their educational lives or causing them to forgo their education altogether (Entwisle, Alexander, and Olson 2004; Rich and Kim 1999; Sibulkin and Butler 2005). Research on the issue has produced mixed results. Some research suggests that there are racial differences in the impact of nonmarital motherhood on education, with Black mothers experiencing less pronounced negative educational effects than White or Hispanic mothers (Forster and Tienda 1992; Manlove 1998; Pillow 2004; Upchurch, Lillard, and Panis 2002). This can be attributed to less stigma attached to premarital or teen pregnancy in the Black community (Jarrett 1990), as well as a stronger network of extended family and community support for these women (Wright and Davis 2008). Other studies show no significant differences in the rates of reenrollment between White, Black, and Hispanic women (Elman and O'Rand 2004). Regardless of race, the socioeconomic repercussions of leaving school are most severe for women who do not complete high school, as these women are the most likely to be impoverished.

When women have children they often face significant, long-term economic penalties that can be tied to diminished human capital (Budig and England 2001; Glauber 2007). The literature on carework shows that despite some shifts in family dynamics, women still retain

primary responsibility for childcare, as well as care for spouses and other relatives who may need care. Even when women go into the workforce, it generally remains their responsibility to locate, supervise, and otherwise manage the care for their children (Hertz 1986; Hondagneu-Sotelo 2007). When childcare arrangements falter, it usually is the mother, rather than other relatives, who must substitute for the caretaker (Maume 2008). This persistent responsibility for childcare, even if nonparental childcare is used, has a depressing effect on women's wages and opportunities in the workforce, even in affluent, two-parent families. Yet just as having young children often alters women's work lives, further education for mothers is also complicated by the presence of young children. Not only are teenagers more likely to leave high school when they get pregnant or have children (Zachary 2005), but one study found that having preschoolers adversely affected women's enrollment in both two-and four- year institutions (Taniguchi and Kaufman 2007).

Previous research has demonstrated that education, particularly postsecondary education, consistently improves the economic status of single mothers and is key to exiting poverty permanently for women of all racial/ethnic backgrounds (Pandey and Kim 2008; Pandey et al. 2000; Zhan and Pandey 2004b). Research has also shown that postsecondary education is more effective than either marriage or postbirth employment at protecting new mothers from poverty (Nichols, Elman, and Feltey 2006), and permanently transitioning women off government assistance (London 2006; Meyer and Cancian 1998). Further education for mothers and the effects of this education on family income can have intergenerational benefits as well. In addition to decreasing child poverty, improved maternal education has been linked to their children's positive developmental outcomes (Zaslow et al. 2002), stronger social skills (Loeb et al. 2004), and increased educational achievement (Hauser, Simmons, and Pager 2000). One

study found that each year of mother's post-secondary education is associated with a 10 percent decrease in the odds that her children will drop out of high school (Hauser, Simmons, and Pager 2000), effectively decreasing their children's likelihood of future poverty.

Having young children may have a particularly strong negative impact on the education of poor women, a population that disproportionately consists of single and minority mothers, because of the greater economic need for maternal employment, the impact of welfare restrictions, and the high cost of childcare. Public childcare assistance for poor women has typically concentrated on center-based daycare solutions. Previous research has addressed the effects of childcare on the educational development of children, and has broadly discussed the importance of childcare for the education and social mobility of women. However, little is known about the effects of certain types of childcare, center-based or otherwise, on the educational lives of mothers.

Research on childcare has generally focused on parents' preferences for *qualities* of care (e.g. Burchinal and Cryer 2003; Hofferth and Collins 2000) and differences in mothers' *choices* of care (e.g. Kimmel and Powell 2006a; Morrissey 2008; Rose and Elicker 2008). This literature

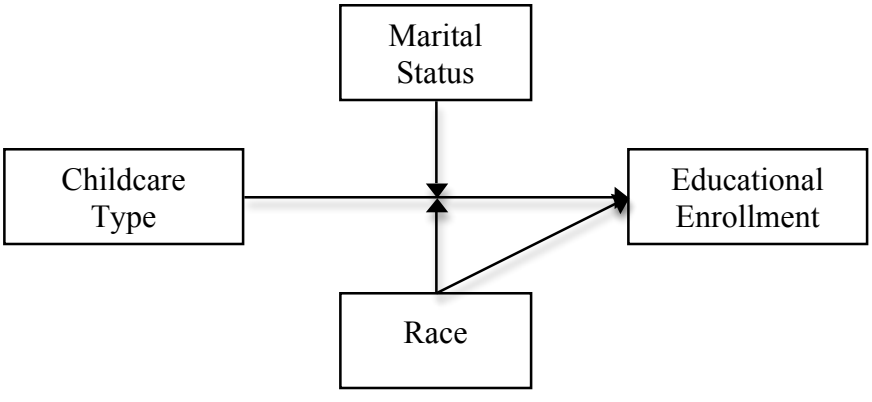

Figure 4-1: Conceptual Map for Relationship between Childcare and Maternal Educational Enrollment

has not addressed how these preferences and decisions are related to *educational* trajectories, or which specific childcare *arrangements* are most beneficial to mothers' abilities to upgrade their education and thereby their earning power. Additionally, previous research has not assessed if the relationship between childcare and maternal education is different among groups of women. In this chapter, I fill these holes in the literature by answering the following research questions: Are certain types of childcare assistance, formal or informal, associated with greater enrollment in education or job training for mothers with young children? How is the relationship between childcare and enrollment different, if at all, by race/ethnicity and marital status? In Figure 1, I present a simplistic conceptual map for this chapter—childcare affects educational enrollment. I predict, however, that both race/ethnicity and marital will have an impact on this relationship.

LITERATURE REVIEW

Childcare, Education, and Social Mobility

Drawing on qualitative research, Edin and Lein (1997) discuss the "costs" of low-wage work in comparison to welfare receipt. In their study, the majority of low-income mothers identified two factors—temporary health problems of women and/or their children and lack of access to affordable childcare—as primary barriers to sustainable employment. Even if these two problems were solved, however, the mothers believed that economic self-sufficiency would be difficult without further education or quality training as a way of improving their earning potential. Over a decade later, links between childcare and maternal education remain understudied. Though research such as this has identified both education and childcare as key components to economic stability and social mobility, the relationships *between* childcare and maternal education have been largely neglected in sociological literature. One recent article by Stephanie Mollborn (2007) identifies childcare as the critical component in reducing long-term

educational penalties for teen mothers, yet the article fails to distinguish what types or even qualities of childcare arrangements could help these mothers. I predict that having a regular childcare arrangement will increase the likelihood of educational enrollment for mothers with young children, but that some arrangements will be more strongly connected to enrollment than others.

Several studies have shown that for low-income women relative-care arrangements and patchworks of care are generally more consistent with convenience and cost considerations than other care arrangements (Henly and Lyons 2000). Mixtures of care typically place relative care at the center (Scott, London, and Hurst 2005), and mothers often rely on relatives to deal with unexpected events, such as a sick child, that can interfere with other care arrangements (Early and Burchinal 2001; Thompson 1993). Of course, not all mothers live close enough to relatives, or have relatives able and willing to provide care, to make such arrangements an option for all women. Some older research suggests that if mothers do have multiple care arrangements that include relatives, these arrangements may provide more flexibility for working mothers and a greater ability to adapt to work, family, and perhaps even educational demands (Folk and Yi 1994; South and Spitze 1994). Alternately, more recent research has repeatedly found that both mixtures of care and relative care, though less expensive than center-based care, tend to be less reliable, less stable, and less educationally focused for children (Chaudry 2004; Scott, London, and Hurst 2005; Usdansky and Wolf 2008). For example, the availability of relatives for childcare can change rapidly if the relative acquires a new job or has other competing obligations.

As noted above, public policies addressing the childcare needs of poor families have concentrated on center-based daycare options, namely Head Start and child-care subsidies

allocated primarily for center-based programs.[7] On the one hand, center-based childcare solutions typically have stronger educational programs for children than other types of care (Magnuson et al. 2004) and are generally considered more stable than other care arrangements (Chaudry 2004; Scott, London, and Hurst 2005). On the other hand, there are two main limitations to this type of care, aside from cost. First, childcare centers usually do not provide care for sick children (Early and Burchinal 2001). The carework literature suggests that when such unexpected events occur, it is usually the mother who cancels obligations to care for the child (Folbre 2001; Maume 2008). Frequent absences from class or training sessions to care for a sick child are likely to inhibit educational success for mothers. Second, most daycare centers operate with limited hours (Kimmel and Powell 2006a; Willer et al. 1990), which have been found to conflict with work hours or place limitations on the days mothers can work (Chaudry 2004). Similarly, mothers who are enrolled in school may have a hard time scheduling their courses around restrictive daycare hours, especially if they are working as well. Many adult education programs explicitly schedule classes in evenings or on weekends when centers typically are not open. Single mothers with no alternative childcare arrangements, in particular, may be blocked from attendance. However, a study by Lemke (2000) found that mothers whose children are enrolled in Headstart programs—a subsidized, center-care arrangement—are less likely to be employed and more likely to be involved in some form of education or job training. Therefore, the limitations of susbsidized care and center care may be more severe for employment than educational enrollment. Despite these limitations, I predict that mothers who use center-based care will be more likely to be enrolled in education or job training than women who use other care arrangements because of the stability and reliability of center-based care.

[7] See Chapter 1 for further discussion of childcare subsidies.

Within the home, familial assistance with carework from parents and older children may also affect mothers' educational enrollment. Living with parents can be an important resource for the educational advancement of both high school and college age mothers (Mollborn 2007; Sibulkin and Butler 2005); in fact, a requirement to live with parents was built into welfare reform as a condition of welfare receipt if single mothers are teenagers (Rosman and Yoshikawa 2001). Women in these circumstances are more likely to receive support with childcare and housework, as well as with finances, which facilitates continuing with their education (Mollborn 2007). Living with parents may alternatively represent an increase in carework responsibility for mothers, rather than assistance, if the parents are elderly or otherwise needy (Johnson and Sasso 2000; Sarkisian and Gerstel 2004a). In such circumstances, parents living within the household may negatively affect women's educational enrollment. Furthermore, research has shown that older children—especially daughters—often contribute substantially to carework within low-income homes (see review in Dodson and Dickert 2004), which may allow the mother to focus more on her own educational advancement. I expect that living with grandparents and older daughters will each generally increase educational enrollment for mothers, though there may be racial or marital status differences in these relationships.

Race/Ethnicity, Childcare, and Education

Previous literature has found that although women and minorities have experienced economic mobility over time, a substantial racial wage gap still exists—particularly among unskilled workers (Alon and Haberfeld 2007). This racial gap has be attributed to differences in education, occupation, and skill (Kearney 2006). Some research has shown that early childbearing depresses the earnings of Black women more so than for their White counterparts, and that educational credentials and job experience are particularly important for the wage

growth of Black women (Christie-Mizell, Keil, and Blount 2007). Research on racial and ethnic differences in the effects of motherhood, particularly nonmarital motherhood, on education has produced mixed results. Some research has found little difference in the effects of motherhood across racial groups (Klepinger, Lundberg, and Plotnick 1995), while other studies have found that Black mothers are more likely than White and Hispanic mothers to continue their education (Forster and Tienda 1992; Upchurch, Lillard, and Panis 2002). For all mothers, accruing this human capital necessitates some form of non-maternal childcare, although many minority women have limited childcare options.

There is substantial variation in access to childcare across racial and ethnic groups based largely on systematic differences in socioeconomic status. Research has shown that Black, single women with low education and income have traditionally been most likely to face "childcare constraint," or limited childcare options, than women of other racial and ethnic groups (Ciabattari 2007; Presser and Baldwin 1980). Aside from the high price of childcare, these women's choice in childcare is generally constrained by location and limited transportation options (Han 2004; Herbst and Barnow 2008; Van Ham and Mulder 2005); childcare center hours in conjunction with variable work hours (Han 2004); the availability and reliability of relative care options; and restrictions around childcare subsidy availability and use (Shlay et al. 2004). Such factors affect minority women more than White women because of minority women are more likely to live in segregated neighborhoods (Fernandez and Su 2004; Wilson 1996), work in segregated jobs with a greater likelihood of variable and sometimes unpredictable work hours (Anderson and Shapiro 1996; Maume 1999; Presser 2003), and receive government assistance (TANF 2003). These constraints may funnel minority women into different types of childcare arrangements. Since racial/ethnic differences in childcare use have been shown to

differentially affect women's work lives and earnings (see Chapter 5), I anticipate that they will also differentially affect educational enrollment among women.

Black and Hispanic families have traditionally received support from their extended families as a strategy for managing work/family balance amidst limited resources (Cohen 2002b; Cohen and Casper 2002; Sarkisian, Gerena, and Gerstel 2007; Uttal 1999). This practice has arguably increased under welfare reform regulations that require that mothers be involved in work or other preapproved work related activities, such as vocational education or job training, in order to receive benefits (Dodson and Dickert 2004; Kamo 2000). While some research has found that such support networks have diminished within Black communities (Brewster and Padavic 2002), other research has found that Black extended families still provide substantial practical support to their kin—such as help with transportation, childcare, and housework—in comparison to White extended family networks (Sarkisian and Gerstel 2004b). Differences in extended family support between Black and White families can be largely explained by structural factors (i.e. social class), though racial differences in cultural values help to explain these differences as well.

In comparing extended family integration of Mexican American and White women, Sarkisian and colleagues (2007) found that Mexican American were more likely to live with or near kin. Additionally, Mexican American women are *less* likely than White women to provide financial support to extended family but *more* likely to give household or childcare assistance. Social class, rather than culture, is the primary explanatory factor for these differences (Sarkisian, Gerena, and Gerstel 2007). Based on this research, along with research that establishes the flexibility of relative centered care arrangements, I predict that the greater use of

relative care arrangements among minority families will lead to greater educational enrollment for Black and Hispanic mothers with young children.

Marital Status, Childcare, and Educational Enrollment

The sources of support that women use to care for children are likely to vary by marital status since women in married households are more able to rely on a partner for assistance with the financial and/or carework needs of the family. Scholars have suggested that single parent families are more likely than married families to receive help from relatives in order to compensate for not having a spouse (Brandon and Hofferth 2003; Folk and Yi 1994). A substantial amount of research on has shown that the help of the woman's mother and other extended family supports is a particularly common means of support for Black, unmarried, low-income mothers (Cohen 2002b; Jarrett 1998; Jarrett and Burton 1999; Marsh et al. 2007). Similarly, older daughters in low-income families often assist with a significant amount of childcare and other household labor in single parent homes (Dodson and Dickert 2004; Romich 2007). Relying on the household labor of older children, particularly daughters, has been a strategy that single mothers use for balancing work and family amidst long work hours and low hourly wages, and I believe that this strategy will assist in educational enrollment as well. I predict that the carework assistance provided by older daughters and relatives will each increase educational enrollment, but that marital status will moderate these relationships. The effect of having older daughters and relative care on education will be stronger for single mothers than married mothers since single mothers are more dependent on these types of care.

The effects of marital status on educational enrollment may also vary by race and ethnicity. In addition to being more likely than White women to live with or near extended family and receive assistance with childcare, Black women are also more likely to receive help

within the household from their husbands (Berridge and Romich 2007; Cooksey and Fondell 1996; Kamo and Cohen 1998; Penha-Lopes 2006). Black and Hispanic men are more likely than their White counterparts to contribute to housework and childcare, a finding that has been attributed to a norm of shared contribution in which men and all children contribute to household labor (Penha-Lopes 2006). Therefore, I expect that marital status will increase the likelihood of educational enrollment for minority mothers, as minority men in these relationships are more likely to assist with carework responsibilities than are White men. Race/ethnicity will moderate the effects of marital status on educational enrollment.

DATA AND METHODS

In this chapter, I use the 2005 Early Childhood Program Participation Survey (ECPP), collected by the National Center for Educational Statistics as part of the National Household Education Surveys[8]. This survey provides cross-sectional, nationally representative data on families with children under 6 years old who have not yet enrolled in Kindergarten. The original sample of 7,209 mothers was restricted to biological, adopted, and step mothers only. I eliminated 277 cases where no mother figure was present in a household or the mother-figure was the partner of the father, a foster mother, or another guardian. I also limited to the analysis to mothers whose race/ethnicity was White, Black, or Hispanic, excluding the 667 mothers whose reported primary racial/ethnic identification was Asian, Pacific Islander, or "other." With these restrictions, the final sample size was 6,265 women with young children.

Variables

Dependent Variable. The dependent variable in these analyses is dichotomous—whether or not the mother is enrolled in education or job training. The ECPP question about education is broad, asking if the mother is "attending or enrolled in a school, college, university, or adult

[8] Further information about the ECPP can be found in the methods chapter (Chapter 3) of this dissertation.

Table 4-1: Descriptive Statisitics for Variables in Education Analysis (n=6,265)

	Mean	St. Error	Min	Max
Dependent Variable				
Mom Enrolled in Education or Job Training	0.12	0.01	0	1
Regular Childcare Arrangment				
Center-based Care	0.31	0.01	0	1
Relative Care	0.16	0.01	0	1
Nonrelative Care	0.11	0.01	0	1
Mixture of Care	0.02	0.00	0	1
No Childcare Arrangment	0.40	0.01	0	1
Receives Childcare Subsidies	0.07	0.01	0	1
Informal Carework Assistance				
Any Older Daughters (10-17 y/o)	0.11	0.01	0	1
Grandparents Live in Household	0.07	0.00	0	1
Race, Ethnicity, and Immigration				
White	0.62	0.00	0	1
Black	0.15	0.00	0	1
Hispanic	0.23	0.00	0	1
Immigrant	0.17	0.01	0	1
Other Characteristics				
Mother's Age	31.25	0.11	14	61
Married	0.76	0.01	0	1
Single	0.24	0.01	0	1
Years of Education	13.72	0.05	0	21
Number of Children Under 10	2.00	0.03	1	7
Poverty	0.23	0.00	0	1
Between Poverty and Median	0.77	0.00	0	1
Above Median Income	0.46	0.01	0	1
Receives TANF or State Welfare	0.19	0.01	0	1
Hours Per Week Mother Works	19.13	0.39	0	99

Note: Means are Weighted

learning center, or receiving vocational education or job training [other than at (her/your) regular job].” Unfortunately, the data do not differentiate between types of education. Mothers who are enrolled in more demanding forms of education (e.g., master’s programs rather than job training programs) may require different forms and levels of carework support. Mothers also have different prospects for mobility based on the type of educational program in which they are

enrolled. This is evident in comparing mothers enrolled in college and mothers enrolled in vocational education. Receiving a postsecondary degree is the primary way to achieve upward wage mobility (Elman and O'Rand 2007), and is an avenue out of poverty for low-income women (London 2006; Nichols, Elman, and Feltey 2006). Though vocational education may reduce future periods of unemployment (Ainsworth and Roscigno 2005), vocational education is often an educational stopping point for women, stunting their occupational and wage mobility (Ainsworth and Roscigno 2005; Elman and O'Rand 2007). Despite the differences between types of education, any educational advancement increases the mother's human capital and most mothers require some form of childcare assistance for any kind of educational enrollment. Thus, while I cannot assess the effects of childcare on different forms of educational enrollment, I can explore the effects of childcare on maternal educational enrollment more generally. Of the 6,265 mothers in the sample, 772 (12.3 percent) responded that they were enrolled in some such further education or job training.

Independent Variables. There are three main sets of independent variables in these analyses: regular childcare arrangements, informal carework assistance, and women's race/ethnicity. I include five mutually exclusive childcare categories: center-based care, relative care, nonrelative care, mixture of care, and no regular arrangement. The category "no arrangement" is used as the reference category. Center-based daycare, relative care, and non-relative care are each dummy coded 1 if the mother reported using each type of care as the child's primary childcare arrangement. The childcare arrangement is categorized as a mixture of care and dummy coded 1 if the mother reports using two or more childcare arrangements in equal proportions. The fifth dummy variable is "no regular arrangement," coded 1 if the family does not use any form of non-parental pre-Kindergarten care for their child. There are 33 cases

where respondents report using nonparental care arrangements, but schedule nonparental childcare for less than once a week. In these cases, I coded the mothers as not using any form of regular childcare arrangement.

I include two independent variables to examine the potential availability of caregivers within the home—any older daughters and grandparents living in household. The variable for any older daughters is dummy coded 1 if there are any female children over the age of 10 and under the age of 18 that live in the household. Grandparents in the home is dummy coded 1 if any of the child's grandparents are reported to be living in same household as the mother and child(ren).

I use a set of four dummy variables for race and ethnicity. Unfortunately the ECPP only asked questions about the race and ethnicity of the children, not the mothers. This limitation is a result of the rarity of datasets that provide detailed information on the work and educational lives of mothers, as well as on the childcare experiences of children. Since the data on the race and ethnicity of the child is the best available, I use the child's primary race/ethnic background as a proxy for the mother's race/ethnicity. As of 2005, 7 percent of U.S. married people were part of interracial couples (Rosenfeld 2007). In cases of children of interracial couples, the reported primary race or ethnicity of the child may not be the same as the primary racial or ethnic identification of the mother. However, if the child was identified as belonging to multiple races, as was the case in 289 observations, interviewers coded his/her race as "other." Since I only focus on White, Black, and Hispanic mothers, these mothers are not included in these analyses and I can assume that the race/ethnicity of the child in these analyses generally matches that of the mother. Each racial/ethnic category—White, Black, and Hispanic—is dummy coded 1 according to the reported primary race/ethnicity of the child.

Control Variables. I included a control variable for whether or not the mother uses childcare subsidies to help pay for childcare. This variable is dummy coded 1 if TANF, the state government, or a welfare agency is helping the mother pay for childcare costs. I also control for immigrant status of the mother. This variable is dummy coded 1 if the mother was not born in the United States. Additionally, I included control variables for mother's age, marital status, years of education, number of children under 10 years of age, income level, receipt of government assistance (TANF or state welfare), and hours worked for pay. For further information on the variables in this analysis, including the control variables, see Table 4-1 of this chapter (for descriptive statistics) and Table A-1 Appendix A (for variable measurement).

Analytic Strategy

I use binomial logistic regression because the dependent variable has two possible outcomes—whether or not the mother is enrolled in some form of education or job training. In running these regression models, I added weights and adjusted for the complex survey design of the ECPP data using STATA's svy command. This was necessary because the sampling design for the ECPP was not a simple random sample. For example, the survey oversampled areas with higher concentrations of minorities. Two methods are used to compute accurate sampling errors. First, I used the replicate weights available. The sample was divided into 80 random samples, or replicates, based on the sample design in order to compute replicate weights (National Household Education Surveys Program 2006). The procedure was a jackknife replication method, and I added weights to the data using the jackknife option with the STATA svy command. Second, standard errors are calculated using Taylor series methods through STATA. This method takes into account the stratum (whether the person was part of the high minority or low minority grouping) and primary sampling unit (the persons random identification number

within the stratum) when calculating error. The combination of these methods assures that the sample is nationally representative and that the standard errors, and thus the reported significance levels, are accurate.

My results are presented in two tables. The first table examines the effects of childcare on maternal education for all mothers, while the following table examines this relationship by marital status. Table 4-2 includes a series of 7 nested models. Model 1 isolates the effects of childcare and childcare subsidies on educational enrollment, where Model 2 only presents the variables for race, ethnicity, and immigration. The variables for these two models are combined in Model 3 in order to assess the effects that these two sets of variables have on one another. I add variables for older daughters and grandparents, proxies for informal carework assistance, in Model 4. I assess the effects of age on informal carework assistance by adding mothers' age in Model 4a. Model 5 is the full model that includes all variables for childcare arrangements, informal carework, race/ethnicity, and other maternal and household characteristics. The final model in the table, Model 6, includes an additional interaction variable between single and relative care.

I then divide the sample into two groups by marital status and present the full model for each group in Table 4-3. I chose to do this, rather than presenting the moderating effects of marital status on educational enrollment through interaction variables, because I believed that marital status would interact with most of the variables in the model to affect mothers' odds of enrollment in education or job. Not only are there racial/ethnic differences in marital status, but as noted above, single mothers rely on different strategies than married mothers to mange family responsibilities. The results in both tables are presented as odds ratios for ease of interpretation. An exponentiated coefficient above 1 indicates that a unit change in the independent variable

increases the odds of educational enrollment, while a coefficient below 1 designates a decrease in the odds of enrollment.

