

Mediating Impact of Social Capital and Human Capital on Employment Outcome among  
Single Women Who Use Welfare: A Structural Equation Model

DISSERTATION

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## Abstract

With the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996, Congress ended “welfare as we know it” and formally adopted a workfare approach. However, families continue to be trapped in the “low-wage ghetto”. Therefore, research is needed that investigates effective routes out of poverty. Studies have found that welfare recipients with higher educational attainment work more and earn significantly higher income than those with lower educational attainment. However, very little research exists around the relationship between social capital and labor force participation.

Four research questions guided this study: (1) How do demographic variables affect social capital and human capital among single women who use welfare? (2) How do social capital and human capital affect employment outcome? (3) Do social capital and human capital act as mediators between demographic variables and employment outcome? (4) How do macro-level variables (i.e., city unemployment rate and state TANF policy) affect employment outcome?

This study analyzed Wave 2 (2005-2007) data from the Making Connections Cross-Site Survey database. 1,428 women with no spouse/partner present in the household who indicated use of a TANF/welfare office in the last 12 months were selected for inclusion in the study sample. An exploratory factor analysis was conducted to extract factors that underlie the social capital construct and to identify the indicators

that were associated with each of those factors. Five social capital factors emerged: support giving social capital, bonding social capital, bridging social capital, value sharing social capital, and support receiving social capital. Structural equation modeling was used to answer the major research questions in this study.

This study found that older participants had a lower level of human capital, support giving social capital, and support receiving social capital than their younger counterparts. Additionally, older recipients had a worse employment outcome. Human capital and support giving social capital were positively associated with employment outcome, meaning that a higher level of human capital and giving support to family and friends were associated with a better employment outcome. In contrast, receiving support from family and friends was associated with a worse employment outcome. Human capital, support giving social capital, and support receiving social capital were found to mediate the relationship between age and employment outcome. Furthermore, more generous state TANF policy was associated with a worse employment outcome. Finally, there was sufficient evidence that factor loadings differed across race/ethnicity, presence of child under the age of 6, and ownership of a vehicle.

This study has implications for policy, practice, and research. First, federal TANF policy should be amended to encourage the accumulation of human capital. Second, community participatory interventions are needed to increase social capital. Third, research is needed that will develop a measurement tool that can be tailored to measure social capital among low-income families. Longitudinal research is needed to examine the impact of social capital on employment in the long-term.

Dedicated to my parents, Nicholas and Shirley Gezinski

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## Fields of Study

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## Disclaimer

The author acknowledges that data included herein are derived from the Making Connections Survey in the NORC Data Enclave. Any opinions, findings, and conclusions expressed in this material are those of the author and do not necessarily reflect the views of the Annie E. Casey Foundation or NORC. All results have undergone a review process to confirm that no confidential data have been revealed.

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## Chapter 1: Introduction

### 1.1 Statement of the Research Problem

Poverty represents a significant problem in the United States. Overall, the percent of Americans in poverty in 2009 was 14.3 percent up from 13.2 percent in 2008, a statistically significant change (DeNavas-Walt, Proctor, & Smith, 2010). This represents the highest poverty rate since 1994. In other words, 43.6 million people lived in poverty compared to 39.8 million in 2008, which equates to an increase of 3.8 million individuals. This 43.6 million figure is the largest number of people in poverty in the 51 years that poverty estimates have been published. The economic downturn of 2007 likely affected poverty rates. For instance, the number of people in poverty increased by 6.3 million and approximately 2 percentage points between 2007 and 2009. Employment has a direct effect on poverty status. Of those who worked full-time year round in 2009, 2.7 percent lived in poverty. Whereas, 14.5 percent of those who worked less than full-time year round lived in poverty and 22.7 percent of those who did not work at least one week lived in poverty.

Large differentiation exists between subgroups of the poor. In 2009, almost 14 percent of persons born in the United States lived in poverty and 19 percent of foreign-born persons lived in poverty (DeNavas-Walt et al., 2010). Of those who indicated foreign-birth, about 11 percent of naturalized citizens were poor in contrast to about 25 percent of non-citizens. Large racial differences exist, as well. In 2009, 25.8 percent of

Black persons were poor, followed by Hispanic persons (25.3 percent), Asian persons (12.5 percent), and white, non-Hispanic persons (9.4 percent). Children are at a greater risk of poverty than all other age groups (Barusch, 2009). For instance, over one in five children lived in poverty in 2009 (Wight, Chau, & Aratani, 2011). However, 36 percent of children who are Black are poor in contrast to 12 percent of children who are white.

Female-headed households are particularly vulnerable to poverty. In 2009, 30 percent of female households with no husband present were poor in contrast to 17 percent of male households with no wife present and 6 percent of households with married couples (DeNavas-Walt et al., 2010). In 2006, the rate of poor single women with children under the age of 18 was 28 percent (U.S. Census Bureau, 2006). As with other sub-populations, large racial differentiation exists among poor single mothers. In 2006, 44 percent of Black single mothers lived in poverty followed by Hispanic single mothers (43 percent), white single mothers (33 percent), and Asian single mothers (24 percent).

There are a multitude of policy approaches to address poverty in female-headed households. The United States' approach can be characterized as a selective, "social safety net" system involving limited governmental involvement, the protection of negative rights of liberty (i.e., rights that oblige governmental inaction), and the distribution of few benefits as a right of citizenship (Daly & Rake, 2003; Olsen, 2007). This approach can be compared to other industrialized countries. For instance, Sweden has an institutional, social democratic system in effect while Canada has a social liberal system (Olsen, 2007). Unlike other industrialized countries, the United States has never provided a universal family allowance program opting instead for means-tested

programs. Additionally, the United States differs from other industrialized countries in that no statutory, paid maternity, paternity, or parental leave is provided; child care is often inadequate or costly; and a national public health insurance program is not in effect.

Various federal programs exist to address the needs of low-income families in the United States. Major programs include Temporary Assistance for Needy Families (TANF); Medicaid/State Children's Health Insurance Program (S-CHIP); Supplemental Nutrition Assistance Program (SNAP); Women, Infants and Children (WIC); Head Start; Survivors Insurance Program; Social Security Disability Insurance (SSDI) Program; Supplemental Security Income (SSI) Program; Low Income Home Energy Assistance Program (LIHEAP); Cash and Medical Assistance (CMA) Program directed at refugees; Housing Choice Voucher Program (Section 8); subsidized child care; and school meals among others (U.S. Administration for Children & Families, 2009; U.S. Centers for Medicare & Medicaid Services, 2009; U.S. Department of Agriculture Food and Nutrition Service, 2009; U.S. Department of Housing and Urban Development, 2009; U.S. Social Security Administration, 2009).

This study will focus on the social safety net program entitled Temporary Assistance for Needy Families (TANF). TANF replaced Aid to Families with Dependent Children (AFDC) with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 to address income supports and "end welfare as we know it" (Pandey, Zhan, & Collier-Tenison, 2004). According to PRWORA, individuals may receive cash assistance for a maximum of five years in their lifetime, and must commence work within two years of receiving assistance (Pandey et al., 2004).

However, states are permitted to devise their own guidelines around time limits (as long as they do not exceed 5 years) and benefit eligibility. The four purposes of TANF are to:

(1) provide assistance to needy families so that children may be cared for in their own homes or in the homes of relatives; (2) end the dependence of needy parents on government benefits by promoting job preparation, work, and marriage; (3) prevent and reduce the incidence of out-of-wedlock pregnancies and establish annual numerical goals for preventing and reducing the incidence of these pregnancies; and (4) encourage the formation and maintenance of two-parent families. (104<sup>th</sup> Congress, 1996)

Welfare reform has been deemed a success by some and a failure by others.

However, the definition of success determines whether reform was actually a success or failure. To illustrate TANF's success, supporters of the program point to the nearly 60 percent decrease in the number of individual welfare recipients from August 1996, the month TANF was enacted, to September 2003 (Department of Health and Human Services [DHHS], 2004). Additionally, DHHS reported that the number of families receiving TANF decreased by 54 percent during this same period. Several circumstances can explain this decline including the fact that the advent of TANF coincided with a period of economic growth in the United States, which meant that there were more jobs to be had. Additionally, welfare rolls were cut by not permitting people on in the first place. Further, recipients were often sanctioned for program violations such as not complying with work requirements. Lens (2002a) estimated that between one-half and three-fourths of recipients left the welfare rolls for employment; whereas, Myadze's

(2006) examination of select states (i.e., WV, CO, FL, ID, WY, and WI) resulted in the estimation that one-third or fewer of case closures were due to employment. In Mississippi, key informants indicated that the state's primary goal was to reduce caseloads through diversion and immediate job placement (Parisi, Harris, Grice, Taquino, & Gill, 2005). Additionally, they indicated that states made little attempt to increase human capital and employment opportunities.

Welfare rolls may have decreased, but this does not indicate that former recipients' standard of living improved. Although 50 to 60 percent of former recipients found work, largely in the service industry, the average wage was between \$5.50 and \$7.00 an hour (Lens, 2002a). Lower-Basch & Greenberg (2008) found that typical wages for former recipients ranged from \$7.00 to \$8.00 per hour. In Wisconsin, although "63 percent of those who left the rolls were working, 68 percent of those surveyed described themselves as barely making it, with less than half better off than they were on welfare" (Lens, 2002a, p. 281). Additionally, when former welfare recipients secured employment their income did rise, but after expenses (e.g., child care, transportation, and clothing) their standard of living actually declined compared to pre-employment standard of living (Edin & Lein, 1997).

Research is needed that investigates effective routes out of poverty. Human capital theory and social capital theory can be integrated to produce a theoretical framework that considers both the actions of individuals and the community factors that affect employment. Human capital theory contends that investing in education, on-the-job training, and work experience will affect the labor market potential of individuals and

increase their labor force participation (Becker, 1993). Theoretically, this increased labor force participation will elicit greater income. While human capital theory is useful in its emphasis on the relationship between human capital and labor, it lacks a conversation pertaining to forces outside individuals that assist in labor force participation. For example, human capital theory relies on the actions of *individuals*, and lacks any consideration of familial/friend support or community participation. Therefore, social capital theory will be utilized to supplement human capital theory. Putnam defined social capital as “features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions” (1963, p. 167).

Research exists around the impact of human capital investment on economic outcomes among welfare recipients. For example, studies have found that welfare recipients with higher educational attainment work more and earn significantly higher income than those with lower educational attainment (Dworsky & Courtney, 2007; Kyoung & Yoon, 2008; Latimer, 2004; Pandey, Zhan, & Kim, 2006; Zhan & Pandey, 2004). However, very little research exists around the relationship between social capital and labor force participation, and the investigator could not find any research that examined this relationship among TANF recipients specifically. Research that does exist is mixed. While Brisson, Roll, and East (2009) found an inverse relationship between bonding social capital and full-time employment, Aguilera (2002) found a positive relationship between social capital (measured as network structure, network quality, and network diversity) and employment and hours worked. Research is needed that examines the impact of various types of social capital on labor force participation among TANF

recipients. Moreover, a social capital tool must be evaluated to ensure it is valid and reliable.

## 1.2 Research Questions

For this study, the investigator examined the mediating impact of social capital and human capital on employment outcome among women who indicated the use of a TANF/welfare office at some point during the past 12 months. Only those women who reported that no spouse/partner resided in the household were included in the research study. This study addressed the following research questions: (1) How do demographic variables affect social capital and human capital for single women who use welfare? (2) How do social capital and human capital affect employment outcome? (3) Do social capital and human capital act as mediators between demographic variables and employment outcome? (4) How do macro-level variables affect employment outcome?



## Chapter 2: Literature Review

This chapter will provide an overview of the historical and social transformation of cash assistance for low-income mothers. Second, the theoretical framework (i.e., human capital theory and social capital theory) will be explored. Third, an empirical review of the literature will be presented. Finally, the research hypotheses and conceptual framework will be discussed.

### 2.1 Historical Context of Welfare Reform

Over time, family policy has shifted from Mother's Pensions to Aid to Dependent Children (ADC) to Aid to Families with Dependent Children (AFDC) to Temporary Assistance for Needy Families (TANF). Moreover, efforts to reform welfare in the United States date back to the early 1960s and include the following approaches: 1) rehabilitative approach; 2) incentive approach for marriage and work; 3) human capital and learnfare approach; 4) child support enforcement approach; and 5) workfare approach (Kim, 2011). This section will trace this chronology of events with special emphasis on the values underlying these shifts, as well as the key players in the evolution of family policy.

#### *Background of Welfare Reform of 1996*

Patricia Hill Collins (2000) stated, "Women are differentially evaluated based on their perceived value to give birth to the right kind of children, pass on appropriate American family values, and become worthy symbols of the nation" (p. 248). This

statement is especially pertinent in the family policy debate as political actors, media outlets, and the general public continually judge women as deserving or undeserving of financial assistance. Mother's Pensions were designed to assist the "deserving poor" (i.e., White widows) to enable these mothers to care for their children inside the home (Abramovitz, 1996; Quadango, 1994; Reese, 2005). The Social Security Act of 1935 transformed Mother's Pensions into a federal entitlement program called Aid to Dependent Children (ADC). In 1939, the majority of welfare recipients were widowed (61 percent), followed by those who had been deserted, divorced, or separated (25 percent), and finally those who had never been married (2 percent) (Abramovitz, 1996). Although the majority of welfare recipients in 1939 were widows, this would not be true in the ensuing years as the majority of poor widows gained access to the Old Age & Survivors' Insurance Program (Reese, 2005). According to Mead (1996), by 1991 the welfare rolls consisted of less than two percent widows and 53 percent people who had never been married.

The first major backlash to ADC occurred in the late 1940s due to the postwar expansion of welfare and the increased usage by unwed mothers and women of color (Reese, 2005). In the early fifties, this resulted in heightened restrictions, such as rules regarding employable mother, suitable homes, man-in-the-house, and substitute fathers (Abramovitz, 1996; Quadango, 1994). Out of wedlock childbearing tripled between 1940 and 1958. Four social trends contributed to this rise in single parenthood including the rise in women's paid labor force participation, decline in earnings of primary breadwinners, sexual revolution, and relative cultural acceptance of these social shifts

(Hays, 2003). Women's labor force participation contributed to the invalidation of caretaking as work and led many to question the right of poor women to remain in the home (Johnson, Duerst-Lahti, & Norton, 2007; Solinger, 2001).

Rising rates of "unemployment, divorce, desertion, illegitimacy, juvenile delinquency, and mental illness in the late fifties and early sixties" (Reese, 2005, p. 329) led to fear about the ability of most families to survive in an ever-changing world. Further, Michael Harrington's 1962 publication entitled *The Other America: Poverty in the United States* shed light on the expansiveness of economic difficulties contributing to the "rediscovery" of poverty in the early sixties (Abramovitz, 1996; see Harrington, 1962). Moreover, President Kennedy delivered a message to Congress that emphasized the 'rehabilitation' of welfare mothers through increased provision of social services and marriage incentives (Kim, 2011). These events led to the 1962 amendments to the Social Security Act which renamed ADC as AFDC and increased federal funding for social services (Abramovitz, 1996; Kim, 2011). The rehabilitation approach was short-lived as counseling and social services were judged to be too costly, and treatment for substance abuse never gained wide support (Kim, 2011).

Controversy was soon to follow this renaming of the welfare program. Patrick Moynihan's 1965 report entitled *The Negro Family: The Case for National Action* contended that welfare dependency resulted from female-headed households and Black matriarchs (Quadango, 1994; Reese, 2005). Additionally, Moynihan held that lack of employment opportunities for Black males resulted in a lack of interest to form and maintain families (Reese, 2005). On the other hand, Charles Murray theorized that

loosened welfare restrictions in the 1960s resulted in the discouragement of marriage (Quadango, 1994). The “white backlash” that emerged in the 1960s has been attributed to perceived excesses of the Civil Rights Movement (Neubeck & Cazenave, 2001).

Various actions were taken to incentivize marriage and work. Believing that ADC encouraged the break-up of the family, the Kennedy Administration gave states the option to extend ADC benefits in 1961 to children of two parent families who were unemployed (Kim, 2011). Thus, the program was renamed Aid to Families with Dependent Children (AFDC) in 1961. President Nixon proposed the Family Assistance Plan (FAP), and President Carter proposed the Program for Better Jobs and Income (PBJI), but both failed to pass Congress. President Reagan’s Family Support Act of 1988 required all states to adopt Assistance to Families with Dependent Children – Unemployed Parent (AFDC-UP). However, AFDC-UP cases accounted for only a fraction of the total welfare caseload.

As time progressed, welfare ideology emphasized work more and more. By the mid-1960s the Negative Income Tax (NIT) became popular in academia and the federal government provided funding for social experiments (Kim, 2011). The NIT would reduce benefits by no more than 50 cents for each dollar earned. Created in 1967, the Work Incentive Program (WIN) was the first policy to require states to establish education and training programs for welfare recipients (Blank & Blum, 1997). Originally, WIN was voluntary for welfare recipients; however, in 1971 the federal government mandated participation for those who did not have special responsibilities at home or preschool-aged children. Due to lack of funding, though, WIN was largely an unfunded mandate.

The human capital and learnfare approach was heavily emphasized under President Johnson who declared the War on Poverty in 1964 (Kim, 2011). Various programs were created under the Economic Opportunity Act to increase education, employment, and job training of low-income families. These programs included Head Start, Job Corps, Work Study, Upward Bound, and the Work Experience Program. However, fiscal conservatism of the 1980s did not permit the human capital and learnfare approach to fully materialize. The Family Support Act (FSA) of 1988 established the federally mandated Job Opportunities and Basic Skills (JOBS) Training Programs, which aimed to enhance employability through basic education, skills training, and postsecondary education (Blank & Blum, 1997; Neenan & Orthner, 1996). JOBS represented another largely unfunded mandate as states lacked funding to provide these services to all who were eligible (Blank & Blum, 1997). Moreover, the human capital and learnfare approach never gained fruition as this approach was judged to be too expensive.

Child support enforcement represents another welfare reform approach. By the early 1970s, Congress realized that parents of most child recipients of AFDC were divorced, separated, or never married (Kim, 2011). Congress introduced the Child Support Enforcement and Paternity Establishment Act in 1975 to create a federal Child Support Enforcement Program under title IV of the Social Security Act. This legislation provided federal matching funds for states to locate nonresident fathers, establish paternity, establish child support awards, and collect child support payments on an ongoing basis. Recipients of AFDC were required to participate in child support enforcement activities, and they were required to give up their right to child support

payments to the state as long as they remained on AFDC. The 1984 Child Support Enforcement Amendments required all states to adopt income withholding in which the nonresident's wages were withheld if the child support payments were delinquent for one month. The Family Support Act of 1988 strengthened the enforcement of child support even further.

Workfare (i.e., work in return for cash benefits) represents the final approach to welfare reform. As previously stated, 1971 marked the first year that women on welfare were required to participate in work and job training programs, except those with preschool aged children. However, this requirement was not effectively implemented (Kim, 2011). The first workfare proposal occurred under the Reagan Administration who proposed to require AFDC mothers to work in community services for cash assistance. Many states implemented some form of workfare, but no state introduced a statewide workfare program until PRWORA in 1996. In 1992, the federal government began to grant waivers of AFDC to states at the state's request. States were permitted to experiment with provisions, which included welfare receipt time limits, work requirements, sanctions for noncompliance, and extended earnings disregards. In 1996, Congress formally adopted the workfare approach by passing PRWORA.

#### *Key Players in the Welfare Reform of 1996*

Key players in the welfare reform of 1996 consisted of right-wing think tanks, politicians, low-wage employers, and media outlets. Many right-wing, corporate-sponsored think tanks formed in the late 1970s effectively shifting the welfare debate toward the right during the eighties and nineties (Reese, 2005). Additionally,

conservative and low-wage employers (e.g., large farmers), as well as the white working and middle classes became closely aligned and powerful during conservative periods. These groups feared that the expansion of welfare would result in increased taxes and decreased supply of cheap labor.

After the 1994 elections, the newly Republican Congress chose to pursue the welfare issue and proposed significantly extreme changes with the Contract with America that promised deep spending cuts in federal programs to fund tax cuts (Cabe, 2002). With the Contract with America, Republicans became united and leadership power was centralized around political rhetoric holding that a federal entitlement was synonymous with irresponsibility and lifelong dependency (Cabe, 2002; Cloud, 1994). Representative Christensen, a Republican, stated, “In the last thirty years the Democratically controlled Congress has spent over \$5 trillion on welfare. In that same 30 years AFDC recipients have more than doubled, the number of single parents has tripled” (Christensen, 1995). With the presidential election looming and polls finding that a majority of Americans favored welfare reform, President Clinton promised to “end welfare as we know it” in the election campaign for his second term. President Clinton signed the PRWORA into law on August 22, 1996 (Off Our Backs, 1996).

PRWORA ended the entitlement of needy families and their children to AFDC benefits and created TANF, a federal block grant for state welfare programs that has vastly expanded state discretion in designing and operating programs. States were required to impose a five-year lifetime limit and establish work requirements. For

instance, single parents were required to work 30 hours per week and couples were required to work 35 hours per week (combined).

### *Values Underlying Welfare Reform*

Three United States value tenets, which highlight individualism, private property, and distrust of authoritative government, contributed to the conceptualization of poverty as a result of individual choices (Quadagno, 1994). Further, the tenets of autonomy of the individual, virtue of work, primacy of family, and desire for and sense of community (Ellwood, 1988) presumably encouraged welfare reform. The autonomy of the individual was central and promoted the myth of meritocracy that holds that individuals can achieve any goal if they work hard enough. Proponents of this philosophy believed that individuals had control over their own destiny; therefore, welfare recipients were considered unwilling to make the personal sacrifices for success. The themes of independence, responsibility, and self-sufficiency pervaded welfare policy discourse allowing officials to shift the focus from their own inability to alleviate poverty to welfare mothers (Limbert & Bullock, 2005). Political figures emphasized the morality associated with work and claimed that the welfare state discouraged marriage.

Stereotyping of welfare recipients also contributed to the public's perception that cash assistance was a problem. The "Welfare Queen" stereotype became rampant and was socially constructed as a single, poor, Black breeder who was too lazy to work (Hancock, 2004; Neubeck & Cazenave, 2001). The "Welfare Queen" would never contribute to society, and she would birth future welfare recipients and prison inmates (Hancock, 2004). Negative stereotypes of Black women (e.g., lazy and hyper-sexual)



originated during slavery to excuse white males' abuse and rape of Black slave women (Collins, 2000; Neubeck & Cazenave, 2001). Thus, the "Welfare Queen" stereotype was a result of historical racism against African Americans.

The belief that Blacks were lazy influenced media coverage that perpetuated the idea that poor Blacks were lazy and undeserving of assistance (Gilens, 1999). Through the examination of commentary of elected officials, poverty experts, advocates, bureaucrats and others in the New York Times and the Washington Post from January 1994 to August 1996, Lens (2002b) found that officials dominated the public discourse with terms such as 'welfare dependency,' 'self-sufficiency,' 'responsibility,' 'self-discipline,' and 'self-control.' Overall, Republican officials were found to rely on "othering" language depicting welfare recipients as lazy and childlike. Neither liberal policy makers nor advocates contradicted these stereotypes. While individualist deficiencies were highlighted, structural barriers remained absent from the discussion. This discourse likely shaped the general public's (especially middle class) perception of welfare recipients and contributed to the belief that AFDC was "money for nothing" (Off Our Backs, 1996). According to Ellwood (1988), 59 percent of the public believed that welfare made "poor people dependent and encourage[d] them to stay poor."

## 2.2 Theoretical Framework

Numerous ideological perspectives exist regarding employment, including orthodox economic theory, institutionalist, radical or Marxist, and neo-liberal (Gordon, 1972; Simmons, Bok, Churchill, & Pritchard, 2001). Orthodox economic theory emphasizes the importance of addressing human capital through training and education

(Simmons et al., 2001). The institutionalist perspective emphasizes the importance of reducing labor market barriers to equality and expanding ethical and stable employment in the public sector. The radical or Marxist approach postulates that labor force inequality is inherent in the division between the bourgeoisie and the proletariat (Marx, 1848). Thus, workers must organize around economic and political power to overthrow the ruling class (Marx, 1848; Simmons et al., 2001). A neo-liberal approach is particularly relevant to welfare reform in the United States today. This theory emphasizes the importance of labor force attachment at a young age (Alon, Donahue, & Tienda, 2001). The theory posits that individuals who do not have early contact will be unemployable in later years. This study will adopt the human capital approach of orthodox economic theory as a starting point for the theoretical framework. Human capital theory is described below.

#### *Human Capital Theory*

The term ‘human capital’ emerged in the late 1950s. Its pioneers included Ted Schultz, Jacob Mincer, Milton Friedman, Sherwin Rosen, and several others associated with the University of Chicago (Daniels & Mickel, 2002). However, the concept behind ‘human capital’ can be traced back to Adam Smith. Smith stated:

The difference of natural talents in different men is, in reality, much less than we are aware of; and the very different genius which appears to distinguish men of different professions, when grown up to maturity, is not upon many occasions so much the cause, as the effect of the division of labour. The differences between the most dissimilar characters, between a philosopher and a common street porter, for example seems to arise not so much from nature, as from habit, custom, and

education. When they came into the world, and for the first six or eight years of their existence, they were, perhaps, very much alike, and neither their parents nor playfellows could perceive any remarkable difference. About that age, or soon after, they came to be employed in very different occupations. The difference of talents comes then to be taken notice of, and widens by degrees, till at last the vanity of the philosopher is willing to acknowledge scarce any resemblance.

(Spengler, 1977, p. 33)

Smith posited the notion that human beings are not different as a result of nature, instead heterogeneity is a result of cultural circumstances that allow for education and the development of skills and ability. While Smith's belief is inherently flawed in its lack of attention to the impact of social inequalities on occupational and class status (e.g., based on gender, race, nationality, and so on), the belief is helpful in its de-emphasis of biological determinism.

