

Effects of a Work-Based Anti-Poverty Program for Parents on Youths' Employment  
Experiences and Future Orientation: Understanding Pathways of Influence and Subgroup  
Differences in Program Impacts

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## Abstract

This study examines mediating effects of the New Hope Project, a work-based, anti-poverty program directed at parents and implemented in Milwaukee, WI, during the mid-1990s, on youths' employment and future orientation. Families were randomly selected to receive New Hope benefits, which included earnings supplements, job search assistance, and child and health care subsidies. Benefits were available for three years. Importantly, effects on youths' future orientation were found eight years after the program began (five years after benefits ended). The present study investigates what factors sustained these positive impacts over time. Specifically, earlier effects (measured two years after benefits ended) on parental employment and income, youths' participation in center-based care and structured activities, youths' academic skills, youths' social behaviors, and youths' educational expectations are hypothesized to mediate the effects of New Hope on employment and future orientation. Program effects on employment and future orientation were concentrated among boys and African American youth. This study also examines how mediating factors may have contributed to the gender and ethnic differences found in program impacts. Results indicate that parent perceptions of reading performance mediate the effects of New Hope on duration of employment, cynicism about work, and pessimism about future employment. Results of subgroups analyses reveal that gender differences in impacts on employment and future orientation are primarily accounted for by the small impacts of New Hope on girls' academic skills at earlier time points. Results of ethnic subgroups are inconclusive due to unequal sample sizes across groups. Implications for policy and future research are discussed.

## TABLE OF CONTENTS

LIST OF TABLES	v
LIST OF FIGURES	vi
Chapter	
I. INTRODUCTION	1
Welfare and Employment Policies and Youth Development	4
Adolescent Employment and Future Orientation	9
New Hope's Effects on Adolescent Employment and Future Orientation	11
Hypothesized Mediators of New Hope's Effects	13
Understanding Gender and Ethnic Differences in Mediated Effects	21
II. METHODS	27
Project Description	27
Sample	29
Measures	31
Analysis Plan	37
III. RESULTS	45
Preliminary Analyses	45
Focal Analyses	52
Supplementary Analyses	64
Overall Summary of Findings	69

IV.	DISCUSSION	94
	Mediators of New Hope's Effects on Employment Duration	95
	Mediators of New Hope's Effects on Future Orientation	97
	Mediators of New Hope's Effects on Boys	99
	Mediators of New Hope's Effects on African American Youth	101
	Parental Perceptions of Reading Performance	103
	Understanding the Absence of Mediating Effects	104
	Policy Implications	107
	Implications for Future Research	109
	Examination of Existing Policy Effects on Children	112
	Limitations	113
	APPENDIX	116
	REFERENCES	124

## LIST OF TABLES

Chapter 1	
1.1 Study measures, by time point and reporter	24
Chapter 3	
3.1 Descriptive characteristics of parents & youth in New Hope CFS	70
3.2 Bivariate correlations among key study variables	72
3.3 Descriptive characteristics, by experimental status	73
3.4 Descriptive characteristics, by gender & experimental status	75
3.5 Descriptive characteristics, by ethnicity & experimental status	77
3.6 Descriptive characteristics, by participation status	80
3.7 Descriptive characteristics, by participation status & experimental status	82
3.8 Reliability estimates for study scales, by subgroup	84
3.9 New Hope's impacts on employment & future orientation	85
3.10 New Hope's impacts on mediators, by subgroup	86
3.11 Mediation effects of New Hope treatment on employment and future orientation, full sample	87
3.12 Mediation effects of New Hope treatment on duration of employment and future orientation, boys only	88
3.13 Gender differences in mediational pathways	89
3.14 Mediation effects of New Hope treatment on employment and future orientation, African American youth only	90
3.15 Mediation effects of New Hope treatment on pessimism about future employment, White youth only	91
3.16 Ethnic Differences in Mediational Pathways	92

## LIST OF FIGURES

### Chapter 1

1.1 Hypothesized mediational model of New Hope's effects on adolescent employment	25
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1.2 Hypothesized mediational model of New Hope's effects on adolescent future orientation	26
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### Chapter 2