RESULTS

Formal Childcare Arrangements and Education

Based on prior literature (e.g. Mollborn 2007), I first broadly predicted that having regular childcare would increase mothers' educational enrollment. The results in Table 4-2 reveal that each type of regular childcare arrangement increases the odds of mothers' educational enrollment as compared to having no regular arrangement at all. This is true even when all race, ethnicity, immigration, household characteristics, and maternal characteristics are controlled. For example, as shown in Model 6, mothers who use center-based childcare and relative childcare as their primary childcare arrangements are 169 percent and 119 percent more likely, respectively, to be enrolled in education or job training than mothers with no regular arrangement. When I switch the reference category for childcare arrangement to other primary childcare arrangements (in analysis not shown), I find that there are no significant differences in the relationships between childcare type and educational enrollment between mothers using center-based care, relative care, nonrelative care, and mixtures of care. Thus, while having some form of regular childcare does matter for educational enrollment, the type of regular childcare used does not. Contrary to my expectations, center-based childcare is no better than any other form of regular childcare at supporting maternal educational enrollment. This finding suggests that governmental support for childcare needs of low-income mothers could usefully be extended beyond the current focus on center-based care where maternal education is concerned. This also implies that the government tax deductions for childcare expenses on *any* form of childcare may be an effective way to support maternal education. Families can deduct between 20 and 35 percent of

Table 4-2: Logistic Regression of Mothers' Enrollment in Education or Job Training on Childcare Type and Race/Ethnicity: ECPP 2005

	Model 1		Model 2		Model 3		Model 4		Model 4a		Model 5		Model 6	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
Regular Childcare Arrangement														
Primary Childcare Type (vs. No Arrangement)														
Center-Based Care	2.36 ***	0.34			2.24 ***	0.32	2.25 ***	0.32	2.74 ***	0.42	2.75 ***	0.41	2.74 ***	0.41
Relative Care	2.46 ***	0.39			2.21 ***	0.38	2.07 ***	0.36	2.12 ***	0.35	2.22 ***	0.39	3.07 ***	0.60
Nonrelative Care	1.72 **	0.32			1.78 **	0.34	1.80 **	0.34	2.07 ***	0.41	2.17 ***	0.45	2.18 ***	0.46
Mixture of Care	2.48 ***	0.67			2.31 **	0.63	2.26 **	0.61	2.54 **	0.73	2.78 ***	0.82	2.79 ***	0.83
Receives Childcare Subsidies	1.88 **	0.38			1.44	0.35	1.42	0.33	1.15	0.27	1.21	0.27	1.19	0.26
Informal Carework Assistance														
Any Older Daughters (10-17 y/o)							1.07	0.18	1.63 **	0.30	1.82 **	0.35	1.81 **	0.35
Grandparents Live In Household							1.67 **	0.28	1.31	0.21	1.21	0.21	1.24	0.22
Groups of Women														
Race/Ethnicity (vs. Non-Hispanic Whites)														
Black			3.10 ***	0.48	2.78 ***	0.46	2.63 ***	0.45	2.26 ***	0.38	2.12 ***	0.37	2.14 ***	0.37
Hispanic			1.62 ***	0.23	1.61 ***	0.23	1.52 **	0.23	1.33	0.21	1.43 *	0.23	1.44 *	0.23
Immigrant			0.55 **	0.11	0.63 *	0.12	0.63 *	0.12	0.68	0.14	0.74	0.14	0.73	0.14
Other Characteristics														
Mother's age									0.93 ***	0.01	0.92 ***	0.01	0.92 ***	0.01
Single											1.26	0.21	1.50 *	0.28
Years of Education											1.15 ***	0.03	1.15 ***	0.03
Number of Children Under 10											0.76 **	0.07	0.77 **	0.06
Income Level (vs. Poverty)														
Between Poverty and Median											0.90	0.15	0.90	0.15
Over Median Income (50K)											0.79	0.12	0.79	0.12
Receives TANF or State Welfare											0.96	0.19	0.95	0.19
Hours Working for Pay											0.99 **	0.00	0.99 ***	0.00
Single X Relative Care													0.45 *	0.14
F	12.02***		14.62***		11.44***		10.83***		13.60***		10.10***		10.52***	
Population	18,027,381		18,027,381		18,027,381		18,027,381		18,668,387		18,668,387		18,668,387	
N	6,265		6,265		6,265		6,265		6,265		6,265		6,265	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$; Results are Weighted

their childcare expenses on their federal taxes, depending on their income level, as long as they had earned income and used childcare to work, look for work, or if one spouse attended school *full-time* (IRS 2008). Mothers cannot deduct childcare expenses if they are part-time students and not in the paid labor force, which may affect some women's ability to claim this benefit.

Interestingly, mothers who receive childcare subsidies[9] are no more likely to be enrolled in education or job training than mothers who do not receive this assistance. Though government subsidized childcare does help with educational enrollment when only formal childcare arrangements are included in the model (Model 1), this relationship disappears when race and ethnicity are controlled (Model 3). I found that the significance of childcare subsidies disappears when the variable Black is included in the model. Thus, the initial significance of childcare subsidies can be explained by Black/White differences in subsidy use and educational enrollment, rather than direct links between subsidies and educational enrollment. Black mothers are more likely than White mothers to receive childcare subsidies and are also more likely to be enrolled in education or job training. The finding that childcare subsidies do not increase enrollment may have to do with the current stress on employment over education as a policy initiative for low-income mothers (Pandey et al. 2000; Zhan and Pandey 2004a, b). Though a limited number of mothers receiving childcare subsidies use them to further their education, mothers who receive childcare subsidies are generally encouraged to work rather than return to school.

Informal Carework Assistance and Education

As far as informal assistance with carework, I hypothesized that having older daughters and grandparents living in the household would each increase the odds of mothers being enrolled

[9] I am referring to more immediate monetary support for childcare. I assume that in answering the question about whether the state government or welfare helps to pay for childcare mothers were typically not considering tax deductions as a form of government financial assistance with childcare.

in education or job training because they would provide the mother assistance with carework. When these variables are initially added into the model, along with variables for formal childcare arrangements, race/ethnicity, and immigration (Model 4), mothers living with their children's grandparents are more likely to be enrolled in education or job training. Having daughters in the home makes no difference for educational enrollment. When age is added (Model 5), these variables switch significance—grandparents in the home is not significant and having older daughters is. In this model as well as the full model (Model 6), living with grandparents does not affect educational enrollment, yet living with grandparents has a significant indirect effect on maternal educational enrollment through age.[10] Mothers who live with their parents, their children's grandparents, are likely to be younger, and younger mothers are more likely to be enrolled in education or job training.

The change in the significance of older daughters on maternal education enrollment between Models 4 and 4a reveals a suppressor effect. The positive effect of having older daughters on maternal educational enrollment was initially hidden, or suppressed, by mothers' age. Older daughters can be helpful in supporting mothers' educational enrollment; however, older mothers are more likely to have older children and less likely to be enrolled in further education. The full model (Model 5) shows that having older daughters in the household increases the odds of educational enrollment for mothers by 82 percent. I explored the effect of any older sons on maternal enrollment, in analysis not included here, in order to assess whether specifically having older *daughters* affected enrollment, or whether it is older *children* and any

[10] I confirmed this using the Sobel mediation test. This test measures the mediating effect of age on the relationship between grandparents and educational enrollment. I was unable to apply this test through STATA software and still account for the complex survey design of the ECPP data. Instead, I used the unexponentiated coefficients and standard errors to calculate mediation using an online tool developed by Preacher and Leonardelli (2003).

variables that may be correlated with having older children that may be influencing enrollment. For example, mothers of older children tend to be older and they may further their education because they are in a position of greater financial stability to do so. I found that having sons in the house had no effect on whether the mother is enrolled in education or job training. The fact that older daughters are beneficial to enrollment, where older sons are not, helps to support my hypothesis that these older daughters are helpful for enrollment because they assist with carework.

Race, Childcare, and Education

The findings in Table 4-2 also reveal racial and ethnic difference in educational enrollment. Black and Hispanic mothers have greater odds of educational enrollment than White mothers. This is the case when variables for only race, ethnicity, and immigration are in the model (Model 2), as well as when controls are added. The addition of childcare (Model 3), informal carework assistance (Model 4), and other maternal and household characteristics (Model 5) does not significantly change these racial and ethnic differences in educational enrollment. In the full model, Black and Hispanic mothers are, respectively, 109 percent and 42 percent more likely to be enrolled in education or job training than White mothers. These findings run counter to my predictions that formal and informal childcare would mediate the effect of racial and ethnic status on educational enrollment. Though minority mothers may use different childcare arrangements than White mothers, such as receiving more help from relatives (Cohen 2002b; Sarkisian, Gerena, and Gerstel 2007; Sarkisian and Gerstel 2004b), these differences do not explain their higher rates of educational enrollment.

In supplemental analyses, I found that in all models Hispanic women are more likely than White women to be enrolled in school only *after* controlling for immigration. Hispanic mothers'

odds of educational enrollment are not significantly different than that of White mothers before the addition of this variable. The negative relationship between being an immigrant and educational enrollment hides, or suppresses, the positive relationship between Hispanic mothers and enrollment. This finding is consistent with previous research (e.g. DebBurman 2005; Rong and Grant 1992) that shows that Hispanics of both genders show strong gains in educational attainment from the first to second generation in the United States, which is probably the result of increased language skills and acculturation to the United States educational system.

Marital Status and Education

While marital status does not directly affect educational enrollment for mothers as a whole (Model 5, Table 4-2), I discovered that the effects of certain childcare and race variables on educational enrollment vary by marital status. In supplemental analyses, I individually added interaction variables between single and each of the other variables in the analysis to the full model. I found that marital status significantly moderates the effect of the following variables on educational enrollment: using center-based care, using relative care, having older daughters, and being a Black mother. For example, as shown in Model 6, single mothers who use relative care as their primary childcare arrangement are 32 percent[11] less likely to be enrolled in education or job training than single mothers who do not use relative care as their primary arrangement. Married women using relative care, conversely, are 50 percent more likely to be enrolled in education or job training than married women who do not use this care arrangement. While I predicted that marital status would moderate the relationship between relative care and educational enrollment, I believed that single mothers would benefit from this care—a finding

[11] The precise percentage was calculated by adding the unexponentiated coefficients for single and the interaction variable between single and relative care. I then exponentiated the sum in order to interpret the odds ratio.

Table 4-3: Logistic Regression of Mothers' Enrollment in School or Job Training on Childcare Type by Marital Status: ECPP 2005

	Single Mothers		Married Mothers	
	Odds Ratio	SE	Odds Ratio	SE
Regular Childcare Arrangement				
Primary Childcare Type (vs. No Arrangement)				
Center-Based Care	4.05 ***	1.14	2.29 ***	0.41
Relative Care	2.01	0.71	2.65 ***	0.57
Nonrelative Care	1.94 *	0.61	2.12 **	0.55
Mixture of Care	4.57 *	3.16	2.32	1.01
Receives Childcare Subsidies	1.25	0.34	0.98	0.42
Informal Carework Assistance				
Any Older Daughters (10-17 y/o)	2.55 *	2.79	1.46	1.25
Grandparents Live In Household	1.21	2.56	1.22	2.63
Groups of Women				
Race/Ethnicity (vs. Non-Hispanic Whites)				
Black	1.61	0.42	2.87 ***	0.66
Hispanic	1.29	0.39	1.50 *	0.28
Immigrant	0.75	0.27	0.71	0.16
Other Characteristics				
Mother's Age	0.94 *	0.03	0.90 ***	0.01
Years of Education	1.15 **	0.05	1.16 ***	0.03
Number of Children Under 10	0.73	0.12	0.81 *	0.08
Income Level (vs. Poverty)				
Between Poverty and Median	0.81	0.20	1.01	0.25
Over Median Income (50K)	1.04	0.32	0.74	0.14
Receives TANF or State Welfare	0.90	0.27	0.95	0.31
Hours Working for Pay	0.98 ***	0.01	1.00	0.00
F	4.56***		7.95***	
Population	4,388,338		13,639,043	
N	1,308		4,957	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$; Results are Weighted

discussed more in the following section. As also predicted, the interaction between Black mothers and marital status was significant. Black married mothers have greater odds of educational enrollment as compared to non-Black married mothers. Because marital status affected several of the independent variables of interest, I present separate models for married and single women in Table 4-3 and discuss the differences between models below.

Formal Childcare. According to the findings in Table 4-3, single mothers who use center-based care, nonrelative care, and mixtures of care as their primary childcare arrangements are more likely to be enrolled in education or job training than single mothers who do not use any arrangement at all. Therefore, having regular childcare generally increases the odds of educational enrollment. Surprisingly, using relative care is no more beneficial to single mothers' educational enrollment than using no arrangement at all. When comparing regular childcare arrangements by switching the reference category (in analysis not shown), I find that single mothers who use center-based care have greater odds of educational enrollment than single mothers who use any other childcare arrangement. For example, single mothers who use center-based care as their primary childcare arrangement are twice as likely to be enrolled in school as single mothers who use relative care as their primary arrangement. Single mothers may be especially in need of the stability of center-based care because they have fewer alternatives than married women when care breaks down. Since relative care is generally considered to be less stable than center-based care (e.g. Chaudry 2004), single mothers who use relative care as their primary care arrangement may be less inclined to enroll in school or may have had problems maintaining their enrollment.

For married mothers, mothers who use center-based care, relative care, and nonrelative care all have greater odds of being enrolled in education or job training than married mothers who don't use any regular childcare arrangement. Mixtures of care are equivalent to no arrangement for married mothers. Previous research has shown that patchworks of care tend to be unreliable, leading to problems with employment stability, though this research has typically been conducted on low-income, single mothers (Chaudry 2004; Scott, London, and Hurst 2005). These findings suggest that mixtures of care may similarly have negative effects on educational

enrollment, though only for married women. Upon further investigation, I found that among the small sample of married mothers using mixtures of care, this group was significantly more likely to be the only parent living in the household as compared to married mothers who use other care arrangements.[12] This group of women, similar to single women discussed in the literature, is using patchworks of care in the absence of support from a spouse. Switching the reference category, in analysis not shown, reveals no significant differences between regular childcare types for married women, including mixtures of care.

Informal Childcare Assistance. The main finding from Table 4-3 with regard to informal carework assistance is that single mothers with older daughters are 155 percent more likely to be enrolled in education or job training, while older daughters makes no significant difference to enrollment for married mothers. This finding is likely attributable to the contribution of older children to household labor and childcare, allowing the mother to further her education. As noted above, low-income women across racial/ethnic groups often use the family labor of older daughters as a survival strategy (Dodson and Dickert 2004; Romich 2007). As predicted, this strategy seems especially beneficial for single mothers—a group that is disproportionately likely to be poor. Again, I ran supplemental analyses (not shown) to explore the effects of older sons on educational enrollment for mothers and found that having older sons does not increase the odds of educational enrollment for mothers.

Race and Ethnicity. Table 4-3 also reveals racial/ethnic differences in enrollment by marital status. There are no racial or ethnic differences in educational enrollment among single mothers. Married Black and Hispanic mothers, on the other hand, have greater odds of educational enrollment than White mothers. The most extreme split is between Black and White

[12] In these cases the mother reported being married, but also reported the family type as having only one parent. No further questions were asked to clarify why the other parent is not in the household.

married mothers—Black, married mothers are 187 percent more likely to be enrolled in education or job training than their White counterparts. The finding that married Black mothers have higher rates of educational enrollment in relation to other groups of women may be attributable to the greater role that Black men play in the everyday functioning of the household, including carework, as compared to men in other racial/ethnic groups (Cooksey and Fondell 1996; Kamo and Cohen 1998; Penha-Lopes 2006). Hispanic married mothers may also receive more help than White women with household tasks, helping to explain their level of educational enrollment that falls between that of Black and White mothers. The few studies that have included comparisons of Hispanic men with men of other ethnic backgrounds find that they contribute more to household labor than White men, but less than Black men (Coltrane, Parke, and Adams 2004; Cooksey and Fondell 1996). This assistance in the household may enable Black and Hispanic married mothers to further their education at greater rates than White mothers, and even Black married women at greater rates than Black single mothers.

DISCUSSION/ CONCLUSION

In this chapter, I have explored whether certain types of formal and informal childcare arrangements are related to greater educational enrollment for mothers with young children. I also examined whether the effects of these arrangements on enrollment differ by racial/ethnicity and marital status, and if childcare affected racial/ethnic differences in educational enrollment. Previous literature has noted the importance of childcare for mothers' education and consequent mobility (e.g. Edin and Lein 1997; Mollborn 2007), but has not examined which types of childcare are most beneficial to the educational lives of mothers. There are three findings worth highlighting. First, childcare does matter for the educational enrollment of mothers, with center-care being particularly beneficial for single mothers. Second, there are persistent differences in

educational enrollment by race and ethnicity. Third, having older daughters can help with the educational enrollment of single mothers. These findings and their implications are discussed further below.

For mothers as a whole, using a regular childcare arrangement increases educational enrollment though there is no difference in educational enrollment between types of regular childcare. There are differences in the effects of childcare on educational enrollment by marital status. Most notably, single and married mothers have different experiences with center-based childcare as it affects mother's educational enrollment. Center-based care is particularly important for supporting enrollments of single mothers, who benefit less than do married women from relative care. Single women experience a persistent benefit of center-care over relative care. Married mothers, in contrast, benefit equally from the range of formal childcare arrangements. Government solutions for childcare have traditionally focused on center-care, specifically Head Start programs and subsidies for center-based care, and childcare subsidies have been shown to successfully encourage movement from relative care to center-care for children for low-income mothers (Fuller et al. 2002; Shlay, Weinraub, and Harmon 2007). Findings in this study for single mothers suggest that this is sound policy as related to this group. If these programs help mothers further their education through promoting center-care, they may successfully assist in the economic stability and mobility of single mothers and their children. Families headed by single mothers face greater risks of living on poverty in comparison to other groups and are most likely to need such government assistance. Yet according to these findings, single mothers have greater odds of being enrolled in education with center-care regardless of whether they receive subsidies for childcare.

I also find substantial difference in educational enrollment by race and ethnicity, though the forms of formal and informal childcare arrangements that mothers use do not affect these differences. Black mothers and Hispanic mothers, after controlling for immigration, have significantly greater odds of educational enrollment than White mothers. This is true for women as a whole and for married women, but this study does not reveal any racial/ethnic differences in educational enrollment among single women. This research suggests that married Hispanic mothers and, in particular, married Black mothers have particularly favorable prospects for mobility. For many women, marriage is one avenue for social mobility, though it is an avenue that typically perpetuates the existing social structure since women typically marry men of similar socioeconomic status as their fathers (Blackwell and Lichter 2004). Regardless, married women are significantly less likely to be in poverty. While single and married mothers are enrolled in education or job training at equivalent rates, married mothers of all races have higher levels of education than their single counterparts. If Black and Hispanic married mothers are able to further their education, possibly because of spousal carework support or greater economic resources generally to support enrollment, they are furthering their economic stability in two ways—through marriage and education—and are thus creating a greater economic divide between single and married women.

Black mothers' higher rates of school enrollment are consistent with literature that Black women's education is less likely to be disrupted by having children (Forster and Tienda 1992; Pillow 2004; Upchurch, Lillard, and Panis 2002). However, previous literature on racial/ethnic differences in maternal school enrollment has focused primarily on young, unmarried mothers. My findings show racial/ethnic differences in enrollment for women as a whole and for married women, but no persistent enrollment differences for unmarried women. The finding that single

women of all racial/ethnic backgrounds are equally likely to be enrolled in education is perhaps due to similar experiences based on class background. Poor single mothers across racial and ethnic groups may see education or training as the only pathway to mobility and economic stability in the absence of a stable male partner, so they may find a way to enroll in education regardless of whether they have young children or (as discussed above) whether they have financial support for childcare.

The finding that Hispanic mothers are more likely to be enrolled in education or job training than Whites runs counter to previous literature (Elman and O'Rand 2004; Forster and Tienda 1992). Although educational enrollment of Hispanic mothers has been studied less than that of Blacks or Whites, some previous studies have found that Hispanics are more likely than Whites or Blacks to experience negative educational consequences of early childbearing (Forster and Tienda 1992) or that their re-enrollment rates are the same as non-Hispanic Whites (Elman and O'Rand 2004). Also, the majority of literature linking educational enrollment, race/ethnicity, and motherhood have focused more on dropout rates and the childbearing that often occurs around that point (Dogan-Ates and Carrión-Basham 2007; Hondo, Gardiner, and Sapien 2008; Pillow 2004), rather than examining racial and ethnic difference in school enrollment of mothers with young children. Thus while others have focused on the fact that Hispanic pregnant mothers are more likely to leave school (e.g. Pillow 2004), I am looking at which groups are more likely to return to education or continue their education as mothers.

While Black and Hispanic women may be more likely than White mothers to be enrolled in education or job training, developing their human capital, it is important to recognize that these higher enrollment rates do not imply higher educational or economic levels for these groups. White mothers have higher educational levels on average than both Black and Hispanic

women to start with, in part because White women are more likely to delay childbearing until after the traditional college age (Glick et al. 2006; Matthews and Hamilton 2002). In these data, White mothers with young children have an average of 1.5 years more of education than Black mothers and 3.0 years more than Hispanic mothers. Additionally, further education has less economic benefit for Black and Hispanic women than it does for Whites because of discrimination in labor markets (Hall 2008; McGuire and Reskin 1993). For non-White women, increased human capital is less likely to pay off by way of promotions or higher pay.

Greater access to education and educational programs for low-income women is a key way to increase the mothers' employment prospects, helping to lift them and their families out of poverty. Further education has intergenerational benefits as well. Not only are children less likely to grow up in poverty, they are likely to have better developmental outcomes (Zaslow et al. 2002) and higher educational attainment themselves if their mothers further their own education (Hauser, Simmons, and Pager 2000). Unfortunately, Dodson and Dickert (2004) suggest that there may be negative intergenerational repercussions if families rely on older children for carework—a tactic that I found to be significantly related to educational enrollment for single mothers. Older children, more typically daughters, who take on household labor may miss out on opportunities to build their own human capital, thus perpetuating inequality. Future research on this topic could examine whether certain types of publicly funded childcare assistance may facilitate increases in maternal educational enrollment while reducing the carework burden of older daughters in low-income families. Further research could also explore how the relationships between childcare, family composition, and educational enrollment may differ based on the type of educational program in which the mothers are enrolled. As previously noted, the data used here do not allow me to determine what type of education mothers are

enrolled in, though educational program may matter for carework as well as for mothers' future wage and occupational mobility.

In the next chapter, I further explore the effects of children and childcare on women's human capital development and mobility. Rather than looking at education, I examine how and to what extent having additional children affects human capital and subsequent wage growth for White, Black, and Hispanic women. I then assess whether certain forms of childcare and carework assistance can alleviate the motherhood penalty.

CHAPTER 5

CHILDCARE, THE DIVISION OF HOUSEHOLD LABOR, AND THE MOTHERHOOD PENALTY ACROSS RACIAL/ETHNIC GROUPS

In the United States today, women have yet to achieve wage parity with men; women currently earn 78 cents on the dollar as compared to men (DeNavas-Walt, Proctor, and Smith 2008) and continue to face a multitude of inequities with regard to employment and economic stability. This wage gender gap has been well-explored by sociologists, economists and gender scholars (Lapidus and Figart 1998; Reskin 1988; Tomaskovic-Devey 1993; Williams 2004). One factor that has emerged as particularly relevant for explaining women's disadvantaged position is the disproportionate responsibility that women still hold for housework and childcare, even in dual earner families (Hochschild 2003). Though men have dramatically increased the amount of time that they spend in daily housework and childcare activities, women continue to do significantly more unpaid domestic labor than men (Bianchi 2000a; Bianchi et al. 2000; Sayer 2005; Sayer, Bianchi, and Robinson 2004) including an estimated 70 to 80 percent of childrearing (Williams 2001). Women's greater shares of unpaid labor have been met with lower benefits for paid labor, including a "motherhood penalty" in wages (Budig and England 2001; Crosby, Williams, and Biernat 2004).

Research has consistently shown that mothers encounter lower wages and wage growth than women without children and that wage penalties increase with the number of children (Anderson, Binder, and Krause 2002; Avellar and Smock 2003; Weeden 2005). As much as 40 percent of the penalty has been attributed to loss in human capital, specifically the loss of on-the-

job experience and seniority as many women decrease their work hours or take at least short breaks from paid labor for childrearing (Budig and England 2001). The effect of motherhood on women's work lives stands in sharp contrast with men's experience with fatherhood. Men generally experience wage growth with parenthood (Cohen 2002a; Glauber 2008), in addition to an increase in the number of hours they contribute to paid labor (Glauber 2008). Additionally, in qualitative studies, women are more likely than men to report that family demands negatively affect their jobs, in part because they take on less workplace responsibility for the sake of family (Keene and Reynolds 2005). Thus, having children often serves to establish a more traditional division of work and family roles among couples (Becker 1991). In this chapter, I explore how the unequal division of household labor affects the motherhood penalty, and how different types of early childcare arrangements may mitigate or exacerbate the effects of children on mothers' wages. I am particularly interested in understanding differences in the motherhood penalty across racial/ethnic groups of women.