It is important to understand the term 'capital' in conceptualizing human capital theory. Capital is defined as an entity that is purchased or created at a given cost that results in a future output (e.g., an income stream) (Morgan & Duncan, 1982). Thus, physical capital and human capital can both be designated as capital assets, because investment in both results in some type of output (Mincer, 1994). Again, Adam Smith is useful in understanding the similarity between physical capital and human capital. Smith stated:

...education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were in his person...The improved dexterity of a

workman may be considered in the same light as a machine or instrument of trade which facilitates and abridges labour, and which, though it costs a certain expense, repays that expense with a profit. (Schultz, 1993, p. 226)

Smith considered both physical capital and human capital as essential for productivity. As physical capital and human capital improve, profits increase. In this context, workers' acquisition of education and trainable skills improves work performance. While this statement emphasized the importance of human capital for earnings, Schultz stated that human capital has intrinsic benefits for the future as well (Schultz, 1971). These intrinsic benefits may affect individual well-being. However unlike material benefits, well-being is difficult to identify and measure.

As previously mentioned, human capital and material capital are similar in their importance for productivity. However under human capital theory, the term 'human' is key in that 'capital' is embodied in human beings (Schultz, 1971). Each individual accumulates human capital over time, this asset is neither negotiable nor a product for sale (Checchi, 2006; Schultz, 1971). Human capital is thought to encompass ability, skills, competencies, and attributes that facilitate personal, social, and economic well-being (Centre for Educational Research and Innovation, 2001; Rosenbaum, 1986). Others have built on these elements to include motivation and behavior, as well as physical, emotional, and mental health of individuals (Centre for Educational Research and Innovation, 2001). The belief is that individuals begin acquiring human capital at birth; however, one has the ability to invest in human capital through formal schooling, on-the-job training, and migration in search of a different job or lifestyle (Becker, 1993; Bryant,

1990). Thus, investments in human capital occur over the life cycle and decline over time, as the benefits from investments decline (Mincer, 1974).

Orthodox economists hold that the benefits of investment in human capital are many. Thus, investment in ability, education, and training is hypothesized to result in higher individual productivity resulting in increased compensation (Morgan & Duncan, 1982). This theory holds that opportunities are open to those with ability who are willing to invest in education and training. Therefore, it is held that individual opportunities are not predetermined. Bryant (1990) posited that the main reason individuals invest in human capital is to increase future income and overall wealth. It is believed that individuals will invest in schooling only if the payoff for doing so is larger than or equal to the payoff of alternative investments.

Becker (1993) held that education and training are the most important investments in human capital. He lends credence to this hypothesis by the fact that highly educated and skilled individuals earn more than less educated and skilled individuals. Also, it is hypothesized that individuals partake in a cost-benefit analysis regarding education (Checchi, 2006). These costs include direct costs for items such as tuition, books, transportation, and living costs, as well as indirect or opportunity costs. Thus, individuals will invest in education only if the future benefits outweigh the present costs.

Becker (1993) found that high school and college education in the United States greatly increased one's income level even after accounting for present direct and indirect costs, and adjusting for family background and individual ability. Becker argued that this increased income was a result of knowledge, skills, and critical thinking skills gained

through partaking in educational activities. However, differences were apparent between high school graduates and college graduates in that college graduates received a larger payoff due to higher rank. Additionally, a distinction must be made between college graduates and those who attend college but do not graduate. Becker (1993) concluded that these “college dropouts” (p. 179) did not have greater ability than high school graduates. Furthermore, according to Becker, the gains from graduating college vary across different demographic groups. For example, he found that the rate of return for urban, white, male college graduates is higher than the rate of return for rural residents, people of color, females, and “college dropouts.”

Training represents another important component of human capital. As stated previously, the acquisition of skills and knowledge is thought to begin at birth and last a lifetime. This learning is thought to occur through family and childcare settings, formal education and training, workplace training, and informal learning gained via employment and civic participation (Becker, 1993; Centre for Educational Research and Innovation, 2001). Experience has been divided into two categories: general and specific. General experience is defined as experience that benefits the worker no matter where she/he is employed, whereas specific experience is believed to benefit the worker in the present position only (Bryant, 1990). Moreover, it has been found that employers are more willing to pay for specific training when the company experiences lower turnover (Blaug, 1976). Many economists hold that even low-wage jobs may provide valuable work experience, leading to higher earning power in subsequent positions (Friedlander & Burtless, 1995).

While skills are largely acquired through experience, competencies reflect an innate ability (Centre for Educational Research and Innovation, 2001). Ability represents the least tangible element of human capital to measure, as will be discussed later in the discussion of the deficiencies of human capital theory. Becker (1993) argued that a correlation exists between educational attainment and ability, saying that the rate of return of education is grossly overestimated as many extraneous variables related to ability contribute to different income levels. However, he argued that education explains income differentials to a larger extent than does ability. It appears that education and ability are positively correlated, and evidence suggests that ability plays a larger part in determining the income of college graduates than the income of high school graduates. In line with this statement, evidence has suggested that college graduates are more able than high school graduates even after controlling for education level. This inherent ability has been assessed through the use of IQ, class rank, father's education or income, physical health, and communication skills.

Some scholars consider health to be a component of human capital, while others do not. It has been found that health, education, and intellectual development all interact with each other (Bryant, 1990). As one component improves, the other components improve as well. For instance, healthy children are found to accomplish more in school and better-educated people are healthier.

All are not created equal under human capital, as will be evidenced here regarding the impact of family, marital status, race and ethnicity, and age on human capital. First, parents play an important role in investing in their children through expenditures on

skills, health, and learning (Becker & Tomes, 1993). Empirical studies have found that wealthier families are better equipped to finance investment in children's human capital than are poorer families. Second, marital status has been found to affect the degree to which women invest in human capital. Becker (1981) contended that married women tend to invest in human capital more than do single women due to the likelihood of divorce. Thus, married women may attempt to buffer the effects of loss of income through investment in human capital. Third, it is posited that race and ethnicity affect compensation for investment in human capital as overt and covert discrimination affects the ability of people of color and immigrants to advance. Fourth, age plays an important role in human capital. The older an individual is, the less likely she/he is to invest in human capital and the fewer years she/he will spend in the labor market (Bryant, 1990). Moreover, investment in human capital later in life is found to result in lower returns. The more time an individual spends in the labor market, the higher benefits to human capital and the greater likelihood that one will invest. Thus, younger persons are likely to have a greater incentive to invest in human capital because they will have more years to collect returns (Becker, 1993).

### *Social Capital Theory*

Whereas human capital and physical capital are the property of an individual, social capital is a public good that is dependent on relations within networks. Putnam (2000) defined social capital as having:

both an individual and a collective aspect—a private face and a public face. First, individuals form connections that benefit our own interests...However, social



capital also can have ‘externalities’ that affect the wider community, so that not all the costs and benefits of social connections accrue to the person making the contact...Social connections are also important for the rules of conduct that they sustain. Networks involve (almost by definition) mutual obligations; they are not interested as mere ‘contacts.’ Networks of community engagement foster sturdy norms of reciprocity: I will do this for you now, in the expectation that you (or perhaps someone else) will return the favor (p. 20).

Thus, there are three components of social capital: the network, norms, and sanctions (Halpern, 2005). Sanctions may be punishments for resistance to norms or rewards for compliance with expectations. The number of persons in a network is of importance, but so is the strength of relationships and the resources possessed by each network member (Flap, 1991). Not only must resources be present, but individuals must be aware that these resources exist before they capitalize on them (Lin, 2001).

There is a great deal of dissent around defining the broad term ‘social capital’ as well as its various forms. Additionally, the operationalization of social capital has been so varied that it is unclear whether this construct can even be measured. First, social capital has been divided into ‘primary social capital’ and ‘secondary social capital’ (Alfred & Nanton, 2009). ‘Primary social capital’ is associated with family, religious institutions, and peers/friends, while ‘secondary social capital’ is related to support groups, the workplace, and adult learning programs (just to name a few). Further, these sources of primary social capital are often considered to be permanent and have a stronger influence than secondary social capital sources. This could also be thought of as

a division between informal social capital and formal social capital with informal social capital analogous to primary social capital and formal social capital analogous to secondary social capital (Harpham, 2008).

Some scholars have also used terms such as closed social capital, bridging social capital, bonding social capital, and linking social capital. For example, Schneider (2006) used the terms ‘closed social capital’ and ‘bridging social capital’. She defined ‘closed social capital’ as networks occurring between individuals of similar identity categories (e.g., race and class), while ‘bridging social capital’ was thought to occur when identity boundaries are crossed, meaning that networks would be composed of those of different races, classes, and so on. The Centre for Educational Research and Innovation (2001) also used the term ‘bridging social capital’ (though defined differently) as well as two new terms (i.e., ‘bonding social capital’ and ‘linking social capital’). Here, ‘bridging social capital’ occurs with distant friends and coworkers/colleagues, whereas ‘bonding social capital’ is similar to ‘closed social capital’ (e.g., network based on family or ethnic identity) and ‘linking social capital’ is analogous to Schneider’s (2006) concept of ‘bridging social capital’. It is important to note that these are not either/or categories but rather terms on a continuum of more or less (Putnam, 2000).

Some scholars have categorized social capital as structural social capital and cognitive social capital. Structural social capital refers to observable actions, whereas cognitive social capital refers to subjective thoughts and values (Harpham, 2008). Others have defined social capital as consisting of social support, social leverage (e.g., information pertaining to access to employment, child care, etc.), informal social control

(i.e., the ability of community members to maintain order in the community), and participation in neighborhood organization to address neighborhood issues (Carpiano, 2008).

Social capital theory has been criticized for ambiguity surrounding the definition of the term, as exhibited above, as well as for difficulty associated with measuring the construct (Jennings, 2007). Putnam (2000) created a comprehensive social capital index: i) community organizational life (e.g., served on committee); ii) engagement in public affairs (e.g., voting); iii) community volunteerism; iv) informal sociability (e.g., visiting friends); and v) reported levels of inter-personal trust. However, many investigators have measured social capital using some of these constructs but not all. In addition, others differ in the types of items chosen to measure these constructs. Furthermore, there is disagreement on whether or not social capital should be measured as a macro construct or as a more micro construct or even if the term ‘capital’ is appropriate (Halpern, 2005; Smith & Kulynych, 2007). Thus, no index of social capital has been consistently used.

There are risks associated with social capital. For instance, those in power may exclude others, make excessive demands of group members, restrict individual freedom, or contribute to the downward movement of norms (Alfred, 2009; Bedolla, 2007; Portes, 1998). Finally, it has been criticized for its lack of attention to structural inequality based on socioeconomic status, gender, and race (Alfred, 2009; Gidgenil & O’Neill, 2006; Lowndes, 2000). For instance, Norris and Inglehart (2006) argued that this structural inequality may lead to inequalities in social capital, like knowledge and money. Additionally, marginalized populations are found to utilize social capital in a different

manner than those of the dominant class. For instance, there is evidence that women and young people prefer informal, local, egalitarian networks over other types of networks (Lowndes, 2000, 2006). Furthermore, faith-based organizations are found to be central to social capital in the African American community (Putnam, 2000). Studies have found that states with more racial/ethnic diversity tend to have lower levels of social capital than states with racial homogeneity (Hero, 2003, Putnam, 2000). Moreover, higher diversity was related to worse social outcomes; however, these outcomes were ‘less bad’ for minorities (Hero, 2007). Less diversity was associated with relatively worse outcomes for minorities. Even subgroups in the same community may experience social capital differently as a result of race, gender, or age (Whitley, 2008). Therefore, it may be necessary to measure social capital differently, depending on different populations.

Evidence suggests that low-income communities have historically relied on social capital when other types of capital were lacking (Edin & Lein, 1997). However, the individualism associated with social capital is especially dangerous when applied to welfare recipients. Blame may be placed on the recipients themselves instead of on other sources of economic disadvantage, such as insufficient economic resources (e.g., lack of adequate jobs) (Jennings, 2007).

### 2.3 Review of Previous Studies on Work Participation among TANF Recipients

This section presents an empirical review of the literature regarding the labor participation of TANF recipients with a focus on barriers. Barriers to work and predictors of successful employment are explored. This section also provides a review of the literature on a relationship between human capital and social capital.

### *Work Participation among TANF Recipients*

Work requirements have received support from TANF recipients (Seccombe, Walters, & James, 1999). Welfare recipients tended to share dominant values around paid employment and hard work while chastising those “undeserving” recipients (Woodward, 2008). Recipients have indicated that they want to teach their children the values of work, and they desire happiness and control over their own lives (Anderson, Halter, & Gryzlak, 2004; McPhee & Bronstein, 2003; Woodward, 2008). Welfare recipients have associated work with positive psychological and economic effects (Anderson, Halter, & Gryzlak, 2004). For the most part, welfare recipients did not view themselves as passive dependents on the government (Lee & Abrams, 2001). However, recipients have not viewed work as a path to full independence from governmental assistance. Therefore, recipients emphasized the need for education and training (Lee & Abrams, 2001; Scott, London, & Edin, 2000; Scott, London, & Gross, 2007). Those with greater education levels (i.e., high school diploma/GED or a couple years of college) tended to have higher goals and plans to reach those goals (Scott et al., 2000).

According to Anderson, Halter, Julnes, and Schuldt (2000), approximately 70 percent of respondents were working when they left TANF. At follow-up, about one-fourth of all respondents were living in households in which no one was working. Most welfare leavers who were working worked a single job that was close to full-time at baseline and follow-up. Wages typically exceeded minimum wage but were oftentimes still insufficient to escape from poverty. About three-fourths of welfare leavers who were working had jobs in the service sector at baseline. Less than forty percent of recipients

had the same job 10 to 11 months after leaving welfare, while the median tenure in the job was about six months. Employment instability was a result of temporary or seasonal jobs, as well as personal barriers such as health problems and child care issues.

Wu, Cancian, and Meyer (2008) followed six years of employment and earnings among recipients of the Wisconsin TANF program. Overall, 46 percent of recipients had successful employment. Employment success was defined as maintaining stable employment, increasing employment over time, or experiencing unstable employment with a positive ending. However, only 22 percent had earnings success. Earnings success was defined as experiencing continuous substantial earnings (i.e., total earnings of at least \$15,000 in every year), increasing earnings, or unstable earnings with a positive ending (i.e., earnings in year 5 and year 6 greater than \$15,000). 56 percent of recipients who were successful in the short-term were unable to continue their initial success in the long-term.

There has been considerable heterogeneity of experience concerning wage labor (Wood, Moore, & Rangarajan, 2008). Employment insecurity and poverty cycling were common especially among those with low education levels, little work experience, and poor health. Continuously married women experienced the lowest annual wages, had more dependents, and worked the least hours on average per week (Mason & Caputo, 2006). Compared to Black women, white women experienced higher annual incomes, worked less hours per week, had fewer dependents, were more educated, and were older. Whites with greater levels of education who worked more experienced increased wages on average. White women were more likely than Black women to stay continuously

married, and Black women were more likely to never marry. Less than a high school education was found to limit income, whereas employment barriers were positively correlated with earned income (Sullivan & Larrison, 2003). Poor health was associated with less life satisfaction, less happiness, and more depression. Low human capital was associated with a low perceived locus of control and lower optimism. Few child care issues were reported as recipients tended to rely on social networks for caretaking.

Scott (2006) found that 80 percent of TANF leavers described being satisfied with their job 6 to 8 months after TANF exit, although the work seldom paid well, was rarely full-time, was unstable, and offered few benefits. High job satisfaction was associated with higher pay, employer-based health care, working near or at full-time, and working in the professional/technical sector; whereas, low job satisfaction was associated with poor health. Long-term welfare recipients reported more job satisfaction than short-term welfare recipients did. Neither time limits nor work requirements affected job satisfaction.

#### *Barriers to Work among TANF Recipients*

Various barriers to work have been documented, including child care, transportation, poor health, poor mental health, physical disability, domestic violence, substance abuse, and negative influence of peers. Further, race has been associated with barriers to employment. Child care has frequently been cited as an important barrier to work (Edin & Lein, 1997). A qualitative study conducted by Pearlmutter and Bartle (2003) found that study participants were angry about the lack of child care choices and insufficient system overall. First, many of these mothers had jobs in the service industry

that usually required night and weekend hours. Also, many mothers needed sick-child care or care for children with disabilities. In most states, the supply of such care ranged from 12 to 41 percent, while the need for such care was estimated at 72 percent (Lens, 2002a). Second, voucher programs were considered “too complicated, too slow, too cheap” (Pearlmutter & Bartle, 2003, p. 165). As parents’ income increased, parents became responsible for making co-payments, even though their income was not sufficient to pay for child care services. Third, participants had concerns about trust and safety, and had no faith that licensure or regulations would guarantee a caring and safe environment for their children.

Due to these concerns, welfare mothers are more likely to use informal child care arrangements when possible. According to Zippay and Rangarajan (2007), 78 percent of welfare mothers in need of child care indicated that they relied on informal child care provided by family and friends. Reasons for using informal child care included availability, irregular work schedules, and distrust of strangers working in the formal child care sector.

Access to child care has been shown to affect number of hours worked. Child care problems resulted in a decreased number of hours worked (Press, Johnson-Dias, & Fagan, 2005). Specifically, welfare recipients with severe child care problems worked 30 percent less hours than welfare recipients without this child care issue. However, the impact of child care on work hours varied by state. When compared to mothers living in states with stringent child care eligibility requirements, mothers residing in states with moderate and generous eligibility levels worked 186.2 hours and 174.31 hours more



annually, respectively (Joo, 2008). Furthermore, mothers residing in more generous states were 1.65 times more likely to be working full-time than those residing in stringent states.

Transportation was also found to be a barrier to attaining and retaining employment (Brooks, Nackerud, & Risler, 2001; Pandey et al., 2004). This issue was especially pertinent on reservations. One study found that only 29 percent of the households on TANF owned an automobile compared to the national rural household average of 91 percent (Pandey et al., 2004). To make matters worse, entry-level jobs were primarily located in the suburbs that lacked public transportation (Lens, 2002a).

Other barriers to employment include poor health and mental health, physical disability, and domestic violence. One study found that health was not a significant predictor of employment; however, other studies found that recipients who reported 'poor' or 'fair' health were less likely to work and earned lower incomes than those with 'good' health (Dworsky & Courtney, 2007; Kyoung & Yoon, 2008; Weaver et al., 2007). Moreover, those with depression were less likely to be employed (Lee, Slack, & Lewis, 2004). Disability was also found to be negatively associated with work and income (Dworsky & Courtney, 2007; Kim, 2000). Those with a disability were more likely to have a temporary job and were not likely to have incomes above \$10,000 (Latimer, 2004). Finally, Lee et al. (2004) found that those with a recent history of domestic violence were less likely to be employed.

A TANF recipient's peers may affect her ability to work, as well as her value system. Montoya (2005) found that the employment status, level of education, and age of

peers were positively correlated with a recipient's hours worked. Thus, those with more employed peers, who were older, and had higher levels of education, worked more. Chronic drug use, prior to intake, was associated with decreased hours worked prior to intake. However, older respondents experienced less peer encouragement.

Studies have shown significant gaps in the number of work barriers across different racial/ethnic groups. García and Harris (2001) reported that the Asian subpopulation, largely comprised of Laotian and Hmong refugees, experienced more employment barriers than any other group. Additionally, whites faced fewer barriers to employment than people of color. A significant portion of TANF recipients had been out of the workforce for at least 2 years, had less than 12 years of education, and resided in female-headed households. Kim (2000) found that Hispanics had the lowest probability of employment among all racial groups, while Lee et al. (2004) found that Hispanics were more likely to be employed.

### *Predictors of Employment*

Marital status, age, receipt of welfare as a child, goal orientation, and children characteristics were found to be associated with employment. Those who were unmarried were more likely to be unemployed, while fathers were more likely to work than mothers (Kim, 2000; Latimer, 2004). Not surprisingly, married recipients had higher family incomes than unmarried recipients and were more likely to have incomes above \$10,000 (Kyoung & Yoon, 2008; Latimer, 2004). Additionally, older recipients were less likely to be employed than their younger counterpart (Lee et al., 2004). Further, those who received welfare as children were less likely to be employed. Those with higher levels of

goal orientation were more likely to be employed. Number of children and receipt of formal child support were negatively associated with the probability of work (Kim, 2000; Lee et al., 2004). Caring for a child or family member with a disability was associated with lower earnings (Dworsky & Courtney, 2007).

Work attachment (i.e., time spent in the workforce prior to welfare receipt) was reported to be a predictor of employment. Years spent in previous employment was crucial to obtain a new job and stay employed (Cheng, 2002; Lee et al., 2004). The odds of being employed were lower for those who had never been employed, while lack of prior work experience was associated with lower earnings (Dworsky & Courtney, 2007). Additionally, those working in the informal job sector were less likely to be employed (Lee et al., 2004).

Supportive services, such as telephone service, transportation, and social support are also important for attaining and maintaining employment. For instance, former welfare recipients who had a phone were more likely to be employed (Latimer, 2004). Additionally, those with transportation were more likely to have a permanent job, and ownership of a working vehicle was a predictor of employment (Latimer, 2004; Lee et al., 2004; Weaver et al., 2007).

The state of residence may impact recipients' employment through different TANF policy guidelines, streamlining, and unemployment. Kim (2000) found that sanctions for noncompliance were positively associated with the probability of work. Additionally, state preparation prior to reform was positively associated with the probability of work. Finally, high unemployment in the state of residence was negatively

associated with the probability of work.

### *Impact of Human Capital on Poverty and TANF Participation*

*Poverty.* As previously stated, class status affects the ability of families to invest in human capital. Hong and Pandey (2008) explored the impact of human capital on poor families compared to nonpoor families. The investigators examined the 1996 panel of the Survey of Income and Program Participation (SIPP) that included 12 waves from April 1996 to March 2000. The investigators divided the sample into two groups: the nonpoor (i.e., those with a household income at or greater than the poverty threshold) and the poor (i.e., those with a household income below the poverty threshold). The investigators found that a higher proportion of the poor had less than a high school education, and the nonpoor were twice as likely to have a four-year college degree. While the nonpoor were more likely to have had some training in the past ten years, researchers found that training benefited nonpoor individuals more than poor individuals. The poor were more likely to have health problems that impeded the ability to work. Overall, educational attainment significantly increased the likelihood of being nonpoor, even after controlling for demographic characteristics, work status, and health status. Those with some job training were 1.46 times more likely to live above the poverty threshold than those with no job training. The likelihood of living in poverty was 41 percent higher for those with health problems, which prevented them from working.

Hong & Wernet (2007) studied the relationship between human capital and the likelihood of being a member of the working poor. The study examined the 1996 panel of the SIPP that included 12 waves from April 1996 to March 2000. Human capital

was conceptualized as encompassing education, training, and health. Holding all other variables constant, the investigators found that the odds of being working poor were: (1) 76 percent greater for those without a high school diploma, (2) 27 percent lower for those with some training, and (3) 42 percent higher for those with health conditions that prevented them from working.

*TANF participation.* Currently, obtaining an education cannot be substituted for the work requirement under TANF. Universities, community colleges, and adult education programs have seen a dramatic drop in welfare recipient enrollment since the passage of PRWORA in 1996 (Zhan & Pandey, 2004). Women who exit welfare with higher education are likely to earn significantly higher levels of income and are less likely to return to welfare. The average Black woman with postsecondary education received \$5,734 more in yearly labor income compared to the average Black women without a high school degree. According to Zhan and Pandey (2004), “the respondents with post-secondary education had significantly higher...house values, child support, and significantly lower welfare income than those respondents with less than a high school degree or a high school degree” (p. 97).

Studies have been performed that measure the impact of human capital investment through educational attainment on employment. Cheng (2007) analyzed the 1996 panel of the SIPP consisting of able-bodied, unemployed TANF receivers between the ages of 18 and 64. The average age of participants was 33.6 years with an average unemployment duration of 12 months. While 50 percent of the sample did not graduate from high school, 18.6 percent of participants did complete at least some college. The

researcher found that women with high school and/or college education were more likely to leave welfare employed above the poverty line. Those with occupational skills and work experience had an increased likelihood of becoming employed. Additionally, those with social support and child support were more likely to be employed on welfare.

State factors also played a role in employment (Cheng, 2007). Restrictive state policies placed on an unemployed welfare mother increased her chances of becoming employed below the poverty level. Additionally, high unemployment rates resulted in a low likelihood that women would become employed above the poverty line. Women without young children and younger women were more likely to become employed. Conversely, single mothers were less likely to be employed above the poverty line. Contrary to previous studies, race/ethnicity was not a significant predictor of type of welfare exit. Longer duration on welfare was associated with a greater likelihood of becoming employed, and a greater number of welfare spells increased the likelihood of becoming employed. Overall, this study provided support for human capital theory. Investment in occupational skills and education resulted in better outcomes.

Education and training have been studied as predictors of employment among the TANF population. One study did not find level of education to be a significant predictor of employment; however, others have found level of education to be positively associated with probability of work (Dworsky & Courtney, 2007; Kim, 2000; Latimer, 2004; Weaver et al., 2007). Kyoung and Yoon (2008) found that those with a high school diploma/GED were more likely to have a job and a higher family income than those without a high school diploma/GED. Moreover, the gap became even bigger for those

with a college degree compared to those with less than a high school diploma/GED. Lack of a high school diploma/GED has been associated with lower earnings, such as incomes below \$10,000 (Dworsky & Courtney, 2007; Latimer, 2004). Additionally, those with training were more likely to be employed than those without (Latimer, 2004).