2.1 Possible subgroup differences in New Hope impacts	44
-------------------------------------------------------	----

### Chapter 3

3.1 Mediated effects of New Hope on boys' pessimism about future employment	93
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## Effects of a Work-Based Anti-Poverty Program for Parents on Youths' Employment Experiences and Future Orientation: Understanding Pathways of Influence and Subgroup Differences in Program Impacts

In the U. S., one of the primary issues raised in discussions of policies directed toward the poor concerns how they influence children and their development (Morris, Gennetian, & Duncan, 2005). Despite the avowed importance of linkages between welfare programs, including income supports, and children's development, until recently, there was scant research available to address this topic (Duncan & Chase-Lansdale, 2001). However, as part of an increased effort to reform welfare policies during the early 1990s, the federal government provided states with waivers that allowed them to experiment with changes to the traditional welfare program benefits (i.e., AFDC). These program variations provided a ripe opportunity to gather evidence on the impact of various welfare and employment policies on adult earnings, employment, and well-being, family functioning, and children's health and development. One contingency for receiving the waivers was that states would use random assignment of participants to program and non-program groups, thereby setting the stage for stringent tests of program effects.

Implemented in Milwaukee, WI, during the mid-1990s, the New Hope Project is one of these experimental programs. New Hope was guided by the principle that those who are willing to work should not be poor. Accordingly, a key benefit provided by New Hope was an earnings supplement designed to raise participants' income above the poverty line. Also in line with the philosophy behind the program, participants were required to work at least

thirty hours per week to be eligible for the supplement. New Hope provided job search assistance and access to community service jobs when no other employment was available. Child care and health insurance subsidies were also available to program group members. Overall, New Hope was designed to be a comprehensive, but flexible, employment support program that allowed adults to take advantage of benefits that best suited their needs and the needs of their family (Duncan, Huston, & Weisner, 2007). Indeed, this flexibility was a key program component, as there was wide variation across individuals in benefits utilized throughout the duration of the program.

The benefits provided to New Hope participants were available for three years, and evaluations of program effects took place at two, five, and eight years post-random assignment. No other welfare policy experiment has followed participants for a longer duration of time (McLoyd, Kaplan, Purtell, & Huston, in press). The present study focuses on the Child and Family Sample (CFS) of New Hope, which is comprised of program and control group members who had at least one child between the ages of 1-10 at the time of random assignment. At all time points, parents, children, and teachers reported on a wealth of indicators of child well-being, as well as on the environments that children were experiencing. Prior research with CFS data has shown that New Hope had positive impacts on children's behavior, educational expectations, and academic progress at all three time points; however, these effects faded over time, as indicated by data collected at the five and eight year follow-ups (i.e., two and five years after the program ended; Huston et al., 2001, 2005, 2008). Program impacts were largely concentrated among program group boys. Additional details concerning these impacts will be provided later in the proposal.



A critical feature of the eight year follow-up is that it provides the opportunity to assess developmental phenomena that are unique to adolescence. Specifically, youth reported on their involvement in the labor market and on aspects of their orientation toward the future. Not only are these important constructs in adolescence (Nurmi, 1991), but they also represent the beginnings of youths' transition to adult roles, such as participation in the workforce. In summary, New Hope youth reported greater involvement in the labor market, lower levels of pessimism about their employment future, and higher levels of career preparatory behaviors (McLoyd et al., in press). Similar to earlier follow-ups, effects observed at the 8-year follow-up were concentrated among boys. Additionally, ethnic group comparisons revealed stronger effects among African American youth than among their Latino and White counterparts.

Given the positive impacts of New Hope on youths' labor market attachment and future orientation five years after the program ended, an important follow-up question is, What factors sustained these long term effects on program group youth? The primary goal of this dissertation is to address this question through the use of longitudinal data and mediational analyses. Specifically, I hypothesize that earlier impacts on youths' involvement in center-based child care and structured activities, academic and social skills, and educational expectations provided youth with psychological, behavioral, and environmental advantages that enhanced their ability to obtain and maintain employment, and to engage in positive future-oriented thoughts and behaviors. Understanding the pathways through which New Hope generated positive youth outcomes will provide information that can be used when tailoring future welfare, employment, and other programs and policies. Moreover, illumination of these mediated pathways will contribute to the

developmental knowledge base by shedding light on developmental processes that lead to positive outcomes among low-income youth.