Previous research has found that women do not uniformly experience the motherhood wage penalty. Married mothers face the largest wage penalties in comparison to other marital statuses, and White women pay a larger price for motherhood than either Black or Hispanic mothers (Anderson, Binder, and Krause 2003; Glauber 2007). The causes of these differences, particularly racial and ethnic differences, remain unclear. The greater penalty for married women has been attributed in part to the increase in household labor that women undertake when a man is present in the household (Glauber 2007), a gender divide that increases with the addition of children (Bianchi et al. 2000 and Robinson 2000). Indeed, studies have shown that the amount of time that women contribute to housework, separate from the care of children, is inversely correlated to women's wages as a whole (Hersch and Stratton 1997). However, the gendered

division in household labor and consequent effect on wages are not necessarily equivalent across racial groups. For example, a substantial amount of research suggests that Black men contribute more to household labor than men of other races (Cooksey and Fondell 1996; Kamo and Cohen 1998; Penha-Lopes 2006). Few studies have directly examined the effect of housework on per child penalty in wages or how housework labor may influence racial differences in wage penalties for mothers. One study that did include hours of housework in the analysis found that the presence of children and women's wages were *positively* correlated after controlling for hours of housework and human capital variables (Hersch 1991a). However, this study did not analyze racial differences in this effect.

Understanding the interconnection between work and family roles for women is particularly relevant, given the steady increase in the employment rates of women with young children. As of 2007, 63 percent of mothers with children under 6 participated in the paid labor force (Bureau of Labor Statistics 2008). With such large proportions of working mothers, non-parental childcare has become part of the daily lives of many US families, often directly affecting the work lives of mothers. As a result, the cost of childcare has become one of the main family expenses (NACCRRA 2006). The cost of childcare often serves to mitigate the benefits of working at all, particularly for low-income mothers, yet many low-income women have little choice about their labor force participation. As I noted earlier, increased work requirements under 1996 welfare reform[13] have pushed many low-income mothers with young children into the labor force in an effort to encourage economic independence from government assistance. Until recently, government programs aimed at meeting the childcare needs of these families have focused almost exclusively on center-based daycare solutions, namely Head Start programs and child care subsidies for center-based daycare (Love 2005). Nonetheless, we know little about the

[13] Formally known as the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA)

effect of center-based care, or other care arrangements, on the long-term economic stability and mobility of women.

Previous research on childcare has focused largely on how various childcare arrangements affect children (Burchinal and Cryer 2003; Li-Grining and Coley 2006), or the plethora of factors that affect childcare choice (Davis and Connelly 2005; Early and Burchinal 2001; Peyton et al. 2001; The NICHD Early Child Care Research Network 1997). Limited research has addressed how childcare and certain qualities of childcare arrangements (e.g. stability, flexibility, accessibility, reliability) affect mothers' employment (Hofferth and Collins 2000; Maume 1991), although no research has assessed longitudinally what *types* of childcare arrangements are most beneficial to working mothers and their wage growth over time. A comprehensive exploration of the effects of children on mothers' work lives necessitates an examination of the division of household labor within the home, as well as the types of childcare arrangements used.

For this research, I draw upon longitudinal data to explore the associations between women's wages, race and ethnicity, household labor, and childcare. I use the Panel Study of Income Dynamics (PSID) to address the following research questions: How does the division of unwaged labor affect the motherhood penalty in wages, and how do wage penalties differ among White, Black, and Hispanic women? Do certain childcare arrangements affect the magnitude of the motherhood wage penalty? How does childcare differentially affect wage penalties, if at all, for White, Black and Hispanic mothers? To answer these questions, I first explore differences in the motherhood penalty between racial and ethnic groups of women using a large sample of PSID data; I then use a smaller subsample of these data to examine the effects of childcare on the penalty. Theoretically, I draw upon individual- and structural-level perspectives, specifically

human capital and devaluation theories, to explore the motherhood penalty in wages and place it into a larger cultural context. Though I am only able to directly test individual-level theories with these data, controlling for these factors allows me to speculate on the role that structural level factors play in creating and maintaining social stratification.

LITERATURE REVIEW

The Motherhood Penalty

Why do women experience a motherhood penalty in wages? Despite a significant amount of research on the topic, scholars have been unable to fully explain this phenomenon (Anderson, Binder, and Krause 2002; Budig and England 2001; Glauber 2007). After controlling for human capital variables and job characteristics that typically affect wages, mothers still earn an average of 5 percent less per child as compared to women without children (Budig and England 2001). The fact that mothers experience this penalty, where fathers do not (Cohen 2002b; Glauber

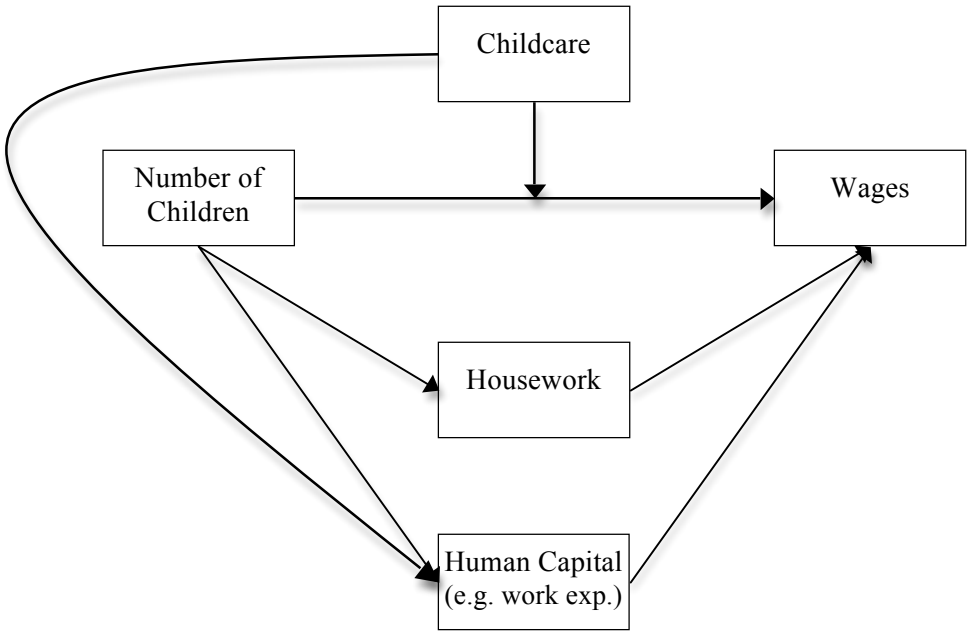

Figure 5-1: Conceptual Map of Relationship between Number of Children, Childcare, and Women's Hourly Wages

2008), implies that this wage penalty is not a parental penalty but is specific to women. It may reflect their greater contributions, actual or perceived, to household labor. Because women's greater contribution to childcare is widespread social practice in the U.S., employers may perceive, correctly or not, that women who are more responsible for household labor will be less available for work (Correll, Benard, and Paik 2007; Kennelly 1999; Sokoloff 1980).

This motherhood penalty in wages is closely connected to other topics of gender inequity, including occupational segregation (Shauman 2006), employment discrimination (Correll, Benard, and Paik 2007), and the cultural devaluation of women's labor (Cohen and Huffman 2003; England, Budig, and Folbre 2002). Women who are mothers may be channeled toward certain types of jobs where interruptions of work can be tolerated. Unfortunately, these tend to be jobs where pay, benefits, and opportunities for promotion are scarce (Anderson and Shapiro 1996; Badgett and Folbre 2003; England 2005b). Explanations for gender inequality in the labor force, including the motherhood penalty, have generally followed two theoretical lines: individual-level and structural-level theories.

Individual-level explanations for gender disparities in paid labor are used primarily to explain gender differences in occupational choices and labor force attachment that lead to pay differentials. Socialization and human capital theories are the principal theories that fall under the individual level, or supply-side, umbrella. The former argues that women and men self select into different occupations and career trajectories because of differences in socialization that instill them with gender-specific values, preferences, occupational aspirations, and expectations for work and family roles (England 2005b; Shauman 2006). More traditionally female career paths tend to result in lower pay and lesser development of marketable human capital than for traditionally male careers. While this may help to explain pay differences between men and

women, gender socialization theories do not shed light on within-gender pay differences—at least when the focus is on social norms rather than socialization at the family or individual levels.

Human capital theories, as described in Chapter 2, argue that economic inequality results from differential investments in human capital, specifically the education, training, experience and employment consistency that are valued in the labor market (Becker 1985, 1991). Consistent labor force attachment, particularly during the early career years, is considered key for the development of work experience and on-the-job training (Alon and Haberfeld 2007; Becker 1991). Thus, for example, women who take time out of the labor force to have children sacrifice on-the-job experience and seniority, and they incur a wage penalty as a result. These gender differences have been attributed by human capital theorists to biological and socially constructed gender differences in the responsibility for bearing and raising children (Becker 1991; Shauman 2006). Indeed, differences in human capital development between mothers and other workers have been important in explaining a large, in fact the largest, proportion of the wage penalty that mothers experience (Anderson, Binder, and Krause 2003; Budig and England 2001).

The economic penalties that women face as a result of diminished human capital may well be the unintended by-products of women's adhering to traditional gender roles. However, the neoclassical version of human capital theory posits that women make rational choices about such things as career, work hours, or development of human capital. Many women *choose* to devote more time and effort into the household, and men to the labor force, for the sake of maximizing their contribution to the family-unit (Becker 1991; Hakim 2004). Indeed, studies have shown that the career aspirations of women and girls are directly related to their orientations toward family and their avoidance of future work-family conflict (Shauman 2006;

Spade and Reese 1991; Williams and Cooper 2004). Such individual-level explanations can be criticized for their "blame the victim" approach to explaining gender inequity (Ryan 1976).

Structural-level theories, in contrast, move beyond individual explanations. For example, form a more structural level perspective, gender economic inequality persists in part because employment discrimination limits women's access to higher-paying positions and restricts their mobility within their jobs. This discrimination may be based on gendered assumptions about their family responsibilities and work/family priorities, or on the statistical risks of employing women who are of childbearing age. Employers often do not want to invest in the training (i.e. the human capital development) of women whom they believe will be in and out of the labor market (Hamil-Luker 2005). Indeed, recent research on hiring decisions found that mothers were discriminated against on a number of measures in comparison to other workers, including proposed starting salary (Correll, Benard, and Paik 2007).

This explanation can be extended beyond individual employers or companies and applied at the societal level, tying in carework theory. The lower wages that mothers, and women more generally, receive in the workplace can be attributed to a larger cultural devaluation of women's labor and carework, such that female-dominated occupations are compensated at lower rates (England, Budig, and Folbre 2002) and, as is our focus, women are systematically penalized for motherhood. Not only are women penalized for parenting, making motherhood an economically risky endeavor, but fathers are systematically rewarded with higher wages as compared to their childless peers (Lincoln 2008). Gender scholars argue that these disparities in compensation reflect "institutionalized gender inequality and essentialist cultural assumptions about fatherhood and motherhood" (Glauber 2008). Fathers are seen as the primary breadwinners, mothers as caretakers, and each is compensated according to these assumed priorities in a manner that

disadvantages women and fails to recognize the value of motherhood or carework for society (England and Folbre 1999a, b).

Racial/Ethnic Inequality and the Motherhood Penalty

Although prior literature has repeatedly found that mothers experience a penalty in wages in comparison to childless women (Anderson, Binder, and Krause 2002; Avellar and Smock 2003; Budig and England 2001; Weeden 2005), few studies have examined motherhood wage penalties across racial and ethnic groups. The research that does exist has generally found racial and ethnic differences in the motherhood penalty. Several studies suggest that Black mothers pay a significantly smaller wage penalty than White mothers (Anderson, Binder, and Krause 2003; Waldfogel 1997). Budig and England (2001) find little difference between Black, White, and Hispanic women, except for women with three or more children. Black and Hispanic women with three or more children had smaller wage penalties than their White counterparts. Further, a recent article by Glauber (2007) found that Hispanic women experienced no motherhood wage penalty at all. Based on this literature, I predict that I will in fact find a motherhood penalty in my analyses, and that race and ethnicity of mothers will affect the strength of motherhood penalty.

I believe that Black and Hispanic women will experience a smaller percent decrease in wages with children than experienced by Whites women because of lower overall incomes for these groups (Joassart-Marcelli 2005; Willson 2003)—a result of persistent racial and ethnic stratification. Black women face multiple disadvantages in the labor force that contribute to lower wages across the board. These disadvantages include occupational segregation into lower-paying jobs (Anderson and Shapiro 1996; Maume 1999), higher rates of employment in part-time and seasonal/temporary labor (Reid 2002), individual differences in human capital

(England, Christopher, and Reid 1999), and disproportionate vulnerability to job loss (Reid 2002; Reskin, McBrier, and Kmec 1999). In comparison to Black men and White men and women, Black women are also the least able to translate job authority and human capital into higher earnings (McGuire and Reskin 1993). With greater variability in the wages of White women, there is greater potential for variation in wages related to parental status.

Black women also face employment discrimination based on race and gender (Elliott and Smith 2004; Kennelly 1999; Roscigno 2007), which contributes to lower pay for this group. In a study of employer perceptions of Black female employees, Kennelley (1999) found employers stereotyped Black women as single mothers and attributed a slew of negative qualities to this characterization, including descriptions of them being unskilled, uneducated, and poor workers due to family distractions. Employers did not pay a similar amount of attention to White women's marital status. If employers view all Black women as mothers and treat them as such, *all* Black women may suffer lower wages, whether or not they have competing family obligations.

Both Black and Hispanic women have less job mobility in their early career years than White women (Alon and Tienda 2005). These groups have also been found to have lower labor force attachment. Transitions in and out of jobs in the early career years negatively affect their human capital development and contribute to racial wage gaps between White, Black, and Hispanic women (Alon and Haberfeld 2007). Black and Hispanic women are particularly disadvantaged in regard to job mobility and wage growth if they do not have a college education, generating wage inequality among unskilled workers (Alon and Haberfeld 2007; Alon and Tienda 2005).

Recent studies have documented unique employment challenges for Hispanic immigrants, which I expect will affect wage trends for the entire Hispanic group. For example, Hispanic women's perceived language proficiency is strongly correlated with their wages (Hamilton 2008), such that lower language proficiency predicts lower wages. Hispanic immigrants, in comparison to White immigrants, also have lower economic returns on their education (i.e. lower wages and fewer promotions) that are not explained solely by language ability (Hall 2008). Furthermore, as is the case with Latina immigrant domestic workers, women's actual or suspected undocumented status may keep wages low and prevent them from bargaining for better working conditions and wages (Hondagneu-Sotelo 2007).

Housework and the Motherhood Penalty

Motherhood penalty analyses have repeatedly found that married women pay a larger motherhood penalty than never-married or previously-married[14] women (Budig and England 2001; Glauber 2007). This has been attributed at least in part to the effect of marriage on the number of hours that men and women devote to housework (Glauber 2008). While dual career families have become increasingly common, couples who achieve an equitable balance in household labor remain rare (Risman 1998). Studies have repeatedly found that the time women devote to housework increases with marriage, while men do not similarly increase their household labor and may even decrease the amount of time they devote to housework (Davis, Greenstein, and Marks 2007; Hersch and Stratton 1994). According to Hochschild (2003), women in dual career families still complete an extra 38 hours of unpaid work within the home, as compared to the additional 22 hours a week completed by men. The existence of this "second shift" has been well-documented (Baxter, Hewitt, and Haynes 2008; Cunningham 2001;

[14] "Previously married" includes women who are separated, divorced, and widowed.

Hochschild 2003), yet the effect of hours of housework on motherhood wage penalties has not yet been directly tested.

An increase in housework can have a negative impact on women's wages for a variety of reasons. Women's time spend in household labor may affect the time and effort that women can devote to paid labor (Keene and Reynolds 2005) or investments into their human capital development, such as education (Hersch 1991b). Motherhood may alter employers' expectations about how available women will be for work, or how focused they will be at work (Correll, Benard, and Paik). Studies have shown that women's hours of household labor are in fact inversely correlated with market wages (Hersch and Stratton 1997; McLennan 2000), and that difference in daily household tasks such as cooking and cleaning have the strongest negative effects on wages (Hersch and Stratton 2000). Even if couples are able to split housework relatively equally before having children, the birth of a child increases the amount of time that women spend in housework more so than males—widening the gender gap in household labor (Baxter, Hewitt, and Haynes 2008; Bianchi 2000b; Sanchez and Thomson 1997). While research suggests that the effect of housework on wages will be higher for married women (McLennan 2000), I predict that the increase in housework with each additional child will have some negative impact on wages for all women. I do not, however, anticipate that strength of the effect of housework on motherhood penalties will be consistent across racial and ethnic groups.

Racial and ethnic differences in the division of housework may contribute to divergent wage penalties among racial and ethnic groups of women. Research has repeatedly shown that Black husbands and fathers are more likely to particulate in household labor than men of other racial/ethnic groups (Cooksey and Fondell 1996; Kamo and Cohen 1998; Penha-Lopes 2006), which has been attributed by some to a cultural norm of shared contribution whereby men and all

children contribute to housework (Penha-Lopes 2006). Most studies on household labor only compare Black and White men, but the few studies that have included Hispanic men find that they contribute more to household labor than their White counterparts and less than Black men (Coltrane, Parke, and Adams 2004; Cooksey and Fondell 1996). Both Black and Latina mothers are also more likely than Whites to use extended family support networks, including extended family households, as a strategy for overcoming economic hardship and caring for children (Cohen 2002b; Roschelle 1999). The contributions of extended family, children, and husbands to household labor will likely diminish or even eliminate any negative effects that housework has on the motherhood penalty for Black and Hispanic women.

Poverty and the Motherhood Penalty

Much of the rationale for why minority women may experience lower motherhood wage penalties revolves around the intersections of race, ethnicity, and class. Black and Hispanic women regardless of parenthood status have lower average wages in comparison to Whites, and women in lower waged jobs generally do not suffer significant wage penalties (Anderson, Binder, and Krause 2002). Workers in these low-paid occupations have fewer opportunities for advancement, so that absences from the labor force are less detrimental than for workers in occupations with longer career ladders. I expect to find that women who have been in poverty, regardless of race or ethnicity, will experience significantly lower wage penalties then women with incomes consistently above the poverty line. Studies have shown that absences from the low-skilled, low-paying jobs do not negatively affect wage growth; thus, women in low paying jobs typically do not pay *further* penalties for breaks in employment (Anderson, Binder, and Krause 2002). Minority women may be concentrated in such jobs, yet the effects of such jobs on wages and wage trajectories are not necessarily different for White women.

Childcare, Household Labor, and the Motherhood Penalty

The United States has been identified as lagging far behind other countries in public policies, such as paid parental leave or widespread nationally subsidized childcare, that support working parents and the development of children (Misra, Moller, and Budig 2007). As Folbre (2001) argues, our society as a whole benefits from women's unpaid carework (i.e. caring for the elderly and for children), yet the costs of such work are borne not by society but by individual women who do the work. While the U.S. has instituted some forms of childcare assistance for low-income parents, such as Head Start and childcare subsidies, critics argue that these programs fall far short of meeting the needs of working parents (e.g. Li-Grining and Coley 2006). Hours and locales are limited, and there typically are fewer subsidized sites than are needed. Furthermore, such programs may not be available in isolated rural communities or to those who lack private transportation. A common element of individual- and structural-level theories of gender inequality is a shared understanding that women are the ones who disproportionately shoulder the responsibilities and the costs of raising children. In order to compete equitably in a paid labor force that penalizes women for caregiving, women must thus acquire childcare that minimizes the negative impact of children on wages and wage growth. I thus anticipate that childcare will in fact affect women's wages—women who have formal childcare arrangements will be less likely to experience wage penalties.

Existing public policies addressing the childcare needs of working parents, namely Head Start and childcare subsidies, have emphasized center-based daycare for young children. Most states now allow subsidies to be used for licensed in-home childcare or relative care providers, although reimbursement for these forms of care is often difficult (Weinraub et al. 2005). Research on childcare subsidies has found that subsidy use increases the probability that parents

will use center-based care arrangements, shifting parents away from parental and relative care (Tekin 2004). Childcare subsidies have also been shown to cut the out-of-pocket expenditures on childcare in half and increase maternal employment (Tekin 2004; Weinraub et al. 2005). As discussed in previous chapters, research on center-based care suggests that there are both benefits and detriments to this care arrangement on mothers' opportunities for mobility.

There are two main criticisms of center-based care. First, this arrangement typically does not provide care for sick children, which is often an important determinant of childcare choice (Early and Burchinal 2001). Time out of the labor force to care for sick children can directly affect the employment stability of mothers and, as a consequence, their wages. Secondly, many center-based daycares operate under limited hours that may either conflict with nonstandard work schedules or place strict time limitations on the workdays of mothers (Chaudry 2004; Kimmel and Powell 2006b; Willer et al. 1990). Parents may face monetary penalties, or expulsion of their children from care, if they repeatedly miss picking their children up on time.

Despite its limitations, center-based care is generally considered more stable for working parents than other care arrangements (Chaudry 2004; Scott, London, and Hurst 2005). Some center care programs, like Head Start programs, also provide health screenings, nutritional services, social services and parenting resources that families would not receive in other types of care (Hamm and Ewen 2006). An additional benefit to center-based care, particularly for low-income mothers, is the role that such institutions play as support systems and "resource brokers" (Small 2006). As resource brokers, staff in these centers connect parents to a wide variety of external institutions and resources, including resources pertaining to employment. In this way, well-connected childcare centers may serve to directly assist low-income parents in their social

mobility, perhaps reducing wage penalties. Thus, overall, I believe that centerbased care will reduce the size of wage penalties for mothers in comparison to other forms of childcare.

DATA AND METHODS

This chapter presents two sets of analyses. The first set uses the larger PSID sample to examine the connections between household labor, race and ethnicity, and the motherhood penalty and the second set used the smaller CDS sample to explore the effects of childcare on mothers' wages by race/ethnicity. Person-years is the unit of analysis throughout these analyses; thus, the sample sizes are reported in two ways: the total years of data among all of the participants (person-years) and the total number of women in the study.

In the first set of analyses, I use the PSID Main Family data to track women over time. After transforming the data from following families over time to following women (see chapter 3), I further restricted the sample of 20,113 women and 111,292 person-years for both theoretical and methodological reasons. I first eliminated any years in which the woman was not working for pay and years in which the woman's average hourly earnings were missing. I was unable to include women in the sample who did not work or report wages, since women's hourly wages is the dependent variable of interest. It is possible that these women left the work force because of they face more severe wage penalties, or because they were unable to find affordable childcare. Thus, mothers with the most severe work and childcare issues unfortunately may not be included in the sample, potentially biasing my results.

Additionally, I restricted the sample to prime age workers (25-54) in 1985 to 2005. The sample also only includes women who are White, Black, or Hispanic due to the relatively small sample sizes of other racial groups. Furthermore, person-years with missing data for any of the independent variables were excluded from the analysis. With these restrictions, the final sample

for this set of analyses consists of 10,620 women and 46,239 person-years with an average of 4.4 years of employment data for each woman.

For the second set of analyses, I use the Child Development Supplement (CDS) to explore how childcare affects the motherhood penalty. This group of women had children between 0 and 12 years of age in 1997. These data were added to the main sample of women from the first set of analyses, and the sample was restricted to those in the CDS sample so that we may have detailed information on early childcare. The childcare analyses additionally focus on White and Black women, rather than also including Hispanic women, because of the small sample of Hispanic women who participated in the CDS. With the additional restrictions to the data (e.g. age, employment, etc.), there would have only been 100 Hispanic women included and 48 percent of this group only used parental care when their children were young. Thus, the sample for this section is White and Black mothers between the ages of 25-54 who were part of the CDS—a separate set of questions about children and childcare. Cases are excluded if the women do not work for pay, if wage information is missing, or if there are missing independent variable values. Furthermore, I did not include years in which no children were reported to live in the family unit. Therefore, the sample includes only custodial parents. Since the CDS sample only consists of current parents, there were relatively few years where there were no children in the household—typically before the children were born or after the children moved out. Ultimately, 1,638 women and 11,117 person years are included in these analyses, with an average of 6.8 years of data per mother.