Marital status has been shown to affect the impact of educational attainment on poverty alleviation. Pandey, Zhan, and Kim (2006) examined the impact of educational attainment on poverty alleviation among single and married mothers. The sample (n=1,935) was drawn from year 2000 of the 1979 National Longitudinal Survey of Youth (NLSY79). 1,165 of the participants were married women, and 770 of the participants were single women. The researchers found that single mothers had lower educational attainment compared to married mothers. However, non-poor single mothers resembled non-poor married mothers regarding educational attainment. Poor single mothers and poor married mothers resembled each other in that both were more likely to be Black, less educated, and less likely to be employed than their non-poor counterparts. Not surprisingly, poor single mothers were less likely to have a bachelor's degree than non-poor single mothers were. Finally, an inverse correlation was found between educational attainment and poverty. Overall, higher educational attainment was associated with higher economic status.

Educational attainment has also been associated with welfare duration. London (2005) explored 20 years of NLSY79 data to investigate the impact of college attendance and completion on women's welfare duration. While college attendance was associated with longer welfare duration, college completion was associated with shorter welfare

duration. Several factors were found to moderate this relationship. For instance, those living in counties with more post-secondary institutions were more likely to enroll in college. Additionally, Black and Hispanic women were more likely to enroll in college than white women. Those who were married with younger children living in low unemployment counties were less likely to enroll in college. Minority status, age of children, and marital status were not associated with college completion. However, being the recipient of a student loan increased the probability of graduating at the end of the welfare spell. Longer duration on welfare was associated with being younger, Black, and never married. Moreover, those with no high school diploma/GED with more children at the start of the first welfare spell living in states with higher welfare benefits experienced longer duration on welfare.

London (2006) investigated 20 years of NLSY79 data to examine the relationship between college attendance, college completion, and welfare duration. London found that women who attended college were less likely to have more than one welfare spell. Women who enrolled in college before they started welfare were more likely to graduate than women who enrolled in college after they started welfare. Increased postsecondary enrollment was associated with being Black or Hispanic, having older children, and having never been married. County levels of postsecondary enrollment were a predictor of college attendance. Being older and receiving financial loans were associated with increased postsecondary completion. Both college attendance and college graduation were predictors of reduced poverty. However, college attendance was a better predictor of later employment than college completion. Black and Hispanic women were less likely



to be employed and experienced increased recidivism. Additionally, Black and Hispanic women were more likely to have incomes below the federal poverty level.

Seefeldt and Orzol (2005) examined the relationship between education and work experience and welfare duration. The investigators used data from the Women's Employment Study (WES), a panel study of current and former welfare recipients, drawn from the February 1997 TANF rolls in one urban, Michigan county. Due to the demographics of the county, only Blacks and whites were represented in the sample data. 29.3 percent of the sample had less than a high school education, and 10.1 percent had minimal work experience. To examine welfare duration, respondents were divided into three groups: low duration (less than 20 weeks), medium duration (20-39 weeks), and high duration (40-60 weeks). High duration was associated with low work experience, less literacy, and persistent health problems. Additionally, those in the high duration group had a higher likelihood of experiencing domestic violence and having a child with emotional, health, or learning problems. Those who were married or cohabitating had a high likelihood of being in the low duration group.

Jones-DeWeever & Gault (2006) examined the impact of education of former and current student-parents on income and well-being during the spring and summer of 2004. The investigators collected data from current and former student-parents through mail and electronic surveys, as well as three focus groups. The investigators conducted interviews with eight college administrators across the United States. Two-thirds of the sample were current students participating in CalWORKS, while one-third were previous student recipients. The majority of respondents indicated that they sought education to

improve future income and to set a good example for their children. Barriers included lack of sufficient study time, financial obligations, and insufficient time to spend with children. 94 percent of respondents indicated that participation in educational activities led to increased self-esteem, feelings of contribution to society, and better job opportunities. Degree-holders earned an average of \$13.14 per hour compared to degree-seekers who earned \$7.50 per hour. Finally, degree-holders reported better job opportunities, greater financial resources, and better relationships than degree-seekers as a result of college completion.

Escamilla and Santhiveeran (2005) examined teen pregnancy as a predictor of educational attainment. They examined 1,142 teen mothers and 2,358 adult mothers in the NLSY79 dataset. The researchers found a negative association between motherhood and educational attainment. Additionally, the researchers found that poverty, welfare receipt, and number of children had an effect on later educational attainment. Finally, the researchers found positive associations between employment, age of woman at first marriage, and being married currently with educational attainment.

The impact of training on welfare recipients' future well-being is important to consider. One study compared those who attended job training with those who did not to ascertain employment outcomes (Beimers & Fischer, 2007). The study sampled 151 TANF recipients in a large, urban county in north-central Ohio. Respondents were interviewed and employment experiences were examined for the 12 months preceding the interview. Six months after the referral period, the two groups had similar rates of employment entry, wages, and hours worked. Only a handful of respondents received job

retention services from the employment service agencies. Overall, the investigators found that job readiness programs may be of minimal adequacy if not accompanied by leads to employment opportunities.

Another study examined the impact of various program curriculum areas on gained knowledge and confidence (Zunz, Wichroski, & Hebert, 2005). The investigators conducted a quasi-experimental pre-test, post-test design to measure participants' self-esteem and social supports, as well as knowledge acquired in four program curriculum areas: Food and Nutrition, Money Management, Parenting, and Personal Skills Development. The sample consisted of 552 individuals who completed the New Hampshire program between April 1998 and July 2001. Special emphasis was given to differences and similarities between rural and urban participants. Rural participants were found to gain the same amount of knowledge from the curriculum as urban participants. However, rural participants were found to have less confidence in their skills, low self-esteem, and lower scores on social support measures. Rural respondents were more likely to be employed in service or laborer jobs, to work less hours, and to earn less income.

It is important to assess recipients' goals and views regarding training and skill building. Scott et al. (2000) used data from the Manpower Demonstration Research Corporation's Project on Devolution and Urban Change to assess these goals and views. The study was based on baseline interviews with 80 women and their families in Philadelphia and Cleveland. In general, respondents had optimistic visions of the future and realized the importance of work. Respondents thought they would acquire female-dominated low-wage low-skill jobs without benefits in the service and manufacturing

sectors. Women stated that their ability to become upwardly mobile was largely contingent on acquiring further education and training. Those who had higher education levels (i.e., high school diploma/GED or a couple years of college) tended to have higher goals and plans to reach those goals.

Sullivan and Larrison (2003) relied on data from the Georgia Welfare Reform Grant Research Project, a longitudinal panel design, to assess the relationship between overall human capital and income and well-being. The study had two waves: July 1999 and fall 2000. Less than a high school education was found to limit income, whereas employment barriers were positively correlated with earned income. Great health barriers significantly decreased the amount of earned income. Poor health was associated with less life satisfaction, less happiness, and more depression. Low human capital was associated with a low locus of control and lower optimism. Few childcare issues were reported as recipients tended to rely on social networks for caretaking.

Danziger, Kalil, and Anderson (2000) used data from the Women's Employment Survey (WES), a longitudinal study drawn from women on the rolls in February 1997 to examine four barriers: human capital, mental health, substance dependence, and physical health. The first wave of interviews occurred between August and December 1997, while the second wave occurred in the fall of 1998. Respondents were deemed to have a human capital barrier if they met two of three criteria: less than a high school degree/GED, employment in less than 20 percent of years since eighteenth birthday, or fewer than four job skills (e.g., reading, writing, and mathematical ability, as well as computer skills). Respondents were deemed to have a mental health barrier if they met the criteria for one

of the following disorders within the previous 12 months: major depression, generalized anxiety disorder, or post-traumatic stress disorder. Respondents were deemed to have a substance dependence barrier if they met Composite International Diagnostic Interview (CIDI) screening criteria for either alcohol or drug dependence. A respondent was deemed to have a physical health barrier if she both self-reported fair or poor health and if she was in the lowest age-specific quartile of a physical functioning scale.

Mental health was the most common barrier (34.7 percent of respondents affected), followed by physical health (18.7 percent), human capital (16.2 percent), and substance dependence (5.6 percent). The Wave 1 employment rate was significantly higher for the zero-barrier group as compared to other groups with identified barriers. Additionally, those who were least likely to be working at Wave 1 were those who had human capital problems only, co-occurring human capital and mental health problems, co-occurring human capital and physical health problems, or co-occurring human capital, physical health, and mental health problems. The Wave 2 employment rate was significantly higher for the zero-barrier group as compared to all other groups except the physical health barriers only group. The lowest employment rates were again found among the human capital groups. Women with combined human capital, physical health, and mental health barriers experienced significantly longer duration on welfare than others. Moreover, this group had the lowest rate of employment in both waves.

As indicated in the overview above, the impact of human capital may vary according to gender, race, ethnicity, and age. Parisi, McLaughlin, Grice, and Taquino (2006) investigated various factors associated with welfare exit, one of those factors

being human capital. The researchers examined data from the Mississippi Department of Human Services (MDHS) from 1996 to 2004. Additionally, the researchers examined 2000 Department of Commerce data, Mississippi Department of Employment Security data, and key informant data. Overall, the researchers found that Blacks were more influenced by human capital, as well as local economic, social, and spatial conditions than were whites.

Obstacles to obtaining human capital may exist among the TANF population. One qualitative study examined 15 welfare recipients in the state of Michigan, five of whom were enrolled in post-secondary education and three of whom expressed post-secondary education aspirations in October 1997 (Kahn, 2001). Respondents indicated that there was a lack of information pertaining to education options distributed to clients and that welfare agencies emphasized work rather than education through caseworker non-disclosure, misinformation, and harassment. The study found that there were serious obstacles to pursuing education, including unreliability of childcare subsidy payments and low-quality childcare, as well as the continual verification process and mistrust of clients.

*Summary of empirical literature pertaining to TANF and human capital.* The empirical literature pertaining to the utility of human capital theory among TANF recipients has had varied results in the areas of education, occupational skills, and training. Many TANF recipients have emphasized the importance of acquiring further education and skills (Scott et al., 2000). Higher educational attainment has been associated with higher economic status (Pandey et al., 2006). Women who exit welfare

with higher education are likely to earn significantly higher levels of income, are more likely to leave welfare employed, and are less likely to return to welfare (Cheng, 2007; Jones-DeWeever & Gault, 2006; London, 2006; Zhan & Pandey, 2004). Associated benefits of educational attainment have included boosts to self-esteem, better job opportunities, and better relationships (Jones-DeWeever & Gault, 2006). College attendance was associated with longer welfare duration, whereas college completion was associated with shorter welfare duration (London, 2005).

Occupational skills and work experience have been associated with an increased likelihood of becoming employed (Cheng, 2007). However, job readiness programs may be of minimal adequacy if not accompanied by leads to employment (Beimers & Fischer, 2007). Additionally, geographic location may impact training. For example, rural participants were found to have less confidence in skills when compared to urban residents (Zunz et al., 2005).

While these study findings are useful, some limitations are present. Four of the studies presented here examined employment outcomes as a dependent variable (See Cheng, 2007; Jones-DeWeever & Gault, 2006; Pandey et al., 2006; Zhan & Pandey, 2004). Therefore, only the limitations of these studies will be assessed. Jones-DeWeever and Gault (2006) collected data during the spring and summer of 2004 and sampled current and former student parents who participated in CalWORKS only. Thus, this study cannot be generalized to the broader population of TANF recipients. While the other studies were nationally representative, they are somewhat dated. For instance, Zhan and Pandey (2004) examined 1993 data of the Panel Study of Income Dynamics (PSID),

Cheng (2007) analyzed Survey of Income and Program Participation (SIPP) 1996 panel data, and Pandey et al. (2006) explored survey year 2000 of the National Longitudinal Study of Youth 1979 (NLSY79). Nationally representative data is needed that examines a new cohort of TANF recipients.

Further, studies tended to examine only one element of human capital (i.e., educational attainment) (See Jones-DeWeever & Gault, 2006; Pandey et al., 2006; Zhan & Pandey, 2004). Typically, this educational attainment variable had two or three categories (See Jones-DeWeever & Gault, 2006; Zhan & Pandey, 2004). For example, the categories of Zhan and Pandey's (2004) educational attainment variable consisted of 'less than a high school degree', 'high school degree', and 'some postsecondary education'. Up-to-date research is needed that considers more levels of educational attainment. Finally, Cheng (2007) *did* examine multiple aspects of human capital (i.e., educational level, occupational skills, and years of work experience). However, training as an aspect of human capital was not examined.

Overall, the investment in human capital may positively affect TANF recipients through increased income, employment rates, and heightened well-being. However, human capital may represent only one piece of a larger puzzle to solve poverty among this population. Research is needed that further analyzes the relationship between human capital investment and various outcomes.

### *Social Capital*

Very little research has been conducted that examines the social capital of low-income people or the relationship between social capital and employment outcomes. The



next section discusses social capital in relation to various topics that are relevant for TANF recipients; however, this section is not exclusive to TANF recipients. Social capital will be examined at the neighborhood-level, and its relationship with labor force participation will be explored.

Curley (2010) examined the social capital of low-income household residents who were relocated from a public housing neighborhood as part of the HOPE VI program. Social support, social ties, and civic engagement were indicators of social capital. The findings indicated that Hispanic and African American participants scored lower in generalized trust, shared norms and values; however, they scored highest in social support (compared to whites and others). Fewer neighborhood problems and greater perceived safety were associated with higher social capital scores. Neighborhood resources were the strongest predictors of social capital.

Pettit and McLanahan (2003) examined the impact of residential mobility on children's social capital among families moved from subsidized housing to either a middle-class neighborhood or less affluent neighborhood. Social capital was measured with three variables: whether parents communicated with the parents of their child's friend, whether the child participated in after-school activities, and total number of after-school activities in which the child participated. Findings indicated that residential mobility impacted parents' communication with other parents; however, little evidence was found of an impact on children's after-school activity participation. Families that moved to middle-class neighborhoods were found to be as connected as families that moved to less affluent neighborhoods.

Social capital has been found to impact labor force participation. Brisson et al. (2009) examined the direct effects of neighborhood bonding social capital, race and ethnicity, and poverty on employment. Additionally, race and ethnicity and poverty were analyzed as moderating variables between neighborhood bonding social capital and employment. The investigators utilized *Making Connections*, a cross-sectional dataset composed of low-income neighborhoods in 10 U.S. cities. Their measure of neighborhood bonding social capital was composed of four indicators of neighborhood social cohesion and one indicator of neighborhood trust. The dependent variable was household employment status, a dichotomous item that gauged full-time employment status of self or partner during the past 12 months. Neighborhood bonding social capital and employment were inversely related; meaning that higher neighborhood bonding social capital was related to lower likelihood of employment. Race/ethnicity was not found to act as a moderator between social capital and employment; however, Asian and Black households had significantly lower odds of being employed than white households. In contrast, Hispanic households showed no difference in the likelihood of employment.

Aguilera (2002) used the 2000 Social Capital Benchmark Survey to examine the impact of social capital on labor force participation. When conceptualizing social capital, Aguilera included network structure (i.e., having 6 or more friends versus less than 6 friends), network quality (i.e., having a manual worker friend, business owner friend, leader friend, welfare friend), and network diversity (i.e., racial diversity, group involvement, religious friend). Dependent variables were whether or not the participant was employed and the number of hours worked during an average week. The findings

suggested a positive association between social capital and employment and hours worked. However, knowing someone on welfare was inversely related with employment.

#### *Relationship between Human Capital and Social Capital*

Several studies have been conducted that examine the relationship between human capital and social capital. Halpern (2005) concluded that human capital and social capital are interdependent, meaning that education appears to foster social capital and social capital appears to result in educational attainment. While Lin (2001) conceptualized human capital as an independent variable and social capital as a dependent variable, others studies viewed social capital as an independent or mediating variable and human capital as a dependent variable (See Ainsworth, 2002; Crowder & South, 2003; Teachman, Paasch, & Carver, 1997). While Mozumber and Halim (2006) claimed that social capital fostered human capital in Bangladesh, Dinda (2008) utilized a one-sector growth model to conclude that human capital produced an increase in social capital.

Lin (2001) compared social capital differences for women versus men in urban China. Lin's social capital measure took into account institutional capital (e.g., adherence to prevailing ideology of Communist party), general social capital (e.g., family member jobs), and political social capital. Social capital and human capital were found to be positively related, as educational attainment led to advantage in social capital. Females tended to rely more on kin ties to access social capital than did men.

Ainsworth (2002) utilized the National Education Longitudinal Study to examine the impact of neighborhood context (i.e., high-status residents, residential stability,

neighborhood economic deprivation, and neighborhood's level of racial/ethnic diversity) on educational achievement (i.e., standardized test scores) for 8<sup>th</sup> graders. Social networks, described by the investigator as a component of social capital, represented one of the many mediating variables. The investigator found that the mediating variables (i.e., collective socialization, social control, social capital, perception of opportunity, and institutional characteristics) accounted for approximately 40 percent of the neighborhood context effect on educational achievement.

Teachman et al. (1997) examined the impact of social capital on human capital among 8<sup>th</sup> graders surveyed for the National Educational Longitudinal Study. Measures of social capital included family structure, attendance at a Catholic high school, and school migration. The dependent variable was whether or not the participant dropped out of high school. The investigators found that those attending Catholic school were less likely to drop out, whereas those who experienced school migration were more likely to drop out. Additionally, children with parents with higher income and education were less likely to drop out.

Crowder and South (2003) used Panel Study of Income Dynamics and Census data to examine the relationship between neighborhood distress and school dropout. Residential stability was inversely related to school dropout, while neighborhood distress was positively associated with school dropout. The impact of neighborhood disadvantage on school dropout was over twice as large for Black adolescents.

## 2.4 Research Hypotheses and Conceptual Framework

This study investigated the relationship between demographic variables and employment outcome among single women who indicated welfare office use in the past 12 months. Social capital and human capital were examined as mediating latent variables. The impact of city unemployment rate and state TANF policy on employment outcome were also examined. Multiple group comparisons were conducted for the following control variables: race/ethnicity, presence of a child less than 6 years of age in the household, and ownership of a vehicle. The research questions and hypotheses are listed below.

Research Question 1: How do demographic variables affect social capital and human capital for single women who use welfare?

Hypothesis 1.1: Age will be inversely associated with social capital factors.

Hypothesis 1.2: Number of years in neighborhood will be positively associated with social capital factors.

Hypothesis 1.3: Age will be positively associated with human capital.

Hypothesis 1.4: Number of years in neighborhood will be positively associated with human capital.

Research Question 2: How do social capital and human capital affect employment outcome?

Hypothesis 2.1: Different forms of social capital will affect employment outcome differently.

Hypothesis 2.2: Human capital will be positively associated with employment outcome.

Research Question 3: Do social capital and human capital act as mediators between demographic variables and employment outcome?

Hypothesis 3.1: Social capital factors will mediate the relationship between age and employment outcome.

Hypothesis 3.2: Social capital factors will mediate the relationship between number of years lived in neighborhood and employment outcome.

Hypothesis 3.3: Human capital will mediate the relationship between age and employment outcome.

Hypothesis 3.4: Human capital will mediate the relationship between number of years lived in neighborhood and employment outcome.

Research Question 4: How do macro-level variables affect employment outcome?

Hypothesis 4.1: City unemployment rate will be inversely associated with employment outcome, meaning that high city unemployment rate will be associated with a worse employment outcome.

Hypothesis 4.2: State TANF policy will be inversely associated with employment outcome, meaning that more generous policy will be associated with a worse employment outcome.

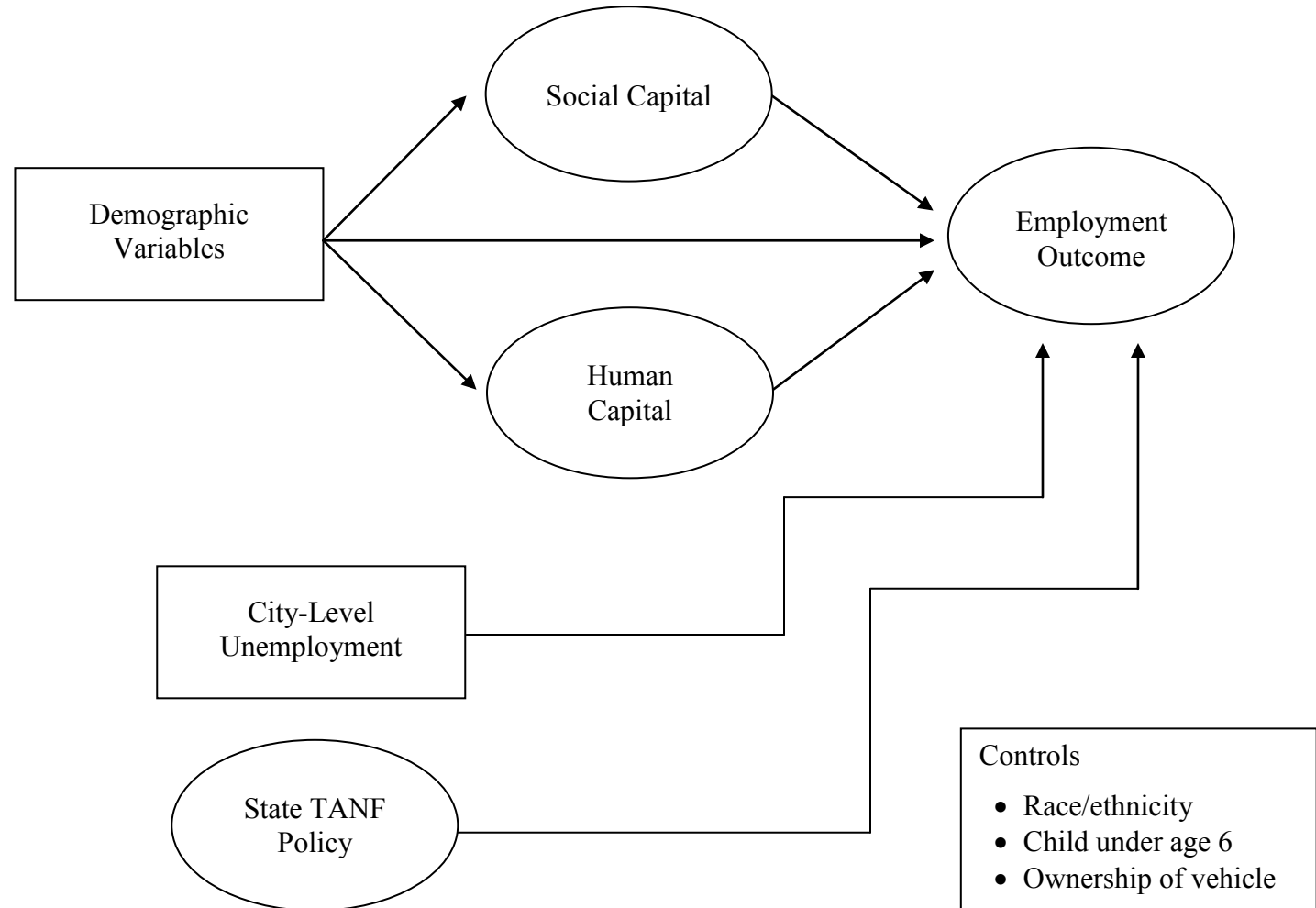


Figure 2.1 A Conceptual Framework for Examining the Mediating Effects of Social Capital and Human Capital between Demographic Variables and Employment Outcome among Female Welfare Office Users

## Chapter 3: Methods

### 3.1 Data and Sample

This study used secondary data from the Making Connections Cross-Site Survey database. *Making Connections* is a decade-long initiative launched in 1999 in low-income areas that aims to improve the outcomes of “vulnerable children living in tough neighborhoods” through strengthening “their families’ connections to economic opportunity, positive social networks, and effective services and supports” (The Annie E. Casey Foundation, 2009). These *Making Connections* neighborhoods are located in Denver, Des Moines, Hartford, Indianapolis, Louisville, Milwaukee, Oakland, Providence, San Antonio, and King County (Seattle). The Annie E. Casey Foundation commissioned the National Opinion Research Center (NORC) to survey these communities in areas such as social networks, civic participation, neighborhood conditions, and employment. Multiple instruments were used for data collection in the *Making Connections* communities. A core instrument was given to residents in every city; however, each city used an additional instrument to collect community-specific data. Data were collected through in-person interviews and phone interviews.

A sampling frame of households in *Making Connections* neighborhoods was created for each participating city (Brisson et al., 2009). A probability sample of households was then selected for each city. Following selection to participate, a household roster was created. If a child was present in the household, then the adult who



knew the child best was requested to participate. If no child was present in the household, then one adult respondent was chosen at random to participate in the survey. The *Making Connections* data is longitudinal; however, a representative cross-sectional sample was also collected. This means that families with children are followed and interviewed over time, with the inclusion of new families in each wave. Therefore, 7,497 individuals participated in at Wave 1 (2002-2004), 8,067 individuals participated at Wave 2 (2005-2007), and Wave 3 is currently underway. This study examined Wave 2 data only and thus provided a cross-sectional snap shot. Women with no spouse/partner present in the household who indicated use of a TANF/welfare office in the last 12 months were selected for inclusion in the study sample. 1,428 participants met these criteria. Table 3.1 breaks down the sample by community.

Community	Wave 2 total sample	Wave 2 study sample
Denver	818	164
Des Moines	813	104
Indianapolis	804	137
San Antonio	802	155
Seattle	801	83
Milwaukee	801	187
Hartford	803	209
Providence	808	175
Oakland	805	69
Louisville	812	145
Total	8,067	1,428

Table 3.1 Sample for Making Connections Cross-Site Survey by Community

#### *Missing Data*

For the exploratory factor analysis, listwise deletion was used to handle missing data. However, multiple imputation, specifically Markov Chain Monte Carlo (MCMC)

simulation, was used to correct for missing data in subsequent analyses (Schafer, 1999).

In MCMC, a long Markov chain is created that allows for the distribution of variables to stabilize to a common distribution. The percentage of missing values was 0.63.

### 3.2 Definition of Variables

#### *Employment Outcome*

The dependent latent variable for this research study was employment outcome. Employment outcome was measured by three indicators, including whether or not the woman had a job at time of interview, the average numbers of hours worked per week during the previous 12 months, and number of months worked at current main job. The number of months was transformed from a continuous variable to an ordinal one to reduce the indicator's skewness and kurtosis.