The second focus of this study is to examine factors that may have given rise to the gender and ethnic group differences observed in program impacts. Specifically, I plan to use the framework of conditional indirect effects (Preacher, Rucker & Hayes, 2007) and comparisons across subgroups to test differences in meditational pathways among gender and ethnic groups. In short, these analyses will examine differences in program effects on the hypothesized mediators and differences in the relations between the hypothesized mediators and adolescent outcomes across gender and ethnic groups. This investigation may yield important insights into why the positive effects of New Hope were concentrated among certain subgroups of youth, and may also provide information to aid the design of future policies so that positive impacts across all social groups will be likely.

#### *Welfare and Employment Policies and Youth Development*

Throughout childhood and adolescence, youth experience multiple contexts that shape their developmental processes (Bronfenbrenner & Morris, 1998). Macro-level policies, such as welfare and employment policies, affect youths' development through the influences that they exert on the more proximal contexts that children experience. For example, policies that provide income supports may allow a family to create a more cognitively stimulating home environment, which may translate to increased levels of child learning. Similarly, policies that promote parental employment may have a multitude of effects on the parent-child relationship, including the amount of time spent together and types of parenting practices used. The following sections summarize the recent empirical work concerning the impact of welfare and employment policies on child and adolescent

development, as well as experimental influences on proximal contexts that may have produced these child outcomes.

The most rigorous evidence of relations between various welfare policies and child development comes from the experimental programs that were implemented in the 1990s and funded by federal waivers to states. Morris and colleagues' synthesis of eleven different employment-based welfare programs identified features of programs that are associated with children's school achievement, social behavior, and health (Morris, Huston, Duncan, Crosby, & Bos, 2001). The programs reviewed in the synthesis included the Minnesota Family Investment Program (MFIP), the Self-Sufficiency Project (SSP), the New Hope Program, the National Evaluation of Welfare-to-Work Strategies (NEWS), and Florida's Family Transition Program (FTP). MFIP had two different program groups and NEWS had six sites with varying program benefits, which brings the total number of programs evaluated to eleven. Programs were classified on the basis of three features: earnings supplements, mandatory employment services, and time limits. Each of these three features is described in greater detail below.

Programs featuring earnings supplements required that parents work, but also provided generous income supplements. Although the programs examined (of which New Hope was one) had differing work requirements and size of earnings supplements, findings across the studies showed consistent positive effects on children's school achievement. Programs with earnings supplements also had either positive or neutral effects on children's social behavior and health. Taken as a whole, programs with earning supplements showed positive impacts on children's development. This set of findings provides empirical support

in favor of employment policies that aim to promote positive developmental outcomes through increases in family resources.

Despite these impacts on child outcomes, evidence regarding the effects of earning supplements on contexts proximal to children's development was not as conclusive. The most consistent finding across programs was that program group children experienced increased time in formal child care (i.e., center-based child care). Findings of effects on the family context were quite mixed. Although some programs increased marriage rates and reduced depression among single mothers, others increased depression and feelings of time pressure. Importantly, no program reported consistent findings on parenting behaviors and parent-child relationships. Overall, out-of-home contexts appear to have mediated some of the earnings supplement programs' effects, but it is likely that specific features of individual programs led to the differing impacts on other contexts relevant to children's development.

Programs with mandatory employment services did not include earnings supplements, but did require parents to work or participate in education training programs. Such programs resulted in increases in rates of parental employment, but did not change total household income. Overall, there were neutral effects on children's school achievement, mixed effects on children's behavior, and negative effects on children's health. In summary, few effects of mandatory employment programs were found, and those that were found were mixed or negative in direction. This suggests that programs that increase employment and education, but not income, do not foster proximal environments that are beneficial for children's development. These findings on child-level outcomes are consistent with the varied effects that mandatory employment services programs had on child care use, and the absence of any program effect on parental mental health and parenting.