Variables

Dependent Variable. The dependent variable in these analyses is the natural log of the woman's hourly wages at her current job. I omitted six person-years here hourly wages were

Table 5-1: Means of Variables in Main Data and Childcare Supplement Analyses, PSID Data 1985-2005

	Main PSID Data			Childcare Supplement	
Variables	**White**	**Black**	**Hispanic**	**White**	**Black**
Dependent Variable					
Hourly Wages ($)	12.88	10.44 *	9.75 *	13.50	10.72 *
Ln_Femwages	2.29	2.10 *	2.01 *	2.33	2.13 *
Independent Variables					
Number of Children	1.13	1.48 *	1.60 *	1.77	2.04 *
Housework/Carework					
Hours of Housework	16.79	14.62 *	20.47 *	18.70	15.27 *
Human Capital Variables					
Months at Current Job	64.90	75.12 *	57.79 *	54.42	65.46 *
Years Worked Full-Time	3.07	3.16 *	1.81 *	3.35	3.87 *
Years Worked Part-Time	1.83	1.13 *	0.97 *	2.67	1.43 *
Years of Education	13.52	12.70 *	11.47 *	13.95	12.71 *
Enrolled in School	0.02	0.02	0.02	0.02	0.03
Job Characteristics					
Full-Time	0.64	0.75 *	0.65	0.55	0.75 *
Part-Time	0.36	0.25 *	0.35	0.45	0.25 *
Percent Female in Current Job	65.91	65.22 *	64.89	67.50	64.89 *
Childcare Job	0.03	0.03	0.03 *	0.04	0.03 *
Farm Occupation	0.01	0.01	0.03 *	0.00	0.01 *
Lower Blue Collar Occupation	0.17	0.29 *	0.25 *	0.17	0.26 *
Upper Blue Collar Occupation	0.09	0.18 *	0.19 *	0.07	0.20 *
Lower White Collar Occupation	0.31	0.29	0.30	0.30	0.30 *
Upper White Collar Occupation	0.43	0.23 *	0.23 *	0.45	0.22 *
Marital Status					
Married	0.80	0.51 *	0.75 *	0.91	0.53 *
Never-Married	0.07	0.23 *	0.08 *	0.02	0.26 *
Separated	0.13	0.26 *	0.17 *	0.07	0.21 *
Age	38.03	37.04 *	37.55	35.07	35.26
Poverty	0.04	0.18 *	0.13 *	0.04	0.20 *
Childcare					
No PreKindergarten Care				0.20	0.18
Centerbased Only				0.15	0.18 *
Relative Only				0.10	0.20 *
Nonrelative Care Only				0.10	0.09 *
Mixed Care--Sequential				0.24	0.26 *
Mixed Care--Simultaneous				0.21	0.10
N Person-Years	27,708	14,708	3,823	6,636	4,488
N Women	5,731	3,518	1,371	930	708

* indicates a significant difference in means between given group of women (Black or Hispanic) and White women

statistical outliers (ie. hourly wages that were $0.01/hour or greater than $300/hour), as determined by the "extremes" command in STATA.

Independent Variables. Number of children is the main independent variable of interest. This variable is measured continuously according to how many children under the age of 18 are in the household in the given year. There are several other independent variables of interest—particularly those related to household labor and childcare. In the first set of analyses from the main PSID data, "hours of housework" is the only measure available reflective of carework/housework duties of women. This variable is used in both sets of analysis and is measured by the number of weekly hours that the woman spends on housework, excluding care of children.

The independent variables for type of childcare, only used for the analyses based on the CDS sample, are coded according to the form(s) of pre-Kindergarten childcare used by families. The CDS asks primary caregivers about any regular childcare arrangements that have been used since the child's birth for up to two children within the family.[15] To construct the childcare variables, I combined childcare data from both waves of CDS panel data, as many of the younger children had yet to enter pre-K care at the time of the first interview. I coded the type(s) of care for each child, then combined the data for the two children (if two were present) to come up with a variable that encompassed all strategies of early childcare used by families. For example, if the first child was only cared for by relatives prior to kindergarten and the second was in both center-based and relative care arrangements, the family childcare arrangement was coded as a mixture of care. The data for the childcare analysis track women during and beyond these pre-Kindergarten years. I enter early childcare arrangements into the analysis by including a set of

[15] The fact that the data only contain childcare information on up to two children is a limitation to the study; however, these data still provide insight into the types of childcare affecting women during this time period.

interaction variables between early childcare arrangement and number of children, a variable that changes over time. With fixed-effects regression, I am unable to include early childcare arrangements independently because the type of early childcare that mothers use remains constant throughout the woman's career (see discussion of the limitation of fixed-effects regression in Chapter 3). By creating interactions with number of children, the main independent variable of interest, I am able to assess how these types of care affect the relationship between children and wages.

Throughout the analyses, I examine racial and ethnic differences in the motherhood penalty. The race/ethnicity variables are dummy coded according to the mother's primary racial/ethnic identification, and women were coded as "Hispanic" if they either noted their race as Hispanic (as was an option in 1994-1999) and/or considered themselves to be of Hispanic origin (a separate question for ethnicity that was included in all data years). Though the questions about Hispanic origin/race were not consistent across the PSID surveys, coding Hispanic in this way resulted in consistent racial/ethnic categorization across years. As noted above, race/ethnicity is limited to White, Black, and Hispanic. I also explore differences in wage penalties between poor and nonpoor women by race/ethnicity, necessitating the creation of a poverty variable. This variable was constructed using family income, number of persons in the household, and the Department of Health and Human Services yearly poverty guidelines. A woman was categorized as poor if she was in poverty at any point in the observation period. Only 17 percent of women changed poverty status within the observation period.

Control Variables. There are a number of work-related control variables used in the analyses. For human capital variables, I include tenure (number of months at current job), number of years the woman worked full-time during the observation period, number of years

woman worked part-time in the observation period, years of education, and whether the woman is currently enrolled in school. I constructed the variable for years of education differently for given years, based on the limitations of the survey data. The data from 1994 to 2005 each contain a variable for the number of years of education. For 1985 to 1993, I constructed the variable using years completed of high school, years completed of college, and my approximation of years that it takes to complete professional degrees.[16]

The analyses also contain a set of variables for job characteristics that have been shown to affect wages. I include whether the woman worked part-time (under 35 hours of work per week) or full-time (35+ hours per week), percent of female workers in the woman's current occupation, whether the woman works in a childcare occupation (the Census occupational classifications of "childcare worker, private" or "other childcare worker"), and a set of dummy variables for occupational type. The variable for percent female was constructed by calculating the percentage of female workers in each of the nearly 900 Census occupational codes using Census data.[17] One challenge to this was matching the 1970 Census occupational codes (used by PSID until 1999) to 1990 occupational codes for 1985 to 1999 data. The 1990 data were more relevant than 1970 data for the given years and more easily available. For 2001 to 2005 data, when PSID switched to 2000 Census occupational codes, I used 2000 Census data for percent female in the occupation.

I include five occupational categories are in these analyses: farm occupation, lower blue-collar occupation, upper blue-collar occupation, lower white-collar occupation, and upper white-collar occupation. Upper white-collar occupation is the reference category. See Table 5-1 in this

[16] I added two years of education for those completing masters degrees, three for law degrees, five for doctorate degrees, and four for medical school. The means and standard deviations for the years in which I calculated the years of education are similar to years in which I use PSID constructed variables.
[17] http://censtats.census.gov/eeo/eeo.shtml

chapter for the means of all variables used in these analyses and Table A-3 in Appendix A for a summary of the measurement of these variables.

Analytic Strategy

I arranged the data into a pooled, cross-section time series with person-years as the unit of analysis. As noted in the Chapter 3, I ran the Hausman (1978) specification test on all models and determined that fixed-effects regression was more appropriate for these analyses than random-effects regression. For the main data analyses I compare fixed effects to pooled-OLS regression in order to give a sense of how much of mothers' lower earnings is due to unobserved, stable characteristics. For these pooled-OLS models, I account for non-independence by using robust, clustered standard errors.

The results are presented in four tables. Table 5-2 is a summary table of what happens to the unstandardized coefficient for "number of children"—the main independent variable of interest—across specified models by regression method (fixed-effects versus pooled-OLS). Since I am mostly interested in changes in the relationship between children and wages, this format is the most efficient way to summarize the large number of regressions. I present the full fixed-effects models by race/ethnicity in Table 5-3 and the full models by race/ethnicity and poverty status in Table 5-4. Importantly, Tables 5-3 and 5-4 also include the results of mediation tests. The coefficients are italicized and marked in bold if the variables independently significantly affect the relationship between number of children and women's hourly wages in the full model. I use the Sobel-Goodman mediation test to measure the mediating effects of children on wages. With the test, I am able to determine what percent of the effect of children on wages is attributable to specific independent variables and whether this percentage is statistically significant. All bolded and italicized variables in Tables 5-3 and 5-4 significantly mediate the

Table 5-2: Summary Table for Nested Motherhood Penalty Models: Unistandardized Coefficients for the Effect of Total Number of Children (Continuous Variable) on Women's Hourly Wages by Race/Ethnicity, from Fixed-Effects and Pooled-OLS Models: Panel Study of Income Dynamics, 1985-2005

	Fixed Effects Models			Pooled OLS Models		
	White Women	Black Women	Hispanic Women	White Women	Black Women	Hispanic Women
Base Model[a]	-0.038 ***	0.007	0.024	-0.089 ***	-0.064 ***	-0.106 ***
	0.006	0.007	0.021	0.008	0.009	0.014
Base Model and Hours of Housework	-0.033 ***	0.007	0.024	-0.049 ***	-0.054 ***	-0.081 ***
	0.006	0.007	0.021	0.008	0.009	0.013
Base Model, Hours of Housework, and Human Capital Variables[b]	-0.030 ***	0.007	0.023	-0.035 ***	-0.015 *	-0.019
	0.006	0.007	0.021	0.007	0.007	0.011
Base Model, Hours of Housework, Human Capital Variables, and Job Characteristics[c]	-0.031 ***	0.010	0.020	-0.027 ***	-0.015 *	-0.016
	0.006	0.007	0.021	0.006	0.007	0.011
N Person-Years	27,708	14,708	3,823	27,708	14,708	3,823
N Women	5,731	3,518	1,371	5,731	3,518	1,371

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

[a] Base Model Controls for Age, Age^2, Dummy Variables for Survey Years, and Marital Status

[b] Human Capital Variables Include Months at Current Job, Years Worked Full-Time, Years Worked Part-Time, Years of Education, and Whether the Woman is a Enrolled in School

[c] Job Characteristics Include Whether Women Works Full-Time, Percent Female in Current Occupation, Whether Woman Works in a Childcare Job, and Occupational Category (Farm, Low Blue Collar, Upper Blue Collar, Lower White Collar, or Upper White Collar)

relationship between children and wages at the 0.01 level. Finally, Table 5-5 presents findings for the motherhood penalty in wages by race and type of early childcare.

RESULTS

I first predicted that women would experience a motherhood penalty in wages, and that this penalty would vary according to the race and ethnicity of the woman. The analyses presented in Table 5-2 demonstrate that the motherhood penalty in wages is tied to race/ethnicity, as well as to other time invariant factors that systematically affect racial/ethnic groups of women.

According to fixed-effects regression models, only White women experience a statistically significant decrease in wages when they have first or additional child. This group has an initial 3.7 percent per child penalty that decreases to 2.9 percent when I control for all housework, human capital, and job characteristic variables. No significant motherhood wage penalty appears for Black or Hispanic women.[18] The wage penalties found in these fixed-effects models are significantly lower than those found in previous comparable analyses—most notably Budig and England (2001). Additionally, the motherhood penalty in wages is less affected by changes in household labor and human capital variables than previously reported. The penalty for White women decreases by a half percentage point when I add hours of housework to the model and only a fraction of a percentage point when I add human capital variables. These differences are perhaps due to a larger sampling of low-income women in the PSID data than in the National Longitudinal Survey of Youth (NLSY), the data that have been used for all previous motherhood penalty analyses.

As shown in Table 5-2, the base motherhood penalties are substantially higher in pooled-OLS models as compared to fixed-effects models. White, Black, and Hispanic women all experience initial significant per child wage penalties—8.9 percent, 6.4 percent, and 10.6 percent respectively. However, these models do not automatically control for time-invariant characteristics, as is the case with fixed-effects models. A comparison across base models by type of regression draws attention to the proportion of motherhood wages penalties that can be attributed to these characteristics—57 percent of the penalty for White women and the penalty becomes insignificant for minority women. The unstandardized coefficients for number of

[18] In additional analyses available upon request, I examined number of children categorically (no children, one child, two children, and three or more children) to confirm that neither Black nor Hispanic women experience a wage penalty with number of children. In fact, Black women face a wage premium if they have one or two children, though no significant penalty or premium with three or more children.

children drops across all racial/ethnic groups with the addition of hours of housework to the pooled-OLS models, though the motherhood penalties remain significant. The coefficients decrease further when I add human capital variables, to the point that Hispanic women no longer have significant wage penalties. Fixed-effects models may already control for these types of variables, such as years of education, which may explain why the base fixed-effects models are comparable to the OLS models that control for human capital. All things considered, the unstandardized coefficients for the full fixed-effects and pooled-OLS regression models are similar by race/ethnicity—with the exception of a small residual penalty for Black women in pooled-OLS models.

In Table 5-3, I present the full fixed-effects and OLS models. I also denote which variables significantly mediate the relationship between children and wages using bold and italicized coefficients. In fixed-effects models, additional children affect women's wages through the hours of housework for White women. In other words, the motherhood penalty in wages can be partially attributed to increases in the number of hours that White women contribute to household labor. Further analysis (not shown) reveals that White *married* women are the only group of women whose wages are negatively affected by changes in hours of housework. White married women may also be the ones best able to afford to allow their unpaid labor to affect their paid labor. These women are likely to have higher family incomes than minority women, and married White women are likely to have financial support from their husbands to offset the negative effects of children on their own wages.

There are several unobserved, relatively time-invariant factors that could help explain why housework affects wage penalties for Black and Hispanic women in pooled-OLS models and not fixed-effects models. For example, as noted above, previous research has found that

Table 5-3: Fixed Effects and Pooled-OLS Regression Models of Women's Hourly Wages (ln) on Number of Children by Race/Ethnicity: PSID, 1985-2005

	Fixed-Effects						Pooled OLS					
	White		Black		Hispanic		White		Black		Hispanic	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Number of Children	-0.031 ***	0.01	0.005	0.01	0.020	0.02	-0.027 ***	0.00	-0.015 *	0.01	-0.016	0.01
Housework/Carework												
Hours of Housework	***-0.002*** ***	0.00	0.00	0.00	0.000	0.00	***-0.01*** ***	0.00	***-0.003*** ***	0.00	***-0.003*** **	0.00
Human Capital Variables												
Months at Current Job	0.001 ***	0.00	0.00 ***	0.00	0.000	0.00	0.00 ***	0.00	***0.002*** ***	0.00	***0.002*** ***	0.00
Years Worked Full-Time	***0.049*** ***	0.01	0.02 *	0.01	0.035	0.03	***0.02*** ***	0.00	***0.014*** ***	0.00	***0.047*** ***	0.01
Years Worked Part-Time	***0.047*** ***	0.01	0.02 *	0.01	0.048	0.03	-0.01	0.00	-0.013 *	0.01	-0.017	0.01
Years of Education	-0.004	0.01	0.02	0.02	-0.036	0.03	0.08 ***	0.00	***0.080*** ***	0.01	0.040 ***	0.01
Enrolled in School	***-0.093*** ***	0.03	-0.08 *	0.03	-0.182	0.10	-0.15 ***	0.04	-0.003	0.04	-0.104	0.09
Job Characteristics												
Full-Time	***-0.059*** ***	0.01	-0.12 ***	0.01	-0.163 ***	0.03	-0.04 ***	0.01	-0.033	0.02	***-0.135*** ***	0.03
Percent Female	-0.001 **	0.00	0.00 **	0.00	-0.001	0.00	0.00 ***	0.00	-0.002 ***	0.00	-0.001 **	0.00
Childcare Job	-0.434 ***	.02791	-0.16 ***	0.04	0.014	0.08	-0.55 ***	0.04	-0.260 ***	0.05	-0.520 ***	0.10
Occupation (vs. Upper White Collar)												
Farm	-0.065	0.05	-0.08	0.07	0.150	0.11	-0.55 ***	0.06	-0.384 ***	0.07	-0.405 ***	0.10
Low Blue Collar	-0.045 **	0.02	-0.05 **	0.02	0.101	0.06	-0.30 ***	0.02	-0.317 ***	0.02	-0.332 ***	0.05
Upper Blue Collar	-0.014	0.02	0.00	0.02	0.082	0.06	-0.28 ***	0.02	-0.293 ***	0.02	-0.385 ***	0.05
Lower White Collar	-0.026 *	0.01	-0.01	0.02	0.064	0.04	-0.16 ***	0.02	-0.070 ***	0.02	-0.109 **	0.04
Marital Status (vs. Married)												
Never married	-0.033	0.05	-0.08	0.05	0.023	0.12	0.02	0.02	-0.099 ***	0.00	0.000	0.05
Separated	0.008	0.04	-0.02	0.05	0.281	0.12	-0.01	0.02	-0.031	0.11	0.052	0.03
R^2	0.70		0.69		0.74		0.37		0.34		0.32	
Number of Person-Years	27,708		14,708		3,823		27,708		14,708		3,823	
Number of Women	5,731		3,518		1,371		5,731		3,518		1,371	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

Note: All Models Also Include Controls for Age, Age2, and Survey Years

Note: Numbers that are italicized and in bold indicate that the variable significantly mediates the relationship between number of children and mother's wages.

minority women are more likely to receive practical assistance from extended family and older children (Coltrane, Parke, and Adams 2004; Kamo and Cohen 1998; Penha-Lopes 2006). This assistance with household labor may diminish the amount of housework that these complete, particularly in comparison to White women, and the consequent effects of household labor on wages. Women's family income and extended family support are likely to remain fairly consistent over time and thus be controlled in fixed-effects models. The results of t-tests in Table 5-1 also show that Hispanic women complete significantly more hours of housework (20.47) than White (16.76) or Black (14.62) women. Upon further investigation, I found that both Black and Hispanic husbands of women in the sample do in fact complete significantly more household labor per week in terms of hours and as a percent of total housework as compared to their White counterparts. Therefore, minority men do contribute more to household labor than White men, and the greater number of hours of household labor completed by Hispanic women is more a product of a greater amount of housework than an unequal division of housework between spouses.

The results from nested models in Table 5-2 suggest that human capital variables do not notably impact the motherhood penalty in wages. However, the results of the mediation tests presented in Table 5-3 tell a different story. According to fixed-effects models, White women's wage penalties are significantly affected by changes in full-time work experience, part-time work experience, and school enrollment. For both part-time and full-time experience, the more children that women have, the less likely they are to have experience in the paid labor force, but as experience in paid labor increases, so do wages. Alternatively, school enrollment has a positive effect on wage penalties. Women who have more children are less likely to be enrolled in school, and enrolling in school leads to lower wages in the short-run.

Notably, increased education has a positive effect on wages across races, again confirming the link between education and wages that was discussed in the previous chapter. Number of years of education also mediates the effects of children on wages for Black women in pooled-OLS models. Black women with fewer children have more years of education, and Black women who have more education have higher wages. Years of education and number of children are not similarly linked for White women. Differences in the effects of human capital on wage penalties between fixed-effects ad OLS models are again a result of unobserved factors that are constant over-time. For example, few women (9 percent of the sample) further their education between the ages of 25 and 54. Education is thus a relatively stable characteristic and the coefficient for education in fixed-effects models is unreliable (Allison 1999). Generally, fixed-effects models are the most accurate and efficient for these data and research questions, with OLS models merely providing a comparison in these tables. In the remaining tables, I display fixed-effects models only.

Also worth noting, for White women full time employment mediates the relationship between number of children and wages. The effect is ultimately positive—mothers are less likely to work full-time and mothers who work full time are paid less per hour than when they work part-time. The relationship between fulltime work and wages runs counter to expectations and previous research (Bardasi and Gornick 2008; Hill, Martinson, and Ferris 2004; Webber and Williams 2008). This is likely a result of fixed-effects methods. In the PSID sample, approximately 42 percent of women do not change between full-time and part-time employment, thus the effects of full-time or part-time work on their wages is not factored into the coefficient for "full-time" for fixed-effects models and the coefficient is also unreliable. However, this negative relationship also holds when hours worked (rather than full-time vs. part-time) is

Table 5-4: Fixed Effects Regression of Women's Hourly Wages (ln) on Number of Children by Race/Ethnicity and Poverty Status: PSID, 1985-2005

	White Women				Black Women				Hispanic Women			
	Not in Poverty		Poverty		Not in Poverty		Poverty		Not in Poverty		Poverty	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Number of Children	-0.032 ***	0.01	-0.019	0.02	0.002	0.01	0.010	0.00	0.045	0.02	-0.051	0.04
Housework/Carework												
Hours of Housework	***0.00*** ***	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
Human Capital Variables												
Months at Current Job	0.00 ***	0.00	0.00 ***	0.00	0.00 ***	0.00	0.00 **	0.00	0.00	0.00	0.00	0.00
Years Worked Full-Time	***0.04*** ***	0.01	0.10 **	0.02	0.03 ***	0.01	0.00	0.02	0.02	0.04	0.13	0.07
Years Worked Part-Time	***0.04*** ***	0.01	0.10 **	0.02	0.04 ***	0.01	-0.01	0.02	0.03	0.04	0.16 *	0.08
Years of Education	-0.01	0.01	0.02	0.04	0.00	0.02	0.04	0.02	-0.05	0.03	0.50	0.36
Enrolled in School	-0.08 **	0.03	-0.15	0.08	-0.03	0.03	-0.15 *	0.07	-0.09	0.11	-0.34	0.33
Job Characteristics												
Full-Time	***-0.07*** ***	0.01	-0.02	0.03	-0.17 ***	0.01	-0.07 **	0.02	-0.16 ***	0.03	-0.14 *	0.07
Percent Female	0.00 **	0.00	0.00	0.00	0.00	0.00	0.00 *	0.00	0.00	0.00	0.00	0.00
Childcare Job	-0.48 ***	0.03	-0.29 ***	0.08	-0.22 ***	0.04	-0.10	0.06	0.04	0.10	-0.04	0.17
Occupation (vs. Upper White Collar)												
Farm	-0.17 **	0.06	0.24	0.14	0.04	0.07	-0.26 *	0.13	-0.02	0.14	0.75 ***	0.23
Low Blue Collar	-0.05 ***	0.02	0.02	0.05	-0.02	0.02	-0.10 *	0.04	0.02	0.06	0.58 ***	0.15
Upper Blue Collar	-0.03	0.02	0.07	0.06	0.02	0.02	-0.04	0.05	-0.03	0.07	0.57 ***	0.16
Lower White Collar	-0.03 *	0.01	-0.01	0.04	-0.01	0.02	-0.02	0.04	0.02	0.05	0.41 **	0.15
Marital Status												
Married (reference)												
Never married	-0.059	0.05	0.02	0.22	-0.072	0.05	-0.17	0.11	0.022	0.13	-0.015	0.27
Separated	0.059	0.04	-0.19	0.14	0.031	0.05	-0.17	0.11	0.287 *	0.13	0.318	0.25
R^2	0.70		0.58		0.73		0.52		0.73		0.63	
Number of Person-Years	23,968		3,730		9,391		5,315		2,963		859	
Number of Women	4,938		792		2,268		1,250		1,045		326	

*** $p \leq 0.001$,** $p \leq 0.01$, * $p \leq 0.05$

Note: All Models Also Include Controls for Age, Age2, and Survey Years

Note: Numbers that are italicized and in bold indicate that the variable significantly mediates the relationship between cumulative welfare and mother's wages.

included—a variable that changes for 88.2 percent of women in the sample. For women who do take a cut in hours or move from full-time to part-time, they may only make that switch and continue to work if they are able to earn comparable or better hourly wages.

As mentioned above, Black and Hispanic women do not experience a motherhood penalty in wages. I previously speculated that women in poverty might not experience significant penalties because poverty level jobs have lower wages growth to begin with, leaving disproportionately impoverished minority women with little or no motherhood wage penalty. This is evident in looking at the mean hourly wages across racial and ethnic groups (see Table 5-1)—White women earn $12.88 per hour on average, as compared to $10.44 for Black women and $9.75 for Hispanic women. I explore the effects of poverty on wages by race/ethnicity further in Table 5-4. I find that regardless of racial and ethnic background women in poverty do not experience per child wage penalties.

Among White women, poor women's wages are not equivalently affected as non-poor women's wages by increases in job experience and housework with motherhood. In fact, non-poor White women are the only group that experiences a persistent motherhood penalty. They are also the only group in which children affect wages through hours of housework and human capital variables for work experience. The fact that the housework does not significantly affect wage penalties for Black women regardless of poverty status suggests that race matters independently of poverty status. The contributions of Black men, children, and extended family to household labor may well be a cultural norm that extends beyond economic hardship, as proposed by Penha-Lopes (2006). The finding that non-poor White women are negatively affected by household labor, while White women in poverty are not, could be attributed to specific strategies for dividing household labor that poor White women use out of economic

Table 5-5: Summary Table of Fixed Effects Regressions of Mothers' Hourly Wages (ln) on Number of Children for Different Types of Early Childcare Arrangements by Race/Ethnicity: PSID 1985-2005

	White Women				Black Women			
	Base Model[a]	Base + Housework	Base, Housework, and Human Capital[b]	Base, Housework, Human Capital and Job Characteristics[c]	Base Model	Base + Housework	Base, Housework, and Human Capital	Base, Housework, Human Capital and Job Characteristics
No preK care	-0.135 ***	-0.121 ***	-0.101 ***	-0.071 **	0.002	0.003	0.005	0.006
	(0.023)	0.023	0.023	(0.022)	(0.025)	(0.025)	(0.025)	(0.025)
Center-based only	-0.057 *	-0.047	-0.037	-0.016	-0.066 **	-0.066 **	-0.063 *	-0.060 *
	(0.035)	0.035	0.035	(0.034)	(0.036)	(0.036)	(0.036)	(0.036)
Relative care only	-0.032	-0.023	-0.025	-0.011	0.015	0.015	0.015	0.014
	(0.038)	0.038	0.038	(0.038)	(0.036)	(0.036)	(0.036)	(0.036)
Nonrelative only	-0.048 *	-0.035	-0.036	-0.007	0.054	0.055	0.045	0.045
	(0.029)	0.029	0.030	(0.029)	(0.055)	(0.055)	(0.055)	(0.055)
Mixture of care Sequential	0.009	0.020	0.013	-0.039	-0.004	-0.004	-0.015	0.023
	(0.031)	0.031	0.031	(0.036)	(0.035)	(0.035)	(0.036)	(0.045)
Mixture of care Simultaneous	-0.057	-0.048	-0.064	0.033	0.024	0.024	0.024	-0.018
	(0.037)	0.037	0.037	(0.031)	(0.045)	(0.045)	(0.045)	(0.036)
N person years	6631				4486			
N mothers	928				709			

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

NOTE: Each unstandardized coefficient presented above is the calculated motherhood penalty for each childcare type.