Indicator	Code	Range	Mean (SD)
Do you currently hold a job?	0 = No 1 = Yes	0-1	.40 (.49)
In the past 12 months, about how many hours per week have you worked in an average week?	Continuous	0-91	14.97 (20.21)
How long have you had your main current job? (months)	0 = 0 1 = 1-6 2 = 7-12 3 = 13-18 4 = 19-24 5 = 25-30 6 = 31-36 7 = 37-42 8 = 43-48 9 = 49-54 10 = 55-60 11 = 61-66 12 = 67-72 13 = 73-78 14 = 79-84 15 = 85+	0-15	1.92 (3.81)

Table 3.2 Indicators for Employment Outcome

### *Social Capital*

As social capital has never been examined for the specific population of women on welfare, it was uncertain which indicators would be most appropriate to measure social capital. Therefore, an exploratory factor analysis was conducted by utilizing available indicators in the data set. A list of indicators included in this exploratory factor analysis are shown below in Table 3.3. The exploratory factor analysis is described in further detail later in this chapter.

Indicator	Code	Mean (SD)
I live in a close-knit neighborhood.		3.13 (1.18)
People in my neighborhood are willing to help their neighbors.	1 = Strongly disagree	3.17 (1.14)
People in my neighborhood generally get along with each other.	2 = Disagree	
People in my neighborhood share the same values.	3 = Neither disagree nor agree	3.09 (1.06)
People in my neighborhood can be trusted.	4 = Agree	2.78 (1.05)
	5 = Strongly agree	2.74 (1.15)
Sometimes families <b>give</b> financial help, either to other people they live with or to friends and family outside. Did you give any financial help like this in the last 12 months?	0 = No 1 = Yes	.30 (.46)
Sometimes families <b>get</b> financial help, either from other people they live with or from friends and family outside. Did you get any help like this in the last 12 months?	0 = No 1 = Yes	.43 (.49)
How often do you <b>get</b> help or support besides money, like babysitting, lending small appliances, and rides from people in your family that do not live with you?		2.48 (1.12)
How often do you <b>give</b> help or support besides money to people in your family that do not live with you?	1 = Never 2 = Rarely 3 = Sometimes 4 = Often	2.77 (1.11)
How often do you <b>get</b> help or support besides money from friends?		2.25 (1.07)
How often do you <b>give</b> help or support besides money to your friends?		2.62 (1.13)
Have you spoken with a local political official like about a neighborhood problem or improvement?	0 = No 1 = Yes	.14 (.35)
Have you talked to a local religious leader or minister to help with a neighborhood problem or neighborhood improvement?	0 = No 1 = Yes	.14 (.35)
Have you gotten together with neighbors to do something about a neighborhood problem or to organize?	0 = No 1 = Yes	.21 (.41)
Over the past 12 months, have you volunteered or helped out with activities in your community?	0 = No 1 = Yes	.25 (.43)

Table 3.3 Indicators for Social Capital

Table 3.3 Indicators for Social Capital Continued

In the past 12 months, have you served as an officer or served on a committee of any local club or organization or religious organization?	0 = No 1 = Yes	.09 (.29)
Do you attend religious services?	0 = No 1 = Yes	.62 (.49)

### *Human Capital*

Human capital was measured by a respondent's educational attainment and training. In particular, three indicators were used, including highest level of education (ranging from eighth grade or less to graduate degree), whether or not the respondent completed any training in the last 3 years, and whether or not the respondent attended community college in the previous 3 years.

Indicator	Code	Mean (SD)
What is the highest level of education you completed?	1 = Eighth grade or less 2 = Beyond eight grade but not high school graduation 3 = GED 4 = High school graduation 5 = Trade or vocational school 6 = One to three years of college 7 = Graduate four year college 8 = Some graduate education 9 = Graduate degree	3.53 (1.80)
Have you used employment placement counseling and training in the past 3 years?	0 = No 1 = Yes	.34 (.47)
Have you used community college or other adult education in the past 3 years?	0 = No 1 = Yes	.37 (.48)

Table 3.4 Indicators for Human Capital

### *Macro-Level Factors*

The macro-level variables for this research study included city unemployment rate

and state TANF policy. City unemployment rates were gathered for year 2005 for which Wave 2 collected. Unemployment rates by city are shown in Table 3.5.

City	City Unemployment (percent), 2005
Denver	4.7
Des Moines	4.8
Hartford	3.1
Indianapolis	4.8
Louisville	6.0
Milwaukee	4.5
Oakland	4.0
Providence	5.1
San Antonio	4.3
Seattle	4.7

Source: Bureau of Labor Statistics, 2006

Table 3.5 Unemployment Rate by City for December 2005

Three indicators were used to create the state TANF policy latent variable. Data for this latent variable were collected from the Welfare Rules Databook for July 2005 published by the Urban Institute. Table 3.6 contains information acquired from this databook, while Table 3.7 lists the coding for the state TANF policy latent construct. Connecticut and Indiana determined the minimum hour work requirement on a case-by-case basis. Therefore, Connecticut and Indiana were designated with a mean score for minimum hour work requirement. Additionally, Rhode Island and Texas had different minimum hour work requirements for those with and without a child under age 6. Therefore, the two values were averaged. Thus, the minimum hour work requirement was designated as 25 hours for both Rhode Island and Texas.

State	Allowable Work Activity	Work Exemption for Caring Children Age under X (months)	Minimum Hour Requirement
California	All except postsecondary education	12	32
Colorado	All	12	22
Connecticut	All except postsecondary education and subsidized employment	12	Case-by-case
Indiana	All except postsecondary education	12	Case-by-case
Iowa	All except subsidized employment	0	Full-time employment
Kentucky	All	12	30
Rhode Island	All	12	30 (20 if has child under 6)
Texas	All	12	30 (20 if has child under 6)
Washington	All	4	32
Wisconsin	Job-related, E&T, and community service	3	40

Note. E&T signifies education and training activities.

Source: Welfare Rules Databook (Rowe, Murphy, & Williamson, 2006)

Table 3.6 State TANF Policy Typologies as of July 2005

Indicator	n	Range	Mean (SD)
Allowable Work Activity 1 = Employment 2 = Job-Related Activities and Employment 3 = All except Subsidized Employment 4 = All except Postsecondary Education 5 = All	10	1-5	4.10 (1.10)
Work Exemption for Caring for Children under X Age (months)	10	0-12	9.10 (4.77)
Minimum Hour Work Requirement	10	22-40	30.36 (5.83)

Table 3.7 State TANF Policy Coding

#### *Other Variables*

Control variables were used to conduct multiple group comparisons for the final structural equation model. These variables were: race/ethnicity, presence of a child under age 6 in the household, and ownership of a vehicle. Control variables are listed in Table 3.8. In some instances, percentages do not add to 100 percent due to missing data.

Indicator	Code	Count (%)
Black or African American	0 = No 1 = Yes	703 (49.2%) 702 (49.2%)
Latina, Hispanic, or Spanish	0 = No 1 = Yes	956 (66.9%) 460 (32.2%)
Presence of child under 6 years of age	0 = No 1 = Yes	993 (69.5%) 392 (27.5%)
Ownership of a vehicle	0 = No 1 = Yes	735 (51.5%) 691 (48.4%)

Table 3.8 Indicators for Multiple Group Comparisons



### 3.3 Measurement of Latent Variables

#### *Exploratory Factor Analysis*

Factor analysis seeks to uncover the constructs that underlie a set of indicators.

According to DeCoster (1998),

Factor analyses are performed by examining the pattern of correlations (or covariances) between the observed measures. Measures that are highly correlated (either positively or negatively) are likely influenced by the same factors, while those that are relatively uncorrelated are likely influenced by different factors.

(p. 1)

Under exploratory factor analysis, “the researcher’s *à priori* assumption is that any indicator may be associated with any factor” (Garson, 2011).

An exploratory factor analysis was conducted to extract factors that underlie the social capital construct and to identify the indicators that were associated with each of those factors. SPSS 16.0 was utilized to conduct the exploratory factor analysis.

Seventeen indicators were included in an effort to produce an exhaustive and parsimonious account of the factors (DeVellis, 2003). The eigenvalue has been judged as a nonstatistical guideline for factor extraction (Kaiser, 1960). Only factors with an eigenvalue greater than 1.0 were retained. To increase interpretability, both orthogonal and oblique rotational techniques were used to identify clustering of indicators (DeVellis, 2003); specifically Varimax and Direct Oblimin rotations were examined. Varimax (the orthogonal rotation technique) operates under the assumption that factors are uncorrelated, whereas Direct Oblimin (the oblique rotational technique) assumes

correlation between factors.

Strength of factor loadings, minimum number of indicators per factor, and cross-loading of indicators on multiple factors were considered to select specific indicators to retain. A minimum factor loading of  $\pm 0.40$  was used to determine which indicators were to be retained for which factor. In some instances, indicators loaded on multiple factors. When this occurred, the indicator was retained on the factor with the highest factor loading except when this did not make sense theoretically.

#### *Confirmatory Factor Analysis*

The purpose of confirmatory factor analysis is to determine the goodness of fit of a measurement model for each latent variable (Schumacker & Lomax, 2004). “In confirmatory factor analysis, a factor structure is explicitly hypothesized and is tested for its fit with the observed covariance structure of the measured variables. The approach allows for testing the relative fit of competing factor models” (Floyd & Widaman, 1995, p. 187). The confirmatory factor analysis also accounts for measurement errors in estimating the structural model (Schumacker & Lomax, 2004).

Confirmatory factor analysis was conducted to test a measurement model for each of the constructs included in the theoretical framework, including employment outcome, social capital, human capital, and state TANF policy. LISREL was used to conduct the confirmatory factor analyses. Three fit indices were used to determine the fit of the proposed measurement model: chi-square, root mean square error of approximation (RMSEA), and comparative fit index (CFI). Chi-square is used to test the difference between the proposed model’s covariance structure and the observed covariance matrix.

A chi-square value of zero indicates a perfect fit or saturated model. For this test, the hope is to fail to reject the null hypothesis. In other words, the higher the chi-square value, the less the fit. However, chi-square is known to be sensitive to sample size; therefore, the significance of the chi-square test may be discounted (Schumacker & Lomax, 2004). A RMSEA value less than .06 is considered a good fit, and a CFI value greater than .90 is a good fit (Hu & Bentler, 1999; Schumacker & Lomax, 2004).

Model modifications were necessary to improve the fit between the theoretical model and the data for the latent variables. The LISREL output produced suggested modifications to the model, which included adding paths between indicators and a latent factor, as well as adding paths between measurement error terms. The results of modifications were judged by the fit indices as explained earlier. However, model modifications were made only when the modification recommendations made sense theoretically.

### *Structural Equation Modeling*

Structural equation modeling was used to answer the major research questions in this study. Structural equation modeling allows for the simultaneous estimation of various relationships among multiple constructs, unlike multiple regression that requires testing of each individual relationship (Schumacker & Lomax, 2004). The inclusion of social capital and human capital as mediating latent variables in the current study necessitated the use of a data analysis technique able to estimate these complex relationships. Thus, structural equation modeling allowed for the inclusion of mediating variables in the estimation of the model. Additionally, structural equation modeling takes into account

measurement errors of variables in the estimation by integrating measurement models (Bollen, 1989).

The maximum likelihood estimates were computed for the initial model and the fit of the specified model was tested. As described above, chi-square, RMSEA, and CFI were used to assess the fit of the model. A specification search was conducted to attempt to find a better fitting model. The LISREL program provided recommendations for specific model modifications. These recommendations included modifications to paths between indicators and latent constructs, paths between latent constructs, and paths between measurement error terms. Again, model modifications were made only when the modification recommendations made sense theoretically.

## Chapter 4: Results

### 4.1 Descriptive Statistics

As previously mentioned 1,428 women indicated use of a TANF/welfare office during the previous 12 months and reported that no spouse/partner was living in the household. The mean age of the sample was 37.37 years ( $SD=13.66$ ) with a range of 18 years to 95 years. The number of children living in the household ranged from 0 to 5 with a mean of 1.94 ( $SD=1.44$ ). 27.5 percent of the sample indicated that a child under 6 years of age lived in the household. 49.2 percent of the sample self-identified as Black or African American, 20.6 percent self-identified as white, 4.1 percent self-identified as Native American or Alaska Native, 3.9 self-identified as Asian, .4 percent self-identified as Native Hawaiian or Pacific Islander, and 22.6 percent self-identified as something else. These figures sum to greater than 100 percent as some individuals indicated multiple races. 32.2 percent of the sample self-identified as Hispanic, Spanish, or Latina, and 16.3 percent of the sample indicated birth outside of the United States. The mean number of years residing in the current neighborhood was 6.88 years ( $SD=9.41$ ) with a range of 0 years to 35 years. 51.5 percent of the sample indicated that they did not own a vehicle.

14.2 percent of the sample indicated that they had spoken with a political official, while 14.1 percent indicated that they had spoken with a religious leader. 61.3 percent of the sample indicated religious service attendance. 21.4 percent of the sample indicated that they had gotten together to solve a problem, and 24.6 percent indicated that they had

volunteered in the last 12 months. 9.2 percent of the sample indicated that they had served as an officer or served on a committee of a local club or organization or religious organization. 30.0 percent of the sample indicated that they had given financial help to family or friends in the last 12 months, whereas 42.4 percent of the sample indicated that they had received financial help from family or friends in the last 12 months.

40.2 percent of the sample had less than a high school degree/GED, 33.2 percent of the sample had a high school degree/GED, and 25.2 percent of the sample had greater than a high school/GED education (e.g., trade or vocational school, some college, college degree). During the past 3 years, 33.7 percent of the sample indicated use of employment placement counseling and training and 36.7 percent of the sample indicated use of community college or other adult education.

#### 4.2 Exploratory Factor Analysis

The data were evaluated for the suitability of utilizing exploratory factor analysis for the social capital latent variable. Significance of the Bartlett's test of sphericity (chi-square = 4374.977,  $df = 136$ ,  $p < .001$ ) indicated that the items had adequate common variance to conduct exploratory factor analysis. A Kaiser-Meyer-Olkin (KMO) value of .731 also supported exploratory factor analysis (Kaiser, 1974). The data were evaluated to determine the number of factors to retain with regard to the Kaiser criterion. As seen in Table 4.1, five factors were suggested by the Kaiser criterion, because the sixth factor had an eigenvalue of less than one (Kaiser, 1960). Both Varimax (Table 4.2) and Direct Oblimin (Table 4.3) rotations were conducted. Items with loadings ( $>0.4$ ) on any one factor were retained. Item 10 had a factor loading below 0.4 for the Direct Oblimin

rotation, but it was retained based on theoretical reasoning. When an item loaded on more than one factor, the item was retained on the factor with the highest loading except in one instance. Item 16 was retained on the factor with the lower loading, as this made theoretical sense.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.842	16.716	16.716	2.311	13.597	13.597	1.639	9.642	9.642
2	2.434	14.319	31.035	1.931	11.360	11.360	1.609	9.463	19.105
3	1.976	11.626	42.660	1.312	7.719	7.719	1.510	8.885	27.990
4	1.084	6.377	49.038	.541	3.181	3.181	.940	5.532	33.522
5	1.028	6.046	55.084	.496	2.917	2.917	.893	5.252	38.773
...*	...*	...*	...*	...*	...*	...*	...*	...*	...*

\* Results from other factors are not listed as they are not relevant to the analysis of the number of factors to retain

Table 4.1 Eigenvalues and Cumulative Percent of Variance from Exploratory Factor Analysis for Social Capital



	Factor				
	1	2	3	4	5
Live in close-knit neighborhood (I1)		.704			
People in neighborhood help neighbors (I2)		.791			
People in neighborhood can be trusted (I3)		.579			
People in neighborhood get along (I4)					.584
People in neighborhood share same values (I5)					.662
Spoken with political official (I6)			.531		
Spoken with religious leader (I7)			.608		
Gotten together to fix problem (I8)			.474		
Volunteered in last 12 months (I9)			.523		
Served as an officer (I10)			.503		
Family give financial help (I11)					
How often gives help besides money to family outside (I12)	.652				
How often gives help besides money to friends outside (I13)	.874				
Family get financial help (I14)				.508	
How often gets help besides money from family outside (I15)				.673	
How often gets help besides money from friends (I16)	.474			.397	
Attend religious services (I17)					

Table 4.2 Varimax Rotated Factor Loadings

	Factor				
	1	2	3	4	5
Live in close-knit neighborhood (I1)		.709			
People in neighborhood help neighbors (I2)		.808		.380	
People in neighborhood can be trusted (I3)		.661		.394	
People in neighborhood get along (I4)		.379		.645	
People in neighborhood share same values (I5)				.688	
Spoken with political official (I6)			.530		
Spoken with religious leader (I7)			.608		
Gotten together to fix problem (I8)			.472		
Volunteered in last 12 months (I9)			.530		
Served as an officer (I10)			.506		
Family give financial help (I11)	.321				
How often gives help besides money to family outside (I12)	.684				.403
How often gives help besides money to friends outside (I13)	.883				.344
Family get financial help (I14)					.530
How often gets help besides money from family outside (I15)	.402				.726
How often gets help besides money from friends (I16)	.544				.526
Attend religious services (I17)					

Table 4.3 Direct Oblimin Structure Matrix Factor Loadings

Factor 1, labeled *support giving social capital*, consisted of three items. These items included: (1) “Sometimes families **give** financial help, either to other people they live with or to friends and family outside. Did you give any financial help like this in the last 12 months?” (2) “How often do you **give** help or support besides money to people in your family that do not live with you?” (3) “How often do you **give** help or support besides money to your friends?” The items on this dimension relate to the participant’s giving of both financial and non-financial support to family and friends.

Factor 2, labeled *bonding social capital*, contained three items. These items included: (1) “I live in a close-knit neighborhood.” (2) “People in my neighborhood are willing to help their neighbors.” (3) “People in my neighborhood can be trusted.” The items on this dimension relate to the quality of networks between individuals of similar identity categories.

Factor 3, labeled *bridging social capital*, contained five items. These items included: (1) “Have you spoken with a local political official about a neighborhood problem or improvement?” (2) “Have you talked to a local religious leader or minister to help with a neighborhood problem or neighborhood improvement?” (3) “Have you gotten together with neighbors to do something about a neighborhood problem or to organize?” (4) “Over the past 12 months, have you volunteered or helped out with activities in your community?” (5) “In the past 12 months, have you served as an officer or served on a committee of any local club or organization or religious organization?” The items on this dimension relate to acts of crossing identity boundaries, as well as participation in civic action.

Factor 4, labeled *value sharing social capital*, was composed of two items. (1) “People in my neighborhood generally get along with each other.” (2) “People in my neighborhood share the same values.” The items on this dimension relate to the quality of relationships in the participant’s neighborhood, as well as the degree with which neighborhood members share a similar worldview.

Factor 5, labeled *support receiving social capital*, consisted of three items. These items included: (1) “Sometimes families **get** financial help, either from other people they live with or from friends and family outside. Did you get any help like this in the last 12 months?” (2) “How often do you **get** help or support besides money, like babysitting, lending small appliances, and rides from people in your family that do not live with you?” (3) “How often do you **get** help or support besides money from friends?” The items on this dimension relate to participants’ receipt of both financial and non-financial support from family and friends.

#### 4.3 Measurement Model Analyses

Confirmatory factor analysis (CFA) was used to confirm the latent variables that make up social capital identified through the exploratory factor analysis. However, item 10 was dropped from the analysis as it had a skewness value of 2.832 and a kurtosis value of 6.027. A measurement model was tested, which included 7 constructs: support giving social capital, bonding social capital, bridging social capital, valuing sharing social capital, support receiving social capital, human capital, and employment outcome.

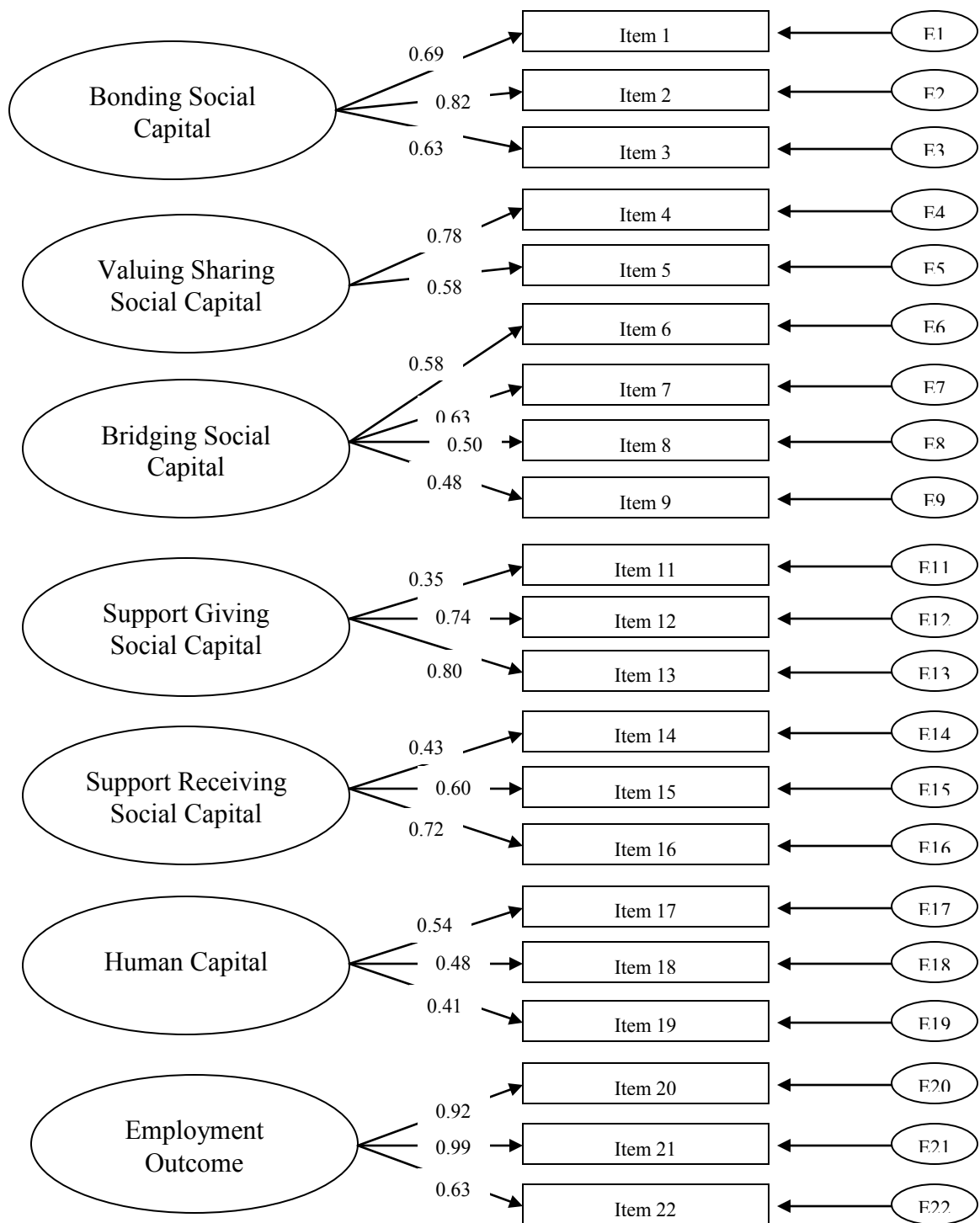
One factor loading for each latent variable was set to 1.0 to set the scale of measurement. The fit indices for the baseline model were  $\chi^2 = 556.02$ ;  $df = 168$ ;  $p < .001$ ;

RMSEA = 0.040; and CFI = 0.955. No modifications were made, as the baseline model represented a good fit. Details regarding the fit of the final CFA model and factor loadings are listed in Table 4.4. Table 4.5 exhibits the covariance matrix for the measurement model derived from the CFA that included social capital factors, human capital, and employment outcome.

	Unstandardized Coefficient	Standardized Coefficient
Measurement Model		
Loadings on Factor – Social Capital		
Bonding Social Capital → Item 1	0.87***	0.69
Bonding Social Capital → Item 2	1.00	0.82
Bonding Social Capital → Item 3	0.77***	0.63
Value Sharing Social Capital → Item 4	1.00	0.78
Valuing Sharing Social Capital → Item 5	0.73***	0.58
Bridging Social Capital → Item 6	0.93***	0.58
Bridging Social Capital → Item 7	1.00	0.63
Bridging Social Capital → Item 8	0.93***	0.50
Bridging Social Capital → Item 9	0.95***	0.48
Support Giving Social Capital → Item 11	0.18***	0.35
Support Giving Social Capital → Item 12	0.91***	0.74
Support Giving Social Capital → Item 13	1.00	0.80
Support Receiving Social Capital → Item 14	0.28***	0.43
Support Receiving Social Capital → Item 15	0.87***	0.60
Support Receiving Social Capital → Item 16	1.00	0.72
Loadings on Factor – Human Capital		
Human Capital → Community College (I17)	1.00	0.54
Human Capital → Employment Training (I18)	0.87***	0.48
Human Capital → Highest Education Level (I19)	2.78***	0.41
Loadings on Factor – Employment Outcome		
Employment Outcome → Hours worked/week (I20)	38.22***	0.92
Employment Outcome → Has job (I21)	1.00	0.99
Employment Outcome → Months worked at job (I22)	4.95***	0.63
Model Fit		
$\chi^2 = 556.02$ df = 168 p < .001 RMSEA = 0.040 CFI = 0.955		

Note. \*\*\*p<.001

Table 4.4 Summary of Measurement Model Factor Loadings Derived from Initial Confirmatory Factor Analysis



Note. Standardized path coefficients presented. All coefficients are significant at  $p < .001$ .