The programs with time limits that were reviewed by Morris et al. (2001) were designed to reduce long-term receipt of welfare and to increase employment by limiting the amount of time during which benefits are available to an individual. They are not intended to directly increase family income. The singular study of a program that had time limits, without the other features, had no consistent impacts on child outcomes. However, results from this program may not replicate in other time-limited welfare policies because of the large number of safeguards included to prevent families from experiencing a dramatic loss in income. For example, families with parental disabilities and/or young children in the home were exempt from the limits. Additionally, families could extend the length of their eligibility for benefits through evidence of illness that prevented work (as provided by a physician) or by showing that they had been in compliance with program requirements but were unable to find work. Participation in this program did increase children's time in child care, but had no effects on parental mental health or parenting.

A synthesis similar to that compiled by Morris and colleagues was conducted with a focus on how features of welfare and employment policies impacted adolescent development (Gennetian, Duncan, Knox, Vargas, Clark-Kauffman, & London, 2004). Findings across the three program types revealed negative impacts on adolescents' school performance and retention, although there were no consistent impacts on school dropout. These negative impacts appeared to be linked to increases in adolescent responsibilities in the home, such as taking care of siblings, which was likely due in part to increases in maternal employment. Consistent with this perspective, negative effects were larger and more concentrated among youth who had a younger sibling in the home. Furthermore, program group adolescents without a younger sibling reported higher levels of participation in extra-curricular activities

compared to their control group counterparts. This developmental context may have conferred important advantages, such as contact with supportive adults, that program group youth with younger siblings did not have the opportunity to receive.

Although prior researchers have hypothesized about the pathways that give rise to and sustain the impacts of adult-directed anti-poverty experiments on children's development, there are few studies that have explicitly tested for mediators of program effects (Gassman-Pines & Yoshikawa, 2006; Walker, 2008). Furthermore, work that has included mediational analyses has employed frameworks that focus on cumulative changes in children's environments produced by program treatment. For example, Gassman-Pines and Yoshikawa (2006) found evidence that the impacts of New Hope on children's achievement and behavior were mediated through reductions in the cumulative risk experienced by program group children, although these relations were only found for the subsample of children whose parents were long-term welfare recipients. Walker (2008) employed a similar approach, but focused on cumulative advantage as opposed to disadvantage, and found that the positive features of developmentally-salient contexts partially mediated New Hope's effects on children's school achievement. However, no similar pathway between New Hope and children's non-cognitive skills was found.

Other researchers have begun to employ instrumental variable estimation (IVE) approaches to examine mediators of welfare program impacts. Typically these studies are limited to examining one potential mediator because the estimation procedure for IVE analyses requires multiple comparison groups in order to investigate multiple mediating pathways. Studies conducted using the IVE approach have provided evidence that effects of the Minnesota Family Investment Project (an earnings supplement program similar to New

Hope) on poor children's school engagement and positive social behavior were mediated through increased family income (Morris & Gennetian, 2003). A similarly designed study found that increases in maternal education mediated program impacts on children's academic skills, although the program under investigation contained some components specifically designed to increase maternal education that were not part of the New Hope program (Gennetian, Magnusson, & Morris, 2008).

### *Adolescent Employment and Future Orientation*

Although experimental evaluations of welfare policies have examined a wide range of youth outcomes, there has been a lack of research examining the effects of these policies on adolescent employment and future orientation. These are important outcomes to consider because of their developmental significance in adolescence and because of their potential to foster a positive transition to adulthood among economically disadvantaged youth. Furthermore, accrual of work experience and career planning may provide routes out of poverty and increase upward mobility in adulthood (McLoyd, Aikens, & Burton, 2006; Ruhm, 1997).

Although the effects of adolescent employment on well-being vary across a number of conditions, such as age, intensity of employment, and type of job, the small literature on employment among economically disadvantaged youth points to beneficial outcomes. Using a sample of low-income African American youth in Baltimore, Leventhal and colleagues (Leventhal et al., 2001) found that stable employment during adolescence increased the likelihood of graduating from high school for all youth, and of college attendance for young men. Additionally, an important benefit of adolescent employment may be the accumulation of human capital. In her ethnographic study of adolescent fast-food employees in Harlem,

Newman (1999) observed the time-management, teamwork, and interpersonal skills that were fostered on the job through interactions with bosses, co-workers, and customers. These skills are likely important for later success in the labor market. In fact, research has shown that work during adolescence has positive effects on earnings later in life (Ruhm, 1995). This effect is especially important for impoverished youth because of their lower odds of completing a college degree, which provides a strong labor market advantage.