[a] Base Model Controls for Age, Age^2, Dummy Variables for Survey Years, and Marital Status

[b] Human Capital Variables Include Months at Current Job, Years Worked Full-Time, Years Worked Part-Time, Years of Education, and Whether the Woman is a Enrolled in School

[c] Job Characteristics Include Whether Women Works Full-Time, Percent Female in Current Occupation, Whether Woman Works in a Childcare Job, and Occupational Category (Farm, Low Blue Collar, Upper Blue Collar, Lower White Collar, or Upper White Collar)

necessity. Some research suggests that low-income women, including White women, frequently rely upon children for household labor (Dodson and Dickert 2004; Romich 2007). There is no evidence that this strategy for dividing chores is used by more affluent White women, who bear more of the brunt of household tasks than other groups and suffer larger penalties as a result.

As for the childcare analyses with the more limited CDS sample, I hypothesized that childcare arrangements would affect the magnitude of motherhood wage penalties. This prediction is supported by the analyses in Table 5-5. The numbers in Table 5-5 are calculated from the coefficient for number of children and the interaction variables between childcare type and number of children; thus, each coefficient represents the motherhood penalty for mothers who use the particular childcare arrangement by racial group. Two types of childcare had significant and persistent effects on wage penalties for mothers—not using any formal pre-Kindergarten care and relying on center-based care only. The relationships between motherhood penalties and childcare are not, however, consistent across racial groups. Again, the analysis focuses on White and Black mothers because of the small number of Hispanic women responding to the CDS childcare supplement.

White mothers face a persistent wage penalty if they do not use any regular, non-parental childcare arrangement before their children were in Kindergarten. Thus, mothers who take time out of the labor force when their children are young—as is the case with the vast majority of this group—are likely to experience motherhood penalties. Interestingly, a significant portion of the wage penalty for this group is attributed to the amount of housework that they continue to do *after returning* to the paid labor force. Hours of housework accounts for 10.1 percent[19] of the

[19] These percentages are calculated by dividing the indirect effect of children on women's hourly wages through the independent variable of interest (e.g. housework) by the direct effect of children on women's hourly wages. More specifically, I multiplied the coefficient for the effect if children on housework and

motherhood penalty for this group after controlling for all human capital variables, job characteristics, and marital status.

Not surprisingly, loss of work experience accounts for an even larger portion of the motherhood penalty in the full model. Lesser full-time experience in the paid labor force accounts for 17.6 percent and lesser part-time experience accounts for 13.5 percent of the per child wage penalty experienced by mothers who stay at home when their children are young. Importantly, White mothers who do use nonparental childcare arrangements when their children are young are able to avoid persistent wage penalties. Among Black mothers, on the other hand, women who stay at home with children are no more likely to experience wage penalties than women who use nonparental childcare when their children are young. The one exception to this is Black mothers who use center-based care—Black mothers who use center-based care are more likely to experience motherhood wage penalties than women who use no arrangement at all.

I had anticipated that using center-based care would reduce mothers' wage penalties; yet center-based care is associated with a significant per child wage penalties for mothers. The effect is strongest and most persistent for Black mothers. The motherhood penalty for White women using center-based care can be explained with the addition of hours of housework or human capital variables (specifically tenure at current job or years worked full-time)[20] to the model, where these variables have little impact on the significance of center-based care for Black mothers. Even after controlling for human capital, housework, marital status, and job characteristics, Black women who use center-based care suffer an unexplained 6 percent decrease in wages per child. In supplemental analyses (not shown), I found that this wage penalty is specific to *single* Black mothers. Married Black mothers who use center-based care do not

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the coefficient for housework on wages, and then divided the product by the coefficient for the direct effect of children on wages.

[20] These variables were added to the model individually in analyses not included here.

experience a motherhood wage penalty. Center-based care may not be as beneficial to mothers, specifically single mothers, as suggested in the previous chapter. These findings are discussed further in the section below.

DISCUSSION

While scholars have noted the importance of housework and childcare to women's work lives (e.g. Folbre 2001), research has largely failed to examine the effects of housework and the use of early childcare arrangements on mothers' wage growth over time. Previous studies have also neglected to examine how racial and ethnic differences in housework and childcare may contribute to divergent wage penalties with motherhood. I fill these holes in the literature by examining how the division of housework and allocation of childcare affect the motherhood penalty in wages across racial and ethnic groups of women. In doing this, I explore the extent to which human capital variables can explain women's wage penalties. This research uncovered a complex set of relationships between race/ethnicity, marital status, household labor, childcare arrangements, and motherhood wage penalties. The main findings are outlined and discussed below.

The Motherhood Penalty

First, I discovered significant racial and ethnic differences in the motherhood wage penalty. Research on racial and ethnic differences in wage penalties has generally shown that minority women experience lower motherhood penalties, but previous research has not explored the ways in which the penalty differs between groups. The loss of human capital that women undergo when they have children proves important in explaining the motherhood penalty in wages for White women. I found that full-time and part-time work experience significantly mediate the relationship between children and wages for White women; however, these factors

did not explain as much of the motherhood penalty in wages as they did in previous studies of motherhood penalty (e.g. Budig and England 2001).

In this chapter, I found that Black and Hispanic women do not experience significant wage penalties with motherhood. The finding that Hispanic women do not experience any penalty is consistent only with Glauber's (2007) recent motherhood penalty work, but there have been no previous studies that have found an absence of a motherhood penalty for Black women. It is important to recognize that lower wage penalties, or a lack of persistent wage penalties, for Black and Hispanic women does not signal greater economic well-being for these groups. Rather the overall wages are lower for Black and Hispanic women than White women, leaving more variation to be explained for White women. Minority women tend to be concentrated in low-paying, unskilled jobs that have little wage variation to begin with. Research has shown that Black women and immigrant Latina women both experience difficulty with turning their human capital investments, such as education, into more tangible economic benefits, such as promotions or wage increases (Hall 2008; McGuire and Reskin 1993). The stunted mobility of these groups, despite qualifications, reflects persistent racial and ethnic discrimination in labor markets. Both groups have to fight against negative stereotypes that place limits on their economic success and wage growth; while Black women are cast as uneducated, single mothers (Kennelly 1999), Hispanic women are seen as undocumented, docile immigrants willing to work for little pay (Hondagneu-Sotelo 2007). These stereotypes can persist even when the women are able to rise out of poverty. The fact that Black and Hispanic women do not experience persistent motherhood penalties, in combination with their low average wages, may indicate that these groups have been confined to a wage floor.

Housework and the Motherhood Penalty

White women, specifically married White women, are the only group of women in this study who face a persistent wage penalty even after controlling for factors such as job characteristics and human capital variables. The hours that women spend in housework, aside from the care of children, account for a significant portion of the motherhood penalty this group, but not for women of any other racial/ethnic group or marital status. In addition to incurring a motherhood penalty in wages, married White women seem to also suffer a unique "husband penalty." The increase in hours of housework with each additional child only negatively affects White women when husbands are present, implying that these husbands create more household labor for their wives and/or fail to contribute adequately to "helping" with household tasks. The interpretation that husbands exacerbate wives' housework load is consistent with prior studies suggesting that married men do less housework than they create (Shelton and John 1993; Thompson and Walker 1991). As research shows, increases in housework are typically met with decreases in the time and effort women are able to contribute to paid labor (Keene and Reynolds 2005) and thus the building of human capital. Alternatively, as mentioned above, White married women may also have more room to have their unpaid work interfere with their paid labor because they are likely to higher average wages to begin with and higher overall family incomes.

Time spent doing housework does not affect wage penalties for Black or Hispanic women, which could contribute to the lower wage penalties for these groups[21]. The division of household labor in minority families, whereby men, children, and/or extended family contribute to household labor (Coltrane, Parke, and Adams 2004; Kamo and Cohen 1998; Penha-Lopes 2006), may be a mechanism by which these women balance work and family in ways that limit some long-term negative effects of children on wages.

[21] Again, OLS models suggest that housework significantly diminishes the penalty across racial/ethnic groups, but this may not show up in fixed-effects models because the mechanisms that help alleviate the effects of household labor on motherhood penalties may be consistent over time.

Childcare, Household Labor, and the Motherhood Penalty

Childcare arrangements differentially affect wage penalties for White and Black mothers, which may both contribute to and reflect stratification between racial/ethnic groups of women. There are two main findings in this section. First, housework only significantly increases the motherhood penalty for white women who used no form of childcare when their children were preschoolers. This group of women likely took a portion of time off from paid work to care for children, yet one of the most significant portions of the motherhood penalty for these women has to do with the share of housework that they continue to do after returning to paid labor. The reason for this is unclear. Perhaps women who leave paid work for extended periods to care for family are generally more inclined to participate in household labor, regardless of work status. It is also possible that if they did the lion's share of housework and childcare during their period of unemployment in the paid labor market, and that this has established a household norm that is difficult to break once these women return to paid work.

Second, center-based daycare serves to greatly exacerbate the per child penalty in wages for single Black mothers. Other than this, childcare has little effect on wage penalties for Black mothers. Several of the potential explanations for wage penalties among this group are linked to the overlap of race and social class. Black mothers in the CDS sample have significantly lower family incomes than White mothers—$36,953 per year and $66,730 per year respectively. I was unable to control for poverty, since the vast majority of women in the sample do not change their poverty status over time and the coefficient would thus be unreliable in fixed-effects models. I was also unable to control for family income, since family income and wages are highly correlated for women, especially single Black mothers.

Potential explanations for this residual wage penalty for single Black mothers using center-based care include the effects of sick childcare on the mothers' employment consistency. The lack of provision of childcare for sick children has been shown to be a significant drawback to center-based care (Early and Burchinal 2001), and single mothers who report only using center-based care as their primary arrangement may not have back-up arrangements should their children be ill. The effects of sick children on employment may have consequences apart from job loss and lengthy breaks in employment, which have already been accounted for in the model. Taking days off for the care of sick children may erode the effort and time put into work in comparison to other workers, affecting their mobility within their jobs.

Another possible explanation for the greater penalty for Black mothers using center-based care only is the spatial and time limitations that daycare may place on mothers' employment. Low-income black mothers may choose their daycare because of a location within their neighborhood or near their place of work, important considering often limited transportation options (Van Ham and Mulder 2005). Since Black mothers have lower hourly wages than other groups, their daycare choice may also be tied to the availability and provision of subsidized childcare (Shlay et al. 2004). Not all centers accept subsidized payment clients, as the reimbursement for childcare through the subsidy system tends to be far lower than market value (Shlay, Weinraub, and Harmon 2007), so women who need these subsidies may have fewer options. These limited center-based care options, and the potential restrictions that the daycare places on work schedules via their hours of operation may inhibit mothers' job options and resultant wage growth.

Additionally, Kristin Seefeldt's (2008) recent study of women transitioning from welfare to work found that when low-income women found an acceptable balance between work and

caregiving responsibilities that they were often reluctant to disrupt this balance. Many mothers chose to remain in their jobs or forgo additional schooling so as not to disrupt their children's schedules, even if these decisions lead to slow or stagnant wage growth. Because of the links between race, welfare, childcare subsidies, and center-based daycare, these findings may apply most readily to the Black women using center-based care only. Thus, this group may be penalized for motherhood more than Black mothers using other forms of childcare because they are more likely to have received welfare and childcare subsidies, and may be more reluctant to alter their work and childcare arrangements for the sake of greater financial opportunities. They may also be more likely to be subject to welfare stigma from employers, especially if they have more children, leading to lower wages.

While I can speculate that this persistent penalty for Black women who use center-care may have to do with sick childcare, limited daycare options, or reluctance to change work/family schedules, the data used in this study do not contain variables to allow specific testing of these possibilities. Regardless, this finding is particularly pertinent in relation to public policies related to job training and welfare reform that encourage and successfully transition women into center-based care arrangements (Crawford 2003; Shlay, Weinraub, and Harmon 2007). If lower-class Black women are being funneled into center-based care arrangements that are not always beneficial for their job mobility, stratification among women may persist and intensify.

CONCLUSION

In this chapter, I have explored the individual and household factors, including hours that women spend in household labor, that affect the motherhood penalty. I discovered that number of hours spent in housework and human capital variables do matter, but this impact differs across racial and ethnic groups. For minority women, hours of household labor do not negatively affect

wages as through do for White women, especially married White women. Black women spend fewer hours in housework, perhaps reflecting higher levels of assistance from others in performing household tasks. This pattern of racial differences has been supported in other literature (Cooksey and Fondell 1996). Married White women, in contrast, may face greater demands for performance of household labor, coupled with norms that they will perform most of this labor (Bianchi et al. 2000). These demands have an impact on the motherhood penalty in wages.

I have also demonstrated that childcare arrangements do have an impact on women's wage growth over time, but again have different impacts across race and ethnicity. For Black and White women, certain childcare types differentially affect the magnitude of the per-child motherhood penalty. While White women are most affected by absences from the labor force while their children are young, Black women seem to suffer greatly when they use center-based care as opposed to other childcare arrangements. This is a significant finding because center-based care has been promoted more in public policies for the poor than any other childcare types. These data cannot detect why these racial variations occur, but these analyses highlight an important issue worthy of attention in further research.

The centrality of staying in the labor force for White mothers draws attention to the larger cultural context in which women make decisions about work/family balance and the development of human capital—particularly the value of carework and motherhood in our society (Ridgeway and Correll 2004a). The findings in this chapter elucidate that White women are penalized for their roles within the home, particularly if they take time out of the labor force. Thus, women take on the responsibility and costs of raising children, rather than the society that freely benefits from this "public good" (Folbre 2001). This devaluation of motherhood, a

structural-level explanation, cannot be measured like human capital variables, but the motherhood penalty is a direct consequence and testament to its existence.

Generally, the findings in this chapter demonstrate that human capital explanations are not sufficient for either explaining motherhood wage penalties or differences in wage penalties across groups of women. For example, human capital theory does not adequately clarify why White mothers who stay at home with their children or single Black mothers who use center-based care face persistent wage penalties. Structural-level explanations, such as employment discrimination, are useful for shedding light on why these residual penalties may occur. I continue to explore the effects of childcare, human capital and discrimination on mothers' mobility in the following chapter, where I focus exclusively on low-wage mothers and whether childcare affects wages through welfare for these women.

CHAPTER 6

CHILDCARE, WELFARE, WORK, AND WAGES: THE EFFECTS OF CHILDCARE ON WAGES THROUGH WELFARE RECEIPT

The implementation of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (more commonly known as PRWORA or welfare reform) pushed many mothers with young children into the paid labor force through increased work requirements for welfare recipients. One of the underlying assumptions of welfare reform is that women can achieve upward mobility through employment, freeing themselves from the need of government support. Edin and Lein (1997) were among the first to challenge this assumption. Though debated, their position has subsequently been reiterated by a number of theorists (Corcoran, Danziger, and Seefeldt 2000; Hennessy 2005; Noonan and Heflin 2005; Pavetti and Acs 2001). They argue that low-income women are often trapped in low-wage jobs that offer little room for advancement, and that these women's work experience does not translate into marketable human capital and higher wages as it does for more highly skilled workers (Anderson and Shapiro 1996; Card, Michalopoulos, and Robins 2001; Corcoran, Danziger, and Seefeldt 2000; Dustmann and Meghir 2005; Edin and Lein 1997; Johnson and Corcoran 2003). Thus, even with employment, many low-income mothers at least periodically need to supplement their income with welfare assistance in order to make ends meet.

In addition to failing to recognize the realities of low-wage work, the PWRORA act does not fully consider women's contributions to carework and the effect that this unwaged labor may have on their need for government assistance as well as on their paid employment. As discussed

in the last chapter, some studies have found that mothers as a whole pay a per child wage penalty for this carework—a penalty that is largely attributed to the loss of human capital that they suffer when caring for children (Anderson, Binder, and Krause 2002; Budig and England 2001; Glauber 2007). Critics of welfare reform have argued that the act requires employment for low-income mothers with young children, without adequately accounting for the childcare needs of these women (Christopher 2004; Meyers and Heintze 1999). Problems with childcare, including issues of reliability, stability, and the availability of care for sick children, have been linked to employment instability for mothers (Bowen and Neenan 1993; Gennetian et al. 2004; Kisker and Ross 1997). For low-income mothers, such instability may lead to a greater dependence on welfare, which may in turn constrain their wages and wage growth. Certain childcare arrangements may help reduce work/family conflict, promoting self-sufficiency and mobility for mothers. While a number of studies have been conducted on links between childcare and welfare, they have largely focused on the effects of childcare for children on welfare (Brady-Smith et al. 2001; Jackson et al. 2000; Neblett 2007) or childcare subsidies on welfare recipients (Blau and Tekin 2007; Gennetian et al. 2004; Hofferth 1999) rather than examining how childcare arrangements are related to welfare receipt.

Studies on the long-term effects of welfare receipt on wages, though scarce, have generally shown that any wage penalties experienced by welfare recipients can be largely attributed to differences in human capital and job placement (Noonan and Heflin 2005). Lesser development of job skills, work experience, or employment stability can impede the ability of welfare recipients to move into "good jobs" (Johnson and Corcoran 2003), particularly if the human capital deficits are accompanied by mental/physical health or substance abuse problems as is often the case (Danziger, Kalil, and Anderson 2000). Further, workplace characteristics may

also affect welfare recipients' human capital development, especially for women who have competing carework responsibilities. For example, a study by the National Partnership of Women and Families (2002) found that employed women on welfare are less likely than other low-income mothers to have basic workplace flexibility, such as sick leave, that can help parents more effectively balance work and family responsibilities. This inflexibility is likely to lead to lesser job stability and employment consistency (Anderson, Binder, and Krause 2003; Bond and Galinsky 2006), and may consequently result in lower wages for welfare mothers. If low-income women have more reliable childcare arrangements, they may be able to avoid welfare receipt and build the human capital linked to increased mobility.

Though other studies have examined welfare wage penalties (Loeb and Corcoran 2001; Noonan and Heflin 2005), or lack thereof, they have neglected to analyze whether there are racial or ethnic differences in the relationship between welfare and wages. Black and Hispanic mothers who receive welfare may be at a particular disadvantage in comparison to their White counterparts and may face a persistent welfare penalty as a result. Not only are these groups

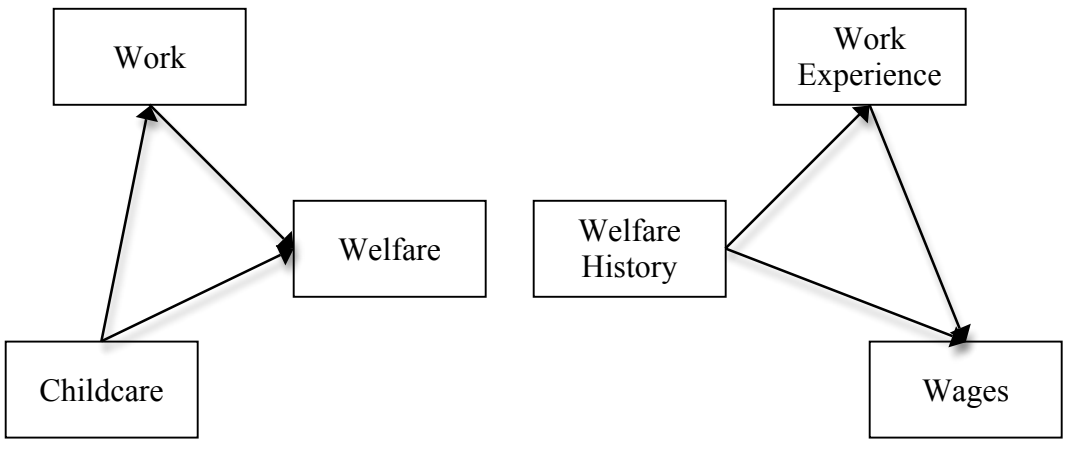

Figure 6-1: Conceptual Map of Relationship between Childcare, Welfare, Work, and Wages

disproportionately concentrated in low-wage, low-skill jobs (Anderson and Shapiro 1996; Huffman and Cohen 2004; Maume 1999), they are also more likely to have difficulty turning their human capital into occupational gains (Hall 2008; McGuire and Reskin 1993). Stigma surrounding welfare receipt may serve to further depress the wages and employment options of welfare mothers, especially Black welfare mothers, in comparison to other low-income mothers (Casciano and Massey 2008; Monroe and Tiller 2001; Seccombe, James, and Walters 1998).

In Figure 3, I provide a conceptual map of the analyses and hypotheses presented in this chapter. I predict that childcare will affect whether mothers receive welfare. This may be the case directly, or indirectly through the effects that childcare has on women's work lives. I also test, in a separate analysis, whether this welfare receipt has long-term effects on women's wage growth. It is possible that women's history of receiving welfare may affect their wage growth, either directly or through work experience. Mothers who have received welfare may have fewer years of work experience, which may serve to depress wages. Race and ethnicity, though not included in the conceptual map, may affect these dynamics through systematic differences in the use of childcare, welfare receipt, or employer assumptions about welfare use.

Therefore, in this chapter, I examine welfare as a mechanism through which childcare arrangements may affect wages. I use quantitative data to examine how childcare affects welfare, and how welfare, in turn, affects wages. In doing this, I answer the following research questions: How do childcare arrangements affect welfare use for mothers with young children? How does receiving welfare affect mothers' wages, including their ability to increase their wages through work? Are the relationships between childcare, welfare, and wages consistent across racial/ethnic groups of mothers?

LITERATURE REVIEW

The Effect of Childcare Arrangements on Welfare Receipt

Among policymakers, childcare has generally been considered a key ingredient to mothers' employment (e.g. Gennetian et al. 2004). Government subsidized support for childcare has been limited to Head Start and childcare subsidy programs.[22] Both of these programs are targeted at low-income families and only serve a fraction of those eligible for assistance (Head Start Bureau 2005; Meyers, Heintze, and Wolf 2002). Of the two, childcare subsidies have been particularly effective at increasing women's likelihood of employment (Crawford 2003) and aiding them in transitions off welfare (Gennetian et al. 2004; Kisker and Ross 1997). Although the childcare subsidy system varies from state-to-state, childcare subsidies are generally disproportionately applied toward center-based childcare options and have been shown to effectively encourage transitions from relative to center-based care (Fuller et al. 2002; Shlay, Weinraub, and Harmon 2007).[23]

While scholars have broadly recognized the importance of childcare for women's self-sufficiency (Edin and Lein 1997; Hofferth 1999; Meyers 2003), research has failed to adequately assess if certain types of childcare, such as center-based care, are more beneficial to mothers than others. Research has instead focused on the effects of certain childcare traits (i.e. quality,

[22] As part of 1996 welfare reform, the federal government allocates money to states, tribes, and territories to provide childcare assistance to low-income children whose parents are involved in employment, job training, or educational programs. This money is primarily provided through the Child Care Development Fund (CCFD) and eligible families may receive childcare subsidies, or vouchers for childcare. While childcare voucher systems vary by state, the state must use CCFD money for vouchers and parents typically have some flexibility for choosing a legally operated childcare provider. The amount of childcare spending in the US has increased dramatically since the mid-1990s, with significant variation in spending from state-to-state (Crawford 2003).

[23] I did not include subsidies as a variable in these models since welfare recipients are more likely to receive government childcare subsidies. Inclusion of this variable would lead to problems of reverse causation (Allison 1999). Including center-based care was not problematic in these data, despite the previously found links between center-based care, childcare subsidies, and welfare recipients, because center-based care and childcare subsidies are not strongly correlated within the sample (r=0.25) or among welfare recipients specifically (r=0.34).

reliabilty, flexibility, cost) on reducing childcare problems and enhancing employment stability among mothers. Persistent childcare problems can lead to frequent work absences, employment instability, and the erosion of the mothers' human capital (Hofferth and Collins 2000; Usdansky and Wolf 2008). Problems with childcare arrangements can be especially costly for low-income mothers, particularly if they have low levels of social support (Usdansky and Wolf 2008). Lisa Gennetian and colleagues (2004) found that while welfare and employment programs have increased employment and the use of paid childcare among low-income women, these programs had only small effects on employment- related childcare problems (i.e. childcare created barrier to keeping or maintaining employment) and thus fell short of adequately supporting employment stability of low-income mothers. For low-income mothers, problems with childcare and the deleterious effects that this can have on their employment can lead to a need for government assistance.