Figure 4.1 Measurement Model I

	Bonding Social Capital	Valuing Relationships	Bridging Social Capital	Giving Support	Getting Support	Human Capital	Employment Outcomes
Bonding Social Capital	0.871***						
Valuing Relationships	0.415***	0.687***					
Bridging Social Capital	0.003	-0.010	0.048***				
Giving Support	0.044	0.044	0.039***	0.647***			
Getting Support	0.046*	0.014	0.018**	0.327***	0.435***		
Human Capital	-0.024*	-0.017	0.023***	0.090***	0.054***	0.070***	
Employment Outcomes	-0.011	0.021	0.001	0.058***	0.007	0.025***	0.235***

Note. \*p<.05, \*\*p<.01, \*\*\*p<.001

Table 4.5 Covariance Matrix for Measurement Model Derived from Initial Confirmatory Factor Analysis

A confirmatory factor analysis was also conducted for the state TANF policy latent variable. Three factors represented the state TANF policy latent variable and are presented in Table 4.6. These included allowable work activity (with higher scores indicating more generous allowable work activities), work exemption for caring for children (with higher scores indicating more generous work exemptions for caring for children), and minimum hour work requirement (with higher scores indicating less generous policy). However, the minimum hour work requirement indicator was transformed to improve the interpretability of the latent variable. Thus, higher scores indicate more generous minimum hour work requirement policy. Table 4.7 describes the



measurement model factor loadings for the state TANF policy latent variable. The baseline model was saturated and represented a perfect fit; however, Item 25 had negative error variance. Therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. Following this modification to the model, the fit indices were  $\chi^2 = 174.45$ ;  $df = 1$ ;  $p < .001$ ; RMSEA = 0.349; and CFI = 0.921. The LISREL program output suggested various modifications to elicit a better model fit, and errors were correlated for Item 23 and Item 24. The final model was saturated and represented a perfect fit.

State	Allowable Work Activity	Work Exemption for Caring Children Age under X (months)	Minimum Hour Work Requirement	Transformed Data
California	4	12	32	29.5
Colorado	5	12	22	39.5
Connecticut	3	12	30.75	30.75
Indiana	4	12	30.75	30.75
Iowa	3	0	40	21.5
Kentucky	5	12	30	31.5
Rhode Island	5	12	25	36.5
Texas	5	12	25	36.5
Washington	5	4	32	29.5
Wisconsin	2	3	40	21.5

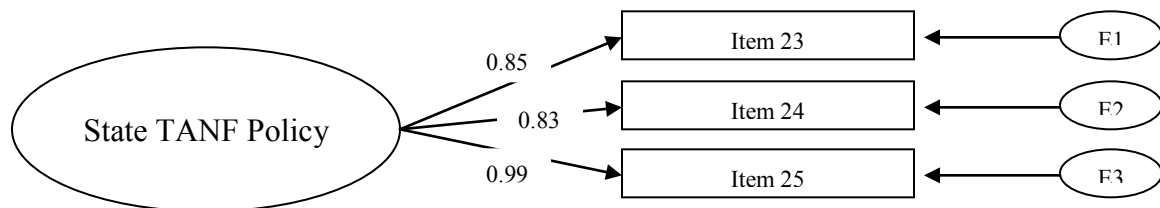
Source: Welfare Rules Databook (Rowe, Murphy, & Williamson, 2006)

Table 4.6 Indicators Used in Measurement Model for State TANF Policy

	Unstandardized Coefficient	Standardized Coefficient
Measurement Model		
Loadings on Factor – State TANF Policy		
State TANF Policy → Allowable Work Activity (I23)	0.16***	0.85
State TANF Policy → Months Exempted for Child (I24)	0.62***	0.83
State TANF Policy → Minimum Work Requirement (I25)	1.00	0.99
Model Fit		
$\chi^2 = 0.00$ $df = 0$ $p = 1.000$ RMSEA = 0.000		

Note. \*\*\*p<.001

Table 4.7 Summary of Measurement Model Factor Loadings Derived from Subsequent Confirmatory Factor Analysis



Note. Standardized path coefficients presented. All coefficients are significant at  $p < .001$ .

Figure 4.2 Measurement Model II

#### 4.4 Structural Equation Modeling

Following confirmatory factor analysis, the structural models were tested. This section will describe the following models: impact of demographic variables on social capital factors, human capital, and employment outcome; impact of macro-level factors on employment outcome; impacts of social capital factors and human capital on employment outcome; and final model.

### *Relationship between Demographic Variables and Social Capital Factors*

The impact of demographic variables on social capital latent factors was analyzed with two separate analyses. The first examined the effects of age, presence of a child under age 6, ownership of a vehicle, and number of years lived in neighborhood on social capital factors. The second explored the impact of race and ethnicity on social capital factors. The model fit indices for the first baseline model were  $\chi^2 = 970.17$ ;  $df = 130$ ;  $p < .001$ ; RMSEA = 0.067; and CFI = 0.856. The LISREL output suggested various modifications to elicit a better model fit. Errors were correlated for the support giving social capital factor and the support receiving social capital factor. Following this modification, the fit indices for the model were  $\chi^2 = 647.70$ ;  $df = 129$ ;  $p < .001$ ; RMSEA = 0.053; and CFI = 0.911. Then, errors were correlated for the bonding social capital factor and the value sharing social capital factor. The final model fit indices were  $\chi^2 = 450.60$ ;  $df = 128$ ;  $p < .001$ ; RMSEA = 0.042; and CFI = 0.945. Table 4.8 and Figure 4.3 present the estimated structural model.

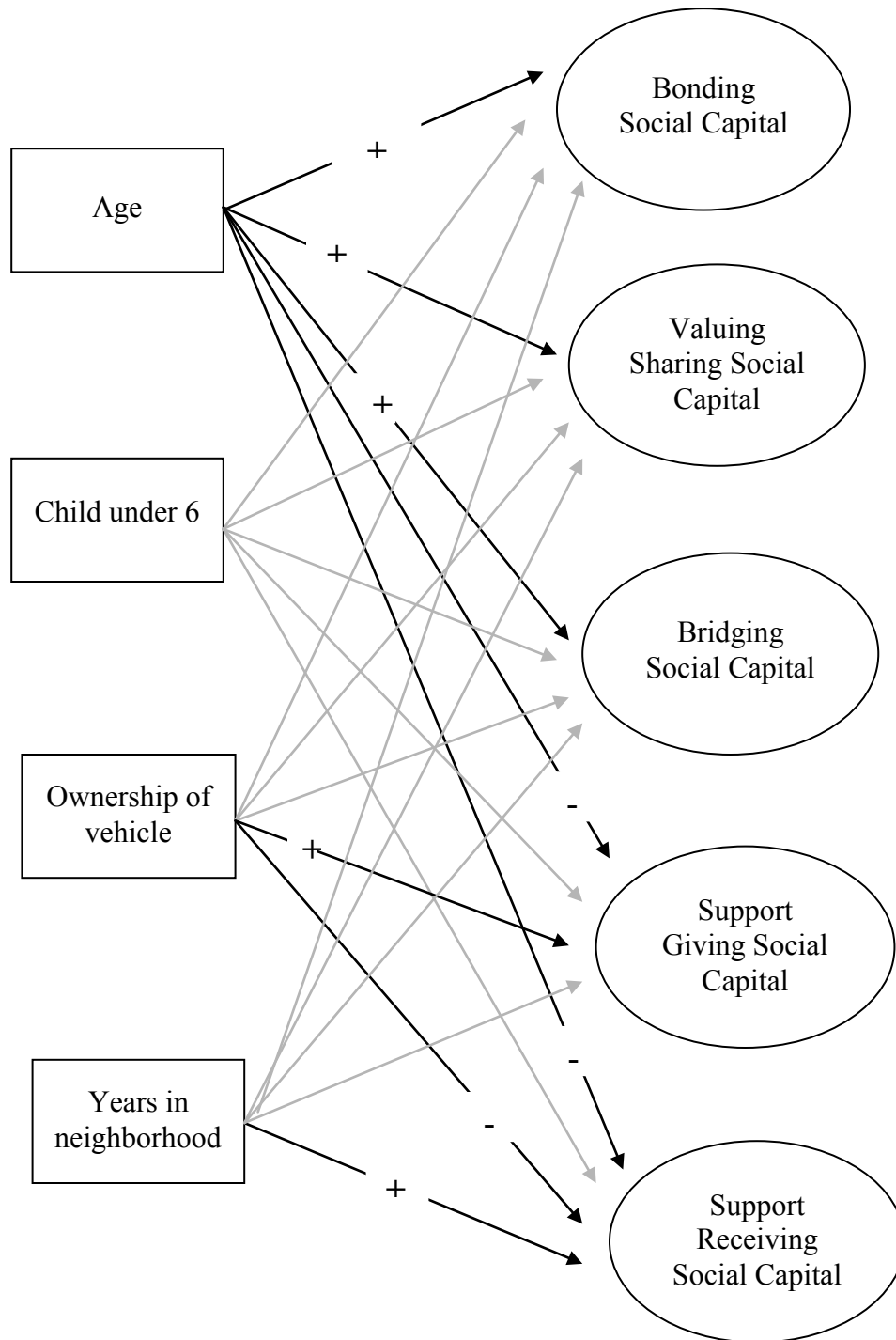
Age was positively associated with bonding social capital, value sharing social capital, and bridging social capital, meaning that older age was associated with more bonding social capital, value sharing, and bridging social capital. In contrast, age was negatively associated with support giving and support receiving meaning that older women gave and received less support to/from family and friends. Ownership of a vehicle was positively associated with support giving social capital, but negatively associated with support receiving social capital. This means that women who owned a vehicle gave more support to family and friends than women who did not. However,

women who owned a vehicle received less support from family and friends. Finally, number of years living in the neighborhood was positively associated with support receiving social capital meaning that women who lived in the neighborhood longer received more support from family and friends.

From	To	Standardized Coefficient
Age	Bonding Social Capital	0.41***
Presence of child under 6 (1 = yes)	Bonding Social Capital	-0.02
Ownership of vehicle (1 = yes)	Bonding Social Capital	-0.01
# of years in neighborhood	Bonding Social Capital	0.04
Age	Value Sharing Social Capital	0.09*
Presence of child under 6 (1 = yes)	Value Sharing Social Capital	-0.03
Ownership of vehicle (1 = yes)	Value Sharing Social Capital	0.01
# of years in neighborhood	Value Sharing Social Capital	0.03
Age	Bridging Social Capital	0.14***
Presence of child under 6 (1 = yes)	Bridging Social Capital	-0.02
Ownership of vehicle (1 = yes)	Bridging Social Capital	0.02
# of years in neighborhood	Bridging Social Capital	0.05
Age	Support Giving Social Capital	-0.15***
Presence of child under 6 (1 = yes)	Support Giving Social Capital	-0.02
Ownership of vehicle (1 = yes)	Support Giving Social Capital	0.07*
# of years in neighborhood	Support Giving Social Capital	0.03
Age	Support Receiving Social Capital	-0.24***
Presence of child under 6 (1 = yes)	Support Receiving Social Capital	-0.01
Ownership of vehicle (1 = yes)	Support Receiving Social Capital	-0.06*
# of years in neighborhood	Support Receiving Social Capital	0.08*
$\chi^2 = 450.60$ df = 128 p < .001 RMSEA = 0.042 CFI = 0.945		

Note. \*p<.05, \*\*\*p<.001

Table 4.8 Structural Coefficients for Paths from Demographic Variables to Social Capital Factors



Note: Bold lines are significant at the  $p < .05$  level

Figure 4.3 Path Diagram for Demographic Variables and Social Capital Factors

The fit indices for the second baseline model were  $\chi^2 = 972.95$ ;  $df = 120$ ;  $p < .001$ ; RMSEA = 0.071; and CFI = 0.865. The LISREL output suggested various modifications, and errors were correlated for the support giving social capital factor and the support receiving social capital factor. The fit indices for this model were  $\chi^2 = 665.36$ ;  $df = 119$ ;  $p < .001$ ; RMSEA = 0.057; and CFI = 0.914. Then, errors were correlated for the bonding social capital factor and the value sharing social capital factor. The final model fit indices were  $\chi^2 = 466.33$ ;  $df = 118$ ;  $p < .001$ ; RMSEA = 0.045; and CFI = 0.945. Table 4.9 and Figure 4.4 present the estimated structural model.

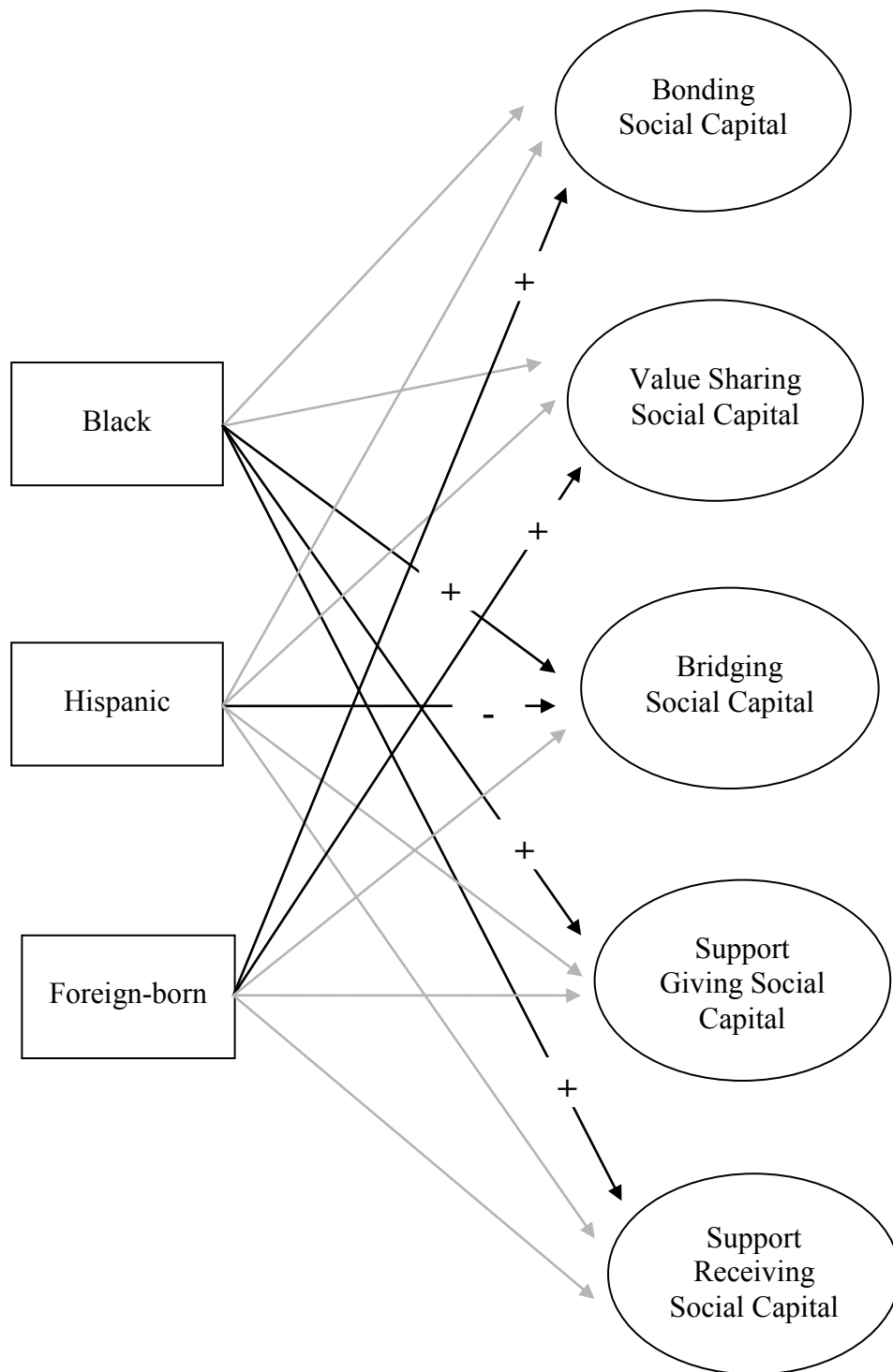
Women who identified as Black/African American had more bridging social capital than non-Black/African American women. They also gave more financial and non-financial support to family and friends than non-Black/African American women. Those who identified as Hispanic/Spanish/Latina had less bridging social capital than non-Hispanic/Spanish/Latina women. Finally, foreign-born women had greater bonding social capital and value sharing social capital than their counterparts.

From	To	Standardized Coefficient
Black/African American (1 = yes)	Bonding Social Capital	-0.01
Hispanic/Spanish/Latina (1 = yes)	Bonding Social Capital	0.03
Foreign-born (1 = yes)	Bonding Social Capital	0.09**
Black/African American (1 = yes)	Valuing Sharing Social Capital	-0.02
Hispanic/Spanish/Latina (1 = yes)	Valuing Sharing Social Capital	-0.00
Foreign-born (1 = yes)	Valuing Sharing Social Capital	0.10**
Black/African American (1 = yes)	Bridging Social Capital	0.09*
Hispanic/Spanish/Latina (1 = yes)	Bridging Social Capital	-0.11**
Foreign-born (1 = yes)	Bridging Social Capital	0.01
Black/African American (1 = yes)	Support Giving Social Capital	0.14***
Hispanic/Spanish/Latina (1 = yes)	Support Giving Social Capital	-0.07
Foreign-born (1 = yes)	Support Giving Social Capital	-0.02
Black/African American (1 = yes)	Support Receiving Social Capital	0.12**
Hispanic/Spanish/Latina (1 = yes)	Support Receiving Social Capital	-0.02
Foreign-born (1 = yes)	Support Receiving Social Capital	-0.03
$\chi^2 = 466.33$ df = 118 p < .001 RMSEA = 0.045 CFI = 0.945		

Note. \*p < .05, \*\*p < .01, \*\*\*p < .001

Table 4.9 Structural Coefficients for Paths from Demographic Variables to Social Capital Factors





Note: Bold lines are significant at the  $p < .05$  level

Figure 4.4 Path Diagram for Demographic Variables and Social Capital Factors

### *Demographic Variables and Human Capital*

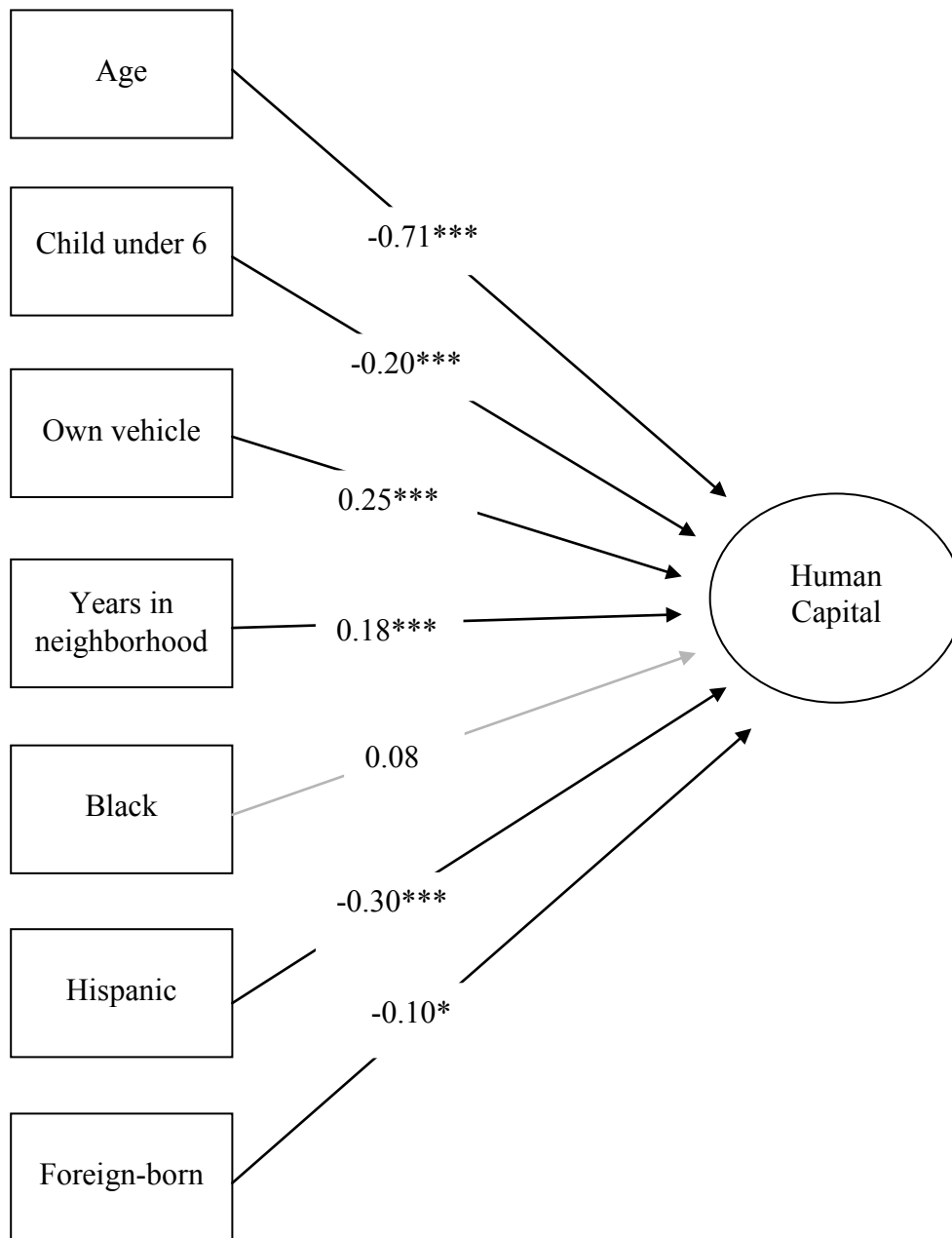
The impact of demographic variables on the human capital latent variable was analyzed with one analysis. The analysis examined the effects of age, presence of child under age 6, ownership of vehicle, number of years in neighborhood, race, ethnicity, and foreign-born status on the human capital latent variable. The fit indices for the baseline model were  $\chi^2 = 121.91$ ;  $df = 14$ ;  $p < .001$ ; RMSEA = 0.073; and CFI = 0.937. The LISREL output suggested various modifications to elicit a better fit, and an error covariance was added between Item 17 and Item 18. The fit indices for this model were  $\chi^2 = 83.18$ ;  $df = 13$ ;  $p < .001$ ; RMSEA = 0.062; and CFI = 0.959. Then, an error covariance was added between age and Item 19. The fit indices for the final model were  $\chi^2 = 30.68$ ;  $df = 12$ ;  $p < .01$ ; RMSEA = 0.033; and CFI = 0.989. Table 4.10 and Figure 4.5 present the estimated structural model. The standardized coefficients are included in Figure 4.5.

Ownership of a vehicle and number of years living in the neighborhood were positively associated with human capital, meaning that those who owned a vehicle and those who lived in the neighborhood longer had a greater level of human capital than others. In contrast, age, presence of a child under age 6, being Hispanic/Spanish/Latina, and foreign-birth were negatively associated with human capital. This means that older women had less human capital than younger women, and women with a child under age 6 had less human capital than those who did not. Additionally, women who identified as Hispanic/Spanish/Latina had less human capital than those who did not, and foreign-born women had less human capital than native-born women.

From	To	Standardized Coefficient
Age	Human Capital	-0.71***
Presence of child under 6 (1 = yes)	Human Capital	-0.20***
Ownership of vehicle (1 = yes)	Human Capital	0.25***
# of years in neighborhood	Human Capital	0.18***
Black/African American (1 = yes)	Human Capital	0.08
Hispanic/Spanish/Latina (1 = yes)	Human Capital	-0.30***
Foreign-born (1 = yes)	Human Capital	-0.10*
$\chi^2 = 30.68$ df = 12 p < .001 RMSEA = 0.033 CFI = 0.989		

Note. \*p < .05, \*\*\*p < .001

Table 4.10 Structural Coefficients for Paths from Demographic Variables to Human Capital



Note. \* $p < .05$ , \*\*\* $p < .001$

Figure 4.5 Path Diagram for Demographic Variables and Human Capital

### *Demographic Variables and Employment Outcome*

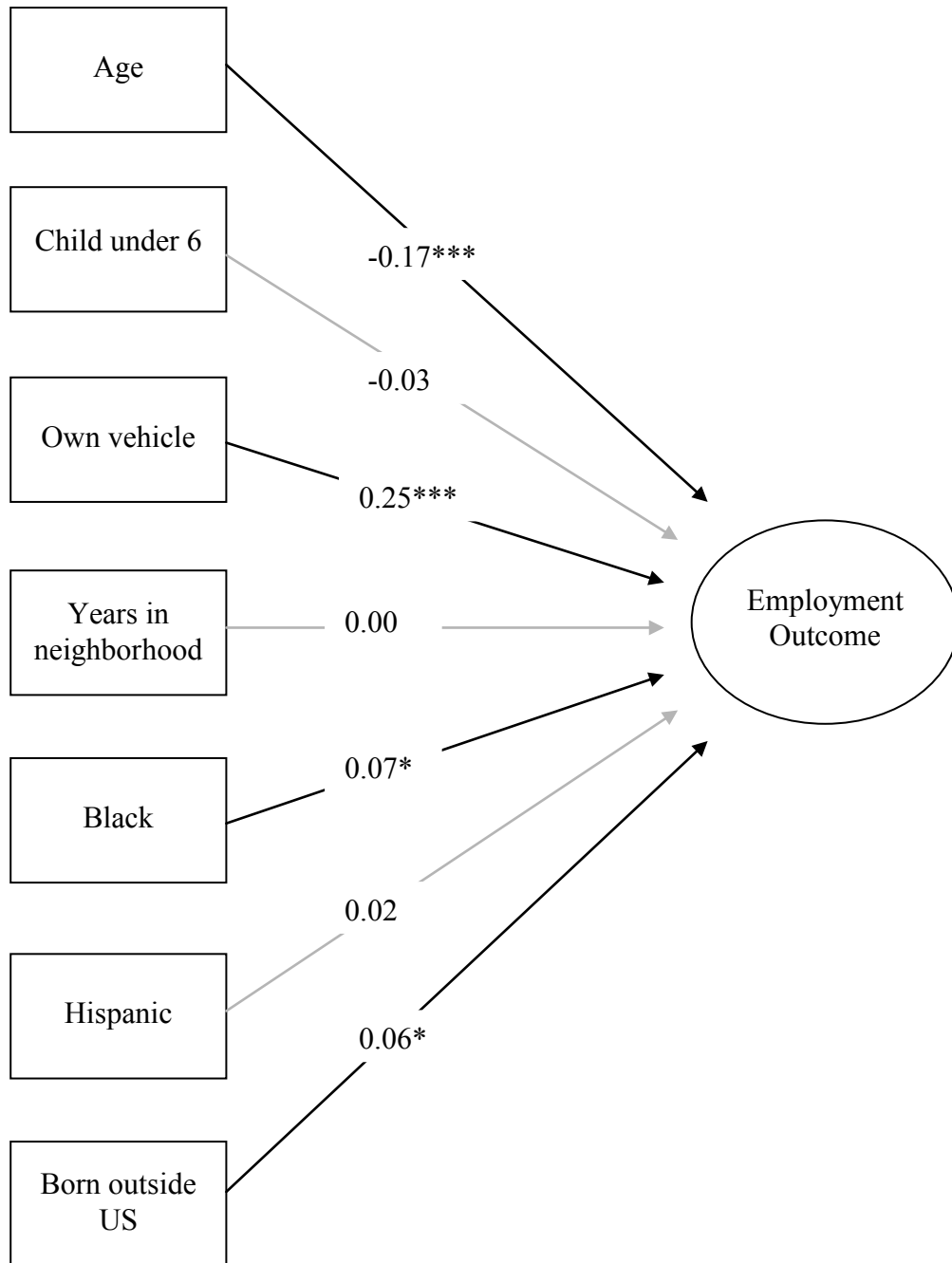
The impact of demographic variables on the employment outcome latent variable was examined. The analysis examined the impact of age, presence of child under age 6, ownership of vehicle, number of years in neighborhood, race, ethnicity, and foreign-born status on the employment outcome latent variable. The model fit indices for the first baseline model were  $\chi^2 = 76.16$ ;  $df = 14$ ;  $p < .001$ ; RMSEA = 0.056; and CFI = 0.982. The LISREL output suggested various modifications; however, the baseline model was determined to be an adequate fit and no modifications were made. Table 4.11 and Figure 4.6 present the estimated structural model. The standardized coefficients are included in Figure 4.6.