Though the effects of childcare type on welfare receipt have not been explored, scholars have discussed the relationship between childcare type and employment. Center-based care, the focus of publicly subsidized care, can have both negative and positive effects on the employment of mothers. For many low-income women, in addition to the cost of center care, this form of childcare is limiting because of limited hours of operation (Himmelweit and Sigala 2004; Willer et al. 1990) and lack of provisions for the care of sick children[24] (Early and Burchinal 2001). Since women still hold a disproportionate responsibility for childcare, including arranging childcare (Hondagneu-Sotelo 2007; Rollins 1985) and caring for children when nonparental childcare falters (Maume 2008), they are also disproportionately affected by such limitations. Nonetheless, except for the difficulties involved in sick child care, center-based care is also

[24] A further discussion of these concerns as they relate to education and employment can be found in Chapters 4 and 6 respectively.

considered to be more stable and reliable than other childcare arrangements (Chaudry 2004; Scott, London, and Hurst 2005), which should be beneficial to the work lives of mothers. Therefore, I also anticipate that low-income mothers who use center-based care will be less likely to receive welfare than mothers who use other care arrangements or mothers who do not use any formal early childcare arrangements.

The effects of childcare type on welfare receipt may differ by racial and ethnic group, though this topic has not been addressed in previous research. There are, however, documented differences in childcare use by racial and ethnic group. For example, Black mothers are more likely to use center-based care than any other care arrangement and are also more likely than White and Hispanic mothers to use this form of care (Radey and Brewster 2007). The stability of this arrangement, as discussed above, could help Black mothers using center-based care keep jobs and avoid welfare use. Additionally, previous research has shown that both Black and Hispanic women are also more likely than White women to use some form of relative care to assist with childcare and household labor. These groups of women frequently rely on the support of older children, their parents, and other kin for childcare assistance when financial resources are limited (Dodson and Dickert 2004; Sarkisian and Gerstel 2004b). While more cost efficient, relative care arrangements are often less stable and less educationally-oriented than center-based care (Magnuson et al. 2004; Scott, London, and Hurst 2005). However, in conjunction with other childcare arrangements, relatives may provide a needed back-up arrangement for Black and Hispanic women more so than for White women. In such cases, having access to relatives who can provide childcare—as may be more likely in homes with older childcare and extended family—could help maintain greater consistency in employment for low-income mothers and help them avoid welfare use. In short, I predict that childcare arrangements will differentially

affect welfare use for Black, White, and Hispanic mothers, and that controlling for formal and informal childcare arrangements will diminish racial and ethnic differences in welfare use.

The Effects of Welfare on Wages

Do mothers experience economic penalties if they receive welfare? Do these penalties increase with time on welfare? Previous research that has compared the wages of former welfare recipients to other women has not found persistent wage penalties for welfare recipients (e.g. Loeb and Corcoran 2001; Noonan and Heflin 2005). In Noonan and Heflin's (2005) study, the initial wage penalty per month on welfare can be explained largely by differences in human capital, specifically work experience. When they examined time on welfare by work status (full-time work, part-time work, no paid work), however, they found that women's work experience while on welfare does not lead to increased wages as it does for women not on welfare. Time out of the labor force leads to wage deterioration for both welfare recipients and non-welfare recipients. Noonan and Heflin's findings contribute to a larger body of literature about the relationship between work experience and wages for low-income workers. Though the standard human capital model posits that wages increase with increased work experience, there is debate over whether this model applies to low-skilled workers such as many welfare recipients. Some studies have found that wages rise with experience at similar rates for low-skilled and high-skilled workers (Gladden and Taber 2000; Grogger 2005; Loeb and Corcoran 2001), while other studies suggest that low-skill workers have lower wage growth than their higher-skill counterparts (Burtless 1995; Card, Michalopoulos, and Robins 2001; Dustmann and Meghir 2005; Edin and Lein 1997).

Noonan and Heflin suggest that the stagnant wages that they find among working welfare recipients, despite increased work experience and controls for job placement, can be attributed to

employers' stigmatization of welfare recipients. Numerous studies have found that welfare recipients are a highly stigmatized group, such that even welfare recipients themselves express highly negative view of welfare receipt (Brush 1997; Casciano and Massey 2008; Monroe and Tiller 2001; Seccombe, James, and Walters 1998). These negative sentiments are typically related to feelings that welfare recipients are lazy, taking advantage of public assistance, and/or and having additional children in an effort to avoid employment (Folbre 2001; Jarrett 1996; Polakow 1999). These negative stereotypes persist despite evidence that the majority of welfare recipients have substantial work experience and no more children, on average, than nonrecipients (Edin and Harris 1999; Harris 1996). Although general welfare stigma has been well-documented, evidence of the effects of welfare stigma in employment is relatively scarce apart from a handful of qualitative studies of welfare mothers (Cooney 2006; Jarrett 1996) and studies of employers that note employers' reluctance to hire those with a history of welfare receipt (Holzer 1996; National Partnership for Women and Families 1999). Noonan and Heflin's (2005) aforementioned research is the only quantitative study I found that systematically addressed welfare stigma. The study did not, however, examine racial and ethnic differences in this stigma.

Some scholars have suggested that welfare has become stigmatized because of its association with Black and never-married women (e.g., Quadagno 1994); thus welfare receipt may carry a particularly strong stigma for single, Black mothers. The stereotype of the Black "welfare queen" has permeated public consciousness, affecting people's view of not only welfare recipients but of Black females generally. In her research, Kennelly (1999) found that employers often make assumptions about Black women's job stability and performance based on their (perceived or actual) marital status and parental status, as well as their perceived welfare history and susceptibility. According to Kennelly, "Black women in the entry-level labor force must

face the image of themselves as distracted, desperate, uneducated, unmarried women who are just one step away from welfare" (185). This image may serve to suppress wages for all Black women, but could have particularly severe effects for women who do have a history of welfare or are currently receiving welfare assistance. If employers have knowledge of women's welfare receipt, they may see the women as particularly desperate for employment—effectively leaving them open for exploitation.

Based on the above research, I anticipate that receiving welfare will depress mothers' wages. If this is the case, I will find that the longer that mothers receive welfare, the greater toll welfare will have on their wages over time. I also believe that mothers' work experience while on welfare will lead to lesser wage growth as compared to mothers' non-welfare work experience. Further, I hypothesize that I will find racial and ethnic differences in the effects of welfare on wages. The findings from the previous chapter indicated racial differences in the effects of work experience on wages, with Black women having lower or no wage increase with years of work experience. This may be due to differences in welfare receipt and the moderating effect of welfare has on the relationship between work experience and wages, as Noonan and Heflin (2005) found for women as a whole. I thus predict that Black mothers will experience greater penalties for welfare receipt and lesser economic returns for working while receiving welfare in comparison to White and Hispanic mothers.

DATA AND METHODS

In this chapter, I use two nationally representative datasets to explore the relationships between childcare, welfare receipt, and mothers' wages. First, I use 2005 cross-sectional Early Childhood Program Participation Survey (ECPP) data to examine how childcare affects women's welfare use. I then examine the effects of welfare use on women's wage growth using longitudinal Panel Study of Income Dynamics (PSID) data from 1985-2005. The first dataset is

representative of families with children under 6 years old not yet enrolled in kindergarten, while the second is representative of U.S. families more generally. To make these datasets more comparable, I restricted the PSID sample to families who had a child under the age of 6 at some point during the observation period. I also focused on mothers in both portions of the analysis, since mothers are the theoretical focus of this dissertation. Thus, each dataset was limited to mothers with young children, though the period in which I examine wage growth may extend beyond when children are young.

Neither dataset alone allowed me to examine the relationships between childcare, welfare, and wages. The ECPP data contain childcare and welfare information, but do not include detailed information on women's wages. The PSID collects information on childcare, welfare, and wages; however, the childcare data are collected as part of a PSID supplement (CDS) that was administered to a much smaller sample of families. This sample does not include a sufficient number of current or former welfare recipients to adequately examine the effects of childcare on welfare with these data. By using both datasets, I am able to conduct a more comprehensive analysis of the effects of current or prior welfare receipt on mothers' social mobility. The combination allows me to explore how childcare affects welfare receipt and how welfare affects wages, shedding light on how welfare may be one mechanism through which childcare influences women's wages.

The Effect of Childcare Arrangements on Welfare Receipt

Collected by the National Center for Educational Statistics as part of the National Household Education Surveys, the 2005 Early Childcare Program Participation Survey (ECPP) provides cross-sectional, nationally representative data on families with children under 6 who are

not yet enrolled in Kindergarten.[25] The original sample included 7,209 families. I limited the analyses to families that included a mother who had a biological, adopted, or step-child, excluding 277 cases where no mother was present in the household or the mother-figure was the partner of the father, foster mother, or another guardian. I further reduced the sample to low-income mothers, specifically mothers were below 150 percent of the poverty line. I chose this cut off point, rather than 100 percent of the poverty line, because 32 percent of mothers who received TANF in the past year are between 100 and 150 percent of the poverty line. Restricting the sample to women under 150 percent of the poverty line allows me to include these women, providing a more accurate sample of recent welfare recipients and an accurate comparison group to women receiving welfare in the ECPP data. Finally, I eliminated cases where the child was under a year old at the time of the interview. I assessed childcare one year prior to the interview, before the recorded work and welfare variables. Children who are under a year old at the time of the interview were not yet born at the point in which I record childcare information.[26] The final sample size is 1,939 low-income mothers with young children.

Dependent Variable. My dependent variable for this section is "welfare receipt"—a dummy variable coded 1 if the mother has received TANF or state welfare in the past 12 months. This was a combination of two questions in the ECPP survey. Respondents were asked whether or not the family had received (a) TANF in the past 12 months or (b) state welfare in the past 12 months. I was unable to assess what months or how many months the mother received welfare, and I was also unable to determine whether or not the mother was currently receiving welfare at

[25] See Chapter 3 for a more detailed description of both the ECPP and PSID datasets.
[26] Additionally, welfare recipients with children under 1-year-old are exempt from work requirements in all states. Because of this, I believed that this group would be more likely to be on welfare, but that the welfare receipt may have little to do with childcare or work consistency. In these data, mothers with children under 1 at the time of the interview were no more likely to be on welfare than other mothers. They were more likely to have inconsistent work within the past year, though this is more likely to be a product of their new parent status rather than any problem with childcare arrangement.

the time of the interview. Thus, my assessment of the relationships between childcare, work, and welfare is limited to a one year span of time rather than a more specific point or series of points in time.

Independent Variables. Childcare variables are the main independent variables for this portion of this analysis. Center-cased care, relative care, non-relative care, mixture of care, and no arrangement are all included in the models, with no arrangement as the reference category. I used the type of childcare that the woman was using one year prior to the interview, rather than the current arrangement at the time of the interview, in order to assess the effects of childcare on welfare receipt in the past year rather than visa versa. The childcare used at both time periods, however, was generally consistent. Only 228 (11.8 percent) mothers changed primary childcare within the year, and 204 of these women switched from having no regular nonparental arrangement at all to having some form of nonparental childcare.

Work is entered into this analysis as a set of dummy variables for mothers' work status for the year prior to the interview. There are three possible statuses: consistently employed in past year, inconsistently employed in past year, or not in the paid labor force. A mother was considered consistently employed if she worked all 12 months of the last year and was not looking for work at the time of the interview. She was coded as inconsistently employed if she worked in the past year, but did not work all 12 months of the past year or was unemployed and looking for work at the time of the interview. Finally, mothers who did not work for pay in the past year and reported that they were not looking for work at the time of the interview were considered not in the paid labor force. By including mothers who were looking for work in the category for inconsistent employment, I was trying to separate women who were unemployed involuntarily from those who were unemployed voluntarily.

Table 6-1: Means for ECPP Variables by Welfare Status (N=1,939)

	All Mothers	Received Welfare in Past Year	No Welfare Receipt in Past Year
Childcare			
Center-Based Care	0.29	0.29	0.29
Relative Care	0.16	0.22	0.15
Nonrelative Care	0.05	0.06	0.05
Mixture of Care	0.01	0.01	0.01
No Arrangement	0.46	0.40	0.47
Financial Help For Childcare	0.27	0.22	0.33
Work Status in Past Year			
Consistent Work Experience	0.27	0.22	0.29
Inconsistent Work Experience	0.41	0.56	0.38
Not in Paid Labor Force	0.31	0.23	0.33
Groups of Women			
White	0.38	0.29	0.40
Black	0.23	0.45	0.17
Hispanic	0.31	0.19	0.35
Other	0.08	0.08	0.08
Immigrant	0.27	0.08	0.32
Household Characteristics			
Number of Children Under 10	2.18	2.29	2.16
Any Older Children (10-17)	0.43	0.40	0.44
Grandparent(s) in Household	0.11	0.12	0.10
Other Maternal Characteristics			
Mother's Age	29.16	27.11	29.68
Married	0.54	0.29	0.60
Single	0.46	0.71	0.40
No High School Degree	0.21	0.25	0.20
High School Degree	0.41	0.38	0.42
Vocational Degree or Some College	0.27	0.32	0.26
College Degree or More	0.08	0.03	0.09
N	1939	311	1628

Note: Means are Weighted

Control Variables. I include four categories for race/ethnicity: White, Black, Hispanic, and other. Again, the ECPP only collected information on the racial and ethnic background of children, rather than mothers, so the child's racial/ethnic group is used as a proxy for the

mother's race/ethnicity.[27] I also control for immigration status, including immigration as a dummy variable equal to one if the mother was born outside of the U.S. In this chapter, I include mothers' education as a set of dummy variables for highest level of education: no high school degree, high school degree, vocational degree or some college, and college degree or more. No High school degree is the reference category. Additionally, I include variables for number of children under age 10, number of children older than 10, whether grandparents live in the household, mother's age, and mother's marital status (married vs. single). See Table 6-1 of this chapter for descriptive statistics on these variables and Table A-1 of Appendix A for a description of the measurement of each variable used in these analyses.

The Effects of Welfare on Wages

The Panel Study of Income Dynamics (PSID) has collected nationally representative data on the economic and social lives of U.S. families since 1968. The study oversamples low-income families, making it an ideal dataset to explore the effects of welfare on women over time. I transformed the data to follow *women,* rather than *families*, across data years (see Chapter 3) and arranged the data into a pooled, time-series cross-section with person-years as the unit of analysis. The original transformed sample consisted of 20,113 women and 111,292 years of data among all of the participants (person-year), but was restricted for theoretical and methodological reasons. Since I am interested in the women's wages over time, I eliminated any years of data for which the woman was either not working for pay or did not report wages. I then restricted the sample to employed women between the ages of 18 and 60 in the 1985 to 2005 time period.[28] The sample focuses on women who are White, Black, or Hispanic because of the low

[27] See Chapter 4, pg. 65, for a discussion of the limitations of this.

[28] I ran the analyses with a variety of different age categories. Of the sample of women working for wages, 95% are 18-60 years of age and 84% are prime age workers (25-54). Regardless of the age range, the results are nearly identical. In order to include the maximum amount of welfare data, since the number of women on welfare is relatively small, I use the extended age range for this analysis.

representation of women in other racial groups. Additionally, as noted above, I concentrated the analysis on women who are *mothers* with children under 6 in the household at some point during the observation period.

I also limited the analysis to mothers who had reported family incomes that were below the poverty line at some point during the observation period. This differs from studies by Noonan and Heflin (2005) and Loeb and Corcoran (2001)—the two articles that also examine the effects of *both* work experience and welfare receipt on wages. In each of these, both poor and non-poor women are included in the samples. I limit this sample for two main reasons, one theoretical and one methodological. First, I am interested in comparing how welfare receipt affects wages for low-income mothers. In assessing the effect of welfare work experience and non-welfare work experience, a sample that contains never-poor women does not provide an adequate comparison of the average effects of non-welfare work on wages. Second, using the PSID data without limiting the sample to (once) impoverished women is problematic for the fixed-effects model. If I did not limit the sample by poverty, only 10.5 percent of the mothers in the sample would have any variation in any of the welfare variables, with white women having substantially less variation (4.4 percent). This would be insufficient variation to produce reliable estimates in fixed-effects models (Allison 2005), which is particularly problematic since the welfare variables are the independent variables of interest. After reducing the sample to women who have been in poverty, 35.9 percent of the mothers in the sample have variation in cumulative welfare receipt—an appropriate percentage for accurate analysis.

Finally, I exclude person-years with missing data for any of the independent variables. With all of the above restrictions, the final sample for this set of analyses consists of 1,892 mothers and 9,151 person-years with an average of 4.8 years of employment data for each

woman. These women are included in the sample of 681 mothers who reported receiving welfare at some point since 18 years old, though they may have received welfare during years that they did not work for pay.[29]

Dependent Variable. The dependent variable for the analysis of the connection between welfare and wages is the natural log of women's hourly wages. As is the case here, the distribution of wage data tends to be skewed to the right—a relatively small portion of individuals have hourly wages that are well above the mean. Using the natural log of wages, as opposed to actual hourly wages, gives the data a more normal distribution such that the data become more evenly clustered around the mean. Since most statistical tests assume a normal distribution using the natural log of wages is generally a more appropriate measure of wages than base hourly wages. As an additional benefit, using the natural log of wages makes the interpretation of the independent variables more easily understandable—the coefficients represent a percentage change in each independent variable rather than a change in the dollar amount.

Independent Variables. I assess the effects of welfare on wages using two different sets of independent variables. First, welfare is included as a continuous variable for cumulative number of years on welfare. I calculated this according to the cumulative number of months that the mother reported having been on welfare from when she entered the sample as either a head of household or a wife. Welfare receipt was counted whether or not the mother was working for pay at the time that she collected welfare assistance. The variable was converted from months to years to simplify the interpretation of the coefficients. Second, I consider welfare and work experience together to assess how welfare affects marketable human capital, specifically the

[29] The information about cumulative years on welfare was collected before dropping any person-years from the dataset, including years where the woman was not working for pay, did not report wages, and had missing values for independent variables.

Table 6-2: Means for Select PSID Variables by Race/Ethnicity of Mothers

	White Mothers	Black Mothers	Hispanic Mothers
Hourly Wages (2005 dollars)	4.28	4.73 *	4.68 *
Welfare and Work			
Welfare (dummy variable)	0.05	0.16 *	0.10 *
Years on Welfare	0.28	1.18 *	0.31
Years Full Time Work Experience	0.06	0.27 *	0.06
Years Part Time Work Experience	0.12	0.41 *	0.19 *
Years Not On Welfare			
Years Full Time Work Experience	2.46	2.30	1.33 *
Years Part Time Work Experience	2.08	1.16 *	0.93 *
Carework			
Number of Children	1.55	1.90 *	2.36 *
Hours of Housework	19.74	15.20 *	23.43 *
Other Human Capital Variables			
Months at Current Job	39.65	45.38 *	34.91
Years of Education	12.43	11.83 *	9.48 *
Enrolled in School	0.03	0.03	0.03
Job Characteristics			
Current Employment is Full-Time	0.54	0.63 *	0.52
Current Employment is Part-Time	0.46	0.37 *	0.48
Percent Female	68.93	64.82 *	62.06 *
Occupation			
Farm	0.01	0.01	0.08 *
Lower-Blue Collar	0.32	0.41 *	0.33
Upper-Blue Collar	0.13	0.22 *	0.29 *
Lower-White Collar	0.30	0.24 *	0.23 *
Upper-White Collar	0.24	0.12 *	0.08 *
Marital Status			
Married	0.66	0.24 *	0.56
Never Married	0.08	0.43 *	0.17 *
Separated	0.26	0.33 *	0.27
Age (years)	36.32	35.33 *	36.35
Family Income	30,865	16,808 *	17,048 *
Family Size	3.72	3.66	4.59 *
N Person-Years	3,383	5,060	669
N Women	615	1027	231

* indicates a significant difference in means between given group of women (Black or Hispanic) and White women

effects of work experience on wages. Work experience is divided into part-time and full-time experience. In all, there are four independent variables of interest in this portion of the analyses—full-time work on welfare, part-time work on welfare, full-time work not on welfare, and part-time work not on welfare. Throughout this section, race and ethnicity are also key independent variables and separate models are presented for White, Black, and Hispanic women.

Control Variables. I control for a number of variables that have been shown to affect wages: number of children, hours spent in housework, human capital variables (tenure in current job, years worked full-time, years worked part-time, years of education), and job characteristics (full-time employment, percent female in job, occupational categories). Finally, I include variables for marital status (never married, married, and separated), age (age and age^2), and year (a set of dummy variables for survey year). A full list of these variables and a discussion of their measurement can be found in Table A-3 of Appendix A, and the means for key variables are presented in Table 6-2 of this chapter.

Analytic Strategy

For the analyses of how childcare influences welfare receipt, I employ binomial logistic regression since the dependent variable—welfare receipt in the past 12 months—only has two possible values. I added weights and adjusted for the complex survey design using STATA's svy command.[30] I present the results for the analysis of childcare on welfare with a series of seven models in Table 6-3. Model 1 includes variables for childcare arrangements and Model 2 includes variables for work status in the past year. Each of these are presented in order see how they affect welfare before other variables are added and before the sets of variables are combined. In Model 3, I present variables from both of the previous models together in order to assess the effects of regular childcare on welfare through work. Models 5 through 7 then assess

[30] See Chapter 4, page 66, for a further discussion of the complex survey design of the ECPP data.

how additional controls for race/ethnicity, household characteristics, and maternal characteristics affect this relationship. I first present the variables for race, ethnicity, and immigration without controls in Model 4, then add variables for childcare and work status in Model 5. In Model 6, I add the variables for household characteristics, which include proxies for informal childcare assistance—number of older children and grandparents living in the household. Finally, Model 5 is the full model. This model includes variables for formal childcare arrangements, work status, race/ethnicity, immigration, household characteristics, and maternal characteristics together.

I use fixed-effects regression for the analysis of welfare and wages. This method allows me to control for all observed or unobserved individual characteristics that are constant over time. Thus, in looking at welfare and wages using this regression method, I am able to examine how individual women's hourly wages change when they receive additional welfare support while keeping all time invariant variables constant. Since race and ethnicity are automatically controlled for in fixed-effects models, I have created separate models for White, Black, and Hispanic women in order to compare the relationships between welfare and wages across these groups. I also ran these analyses with pooled-OLS regression using robust clustered standard errors in order to get a sense of how much of the wage changes are is due to unobserved, time-invariant characteristics. In Tables 6-4, I present the full models for both fixed-effects and pooled-OLS models to assess the effect of cumulative welfare receipt on mothers' wages by racial and ethnic group. While I present both types of regression models, fixed-effects models are able to more accurately assess the relationship between welfare and wages because of their ability to control for unobserved variables. The better fit of these models is reflected in the much higher r-squared statistics. In this portion of the analysis I also use the Sobel-Goodman

mediation test[31] to examine what variables may help explain (i.e. mediate) the effect of cumulative welfare receipt on wages. If a variable significantly mediates the effect of welfare on wages in the model, I mark the coefficient in bold and italics on Table 6-4. Finally, Table 6-5 includes full models for the effects of working experience while on welfare and off welfare on mother's wages. Again, the separate models are presented for White, Black, and Hispanic mothers.

RESULTS

The Effects of Childcare Arrangements on Welfare Receipt

There are several findings from the analyses in this chapter that run counter to my expectations. For example, the results presented in Table 6-3 reveal that women with a regular childcare arrangement (of any type) and women without a regular arrangement do not differ in their odds of receiving welfare. In other words, mothers who don't use any form of regular childcare are equally as likely to receive welfare as mothers who use center-based care, relative care, non-relative care, or mixture of care as their primary childcare arrangements. As the insignificant F-statistic in Model 1 reveals, childcare does not alone explain welfare use. Even with the addition of other controls in the model, controls that are more predictive of welfare use, the effect of childcare on welfare remains unchanged and insignificant.

Work, on the other hand, does affect welfare receipt. Mothers who have worked consistently are less likely to have received welfare than mothers who have worked inconsistently (Model 2). Contrary to my predictions, the addition of work variables does not

[31] See chapter 5 for a more detailed explanation of the Sobel-Goodman mediation test.

Table 6-3: Logistic Regression Models of Welfare Receipt on Childcare, Work Status, and Mother's Race/Ethnicity for Low-Income Mothers: ECPP 2005

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	Odds Ratios	SE	Odds Ratios	SE	Odds Ratios	SE	Odds Ratios	SE	Odds Ratios	SE	Odds Ratios	SE	Odds Ratios	SE
Childcare														
Primary Childcare Type (vs. No Regular Arrangement)														
Center-Based Care	1.19	0.25			1.21	0.27			0.93	0.23	0.94	0.23	0.91	0.22
Relative Care	1.80	0.68			1.79	0.71			1.33	0.51	1.34	0.53	1.28	0.46
Nonrelative Care	1.32	0.49			1.31	0.56			1.38	0.62	1.44	0.66	1.23	0.62
Mixture of Care	2.41	1.79			2.45	1.77			1.91	1.44	1.91	1.43	2.68	2.17
Work Status (vs. Inconsistent Work Over Past Year)														
Consistent Work Over Past Year			0.52 *	0.15	0.47 *	0.15			0.47 *	0.14	0.47 *	0.14	0.53 *	0.16
Not in Labor Force			0.46 ***	0.11	0.51 **	0.13			0.71	0.18	0.71	0.19	0.84	0.20
Groups of Women														
Race/Ethnicity (vs. Non-Hispanic Whites)														
Black							3.84 ***	0.96	3.81 ***	1.03	3.90 ***	1.07	2.48 **	0.69
Hispanic							1.70	0.48	1.71	0.49	1.73	0.50	1.31	0.43
Other							1.75	0.53	1.75	0.54	1.79	0.57	1.52	0.50
Immigrant							0.19 ***	0.07	0.19 ***	0.07	0.20 ***	0.07	0.20 ***	0.08
Household Characteristics														
Number of Children Under 10											1.08	0.16	1.14	0.15
Number of Older Children (10-17)											0.89	0.11	1.05	0.15
Grandparent(s) in Household											0.96	0.24	0.67	0.18
Other Maternal Characteristics														
Mother's Age													2.69 ***	0.73
Single													0.96 *	0.02
Highest Education (vs. No High School Degree)														
High School Degree													0.48 *	0.14
Vocational Degree or Some College													0.64	0.22
College Degree or More													0.35 *	0.15
F	1.64		5.95 **		2.68 *		18.92 ***		7.36 ***		7.30 ***		5.33 ***	
N	1939		1939		1939		1939		1939		1939		1939	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$; Results are weighted

affect the relationship between childcare and welfare receipt (Model 3)—childcare arrangements do not indirectly affect welfare receipt through work. Even with all controls added to the model (Model 7), the odds of receiving welfare for women who have worked consistently is still approximately 50 percent less than those mothers who have been in the labor force but have not worked consistently. Work consistently reduces the likelihood of welfare receipt, but childcare does not affect welfare receipt through work consistency. Childcare does not affect welfare use directly or through its effects on work.

Additionally, mothers who are not in the paid labor force have lower odds of being on welfare than mothers who work inconsistently. The primary difference between these groups is that mothers who are not working and not looking for work are out of the labor force voluntarily (not in LF), while mothers who have been working inconsistently (i.e. have not worked all months of the previous year, or are unemployed and looking for work) are much more likely to be frustrated or displaced workers. Again, adding childcare has little effect on the differences in welfare receipt by work status (Model 3). Adding race and ethnicity, however, eliminates the differences in welfare receipt between mothers who have not been in the paid labor force and mothers who have worked inconsistently (Model 5). Further analysis (not shown) demonstrates that the drop in significance occurs largely because of experiences of Black mothers. Black mothers are significantly[32] more likely than mothers of other races to work inconsistently as compared to being out of the paid labor force or working consistently. The findings that Black mothers are more like to have inconsistent employment meshes with prior research suggesting that Black women are disproportionately likely to be displaced or frustrated workers. For example, they are disproportionately vulnerable to job loss (Reid 2002; Reskin, McBrier, and

[32] I confirmed this with t-tests.

Kmec 1999) and have higher rates of employment in part-time and seasonal/temporary labor than White women (Burr and Mutchler 2007; Reid 2002).

I hypothesized that controlling for formal and informal childcare may serve to reduce racial and ethnic differences in welfare receipt. In Model 3, where race, ethnicity, and immigration status are included without other controls, Black mothers have greater odds of receiving welfare than White mothers. This finding does not change, nor does the significance of the relationship drop, when formal childcare arrangements (Model 5) or household characteristics (Model 6) are included in the models. In fact, grandparents and older children within the home, proxies for informal childcare assistance, were not associated with welfare receipt at all (Model 6). When all controls are added (Model 7), Black mothers are still two and a half times more likely to receive welfare than White mothers. Thus, my predictions were unfounded. The only variable in these analyses that reduces Black mothers' odds of welfare receipt is marital status. Single mothers are more likely to receive welfare than married women, and Black mothers are disproportionately single mothers.

There are two additional findings of interest from this analysis. First, immigrant mothers are 80 percent less likely to receive welfare than mothers who are not immigrants (Model 7). This finding does not change across models as variables are added. Difference in welfare by immigration status may result from cultural resistance to using childcare, or to mothers' confusion about their eligibility for welfare assistance, a common issue among immigrant groups (Kretsedemas 2003). It could also be the due to ineligibility for welfare assistance (Kretsedemas 2003; PRWORA 1996), or a mistrust of government agencies among immigrants (Hondagneu-Sotelo 2007) so that even if they do qualify for assistance they may be unwilling to contact welfare agencies for this support.

Second, level of education affects mothers' odds of welfare receipt (Model 7). Low-income mothers with a college education and mothers with high school degrees are less likely to receive welfare than mothers with less than a high school degree. In fact, women with college degrees have lower odds of welfare enrollment than women who work consistently, as I confirmed by running the test command in STATA. This finding supports previous research that has found that postsecondary education, rather than work, is key to self-sufficiency and mobility (Pandey and Kim 2008; Pandey et al. 2000; Zhan and Pandey 2004b). Additionally, mothers with a vocational education or some college are equally likely to be on welfare as mothers with less than a high school degree. This finding contributes to critiques of welfare reforms that focus on short-term vocational education (Pandey and Kim 2008; Pandey et al. 2000). Such education does not significantly increase one's ability to stay off welfare support. While some research suggests that such education does reduce unemployment spells in the long-run (Ainsworth and Roscigno 2005), this relationship is not evident in my analyses. One reason for the difference may be that previous research has not focused exclusively on mothers.

The Effects of Welfare on Wages

The results in the fixed-effects regression models, as shown in Table 6-4, indicate that time on welfare does not systematically lead to lower wages for any group of mothers. In fact (as evident in supplemental analyses), the number of cumulative years on welfare is not associated with changes in wages for any group even when carework, human capital, job characteristics, and marital status are removed from the models. In analyses using pooled-OLS regression, in contrast, I find that *Black* mothers face a persistent welfare penalty in wages that increases with length of time on welfare (Table 6-4, OLS Models). The fact that this group does not demonstrate decreased wages with welfare in fixed-effects models, but does in pooled-OLS

Table 6-4: Fixed-Effects and Pooled Regression of Mothers' Hourly Wages (ln) on Cumulative Welfare Receipt by Race/Ethncity: PSID 1985-2005

	Fixed-Effects						Pooled-OLS					
	White Mothers		Black Mothers		Hispanic Mothers		White Mothers		Black Mothers		Hispanic Mothers	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Cumulative Years on Welfare	0.02	0.03	0.02	0.03	0.09	0.07	-0.03	0.02	-0.03 ***	0.01	-0.04	0.04
Carework												
Number of Children	-0.04	0.02	-0.04	0.02	-0.06	0.04	0.00	0.02	0.01	0.01	0.01	0.02
Hours of Housework	0.00 *	0.00	0.04	0.02	0.00 *	0.00	-0.01 ***	0.00	0.00 *	0.00	-0.01 *	0.00
Human Capital Variables												
Tenure at Current Job	0.00 ***	0.00	0.00 ***	0.00	0.00	0.00	0.00 ***	0.00	0.00 ***	0.00	0.00 ***	0.00
Total Years Full-Time Work	***0.05*** ***	0.02	0.05	0.02	0.11	0.07	***0.05*** ***	0.01	***0.04*** ***	0.01	0.09 ***	0.03
Total Years Part Time Work	0.04 **	0.02	0.04	0.02	0.10	0.08	0.04 ***	0.01	0.01	0.01	0.03	0.04
Years of Education	0.03	0.03	0.03	0.03	0.44 **	0.15	***0.07*** ***	0.01	***0.04*** ***	0.01	0.00	0.01
Enrolled in School	-0.19 *	0.07	-0.19 *	0.07	-0.22	0.22	-0.20 *	0.09	-0.07	0.06	-0.25	0.16
Job Characteristics												
Full-Time Employment	0.00	0.00	-0.05	0.03	-0.14	0.07	-0.04	0.03	-0.04	0.03	-0.12	0.07
Percent Female	0.01	0.16	0.00	0.00	0.01 **	0.00	0.00	0.00	0.00 **	0.00	0.00	0.00
Occupation (vs. Upper White Collar)												
Farm	0.01	0.16	0.01	0.16	0.77 ***	0.21	-0.43 **	0.14	-0.43 ***	0.11	0.12	0.17
Lower Blue Collar	-0.06	0.05	-0.06	0.05	0.53 ***	0.14	-0.26 ***	0.06	-0.19 ***	0.05	0.00	0.13
Upper Blue Collar	0.02	0.06	0.02	0.06	0.50 ***	0.15	-0.17 **	0.06	-0.19 ***	0.05	0.03	0.13
Lower White Collar	-0.04	0.04	-0.04	0.04	0.34 *	0.15	-0.06	0.05	0.00	0.05	0.24	0.13
Marital Status (vs. Married)												
Never Married	-0.18	0.17	-0.18	0.17	0.25	0.24	0.15 *	0.06	0.09 *	0.04	0.13	0.09
Separated	-0.08	0.14	-0.08	0.14	0.34	0.25	0.07	0.05	0.13 ***	0.04	0.12	0.07
R^2	0.61		0.60		0.60		0.26		0.19		0.17	
Number of Person-Years	3,383		5,060		669		3,383		5,060		669	
Number of Women	615		1,027		231		615		231		231	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

Note: All of the Models Control for Age, Age2, and Dummmy Variables for Survey Year.

Note: Numbers that are italicized and in bold indicate that the variable significantly mediates the relationship between cumulative welfare and mother's wages.

models, suggests that the welfare penalty is attributable to factors that are consistent over time and not controlled in the OLS models.[33] Thus the relationship between welfare and wages is likely spurious. A third variable may cause both increased time on welfare and depressed wages, such as being born in a poor family or being the target of persistent employer discrimination.

Of additional interest, as shown by the bold and italicized coefficients in Table 6-4, I found that in OLS models cumulative time on welfare affects wages indirectly through both full-time work experience and years of education for Black mothers as determined by using the Sobel-Goodman mediation test. None of these effects are significant in fixed-effects models, meaning that the effects of education and work are due to stable unobserved characteristics rather within-person changes in these variables over time. Therefore, Black mothers who are on welfare for longer periods of time are more likely to have fewer years of education and fewer years of full-time job experience, both of which lead to lower wages. Cumulative welfare also affects wages through education for White mothers in OLS-models, such that White women who receive welfare for longer are more likely to have fewer years of education and lower wages. However, the fact that Black mothers have significantly fewer years of education on average, as compared to White mothers (see t-test results in Table 6-2), suggests that Black mothers as a group may be particularly disadvantaged in regard to welfare and wages.

Though no group of women has a persistent wage penalty that is commensurate with time on welfare, Table 6-5 shows that the joint effects of welfare and work on wages is not consistent across racial/ethnic groups. I only include the full models here because the variables of interest do not change significantly between the base models (age, age-squared, and yearly dummies)

[33] In supplemental analyses (not shown), I used the 10 category Beale Urban/Rural continuum to explore if location could explain the residual welfare penalty in wages for Black mothers in OLS-models. Where one lives may remain relatively stable over time and thus be controlled for in fixed-effects models. While location does significantly affect wages for Black women—the more rural the area, the lower the wages—this variable does not eliminate the significance of cumulative welfare receipt on mothers' wages.

Table 6-5: Fixed-Effects Regression of Mothers' Hourly Wages (ln) on Work Experience and Welfare Receipt by Race and Ethnicity: PSID 1985-2005

	White Mothers		Black Mothers		Hispanic Mothers	
	Beta	SE	Beta	SE	Beta	SE
Welfare and Work						
Years on Welfare						
Years Full-Time Work	0.26 **	0.08	-0.02	0.04	0.12	0.18
Years Part Time Work	-0.04	0.06	0.01	0.03	0.04	0.13
Years not on Welfare						
Years Full-Time Work	0.05 ***	0.01	0.01	0.01	0.08	0.07
Years Part Time Work	0.05 **	0.02	0.00	0.02	0.09	0.08
Carework						
Number of Children	-0.03	0.02	0.02	0.01	-0.06	0.04
Hours of Housework	0.00 *	0.00	0.02	0.03	0.00 *	0.00
Other Human Capital Variables						
Tenure at Current Job	0.00 ***	0.00	0.00 ***	0.00	0.00	0.00
Years of Education	0.04	0.03	0.02	0.02	0.46 **	0.15
Enrolled in School	-0.19 *	0.07	-0.13 *	0.06	-0.25	0.22
Job Characteristics						
Full-Time Employment	-0.03	0.03	-0.08	0.02	0.25	0.24
Percent Female	0.00	0.00	0.00	0.00	0.33	0.26
Occupation (vs. Upper White Collar)						
Farm	0.01	0.16	-0.30 *	0.16	0.77 ***	0.21
Lower Blue Collar	-0.06	0.05	-0.07	0.05	0.52 ***	0.14
Upper Blue Collar	0.02	0.06	-0.02	0.06	0.49 ***	0.15
Lower White Collar	-0.04	0.04	0.00	0.04	0.36 *	0.15
Marital Status (vs. Married)						
Never Married	-0.14	0.17	-0.02	0.17	0.25	0.24
Separated	-0.07	0.13	-0.06	0.14	0.33	0.26
R^2	0.55		0.49		0.59	
Number of Person-Years	3383		5060		669	
Number of Women	615		1027		231	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

Note: All of the Models Control for Age, Age2, and Dummmy Variables for Survey Year.

and the full models presented in Table 6-5. For poor White mothers, each year working full-time while also receiving welfare leads to a significant increase in hourly wages—approximately 26 percent per year according to these data. Part-time work on welfare makes no difference to White women's wages. These mothers also undergo an approximate 5 percent increase in wages with each additional year of non-welfare, full-time or part-time work experience. Thus, in the case of

poor White women, welfare moderates the effect of work experience on wages—full-time work is more beneficial for women when they are on welfare than when they are not and part-time work is only beneficial for increasing the earnings if women are not on welfare. This is a surprising finding given research on welfare stigma (Casciano and Massey 2008; Jarrett 1996; Seccombe, James, and Walters 1998), although research has focused on racial aspects of this stigma. White women have traditionally been considered part of the "worthy poor" (Mink 1995). As a result, poor White mothers may not only avoid welfare stigma from employers but they may be seen as especially in need of and worthy of assistance—leading to more rapid wage growth on welfare than off welfare. If they are working full time during their period of welfare receipt, they may be seen as especially deserving.

For poor Black and Hispanic mothers, in contrast, additional years of work experience do not result in significant changes in wages. This is true regardless of the mother's welfare status when she is working—neither work situation allows them to build marketable human capital. As predicted, poor Black and Hispanic women have lesser economic returns on their work experience than poor White women, but contrary to my predictions, welfare status while working makes little difference for these groups. White women are the only group that experiences any benefit of working while on welfare, which is particularly interesting given that shifts in welfare policy around work occurred arguably as a result of an increase in welfare recipients of color (Monroe and Tiller 2001; Quadagno 1994; Seccombe, James, and Walters 1998).

The findings that low-income Black and Hispanic women face stagnant wage growth with increased work experience partially supports previous research on lower payoff of work experience for low-income workers as compared to more affluent workers (Card, Michalopoulos, and Robins 2001; Corcoran, Danziger, and Seefeldt 2000; Dustmann and Meghir 2005; Edin and

Lein 1997; Johnson and Corcoran 2003). However, these findings also highlight racial and ethnic differences in the effects of work on wages, supporting studies that suggest minority women have more difficulty than White women turning human capital into marketable returns (Alon and Tienda 2005; Hall 2008), and perhaps especially so when they are mothers.

DISCUSSION/CONCLUSION

Ultimately, in this chapter, I found that welfare is not a mechanism through which childcare affects wages. Childcare neither directly nor indirectly affects welfare receipt, and time on welfare does not significantly affect mothers' wages. I expected that childcare would affect welfare through work consistency, such that mothers with problematic (i.e. less stable or reliable) childcare arrangements would have less consistent work experience and would be subsequently more likely to receive welfare. Though childcare does not significantly affect welfare, work consistency and level of education do. Mothers who work consistently, as compared to mothers who are in the labor force and work inconsistently, have lower odds of receiving welfare, and mothers with a high school or college education are also less likely to receive welfare in comparison to mothers without a high school degree.

The analyses in this chapter hint that minority women may face additional burdens to social mobility. Black mothers are more likely than White mothers to receive welfare, which I believed would lead to lower wages and wage growth for Black women. Surprisingly, my findings revealed no welfare penalty, but highlighted racial differences in the building of marketable human capital among low-income mothers. Although no group of mothers experienced a persistent wage penalty proportionate to their time on welfare, White mothers benefited from working full-time on welfare whereas Black and Hispanic mothers did not benefit

from full-time or part-time employment while on welfare. In fact, low-income Black and Hispanic mothers do not experience significant wage growth with work experience at all.

The fact that poor Black mothers do not experience an increase in wages with work experience may have to do with the association between Black women and welfare. A number of studies (Hancock 2004; Kennelly 1999; Polakow 1999; Quadagno 1994; Seccombe, James, and Walters 1998) have shown that employers and the general public tend to associate welfare with Black women. For Blacks more so than other groups, employers may associate welfare and welfare dependency with numerous other negative stereotypes. As discussed by Wilson (1996), the residential segregation of Blacks in deteriorating urban ghettos marked by joblessness, single parenthood, and widespread welfare reliance has led potential employers to negatively stereotype job applicants from these areas. Employers' reluctance to hire people from these poor minority neighborhoods affects job opportunities and chances for economic mobility for these groups. However, as Kennelly (1999) also found, Black mothers may be more likely to be employed both in spite of and due to such stereotypes, as they are seen to be more desperate for employment than mothers of other ethnic groups or than Black men and thus better candidates for entry-level jobs. The stigma of welfare recipients, and specifically Black welfare recipients, may negatively affect the wages and wage growth of all Black women.

Hispanic women who receive welfare are likely subject to similarly negative appraisals by employers as Black women, causing stagnant wage growth, though these negative appraisals are likely to be less closely tied to welfare stigma. Hispanic women seeking employment who come from poor, segregated communities could also be seen as desperate to work. Additionally, this group is frequently seen as a part of an immigrant population that is willing to work for low wages, enhancing their potential exploitation, and may face obstacles if there are questions about

their legal status (Hondagneu-Sotelo 2007). Employers may also be skeptical about Hispanic immigrant women's language skills or knowledge of U.S. culture (Hall 2008; Hamilton 2008), further devaluing this group of workers. More information about the ethnic backgrounds of these Hispanic women, coupled with a larger sample of Hispanic welfare recipients, would be helpful for assessing why poor Hispanic women face limitations to increasing their wages through work regardless of their welfare status. Exploring the effects of country of origin and English language proficiency on the relationships between welfare, work and wages would be an interesting avenue for future research.

In sum, childcare has little effect on welfare receipt, and welfare receipt has little effect on wages and wage growth, especially for the minority groups that are disproportionately recipients of welfare. Welfare reform has pushed low-income mothers into the workforce through work requirements with two implicit assumptions: that work is the best way to increase women's mobility and that mothers can best help their families through work than through parental caregiving. My findings not only suggest that education may be a more effective pathway to self-sufficiency than work, but also that staying out of the labor force to raise children may not have negative repercussions on the mobility of Black and Hispanic women. In the following chapter, I tie together my empirical findings about the effects of childcare on mothers' education, wages, and welfare. I summarize the overall theoretical and policy implications of this work and provide avenues for future research.

CHAPTER 7

CONCLUSION

In this dissertation, I have explored how the division of carework both within and beyond the home affects mothers' opportunities for social mobility, specifically their chances to build human capital and increase their wages. I found that childcare and childcare types, at best, have uneven effects across groups of women. Mothers' mobility opportunities are shaped by their locations within various "structures of collective constraint" (i.e. their positions with overlapping gender, racial/ethnic, marital status, and class hierarchies) in ways that typically exceed any impact that childcare has on their human capital development and subsequent wage growth. Further, as suggested by previous research (Budig and England 2001; Hall 2008; McGuire and Reskin 1993), I learned that human capital theories are generally insufficient for explaining the economic inequality of women or economic inequality among women—some groups of women experience persistent inequality even after accounting for differences in human capital. Though my interest has been in low-income mothers, these analyses demonstrate the women's opportunities for mobility vary greatly by race/ethnicity and marital status, perhaps to an even greater degree than by social class. Childcare does little to diminish these differences and, in some cases, may even serve to increase preexisting stratification along racial/ethnic and marital status lines. The goal of this chapter is to discuss the theoretical and policy implications of this research, while also pointing out limitations and directions for future research. Before delving into these topics, however, I first synthesize the empirical findings that were presented in three preceding chapters.

CHILDCARE AND THE SOCIAL MOBILITY OF MOTHERS: EDUCATION, WAGES, AND WELFARE

The empirical findings of this dissertation can be summarized into four overarching conclusions about the relationship between childcare and the mobility of mothers. First, c*hildcare can help with mothers' human capital development and mobility in some circumstances*. Although having regular childcare is unlikely to prevent mothers with young children from needing welfare assistance, mothers with regular childcare arrangements are more likely to further their education or job training than mothers who do not have regular care. In this way, childcare may assist mothers in staying off welfare indirectly by helping mothers increase their education, since education is an important factor in helping mothers avoid welfare. I also found that childcare affects motherhood wage penalties, though the effects are different for Black and White mothers. Before taking childcare arrangement into account, White mothers are the only racial/ethnic group that experiences a persistent motherhood penalty in wages. For White mothers, having any kind of regular childcare arrangement when children are young eliminates the long-term wage penalty associated with additional children. Among Black women, in contrast, whether or not a mother has childcare doesn't typically matter for wage penalties unless the mother is single and uses center-based care—a finding discussed more below.

The second main finding, as mentioned above, is that *the effects of childcare type on mothers' human capital development and wage mobility vary across groups of mothers.* Across racial/ethnic backgrounds, single mothers are more likely to be enrolled in education or job training if they use center-based care as their primary childcare arrangement, but are less likely to be enrolled if they use relative care. However, Black single mothers who use center-based care when their children are young, typically while the mother engages in work or education related

activities, are actually *worse* off in regard to long-term motherhood wage penalties than Black mothers who use other childcare arrangements. Black mothers who use all other care arrangements, including mothers who take time out of the labor force and do not use any nonparental childcare arrangement at all, avoid per-child wage penalties. Thus, center-based care has mixed effects for single Black mothers—using center care allows them to further their education but they pay long-term economic penalties for using this care. These results mesh with literature that suggests that Black women may have more difficulty than White women in turning their increased educational credentials into higher pay (Hall 2008; McGuire and Reskin 1993; National Research Council 2004). Results also suggest that single Black women who use center-based care to further their education may not only may they fail to benefit from these educational gains, they may face additional wage penalties related to their childcare. Since Black women disproportionately use center-based care (Radey and Brewster 2007) and Black mothers using center-based care have lower family incomes than other Black women (according to PSID data used here), greater wage penalties for this group can serve to perpetuate and even exacerbate racial stratification among women.

Third, *the informal assistance with childcare and household labor within the home can affect women's opportunities for mobility*. According to the findings in Chapter 5, White mothers complete more hours of housework than Black mothers, and *married* White mothers suffer a significant and unique penalty in wages (a husband penalty) that is directly connected to the increase in hours of household labor with each additional child. In contrast, Black women's wage penalties are not affected by hours of household labor, which I believe reflects the greater contributions of men, extended family, and children to the running of the household that has been documented in previous literature (Dodson and Dickert 2004; Penha-Lopes 2006; Sarkisian,

Gerena, and Gerstel 2007; Sarkisian and Gerstel 2004b). The contributions of these family members may also explain the finding that Black mothers—especially married Black mothers—are more likely than White and Hispanic mothers to be enrolled in education or job training when their children are young. Though all of these women may be constrained by the structure of gender and women's disproportionate responsibility for household labor, they are also influenced by their positions within the structures of class, race/ethnicity, and marital status. For example, low-income Black families have cultural norms of shared responsibility within families for accommodating carework needs amidst limited financial assets (Penha-Lopes 2006). Similarly, single mothers of young children across racial and ethnic backgrounds are more likely to continue their education if they have older daughters in the house. Based on previous literature on the contributions of daughters to the carework in low-income and single parent homes (Dodson and Dickert 2004; Romich 2007), I attribute this finding to the role that daughters play in household labor and carework which allows the mother to develop her human capital. Although the contributions of older children (sons or daughters) do not directly affect welfare receipt, older daughters may assist in their mothers' self-sufficiency via their role in helping mothers further their education. The fact that daughters, but not sons, influence mothers' mobility is a sign that the gendering of carework is being perpetuated.