Ownership of a vehicle, identifying as Black/African American, and foreign-birth were positively associated with the employment outcome. This means that women who owned a vehicle had a better employment outcome than those who did not. Additionally, those who identified as Black/African American had a better employment outcome than those who did not, and foreign-born women had a better employment outcome than native-born women. In contrast, age was negatively associated with the employment outcome meaning that older women had a worse employment outcome than their younger counterparts.

From	To	Standardized Coefficient
Age	Employment Outcome	-0.17***
Presence of child under 6 (1 = yes)	Employment Outcome	-0.03
Ownership of vehicle (1 = yes)	Employment Outcome	0.25***
# of years in neighborhood	Employment Outcome	0.00
Black/African American (1 = yes)	Employment Outcome	0.07*
Hispanic/Spanish/Latina (1 = yes)	Employment Outcome	0.02
Foreign-born (1 = yes)	Employment Outcome	0.06*
$\chi^2 = 76.16$ df = 14 p < .001 RMSEA = 0.056 CFI = 0.982		

Note. \*p < .05, \*\*\*p < .001

Table 4.11 Structural Coefficients for Paths from Demographic Variables to Employment Outcome



Note. \* $p < .05$ , \*\*\* $p < .001$

Figure 4.6 Path Diagram for Demographic Variables and Employment Outcome

### *Macro-Level Factors and Employment Outcome*

The impact of macro-level factors on the employment outcome latent variable was tested. First, the impact of city unemployment rate on the employment outcome was tested. The fit indices for the initial model were  $\chi^2 = 4.00$ ;  $df = 2$ ;  $p > .05$ ; RMSEA = 0.026; and CFI = 0.999. As this was judged to be an adequate model fit, no modifications were made. Table 4.12 and Figure 4.7 present the estimated structural model. The standardized coefficient is included in Figure 4.7. City unemployment rate was not significantly associated with the employment outcome.

Following the analysis of city unemployment rate, the impact of state TANF policy on the employment outcome was assessed. The fit indices for the baseline model were  $\chi^2 = 18.12$ ;  $df = 8$ ;  $p < .001$ ; RMSEA = 0.030; and CFI = 0.998. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 187.05$ ;  $df = 9$ ;  $p < .001$ ; RMSEA = 0.118; and CFI = 0.958. The LISREL output suggested various modifications, and an error covariance was added between Item 23 and Item 24. The final model fit indices were  $\chi^2 = 12.02$ ;  $df = 8$ ;  $p > .05$ ; RMSEA = 0.019; and CFI = 0.999. Table 4.13 and Figure 4.8 present the estimated structural model. The standardized coefficients are included in Figure 4.8. State TANF policy was negatively associated with the employment outcome. This means that more generous state TANF policy was associated with a worse employment outcome.



From	To	Standardized Coefficient
City Unemployment Rate	Employment Outcome	-0.05
$\chi^2 = 4.00$ df = 2 p > .05 RMSEA = 0.026 CFI = 0.999		

Table 4.12 Structural Coefficient for Path from City Unemployment Rate to Employment Outcome

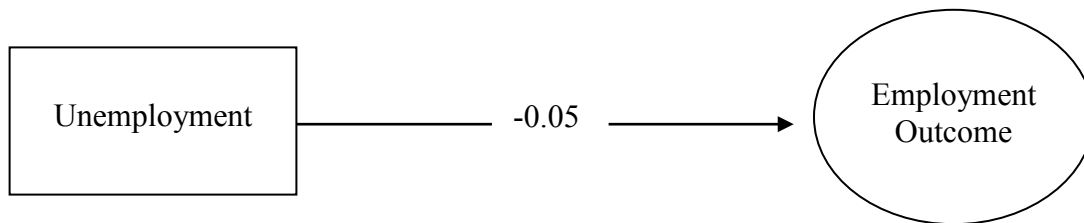
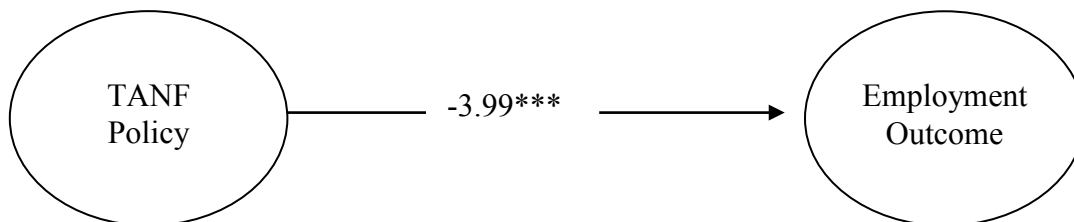


Figure 4.7 Path Diagram for City Unemployment Rate and Employment Outcome

From	To	Standardized Coefficient
State TANF Policy	Employment Outcome	-3.99***
$\chi^2 = 12.02$ df = 8 p > .05 RMSEA = 0.019 CFI = 0.999		

Note. \*\*\*p < .001

Table 4.13 Structural Coefficient from State TANF Policy to Employment Outcome



Note. \*\*\*p < .001

Figure 4.8 Path Diagram for State TANF Policy and Employment Outcome

### *Direct Effects of Social Capital and Human Capital on Employment Outcome*

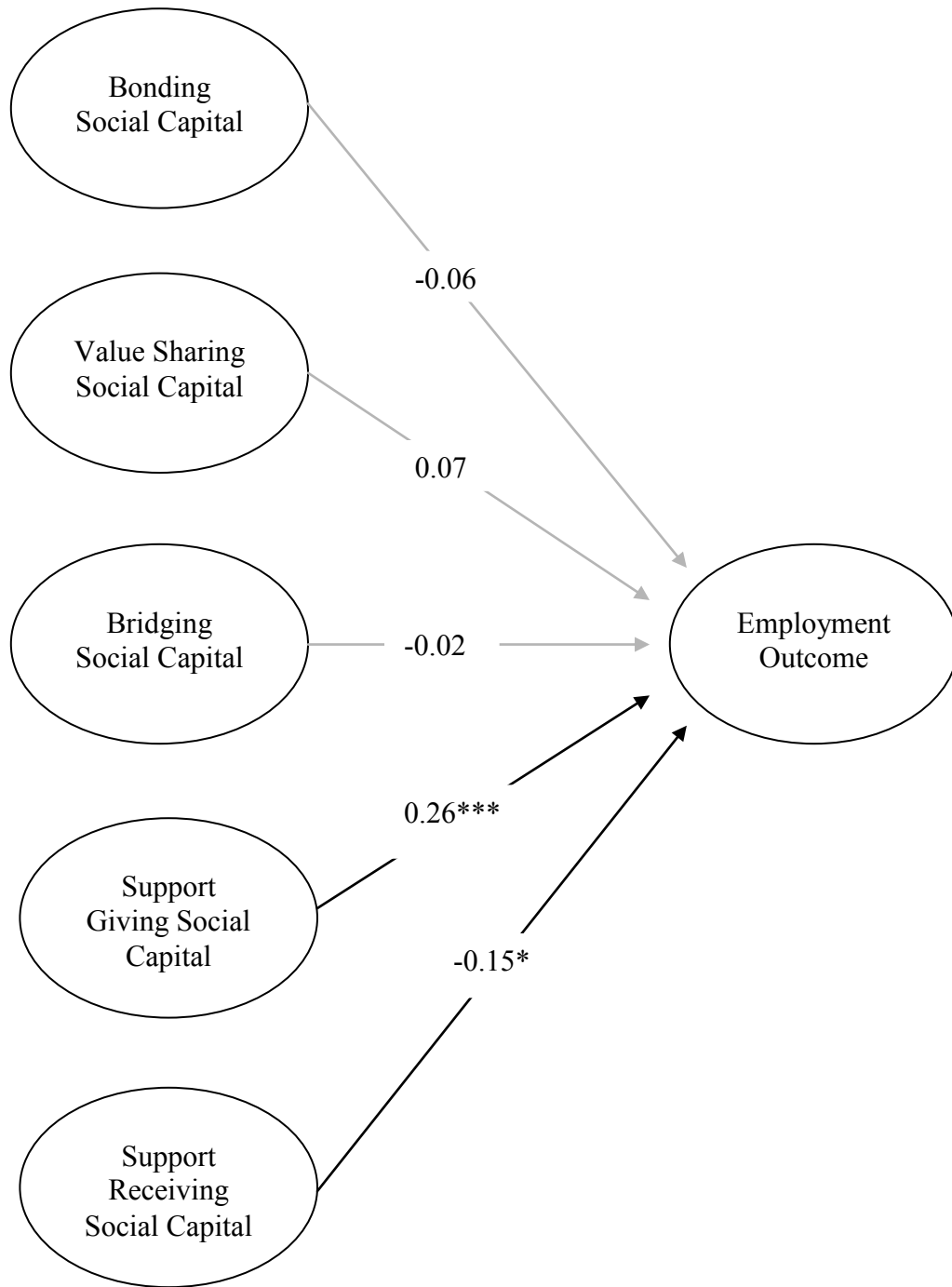
Following analysis of demographic variables and macro-level factors on latent variables of interest, the structural model was tested for social capital factors, human capital, and employment outcome. First, the direct effect of social capital factors on employment outcome was tested. The fit indices for the baseline model were  $\chi^2 = 388.33$ ;  $df = 120$ ;  $p < .001$ ; RMSEA = 0.040; and CFI = 0.965. No modifications were made to the initial model as the fit was judged to be adequate. Table 4.14 and Figure 4.9 present the estimated structural model. The standardized coefficients are included in Figure 4.9.

Support giving social capital was positively associated with employment outcome, meaning that women who gave more support to family and friends had a better employment outcome than others. In contrast, support receiving social capital was negatively associated with employment outcome, meaning that women who received more support from family and friends had a worse employment outcome.

From	To	Standardized Coefficient
Bonding Social Capital	Employment Outcome	-0.06
Value Sharing Social Capital	Employment Outcome	0.07
Bridging Social Capital	Employment Outcome	-0.02
Support Giving Social Capital	Employment Outcome	0.26***
Support Receiving Social Capital	Employment Outcome	-0.15*
$\chi^2 = 388.33$ df = 120 p < .001 RMSEA = 0.040 CFI = 0.965		

Note. \*p < .05, \*\*\*p < .001

Table 4.14 Structural Coefficients for Paths from Social Capital to Employment Outcome



Note. \* $p < .05$ , \*\*\* $p < .001$

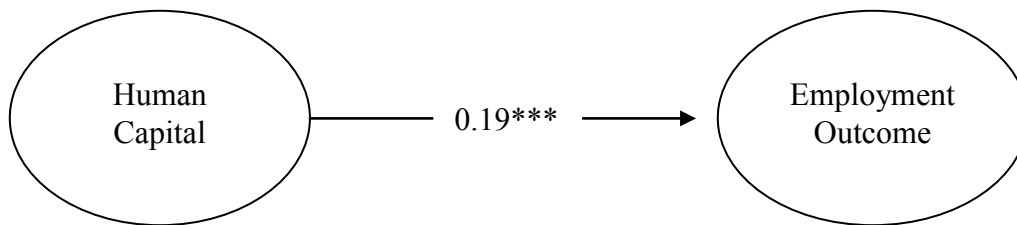
Figure 4.9 Path Diagram for Social Capital Factors and Employment Outcome

Following analysis of the direct effects of social capital factors on the employment outcome, the effect of human capital on the employment outcome was analyzed. The fit indices for the initial model were  $\chi^2 = 81.15$ ;  $df = 8$ ;  $p < .001$ ; RMSEA = 0.080; and CFI = 0.971. The LISREL program output suggested various modifications to improve the fit of the model, and an error covariance was added between Item 18 and Item 22. The final model fit indices were  $\chi^2 = 49.87$ ;  $df = 7$ ;  $p < .001$ ; RMSEA = 0.066; and CFI = 0.983. Table 4.15 and Figure 4.10 present the estimated structural model. The standardized coefficients are included in Figure 4.10. Human capital was positively associated with employment outcome meaning that women with a higher level of human capital had a better employment outcome.

From	To	Standardized Coefficient
Human Capital	Employment Outcomes	0.19***
$\chi^2 = 49.87$ $df = 7$ $p < .001$ RMSEA = 0.066   CFI = 0.983		

Note. \*\*\* $p < .001$

Table 4.15 Structural Coefficient for Path from Human Capital to Employment Outcome



Note. \*\*\* $p < .001$

Figure 4.10 Path Diagram for Human Capital and Employment Outcome

### *Final Model*

The previous analyses were utilized in the construction of the final model. The fit indices for the baseline model were  $\chi^2 = 894.97$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.071; and CFI = 0.907. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 1057.53$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.078; and CFI = 0.888. The LISREL program output suggested various modifications to improve the fit of the model. An error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 726.29$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.063; and CFI = 0.927. Table 4.16 and Figure 4.11 present the estimated structural model. The standardized coefficients are included in Figure 4.11.

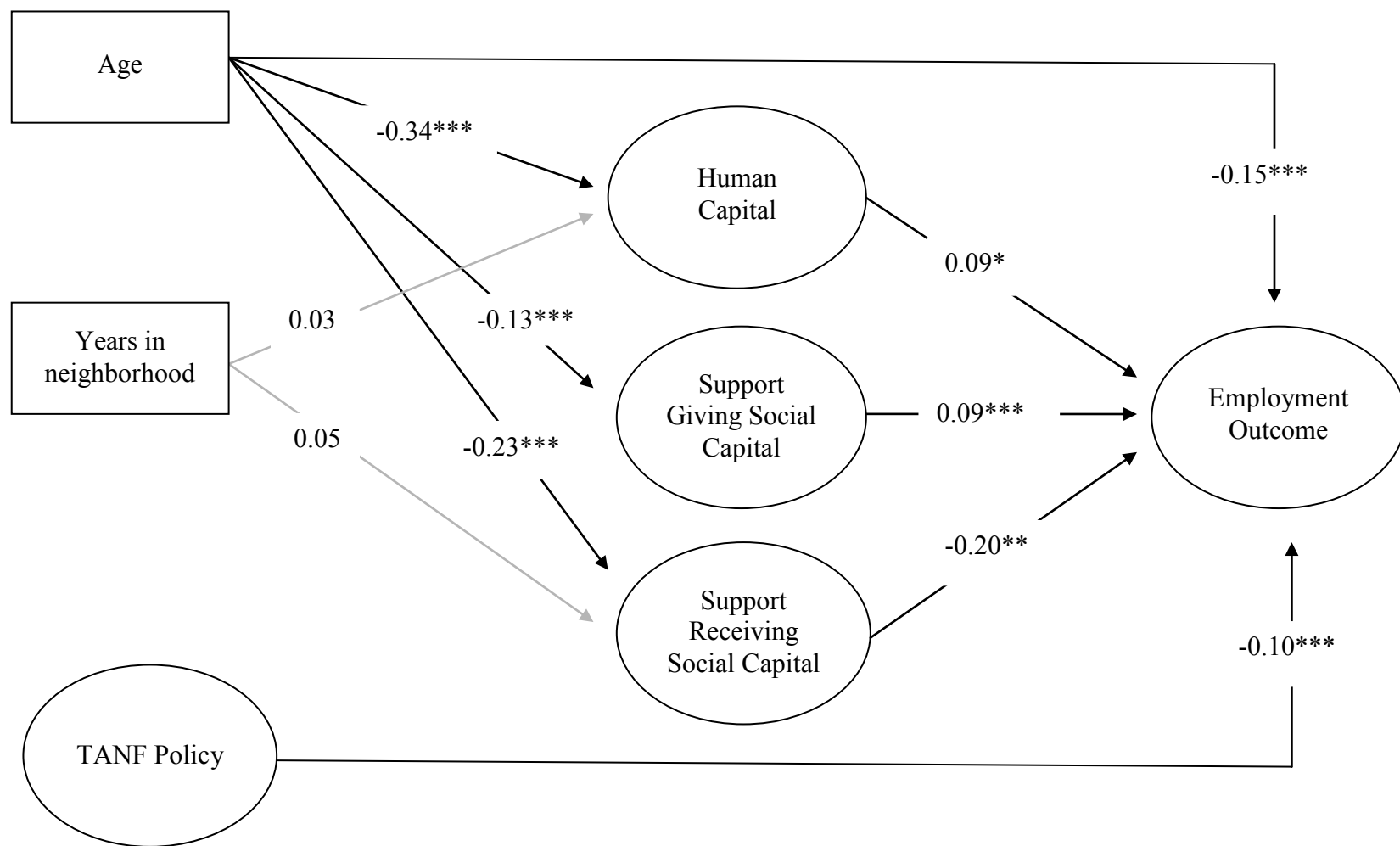
Age was negatively associated with support giving social capital, support receiving social capital, human capital, and employment outcome. This means that older women gave and received less support than their younger counterparts, as well as had lower human capital and a worse employment outcome. State TANF policy was negatively associated with employment outcome, meaning that more generous policy was associated with a worse employment outcome. While support giving social capital was positively associated with the employment outcome, support receiving social capital was negatively associated. This means that women who gave more support had a better employment outcome, whereas women who received more support had a worse employment outcome. Finally, human capital was positively associated with the

employment outcome, meaning that greater human capital was associated with a better employment outcome.

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.13***
Age	Support Receiving Social Capital	-0.23***
Age	Human Capital	-0.34***
Age	Employment Outcome	-0.15***
Years in neighborhood	Support Receiving Social Capital	0.05
Years in neighborhood	Human Capital	0.03
State TANF Policy	Employment Outcome	-0.10***
Support Giving Social Capital	Employment Outcome	0.09***
Support Receiving Social Capital	Employment Outcome	-0.20**
Human Capital	Employment Outcome	0.09*
$\chi^2 = 726.29$ df = 108 p < .001 RMSEA = 0.063 CFI = 0.927		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001

Table 4.16 Structural Model Path Coefficients for Final Model



Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$

Figure 4.11 Path Diagram for Final Model



### *Multiple Group Comparisons*

Following analysis of the final model, various demographic variables were controlled. These included: race/ethnicity, presence of a child under the age of 6 in the household, and ownership of a vehicle. First, the final model was tested for the Black/African American women. The fit indices for the initial model were  $\chi^2 = 439.69$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.066; and CFI = 0.921. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 471.87$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.069; and CFI = 0.913. As Item 21 had negative error variance, an error covariance was added between Item 21 and Item 22. The fit indices for this model were  $\chi^2 = 463.47$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.069; and CFI = 0.915. The LISREL program output suggested various modifications to elicit a better model fit, and an error covariance was added between the support giving social capital latent variable and the support receiving latent variable. The fit indices for the final model were  $\chi^2 = 343.77$ ;  $df = 107$ ;  $p < .001$ ; RMSEA = 0.056; and CFI = 0.944. Table 4.17 and Figure 4.12 present the estimated structural model. The standardized coefficients are included in Figure 4.12.

The final model was then tested for the non-Black/African American participants. The fit indices for the initial model were  $\chi^2 = 512.59$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.073; and CFI = 0.895. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 721.19$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.089; and CFI = 0.841. The LISREL program output suggested various modifications to elicit a better

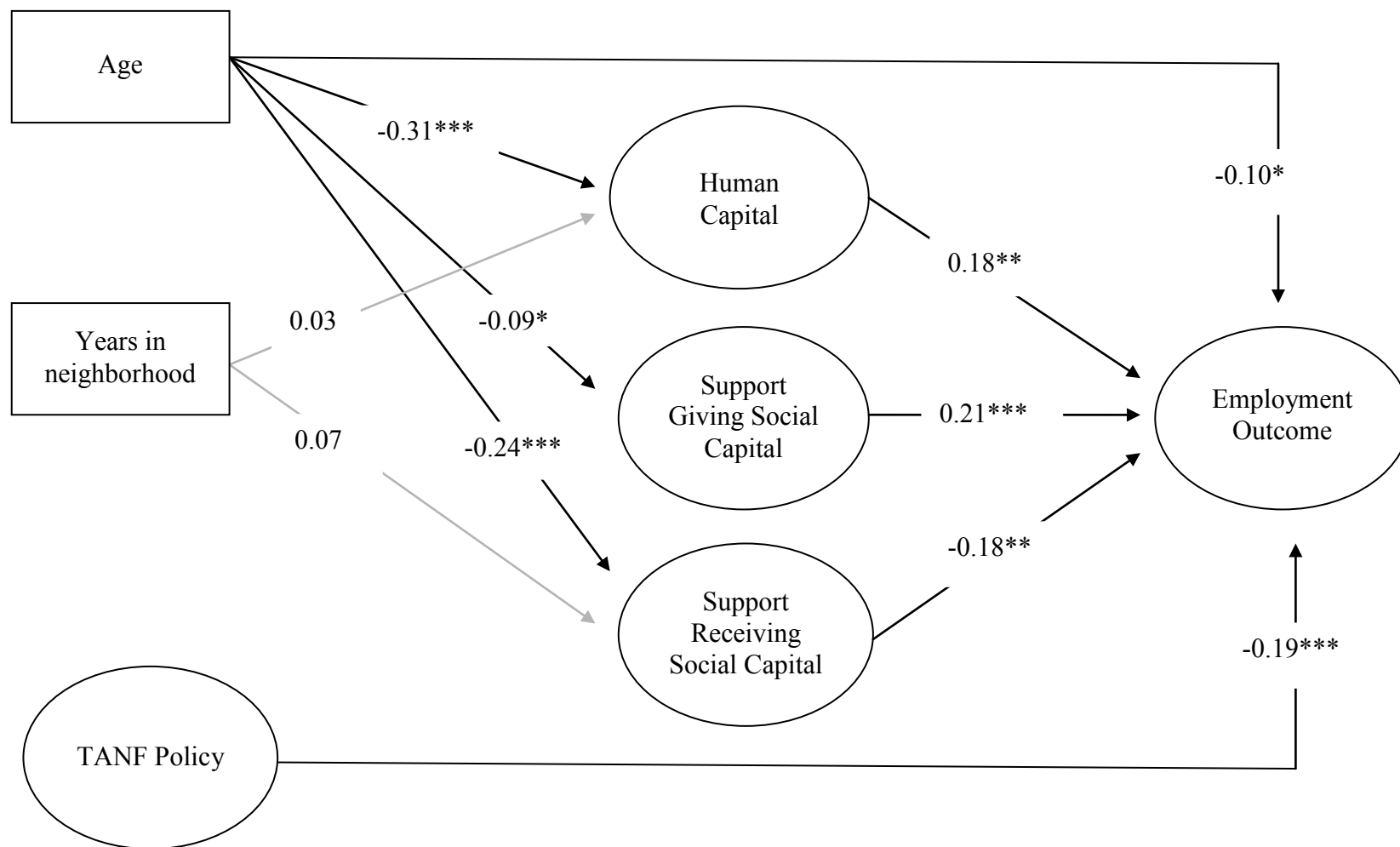
model fit, and an error covariance was added between Item 23 and Item 25. The fit indices for this model were  $\chi^2 = 514.51$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.073; and CFI = 0.895. Then, an error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 315.15$ ;  $df = 107$ ;  $p < .001$ ; RMSEA = 0.053; and CFI = 0.946. Table 4.18 and Figure 4.13 present the estimated structural model. The standardized coefficients are included in Figure 4.13.