The fourth overarching finding in this dissertation is that *women's prospects for mobility vary across racial/ethnic and class groups beyond the effects of childcare on women's human capital development or human capital on women's mobility.* Black and Hispanic women are unlikely to experience motherhood wage penalties, and are more likely to further their education as mothers of young children than are White women. The idea that these groups are "advantaged" in these respects initially seems odd given the findings that these groups are more

likely to receive welfare and given the plethora of research on the disadvantages faced by these minority groups. However, as also shown here, these women have significantly lower wages regardless of parental status as well as lower levels of education than their White counterparts. Minority women may not experience wage penalties because their wages have less distance to fall and these groups of women may be more likely to return to school as mothers since they have more room to increase their education, particularly given the high dropout rates for Black and Hispanic women. Although returning to school may help women avoid welfare receipt, as noted above, some research suggests turning educational gains into higher wages and/or promotions is more difficult for Black and Hispanic women than for White women (Hall 2008; McGuire and Reskin 1993). I also found that work experience for low-income Black and Hispanic women, regardless of whether or not the woman is currently receiving welfare, is unlikely to lead to higher wages as it does for White women. Thus, contrary to standard human capital models, attempts at increasing human capital though education or continued work experience do not actually lead to increases in pay for Black and Hispanic mothers. I attribute this effect to employment discrimination against these groups. Even in instances where childcare does help minority women build human capital (i.e. educational enrollment), this human capital does not necessarily lead to mobility.

Children and childrearing may actually have a larger impact on the human capital development and mobility of White women as compared to minority women. For White women, having additional children impedes wage growth even after taking into account differences in human capital, and White mothers are unable to avoid these penalties without nonparental childcare. White mothers also have lower odds than Black and Hispanic women of being enrolled in education as mothers and, like Black and Hispanic mothers, are unlikely to further

their education without some form of nonparental childcare. In contrast to the situation of Black and Hispanic women, as described above, White women may experience more measurable negative effects of having children because of their general higher socioeconomic status, as measured by higher education, income, and wages. It is important to note, however, that White mothers have more education prior to motherhood and hence may feel less need to get more education. In sum, formal childcare and informal childcare assistance may serve to help women, but the provision of childcare alone does not adequately address the range of inequalities simultaneously experienced by women, nor does childcare provide the only support that they need to achieve social mobility.

THEORETICAL CONTRIBUTIONS: CHILDCARE AND SOCIAL STRATIFICATION

Theoretically, this research contributes to better sociological understanding of the intertwining of workplace and family roles and the ways in which they contribute to gender inequality in both domains. Theories of gender stratification have placed the division of household labor, with women's greater responsibility for childrearing, as a central explanatory factor in women's economic inequality (Blumberg 1978; Chafetz 2004; Collins et al. 1993; England 2005b; Kay and Hagan 1998). The importance of nonparental childcare for mothers, whether generally or in regard to specific types of care, highlights the fact that women's ability to engage in work or educational activities is closely tied to their roles as caregivers. While I only examine mothers, and am thus unable to compare the effects of childcare or the division household labor between mothers and fathers, I can conclude that caring for children affects women's mobility options, albeit differently for different groups of women.

Exploring how different groups of women balance work and family roles also contributes to a greater understanding of levels of inequality between groups of women. Human capital

theory has proven to be limited in providing a framework to explain economic inequality across groups of women. Individual-level perspectives such as human capital theory, at best, tell only one part of the story; gender inequality is continually produced and reproduced through both individual- *and* structural-level processes. Individuals' choices are constrained at interactional and institutional levels in ways that individuals may not even recognize unless they choose to go against the gender status quo (Risman 1998)—or desire equitable wages. Ridgeway and Correll (2004b) specifically discuss the relationship between cultural beliefs and individual outcomes. To them, cultural beliefs and stereotypes about gender have broad social significance, affecting the "social relational" contexts that shape and maintain the gender system. These are the contexts in which individual men and women make decisions and are evaluated, eventually leading to substantial inequality between genders.

I believe that Folbre's (1994) theory of structures of constraint is the most useful framework for conceptualizing the ways in which women's mobility is affected by a multitude of structural factors—gender, race/ethnicity, class, and marital status. To Folbre, individuals are located within a number of interlocking structures of constraint, each of which is made up of a set of assets, rules, cultural norms, and preferences that help to define group identity and power. Using this broader framework that includes and extends beyond gender I can more readily assess inequality among women. As McCall (2001) has observed, improvement in the economic status of one group of workers does not necessarily improved the status of others and may exacerbate within-gender differences. Women are constrained and judged by more than just their gender, and other structures may prove more constraining in some circumstances. For example, the negative cultural stereotypes about Black women and Hispanic women affect the life choices and chances of these women, exacerbating and maintaining their inequality to such an extent that

even the further development of their human capital does not place minority women on an equal playing field with their White counterparts. The negative stereotypes about this group are largely based on the intersections of race/ethnicity, class, gender, and marital status. This is certainly the case of stigma against Black women, where employers assume that Black women are poor, single mothers who can be easily exploited.

Additionally, several of the findings in this study underscore the devaluation of carework in our society, as posited by the devaluation theory, although the evidence and potential effects of this devaluation are different across racial and ethnic groups. The finding that poor mothers of color do not experience long term benefits of working while on welfare, but are required to work when their children are young in order to receive welfare benefits, draws attention to the devaluation of the care that these women provide for their families. For White women, the results reported in the motherhood penalty chapter in particular point to the importance of consistent devotion to career over family in order to achieve equity within the paid labor force, a topic that has received some recent qualitative attention (Blair-Loy 2005). White women are the only group that experiences increases in wages commensurate with years of work experience. White women who stay at home with young children face steep motherhood penalties in wages—penalties that other White mothers avoid by using non-parental childcare. As a result, wealthier White mothers may turn to forms of childcare that recreate racial/ethnic inequality, most notably nonrelative childcare provided by minority women (e.g. Blair-Loy 2005; Hertz 1986; Hondagneu-Sotelo 2007; McCall 2001; Rollins 1985). Minority women are overrepresented in carework occupations more generally, including work as private domestics as well as in childcare centers (Budig and Misra 2008; Gerstel and Sarkisian 2006). White mothers benefit professionally from such care, while the minority women who care for their children

suffer from depressed wages, highly controlled work environments, and isolation from their own families.

POLICY IMPLICATIONS

By examining the multiple childcare strategies used by women and assessing the consequences of these arrangements on the long-term economic well-being of these women, this research provides a base of empirical knowledge to be drawn upon for devising public policies surrounding such issues as childcare, adult education, and gender inequality. As mentioned in previous chapters, public policies with regard to childcare have been directed toward center-based care solutions. The findings here present mixed support for this approach. The main example of this is among single mothers, who are disproportionately poor and the targets of such governmental policies. Regarding education, single mothers who use center-based care are more likely further their education than single mothers who use any other childcare arrangement, while mothers who use relative care are no more likely to be enrolled in education or job training than mothers who use no arrangement at all. Black single mothers who use center-based care, however, are more likely to experience wage penalties than Black mothers who use any other care arrangement.

Since the effects of childcare are not consistent across groups of women or across mobility indicators, public support for childcare should be adequately flexible to address the specific needs of different mothers. This support would necessarily allow for multiple care arrangements or the purchase of back-up care arrangements if primary care falters. Some flexibility, specifically choice in care provider and type of childcare, already exists within the U.S. public childcare subsidy system. Disproportionate public childcare expenditures on center-care persist in part because of confusion about subsidy use. Educating social workers and

potential subsidy recipients about childcare subsidies, in combination with the expansion of the program, could be beneficial to women in choosing the type of care that is best suited to their needs.

Increasing childcare availability is not, however, necessarily the best public policy answer for helping mothers balance work, family, and/or education. Though increasing access to both childcare *and* education may indirectly help to curb mothers' welfare use, childcare does not directly affect mothers' welfare use. Furthermore, as noted above, Black mothers who have childcare are no more likely to avoid wage penalties than Black mothers who use no care arrangement at all and those with childcare may even be more vulnerable to wage penalties. The findings from these chapters point to alternate solutions, such as supporting the caregiving role of mothers with young children through extended, state-supported maternity leaves. If Black and Hispanic mothers do not benefit financially from their years of work experience, these mothers could be allowed the option of spending more time caring for their children during this period.

Among the previously posed solutions to relieving women's carework burden, both Nancy Folbre (1994, 2001, 2008) and Paula England (1999b) have asserted that the care of children needs to be reframed as a public good and that the costs of carework should be socialized. This would include the widespread subsidization of high-quality childcare for all citizens, similar to the French model of childcare. Folbre (1994) additionally states that men and women should share the costs of carework within families. Both fathers and mothers should be encouraged to contribute to raising children, and specialization in family labor should not be economically penalized. My findings suggest that this is especially needed in White families where women currently suffer wage penalties due to their hours of household labor and, for some women, time out of the labor force while their kids are young. To Folbre (2001), carework

should be supported through child support from fathers as well as some form of public compensation. Re-dividing the costs of care toward both society and males seems to be a necessary, though perhaps idealistic, steps toward gender equality that is likely to span across groups of women.

LIMITATIONS

There are several limitations to this study that are related to limitations in the data available. First, the ideal dataset for the welfare analysis would have contained longitudinal data for childcare and welfare status, as well as for controls such as marital status and race/ethnicity, so that I could more closely assess the connections between these variables. Unfortunately, there are only three datasets from the U.S. that collect detailed information on both childcare and family welfare use—the Panel Study of Income Dynamics (PSID), The Fragile Families and Child Well-Being Study, and the Early Childhood Program Participation survey (ECPP). The lack of data on the links between childcare and mothers' mobility is further evidence of the devaluation of carework. The two longitudinal datasets with these data do not contain sufficient samples of women on welfare, making the cross-sectional ECPP survey the best dataset for the analysis of childcare on welfare. However, the combination of datasets for the welfare analyses places limitations on the analyses. For example, I am unable to directly explore mediating or moderating affects of welfare on the relationship between childcare and wages.

Second, the quantitative data available can easily test individual-level explanations to inequality, but are limited in their ability to analyze structural level explanations to inequality, especially discrimination. This is a common problem with large-scale, nationally representative datasets—they typically gather more information on individuals than on organizations and institutions. As a result quantitative analyses of gender economic inequality frequently test

individual level explanations and only speculate that unexplained inequality is due to discrimination (Anderson and Shapiro 1996; Budig and England 2001; Glauber 2007). It is possible that women in this study experienced organization-based discrimination. In particular, my finding that a "welfare stigma" may have significant and long-lasting effect on mobility options for minority women suggests that factors beyond the direct control of women and not explainable by human capital frameworks might be operating. Other studies have found evidence that employers negatively stereotype Black women as workers (Browne and Misra 2003; Kennelly 1999), but research has not quantitatively explored the long-term effects of this stereotyping on minority women. Future data collection and research can address these gaps by assessing factors beyond the individual.

Third, these data do not contain information about why women choose the care arrangements that they do. Women may not have viable options between types of childcare. For example, not everyone has access to regular relative care or can afford center-based care. Understanding women's choices and constraints with childcare decisions *and* the effects of those choices on mobility will lead to better policy-making on these issues.

FUTURE RESEARCH

Limitations often lead to ideas for future research. The final two limitations lead to one common research idea—a mixed-methods study of childcare and work/family balance among mothers, again with a particular interest in low-income, working mothers. Combining qualitative interviews of low-income mothers with quantitative data will allow me to explore lingering questions about how women's employment affects and is affected by childcare options, the division of household labor, and employment discrimination. I can also investigate the effects

(actual or hypothetical) of policy-changes on women's decisions about family, employment, and education, making these women active participants in generating policy suggestions.

Additionally, a separate research project could evaluate quantitatively the effects of informal carework assistance within the home on intergenerational mobility. Dobson and Dickert (2004) review qualitative research on this girls' family labor and speculate that the contributions of older children to household labor can have detrimental effects for these children's mobility. They argue that in helping with household labor, these children may miss opportunities to develop their own human capital. The findings in chapter 4 suggest that the family labor of daughters is helpful to mothers. Not only is the topic of intergenerational mobility beyond the scope of this research, but I was also unable to directly assess the intergenerational effects of household labor using ECPP data. This would be an interesting avenue for future research using longitudinal data such as the Panel Study of Income Dynamics.

CONCLUSION

My work with low-income women at the local domestic violence shelter inspired me to explore the ways in which childcare could alleviate some of the negative effects of carework on upward mobility. I wanted to further the base of empirical knowledge about the benefits of childcare for low-income mothers and help to establish what types of childcare are most beneficial for the mobility of mothers. I found, however, that the effects of childcare are more complicated than might be expected and are bound up with issues of the allocation of carework more generally. Not all women benefit from the same types of childcare, and using certain forms of care can further disadvantage some groups of women. In general, I found that women are constrained in their ability to achieve social mobility by their racial/ethnic, marital status, and class locations. Women's positions within these structures affects their mobility beyond the

effects of childcare on human capital development and beyond differences in human capital across groups. Human capital theory falls short of recognizing the social structures that shape social norms and individual decision-making.

Unfortunately, the findings here do not provide a clear answer on how to assist women like those at the shelter with their mobility and childcare needs, as each woman is affected differently by her position within these structures of constraint. For example, because of their race, Black women face more obstacles to mobility in part because of racialized assumptions about class, marital status, and carework responsibilities. Generally, increased access to childcare can help women and is likely the most feasible policy solution in the short run. Though the government cannot directly provide the full range of care options, such as relative care, it can provide economic support for a range of childcare options so that mothers to make the best choices for their circumstances. Social workers can also assure that clients know the childcare options available to them with childcare subsidies.

Finally, this research also suggests that further education, and support of the necessary childcare for women's education, seems to be a more sound avenue to economic self-sufficiency and mobility for low-income mothers than other mobility options. My results show that minority women do not experience increases in wages commensurate with work experience, whether or not they are receiving welfare. While previous studies have found that minority women have difficulty turning educational credentials into higher pay and promotions (Baunach and Barnes 2003; Hall 2008; McGuire and Reskin 1993; National Research Council 2004), the educational results in Chapter 5 in combination with previous research (Nichols, Elman, and Feltey 2006; Pandey and Kim 2008; Pandey et al. 2000; Zhan and Pandey 2004b) point to education as the most effective mobility option for low-income mothers.

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APPENDIX: DETAILED DESCRIPTIONS OF MEASUREMENT OF VARIABLES

Table A-1: Description of the Measurement of ECPP Variables for Education Chapter

Variable	Measurement
Dependent Variables	
Mom Enrolled in Education	Dummy Variable=1 if Mother is Enrolled in Education or Job Training
Regular Childcare Arrangement	
Center-Based Care	Dummy Variable=1 if Center-Based Care is the Primary Childcare Arrangement
Relative Care	Dummy Variable=1 if Relative Care is the Primary Childcare Arrangement
Nonrelative Care	Dummy Variable=1 if Nonrelative Care is the Primary Childcare Arrangement
Mixture of Care	Dummy Variable=1 if the Primary Childcare is an Even Mixture of 2 or More Care Arrangments
No Childcare Arrangment	Dummy Variable=1 if Family does Not Use Any Form of Nonparental Childcare
Receives Chidlcare Subsidies	Dummy Variable=1 if Family Receives Financial Help Paying For Childcare TANF, State Government, or Welfare
Informal Carework Assistance	
Any Older Daughters (10-17 y/o)	Dummy Variable=1 if Any Daughters Between the Ages of 10 and 17 Live in the Home
Grandparents Live in Household	Dummy Variable=1 if at Least One Grandparent of the Child is Living in the Home
Race, Ethnicity, and Immigration	
White	Dummy Variable=1 if the Primary Race for the Child is Reported as "White" (Proxy for Mother's Race/Ethnicity)
Black	Dummy Variable=1 if the Primary Race for the Child is Reported as "Black" (Proxy for Mother's Race/Ethnicity)
Hispanic	Dummy Variable=1 if the Primary Race for the Child is Reported as "Hispanic" (Proxy for Mother's Race/Ethnicity)
Immigrant	Dummy Variable=1 if Mother is an Immigrant to the U.S.
Other Characteristics	
Mother's Age	Mother's Age in Years
Single	Dummy Variable=1 if Mother is Unmarried

Table A-1 Continued on Next Page

Table A-1: Continued

Variable	Measurement
Years of Education of Mother	Mother's Highest Level of Schooling Attained
Number of Children Under 10	Number of Children Under 10 y/o Living in Home
Hour Working for Pay	Number of Hours that the Mother Worked for Pay in the Last Week
Poverty	Dummy Variable=1 if Family Income is At or Below the Poverty Line for 2005 according to 2005 HHS Guidelines
Between Poverty and Median	Dummy Variable=1 if Family Income is Between the Poverty Line and Median Family Income According to HHS Guidelines and Census Data (respectively) for 2005
Above Median Income	Dummy Variable=1 if Family Income is At or Above the Median Family Income for 2005 According to Census Data for 2005
Government Assistance	Dummy Variable=1 if Family Received Financial Assistance from TANF or state welfare systems

Table A-2: Description of the Measurement of ECPP Variables in Welfare Analysis

Variable	Measurement
Dependent Variables	
Welfare Receipt	Dummy Variable=1 if Respondent has Received TANF or State Welfare within the Past 12 Months
Regular Childcare Arrangement	
Center-Based Care	Dummy Variable=1 if Center-Based Care is the Primary Childcare Arrangement That Mother Began Using One Year Prior to Interview
Relative Care	Dummy Variable=1 if Relative Care is the Primary Childcare Arrangement That Mother Began Using One Year Prior to Interview
Nonrelative Care	Dummy Variable=1 if Nonrelative Care is the Primary Childcare Arrangement That Mother Began Using One Year Prior to Interview
Mixture of Care	Dummy Variable=1 if the Primary Childcare is an Even Mixture of 2 or More Care Arrangments, Mother Was Using a Mixture One Year Prior to Interview
No Childcare Arrangment	Dummy Variable=1 if Mother Was Not Using Any Form of Nonparental Childcare One Year Prior to Interview
Work Status	
Inconsistent Work Over Past Year	Dummy Variable=1 if Mother Worked Some but Not all 12 Months of the Past Year or Was Unemployed and Looking for Work at the Time of the Interview
Consistent Work Over Past Year	Dummy Variable=1 if Mother Worked all 12 Months of the Last Year and Was Not Looking For Work at the Time of the Interview
Not in Labor Force	Dummy Variable=1 if Mother Did Not Work in the Past Year and Was Not Looking for Work at the Time of the Interview
Groups of Women	
White	Dummy Variable=1 if the Primary Race for the Child is Reported as "White" (Proxy for Mother's Race/Ethnicity)
Black	Dummy Variable=1 if the Primary Race for the Child is Reported as "Black" (Proxy for Mother's Race/Ethnicity)
Hispanic	Dummy Variable=1 if the Primary Race for the Child is Reported as "Hispanic" (Proxy for Mother's Race/Ethnicity)
Other Race	Dummy Variable=1 if the Primary Race for the Child is Reported as a Race/Ethnicy Other than Black, White, or Hispanic
Immigrant	Dummy Variable=1 if Mother is an Immigrant to the U.S.

Table A-2 Continued on Next Page

Table A-2: Continued

Variable	Measurement
Household Characteristics	
Number of Children Under 10	Number of Children Under 10 y/o Living in Home
Number of Older Children in Home (10-17)	Number of Older Children in the Home Between the Ages of 10 and 17
Grandparents Live in Household	Dummy Variable=1 if at Least One Grandparent of the Child is Living in the Home
Other Characteristics	
Mother's Age	Mother's Age in Years
Single	Dummy Variable=1 if Mother is Unmarried
No High School Degree	Dummy Variable=1 if Mother's Highest Level of Educational Attainment is Less Than a High School Degree
High School Degree	Dummy Variable=1 if Mother's Highest Level of Educational Attainment is a High School Degree
Vocational Degree or Some College	Dummy Variable=1 if Mother's Highest Level of Educational Attainment is a Vocational Degree or Some College
College Degree or More	Dummy Variable=1 if Mother's Highest Level of Educational Attainment is A Bachelor's Degree or More

Table A-3: Description of the Measurement of PSID Variables and Summary of Location within Dissertation

Variables	Variable Description	Welfare Analysis	Motherhood Penalty Analyses
Dependent Variable			
Ln Hourly Wages	Natural Log of Woman's Hourly Wages	X	X
Independent Variables			
Number of Children	Number of Children Under 18 Years Old Living in the Household	X	X
Cumulative Years on Welfare	Cumulative Number of Years the Woman Reported Receiving TANF, AFDC, or ADC During Observation Period		X
Housework/Carework			
Hours of Housework	Weekly Hours of Housework Completed by Woman	X	X
Other Human Capital Variables			
Tenure	Number of Months at Current Job	X	X
Years Full-Time Work	Years Worked Full-Time in Paid Labor Force During Observation Period	X	
Years in PLF Part-Time	Years Worked Part-Time in Paid Labor Force During Observation Period	X	
Years Full-Time Work on Welfare	Number of Cumulative Years that the Mother Worked Full-Time While Receiving TANF, AFDC, or ADC during Observation Period		X
Years Part-Time Work on Welfare	Number of Cumulative Years that the Mother Worked Part-Time While Receiving TANF, AFDC, or ADC during Observation Period		X
Years Full-Time Work not on Welfare	Years Worked Full-Time in Paid Labor Force While Not on TANF, AFDC, or ADC During Observation Period		X
Years in PLF Part-Time not on Welfare	Years Worked Part-Time in Paid Labor Force While Not on TANF, AFDC, or ADC During Observation Period		X
Years of Education	Number of Years of Education	X	X
Enrolled in School	Dummy Variable=1 if Woman is Currently Enrolled in Educational Program	X	X
Job Characteristics			
Full-Time	Dummy Variable=1 if Woman Works for Pay over 35 Hours per Week	X	X
Part-Time	Dummy Variable=1 if Woman Works for Pay Less than 35 Hours per Week		
Percent Female	Percent Female Workers in Current Occupation According to Census Data	X	X
Childcare Job	Dummy Variable=1 if Woman is a "Childcare Worker" According to US Census Classification		X
Farm Occupation	Dummy Variable=1 if the Respondant is a Farmer, Fisher, or Forester Based on Her Census Occupational Code for the Given Survey Year	X	X
Lower Blue Collar Occupation	Dummy Variable=1 if the Respondant is a Laborer or Service Worker Based on Her Census Occupational Code	X	X
Upper Blue Collar Occupation	Dummy Variable=1 if the Respondant is a Craftsperson or Operative Based on their Census Occupational Code	X	X

Table A-3 Continued on Next Page

Table A-3: Continued

Variables	Variable Description	Welfare Analysis	Motherhood Penalty Analyses
Lower White Collar Occupation	Dummy Variable=1 if the Respondant Works in a Clerical or Sales Occupation Based on Her Census Occupational Code	X	X
Upper White Collar Occupation	Dummy Variable=1 if the Respondant Works in a Professional or Managerial Occupation Based on Her Census Occupational Code	X	X
Marital Status			
Never Married	Dummy Variable=1 if Woman Has Never Been Married	X	X
Separated	Dummy Variable=1 if Woman is Widowed, Divorced, or Separated	X	X
Married	Dummy Variable=1 if Woman is Married	X	X
Social Class			
Poverty	Dummy Variable=1 if Family has been Below the Poverty Line According to the HHS Poverty Guidelines for the Survey Year		X
Race			
White	Dummy Variable=1 if "White" is Woman's Primary Racial Identification and She is Not of Hispanic Origin	X	X
Black	Dummy Variable=1 if "Black" is Woman's Primary Racial Identification and She is Not of Hispanic Origin	X	X
Hispanic	Dummy Variable=1 if Woman Identifies as Hispanic	X	X
Childcare			
No Prekindergarten Care	Dummy Variable=1 if Family Did Not Use Any Non-Parental Pre-Kindergarten Care for Children in the CDS Sample		CDS Analysis Only
Center-based Only	Dummy Variable=1 if Family Only Used Center-Based Daycare for Children in CDS Sample		CDS Analysis Only
Relative Only	Dummy Variable=1 if Family Only Used Relative Care for Children in CDS Sample		CDS Analysis Only
Nonrelative Care Only	Dummy Variable=1 if Family Only Used Non-Relative Care (Babysitter or Family Daycare) for Children in CDS Sample		CDS Analysis Only
Mixed Care Sequential	Dummy Variable=1 if Family Used a Mixture of Childcare Types (Sequentially) for Children in Sample Before They Entered Kindergarten		CDS Analysis Only
Mixed Care Simultaneous	Dummy Variable=1 if Family Used a Mixture of Childcare Types for Children in Sample Before They Entered Kindergarten and The Childcare Types Overlapped During at Least One Observation Period		CDS Analysis Only
Children x NopreK	Interaction Variable Between Number of Children and No PreK Care		CDS Analysis Only
Children x Center-based Only	Interaction Variable Between Number of Children and Center-based Only		CDS Analysis Only
Children x Relative Only	Interaction Variable Between Number of Children and Relative Care Only		CDS Analysis Only
Children x Nonrelative Only	Interaction Variable Between Number of Children and Nonrelative Care		CDS Analysis Only
Children x Mixed Sequential	Interaction Variable Between Number of Children and Mixed Care Sequential		CDS Analysis Only
Children x Mixed Simultaneous	Interaction Variable Between Number of Children and Mixed Care Simultaneous		CDS Analysis Only