A positive relationship existed between support giving social capital and employment outcome for both Black/African American women and non-Black/African American women. This means that more giving of support to family and friends was associated with a better employment outcome regardless of race. Additionally, age was negatively associated with support giving social capital, support receiving social capital, human capital, and employment outcome for both groups. This means that older women gave and received less support, as well as had less human capital and a worse employment outcome. This held true regardless of race. However, there was a significant negative association between state TANF policy and employment outcome, support receiving social capital and employment outcome, and human capital and employment outcome for Black/African American women only.

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.09*
Age	Support Receiving Social Capital	-0.24***
Age	Human Capital	-0.31***
Age	Employment Outcome	-0.10*
Years in neighborhood	Support Receiving Social Capital	0.07
Years in neighborhood	Human Capital	0.03
State TANF Policy	Employment Outcome	-0.19***
Support Giving Social Capital	Employment Outcome	0.21***
Support Receiving Social Capital	Employment Outcome	-0.18**
Human Capital	Employment Outcome	0.18**
$\chi^2 = 343.77$ df = 107 p < .001 RMSEA = 0.056 CFI = 0.944		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 702)

Table 4.17 Structural Model Path Coefficients for Final Model – Control: Black/African American Participants



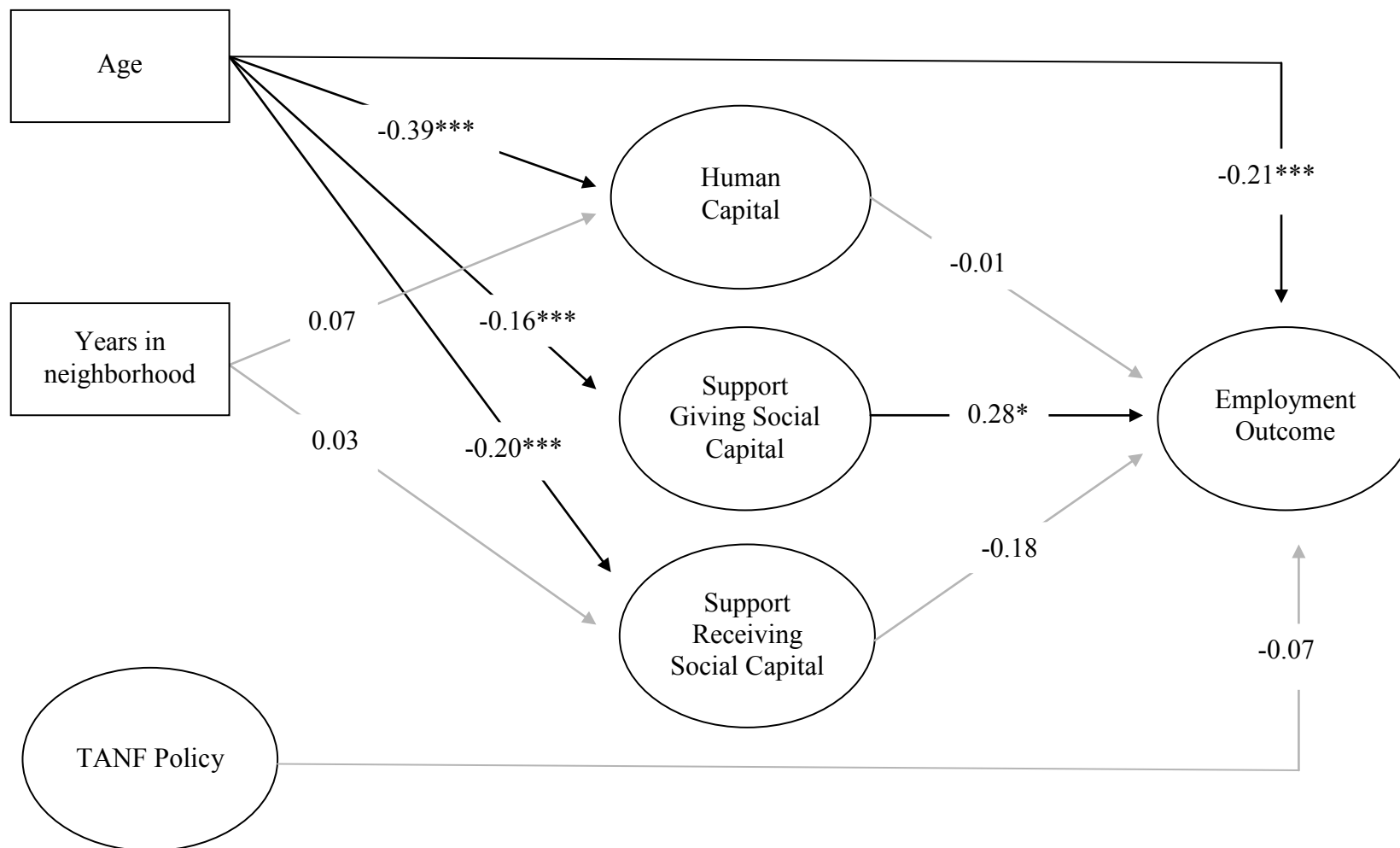
Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  (N = 702)

Figure 4.12 Path Diagram for Black/African American Participants

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.16***
Age	Support Receiving Social Capital	-0.20***
Age	Human Capital	-0.39***
Age	Employment Outcome	-0.21***
Years in neighborhood	Support Receiving Social Capital	0.03
Years in neighborhood	Human Capital	0.07
State TANF Policy	Employment Outcome	-0.07
Support Giving Social Capital	Employment Outcome	0.28*
Support Receiving Social Capital	Employment Outcome	-0.18
Human Capital	Employment Outcome	-0.01
$\chi^2 = 315.15$ df = 107 p < .001 RMSEA = 0.053 CFI = 0.946		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 703)

Table 4.18 Structural Model Path Coefficients for Final Model – Control: Non-Black/African American Participants



Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  (N = 703)

Figure 4.13 Path Diagram for Non-Black/African American Participants

A cross-validation analysis of the measurement model was conducted to determine whether or not the factor loadings of the measurement model were invariant across the two racial groups. First, the null hypothesis (H0) that the factor loadings are identical across race was tested. Then, the alternative hypothesis (H1) that the factor loadings are not identical across race was tested. A chi-square difference test was used to test H0 and H1. Table 4.19 describes the chi-square difference test used to assess the cross validation of the factor loadings of the measurement model across the two groups. The small p-value suggests that there is sufficient evidence to reject the null hypothesis. Thus, there is sufficient evidence that factor loadings across race are different.

Hypothesis	Chi-Square	df	p-value
Equal (H0)	1060.22	260	0.00000
Unequal (H1)	744.25	238	0.00000
Difference	315.97	22	0.00000

Table 4.19 Chi-Square Difference Test for Race

The final model was tested for the Hispanic/Spanish/Latina participants. The fit indices for the initial model were  $\chi^2 = 416.49$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.079; and CFI = 0.876. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 575.29$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.097; and CFI = 0.813. The LISREL program output suggested various modifications, and an error covariance was added between Item 23 and Item 24. The fit indices for this model were  $\chi^2 = 425.26$ ;  $df =$

108;  $p < .001$ ; RMSEA = 0.080; and CFI = 0.873. An error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 280.31$ ;  $df = 107$ ;  $p < .001$ ; RMSEA = 0.059; and CFI = 0.930. Table 4.20 and Figure 4.14 present the estimated structural model. The standardized coefficients are included in Figure 4.14.

The final model was then tested for the non-Hispanic/Spanish/Latina participants. The fit indices for the initial model were  $\chi^2 = 583.46$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.068; and CFI = 0.915. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 676.26$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.074; and CFI = 0.899. The LISREL program output suggested various modifications, and an error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 482.14$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.060; and CFI = 0.933. Table 4.21 and Figure 4.15 present the estimated structural model. The standardized coefficients are included in Figure 4.15.

The Hispanic/Spanish/Latina participants were similar to their counterparts in the impact of age on support giving social capital, human capital, and employment outcome. For both groups, older women gave less support to family and friends, had less human capital, and experienced a worse employment outcome. In contrast to non-Hispanic/Spanish/Latina women, there was a significant relationship between number of years in neighborhood and human capital for Hispanic/Spanish/Latina women.

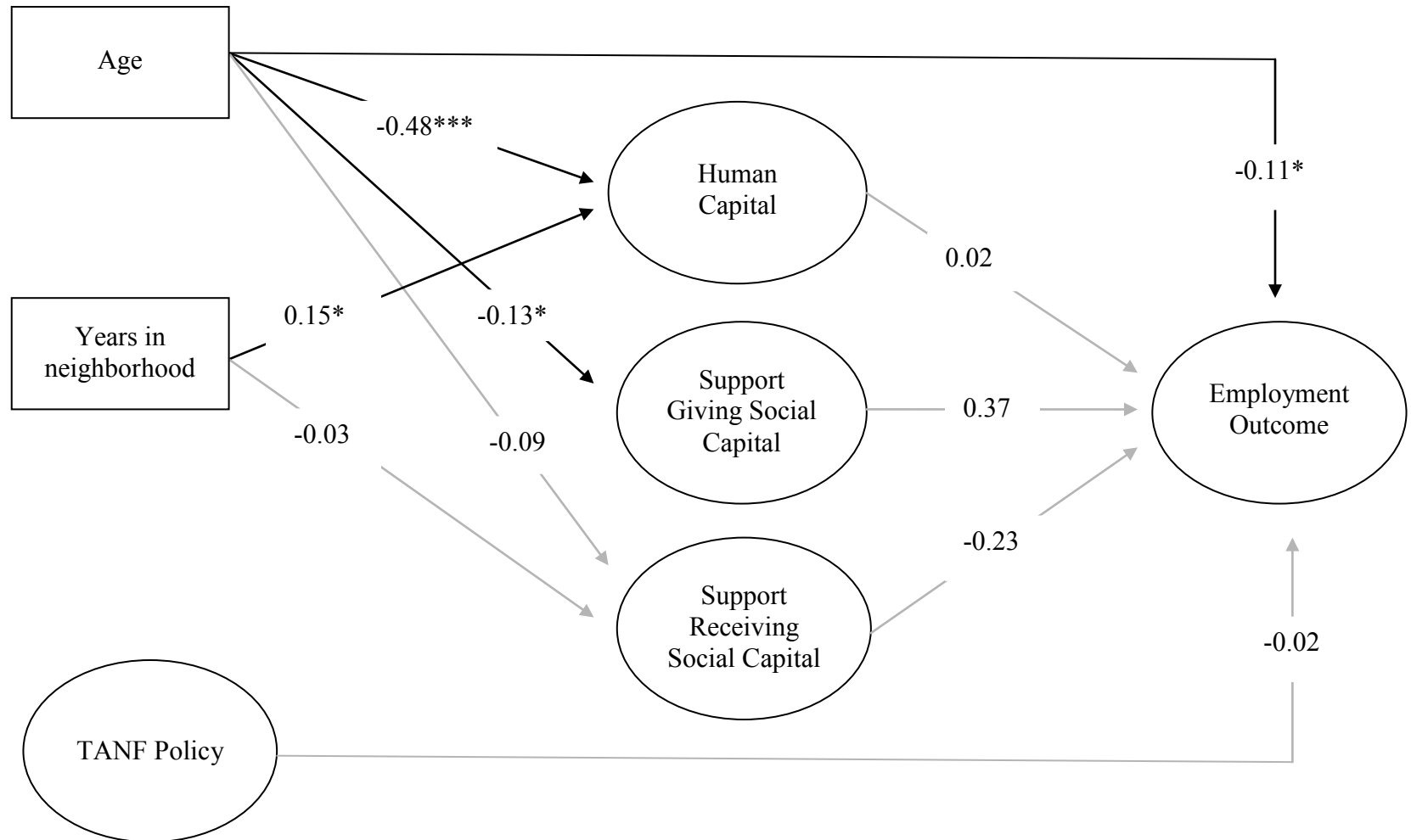


Hispanic/Spanish/Latina women who lived in their neighborhood longer had more human capital. Among non-Hispanic/Spanish/Latina women, age was negatively associated with support receiving social capital, whereas number of years in neighborhood was positively associated with support receiving social capital. More support giving social capital and human capital were associated with a better employment outcome among non-Hispanic/Spanish/Latina women. Conversely, state TANF policy and support receiving social capital were negatively associated with employment outcome for this group. This means that more generous state TANF policy and more receiving of support from family and friends were associated with a worse employment outcome among non-Hispanic/Spanish/Latina women.

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.13*
Age	Support Receiving Social Capital	-0.09
Age	Human Capital	-0.48***
Age	Employment Outcome	-0.11*
Years in neighborhood	Support Receiving Social Capital	-0.03
Years in neighborhood	Human Capital	0.15*
State TANF Policy	Employment Outcome	-0.02
Support Giving Social Capital	Employment Outcome	0.37
Support Receiving Social Capital	Employment Outcome	-0.23
Human Capital	Employment Outcome	0.02
$\chi^2 = 280.31$ df = 107 p < .001 RMSEA = 0.059 CFI = 0.930		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 460)

Table 4.20 Structural Model Path Coefficients for Final Model – Control:  
Hispanic/Spanish/Latina Participants



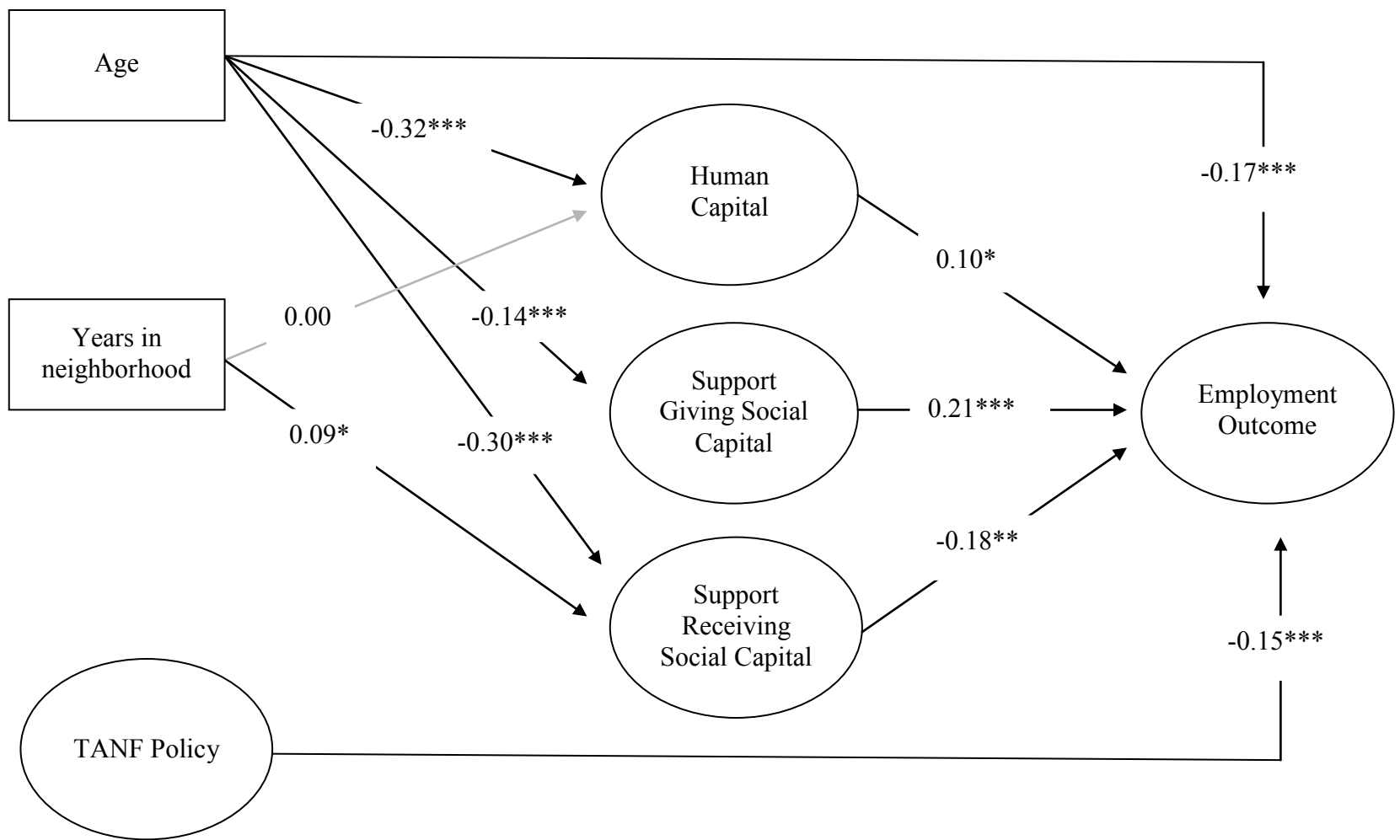
Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  (N = 460)

Figure 4.14 Path Diagram for Hispanic/Spanish/Latina Participants

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.14***
Age	Support Receiving Social Capital	-0.30***
Age	Human Capital	-0.32***
Age	Employment Outcome	-0.17***
Years in neighborhood	Support Receiving Social Capital	0.09*
Years in neighborhood	Human Capital	0.00
State TANF Policy	Employment Outcome	-0.15***
Support Giving Social Capital	Employment Outcome	0.21***
Support Receiving Social Capital	Employment Outcome	-0.18**
Human Capital	Employment Outcome	0.10*
$\chi^2 = 482.14$ df = 108 p < .001 RMSEA = 0.060 CFI = 0.933		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 956)

Table 4.21 Structural Model Path Coefficients for Final Model – Control: Non-Hispanic/Spanish/Latina Participants



Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  ( $N = 956$ )

Figure 4.15 Path Diagram for Non-Hispanic/Spanish/Latina Participants

A cross-validation analysis of the measurement model was conducted to determine whether or not the factor loadings of the measurement model were invariant across the two ethnic groups. First, the null hypothesis (H0) that the factor loadings are identical across ethnicity was tested. Then, the alternative hypothesis (H1) that the factor loadings are not identical across ethnicity was tested. A chi-square difference test was used to test H0 and H1. Table 4.22 describes the chi-square difference test used to assess the cross validation of the factor loadings of the measurement model across the two groups. The small p-value suggests that there is sufficient evidence to reject the null hypothesis. Thus, there is sufficient evidence that factor loadings across ethnicity are different.

Hypothesis	Chi-Square	df	p-value
Equal (H0)	1047.35	260	0.00000
Unequal (H1)	941.55	239	0.00000
Difference	105.8	21	0.00000

Table 4.22 Chi-Square Difference Test for Ethnicity

The final model was tested for participants with a child under the age of 6 in the household. The fit indices for the initial model were  $\chi^2 = 349.32$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.076; and CFI = 0.885. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 369.03$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.078; and CFI = 0.877. This LISREL program output suggested various modifications,

and an error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 255.50$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.059; and CFI = 0.930. Table 4.23 and Figure 4.16 present the estimated structural model. The standardized coefficients are included in Figure 4.16.

The final model was then tested for participants who did not have a child under age 6 in the household. The fit indices for the initial model were  $\chi^2 = 620.22$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.069; and CFI = 0.917. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 752.11$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.077; and CFI = 0.896. The LISREL program output suggested various modifications, and an error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 538.53$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.063; and CFI = 0.931. Table 4.24 and Figure 4.17 present the estimated structural model. The standardized coefficients are included in Figure 4.17.

Age was negatively associated with support giving social capital and human capital for both groups. This means that older age was associated with less giving of support to family and friends and less human capital regardless of presence of child under age 6. Additionally, support giving social capital was positively associated with employment outcome for both groups, meaning that more giving of support was associated with a better employment outcome regardless of presence of child under age 6.

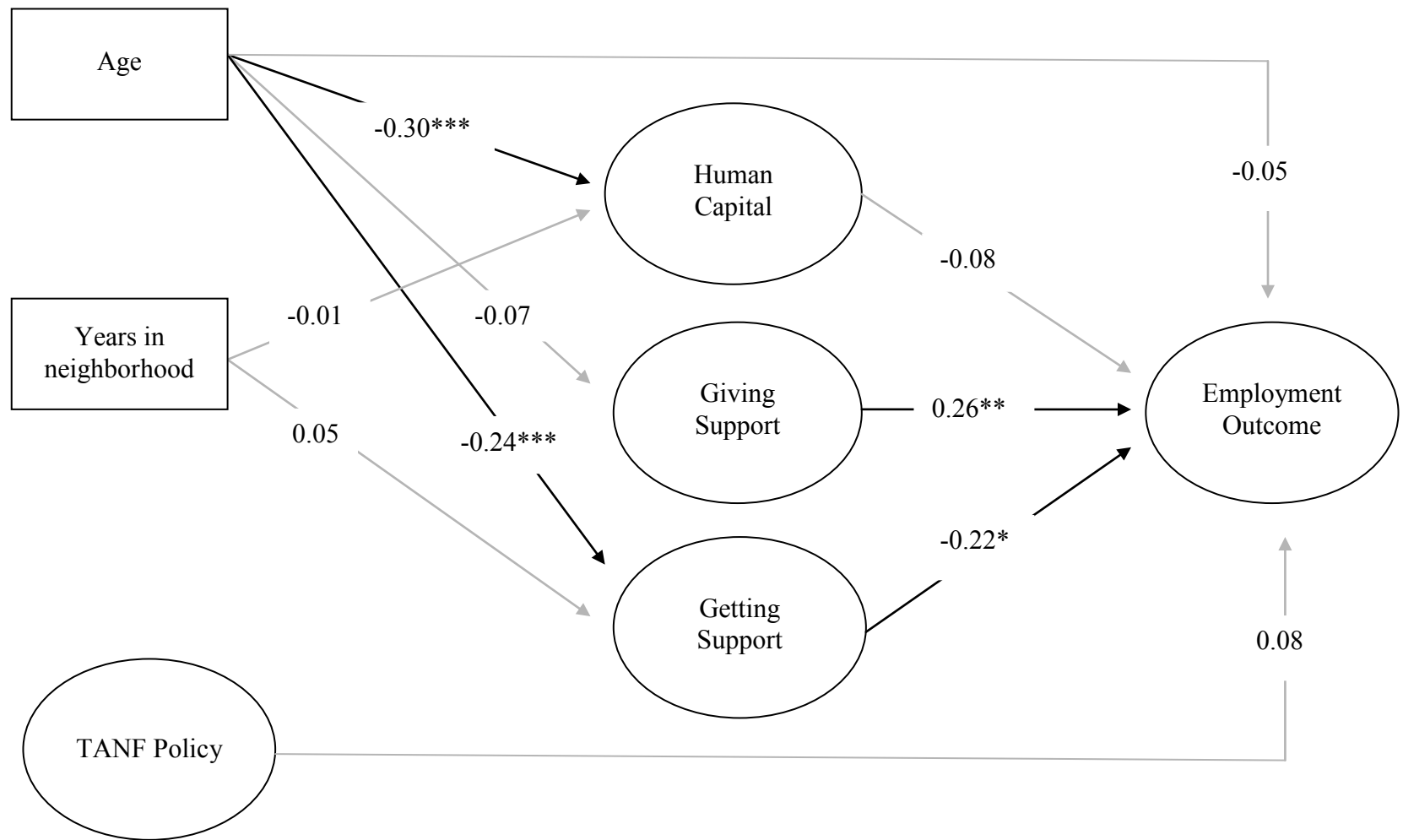
However, many more paths were significant for the group with no child under the age of 6 in the household. For women with no child under age 6 present, age was negatively associated with support receiving social capital and employment outcome. This means that older age was associated with less receipt of support from family and friends and a worse employment outcome. Additionally, state TANF policy and support receiving social capital were negatively associated with employment outcome for women with no child under age 6, meaning that more generous TANF policy and greater receipt of support were associated with a worse employment outcome. Finally, human capital was positively associated with employment outcome for those with no child under age 6. This means that more human capital was associated with a better employment outcome.



From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.04**
Age	Support Receiving Social Capital	-0.22
Age	Human Capital	-0.31***
Age	Employment Outcome	-0.06
Years in neighborhood	Support Receiving Social Capital	0.04
Years in neighborhood	Human Capital	-0.01
State TANF Policy	Employment Outcome	-0.08
Support Giving Social Capital	Employment Outcome	0.42*
Support Receiving Social Capital	Employment Outcome	-0.37
Human Capital	Employment Outcome	-0.04
$\chi^2 = 255.50$ df = 108 p < .001 RMSEA = 0.059 CFI = 0.930		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 392)

Table 4.23 Structural Model Path Coefficients for Final Model – Control: Child under Age 6 Present in Household



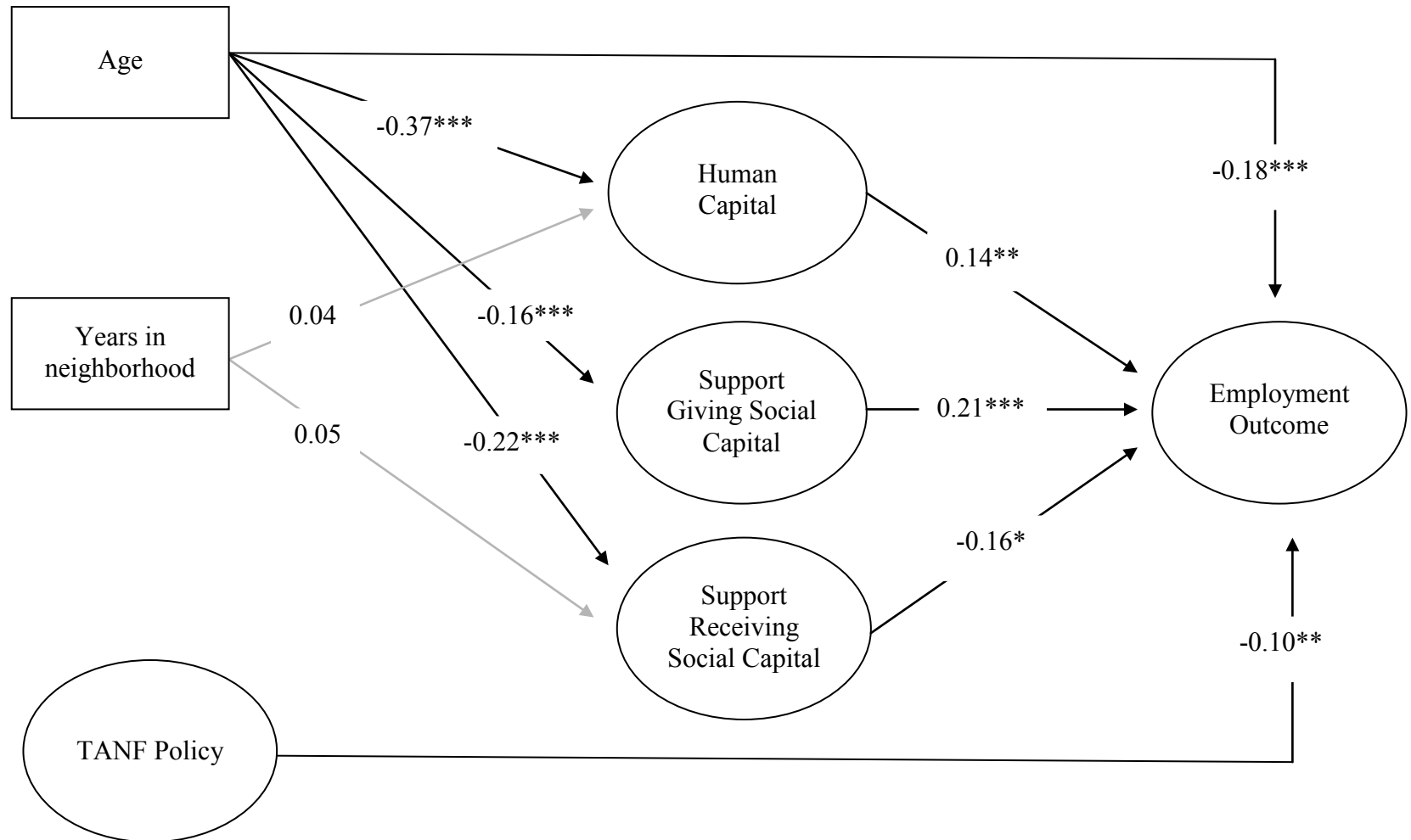
Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  ( $N = 392$ )

Figure 4.16 Path Diagram for Participants with Child under Age 6 Present in Household

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.16***
Age	Support Receiving Social Capital	-0.22***
Age	Human Capital	-0.37***
Age	Employment Outcome	-0.18***
Years in neighborhood	Support Receiving Social Capital	0.05
Years in neighborhood	Human Capital	0.04
State TANF Policy	Employment Outcome	-0.10**
Support Giving Social Capital	Employment Outcome	0.21***
Support Receiving Social Capital	Employment Outcome	-0.16*
Human Capital	Employment Outcome	0.14**
$\chi^2 = 538.53$ df = 108 p < .001 RMSEA = 0.063 CFI = 0.931		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 993)

Table 4.24 Structural Model Path Coefficients for Final Model – Control: No Child under Age 6 in Household



Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  (N = 993)

Figure 4.17 Path Diagram for Participants with No Child under Age 6 in Household

A cross-validation analysis of the measurement model was conducted to determine whether or not the factor loadings of the measurement model were invariant across the two child presence groups. First, the null hypothesis (H0) that the factor loadings are identical across child presence groups was tested. Then, the alternative hypothesis (H1) that the factor loadings are not identical across child presence groups was tested. A chi-square difference test was used to test H0 and H1. Table 4.25 describes the chi-square difference test used to assess the cross validation of the factor loadings of the measurement model across the two groups. The small p-value suggests that there is sufficient evidence to reject the null hypothesis. Thus, there is sufficient evidence that factor loadings across child presence are different.

Hypothesis	Chi-Square	df	p-value
Equal (H0)	966.60	261	0.00000
Unequal (H1)	895.95	240	0.00000
Difference	70.65	21	0.00000

Table 4.25 Chi-Square Difference Test for Presence of Child under Age 6

The final model was tested for participants who indicated ownership of a vehicle. The fit indices for the initial model were  $\chi^2 = 471.58$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.070; and CFI = 0.905. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 598.01$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.081; and CFI = 0.872. The LISREL program output suggested various modifications, and an error

covariance was added between Item 23 and Item 24. Following this modification, the model fit indices were  $\chi^2 = 467.59$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.069; and CFI = 0.906. An error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 328.73$ ;  $df = 107$ ;  $p < .001$ ; RMSEA = 0.055; and CFI = 0.942. Table 4.26 and Figure 4.18 present the estimated structural model. The standardized coefficients are included in Figure 4.18.

The full model was then tested for participants who indicated no ownership of a vehicle. The fit indices for the initial model were  $\chi^2 = 531.32$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.073; and CFI = 0.906. However, Item 25 had negative error variance; therefore, the error variance was set to 1.0, and the error standard deviation was set to 'free'. The fit indices for this model were  $\chi^2 = 569.52$ ;  $df = 109$ ;  $p < .001$ ; RMSEA = 0.076; and CFI = 0.898. The LISREL program output suggested various modifications, and an error covariance was added between the support giving social capital latent variable and the support receiving social capital latent variable. The fit indices for the final model were  $\chi^2 = 363.50$ ;  $df = 108$ ;  $p < .001$ ; RMSEA = 0.057; and CFI = 0.944. Table 4.27 and Figure 4.19 present the estimated structural model. The standardized coefficients are included in Figure 4.19.

Age was negatively associated with support giving social capital, support receiving social capital, human capital, and employment outcome regardless of ownership of vehicle status. This means that older women gave and received less support, had lower human capital, and experienced a worse employment outcome. Additionally,

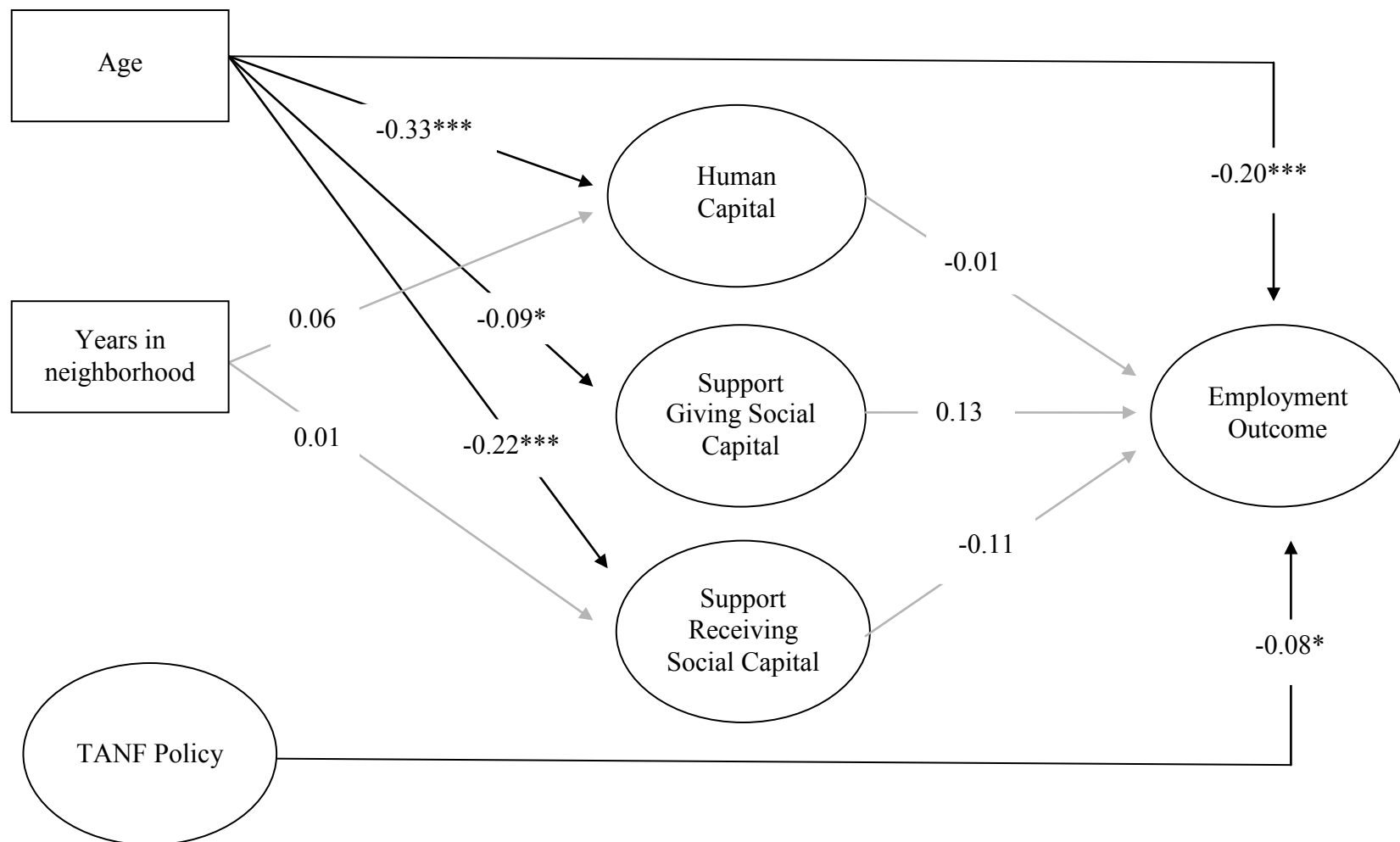
state TANF policy was negatively associated with employment outcome regardless of ownership of vehicle status. This means that more generous state TANF policy was associated with a worse employment outcome. Additional paths were significant for the women who did not own a vehicle. Number of years living in neighborhood and support giving social capital were positively associated with employment outcome for women who did not own a vehicle, meaning that greater number of years in neighborhood and more support giving social capital were associated with a better employment outcome. Finally, support receiving social capital was negatively associated with employment outcome for those who did not own a vehicle. This means that more receipt of support from family and friends was associated with a worse employment outcome.

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.09*
Age	Support Receiving Social Capital	-0.22***
Age	Human Capital	-0.33***
Age	Employment Outcome	-0.20***
Years in neighborhood	Support Receiving Social Capital	0.01
Years in neighborhood	Human Capital	0.06
State TANF Policy	Employment Outcome	-0.08*
Support Giving Social Capital	Employment Outcome	0.13
Support Receiving Social Capital	Employment Outcome	-0.11
Human Capital	Employment Outcome	-0.01
$\chi^2 = 328.73$ df = 107 p < .001 RMSEA = 0.055 CFI = 0.942		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 691)

Table 4.26 Structural Model Path Coefficients for Final Model – Control: Owns Vehicle





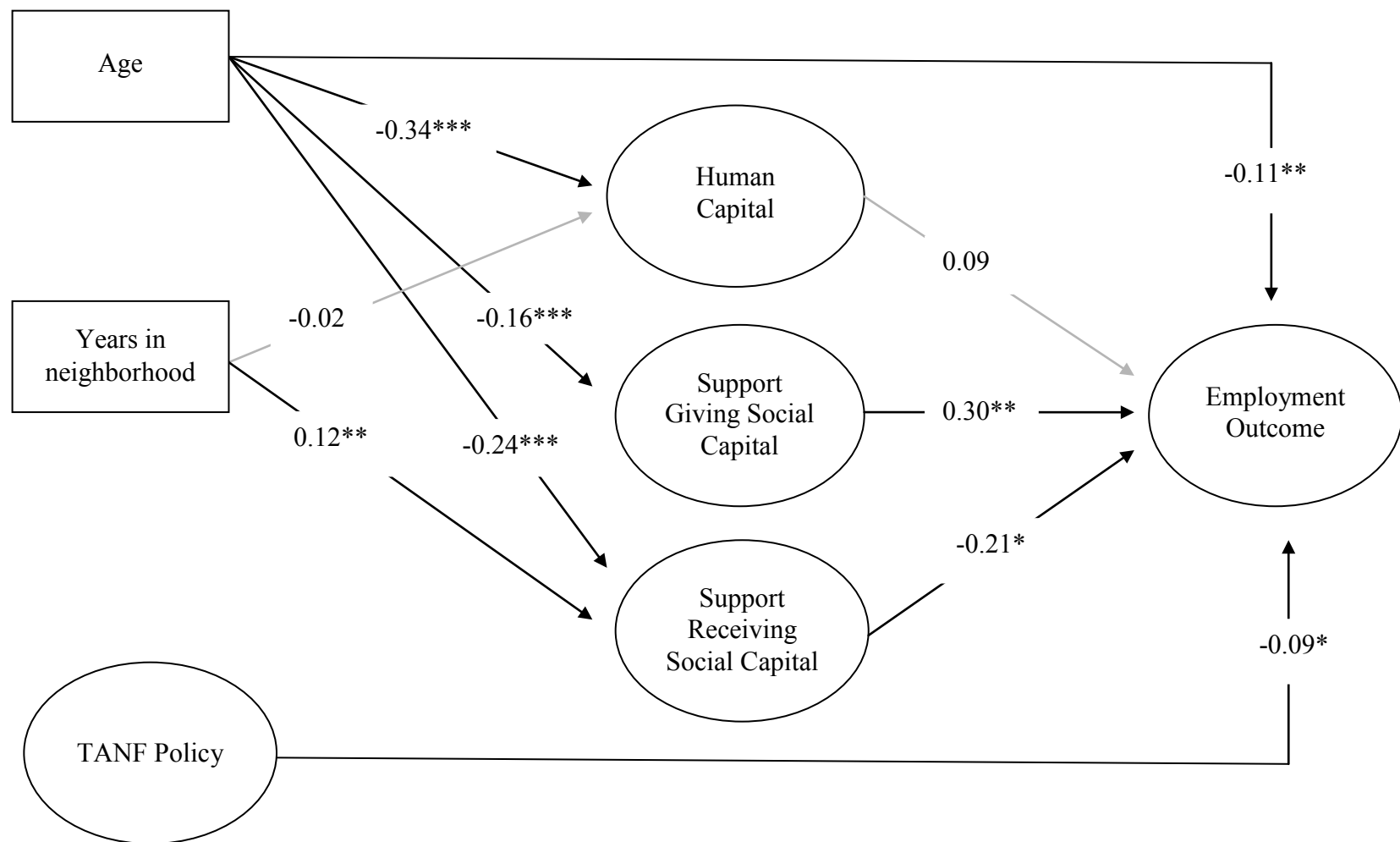
Note.  $^*p < .05$ ,  $^{**}p < .01$ ,  $^{***}p < .001$  (N = 691)

Figure 4.18 Path Diagram for Participants who Own Vehicle

From	To	Standardized Coefficient
Age	Support Giving Social Capital	-0.16***
Age	Support Receiving Social Capital	-0.24***
Age	Human Capital	-0.34***
Age	Employment Outcome	-0.11**
Years in neighborhood	Support Receiving Social Capital	0.12**
Years in neighborhood	Human Capital	-0.02
State TANF Policy	Employment Outcome	-0.09*
Support Giving Social Capital	Employment Outcome	0.30***
Support Receiving Social Capital	Employment Outcome	-0.21*
Human Capital	Employment Outcome	0.09
$\chi^2 = 363.41$ df = 108 p < .001 RMSEA = 0.057 CFI = 0.944		

Note. \*p < .05, \*\*p < .10, \*\*\*p < .001 (N = 735)

Table 4.27 Structural Model Path Coefficients for Final Model – Control: No Vehicle



Note.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$  ( $N = 735$ )

Figure 4.19 Path Diagram for Participants with No Vehicle

A cross-validation analysis of the measurement model was conducted to determine whether or not the factor loadings of the measurement model were invariant across the two ownership of vehicle groups. First, the null hypothesis (H0) that the factor loadings are identical across ownership of vehicle groups was tested. Then, the alternative hypothesis (H1) that the factor loadings are not identical across ownership of vehicles groups was tested. A chi-square difference test was used to test H0 and H1. Table 4.28 describes the chi-square difference test used to assess the cross validation of the factor loadings of the measurement model across the two groups. The small p-value suggests that there is sufficient evidence to reject the null hypothesis. Thus, there is sufficient evidence that factor loadings across ownership of vehicle status are different.

Hypothesis	Chi-Square	df	p-value
Equal (H0)	929.04	260	0.00000
Unequal (H1)	855.11	239	0.00000
Difference	73.93	21	0.00000

Table 4.28 Chi-Square Difference Test for Ownership of Vehicle

## Chapter 5: Discussion

The purpose of this study was to examine the mediating impact of social capital and human capital on employment outcome among single women who indicated welfare office use during the past 12 months. This study examined Wave 2 (2005-2007) of the Making Connections Cross-Site Survey. First, an exploratory factor analysis of 17 social capital indicators available in the data set was conducted, which resulted in five factors of social capital. Then, confirmatory factor analyses were conducted to build measurement models of extracted factors for social capital latent variable, human capital, employment outcome, and state TANF policy. Finally, by integrating these measurement models, various structural equation models were estimated to test hypotheses as stated in Chapter 2. This section will summarize the study findings and limitations, and discuss the implications for policy, practice, and research.

### 5.1 Summary of Findings

#### *Factors Associated with Social Capital, Human Capital, and Employment Outcome*

Very little research has examined the impact of factors on social capital. Curley (2010) found that Hispanics and African Americans had lower levels of trust, and shared norms and values, compared to white individuals. However, the current study found insignificant relations between race/ethnic groups and social capital with respect to both bonding and value sharing factors, which were similarly defined in Curley's study. Curley (2010) also found that African Americans had a higher level of social support than

their white counterparts. The current study found similar results, indicating that especially Black/African American women had significantly higher social support by giving and receiving more with their family and friends. Compared to non-Black/African American women, Black/African American women also showed a higher level of social capital on bridging factor, whereas Hispanics had lower bridging social capital. In brief, the results from this study partially confirmed Curley's findings.

The current study provided new findings that may contribute to better understanding of social capital among women on welfare. Foreign-born women had higher shared values and bonding social capital than the native-born women. Older women on welfare had more bonding social capital, shared values, and bridging social capital than their younger counterparts yet less giving and receiving of support. Women who owned a vehicle gave more support than those who did not, but received less support. Women who had lived in their neighborhood longer received more support than those living in their neighborhood for a shorter time.

Six of the 7 demographic variables were statistically significant in relationship with the human capital latent variable. Those who owned a vehicle and who lived in their neighborhood longer had a higher level of human capital. In contrast, older women, those with a child under 6 years of age in the household, Hispanics, and foreign-born women had lower human capital than their counterparts.

Various demographic variables were assessed in the current study as predictors of employment outcome among TANF recipients. Similar to other studies (Cheng, 2007; Lee et al., 2004), this study found that women at older age had worse employment

outcome than their younger counterparts. Transportation, including ownership of a working vehicle, has also been documented as a significant predictor of employment (Latimer, 2004; Lee et al., 2004; Weaver et al., 2007). This study confirmed this finding as those who owned a vehicle had better employment outcome than those who did not. Finally, this study provided new findings, which indicated that Black/African American women and foreign-born women had better employment outcome than their counterparts.

#### *Macro-Level Predictors and Employment Outcome*

Kim (2000) found that high state-level unemployment was negatively associated with the probability of work. This relationship was not statistically significant in the current study. However, state TANF policy was negatively associated with employment outcome, confirming the previous findings of Kim (2000).

#### *Direct Effects of Human Capital and Social Capital on Employment Outcome*

Various studies have explored the relationship between human capital or educational level and employment outcomes. For instance, occupational skills and work experience have been shown to increase the likelihood that a TANF recipient will become employed after exiting welfare (Cheng, 2007). Further, TANF recipients who had a high school diploma/GED were more likely to be employed than those who did not (Kyoung & Yoon, 2008). The current study confirmed previous findings in that more human capital was significantly associated with a better employment outcome.

Very little research has been conducted that explores a relationship between social capital and employment outcome. Previous studies have reported inconsistent findings. For example, Brisson et al. (2009) indicated that a negative relationship existed between

bonding social capital and employment, whereas Aguilera (2002) found a positive relationship between social capital and labor force participation. Neither of these studies examined welfare recipients specifically. The current study found that two factors of social capital had statistically significant relationships with employment outcome. Support giving social capital was positively associated with the employment outcome, whereas support receiving social capital was negatively associated with the employment outcome. Thus, giving support to family and friends was associated with a better employment outcome, while receipt of support from family and friends was associated with a worse employment outcome.

#### *Final Model*

The final model examined human capital, support giving social capital, and support receiving social capital as mediators between age and employment outcome. Age was negatively associated with human capital, support giving social capital, support receiving social capital, and employment outcome. Human capital, support giving social capital, and support receiving social capital were found to mediate the relationship between age and employment outcome. Number of years in neighborhood was not found to be significantly associated with human capital or support receiving social capital. Human capital and support giving social capital were positively associated with employment outcome, whereas support receiving social capital was negatively associated with employment outcome. Furthermore, state TANF policy was negatively associated with employment outcome. Finally, there was sufficient evidence that factor loadings differed across race/ethnicity, presence of child under the age of 6, and ownership of a



vehicle.

## 5.2 Limitations

This study has various limitations. The first limitation is associated with the sample and use of cross-sectional data. All single women were included who indicated use of a TANF/welfare office during the past 12 months. However, this selection criterion likely underestimated the true number of TANF recipients who participated in the Making Connections Survey. For example, this study did not include women who may have received TANF five or ten years prior to survey. Additionally, this study was cross-sectional in nature meaning that indicators were measured in a time window of 12 months. Therefore, causation cannot be inferred. Moreover, the Making Connections data collected a sample of low-income households in urban areas. In addition, the sample for this study included only single women on welfare, excluding those recipients who were married or living with an unmarried partner. Therefore, the findings of this study cannot represent the entire population of TANF recipients in the United States. In particular, welfare recipients in rural areas might be different from those in urban areas, especially with respect to social capital and employment opportunities.

Additionally, as this study relied on secondary data, the researcher was unable to examine other variables that may affect employment outcomes for this population. For example, research has shown that poor health and mental health, physical disability, and domestic violence negatively affect employment outcomes (Dworsky & Courtney, 2007; Kim, 2000; Kyoung & Yoon, 2008; Lee et al., 2004; Weaver et al., 2007). Constrained by available variables in the data set, this study was not able to examine these variables and

control their effects in estimation of the mediating effects of social capital and human capital on employment outcome.

Many of the indicators utilized to measure latent constructs in this study were limited. For example, the employment outcome latent variable measured three indicators (i.e., whether or not the participant had a job, typical number of hours worked per week during past 12 months, and months worked at present main job). While these type of indicators are normally used as employment-related variables in many studies, they do not seem to capture the quality of employment outcome such as the amount of earnings and the type of work. Thus, the study was not able to examine whether women on welfare had employment that could lead to escape poverty; whether social capital and human capital would affect types of employment; and social capital and human capital would mediate for employment of better quality.

Additionally, many of the indicators collected in the data set were dichotomous which limited the level of measurement and interpretability. For example, human capital was measured by three indicators (e.g., education level, community college participation in past 3 years, employment training in past 3 years). In particular, the community college and employment training indicators were dichotomous, yes/no indicators. Again, this yes/no measurement in these indicators limits the ability to capture the degree of human capital through additional training outside formal education. For instance, an individual who may have participated in employment training for one day is equated with an individual who may have participated for several months.

Many of the social capital indicators were limited, as well. For instance, one of the giving support social capital indicators was a dichotomous, yes/no indicator. The indicator asked, “Did you give any financial help...in the last 12 months?” Dichotomous indicators could have been scaled to provide richer data. For example, the frequency with which the participant gave financial support could have been assessed. Additionally, the social capital factors used in this study may be incredibly limited. As stated earlier, it has been suggested that marginalized populations may utilize social capital differently. This study used the entire sample to conduct the EFA that resulted in five social capital factors. It may be more appropriate to create different social capital instruments for different groups. Moreover, the social capital EFA utilized only those indicators available. The inclusion of other indicators may improve the social capital measure. For example, social leverage, informal social control, and engagement in public affairs such as voting have been described as social capital indicators (Carpiano, 2008; Putnam, 2000). The inclusion of indicators such as these may create a social capital measure that is more valid than the measure presented here.

### 5.3 Implications

This study has several implications for policy. First, federal TANF policy should be amended to include education as a substitution for the work requirement. Additionally, time limits should be suspended for those participating in educational attainment. Moreover, the Federal Pell Grant Program should be expanded so that TANF recipients are able to acquire education for a better paying job. Quality employment training should be provided that prepares individuals for jobs that pay above minimum wage. Ownership

of a vehicle was associated with both human capital and better employment outcome. Therefore, federal TANF policy should require states to exempt values of vehicle ownership from state income thresholds of eligibility.

This study has implications for social work practice. Community participatory interventions are needed to increase social capital. It is important that social workers devise community interventions with a focus on mobilizing community resources for families on welfare and connecting these families with community and business leaders. Social workers should facilitate community agencies and organizations to work together to solve common problems faced in the neighborhood.

This study has various implications for research. While this study measured various factors of social capital, there is still a need for a better measurement tool that can be tailored to measure social capital among low-income families, specifically. Focus groups are needed to identify the domains of social capital that are most meaningful for this group of women. A scale would be developed as a result of these focus groups, and validity and reliability would be tested. This research study has produced various avenues for further research. As described in the limitations section, this study's results do not imply causation. Therefore, a longitudinal research study would add depth to this study's findings. For instance, social capital could be measured over time to determine its effects on employment in the long-term. This will be made possible as NORC continues to collect new waves of Making Connections data. Additionally, this study would benefit from the inclusion of more employment outcomes. For instance, income and earnings are key in the assessment of standard of living. Moreover, future research would benefit from

the consideration of different outcomes, such as hardship. For example, a research study could assess the impact of social capital and human capital on material hardship and subjective perceptions of hardship. Finally, future research would benefit from the comparison of different groups of people. These groups include gender, race/ethnic, immigrant/native, and regional groups. It is likely that social capital is accrued differently across these groups and differentially affects various outcomes. Future research should examine the relationships described here among these types of groups.

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