Future orientation is commonly defined as a set of cognitive, attitudinal, and motivational constructs that lead individuals to form expectations for the future, set goals and aspirations, and give personal meaning to future events (Nurmi, 1991; Steinberg, Graham, O'Brien, Woolard, Cauffman, & Banach, 2009). Future orientation is more relevant for adolescents than children because most youth do not obtain the cognitive skills needed to think abstractly about the future until late childhood or early adolescence (Nurmi, 1991). Future orientation is of particular importance among economically disadvantaged adolescents because aspects of their environments, such as neighborhood poverty and parental unemployment, often work to depress their optimism about future possibilities (MacLeod, 1987; Philips & Pittman, 2003). For example, low-SES youth report lower educational and occupational expectations and more perceived barriers to future success than their middle class peers (Cook et al., 1996; Mello, 2009). Future-related attitudes and behaviors may be especially critical in the lives of low-SES youth because they are relatively unlikely to have the additional time for planning and decision-making typically afforded by college (Arnett, 2000), and because they are more likely to take on adult roles while still in adolescence (Burton, 2007). Consistent with this, Clausen's (1991) seminal work on planful competence



found that, among low SES youth, higher levels of planful competence (a component of future orientation) during adolescence were predictive of upward mobility during adulthood.

#### *New Hope's Effects on Adolescent Employment and Future Orientation*

At the 8-year follow-up New Hope youth reported on their involvement in employment and on aspects of their future orientation. The focus of this dissertation is to explore mediators of program effects. Accordingly, the following section outlines the previously reported program impacts on these outcomes (McLoyd, et al., in press). Because the present study also aims to investigate differences in mediational effects across gender and ethnic groups, program impacts found only for specific subgroups are also discussed.

#### *Effects on Adolescent Employment*

*Overall program impacts.* We used data collected 8 years post-random assignment to examine the longitudinal effect of New Hope on adolescents' likelihood of being employed, the duration (in months) of employment, and the intensity (in average hours per week) of employment. Separate analyses were conducted for employment during the school year and employment during the summer months. Rates of employment did not differ by program group status. However, youth in program group families worked for longer periods of time during the school year than youth in control group families. No effects were found on summer employment.

*Program impacts by gender and ethnicity.* Subgroup analyses revealed concentrated effects of New Hope on boys and African American youth. Compared to boys in control families, boys in program families worked at more months during the school year. No comparable effects were found for girls. African American youth worked for longer periods of time during the school year, worked at higher levels of intensity, and earned more money

than their counterparts in control families. These effects were not found for Latino or White youth.

#### *Effects on Future Orientation*

*Overall program impacts.* Youth reported on two attitudinal components of future orientation (i.e., pessimism about prospects for employment/financial security during adulthood and cynicism about work) and one behavioral component (i.e., career planning activities). Adolescents in program group families held significantly less cynical attitudes about work and were significantly more involved in employment and career preparation activities than their control group counterparts. There were no overall effects of New Hope on pessimism about prospects for future employment and financial security during adulthood.

*Program impacts by gender and ethnicity.* Subgroup analyses revealed that boys in program families were significantly less pessimistic about their future employment prospects than boys in control families. There was no program effect for girls. Even among overall program impacts, subgroup analyses showed that New Hope's effects were concentrated among boys. Compared to boys in control families, boys in program families were less cynical about work and were more involved in career preparation activities, although New Hope had no significant impact on these outcomes for girls.

New Hope's effects on future orientation also varied by youth ethnicity. African American youth in program families reported significantly more involvement in career preparation than African American youth in control group families. Similar but significantly smaller effects were found for Latino youth, but not for White youth. African American and White youth also reported less cynical attitudes about work than their control group counterparts. No comparable program effects were found for Latino youth.

### *Hypothesized Mediators of New Hope's Effects.*

Hypotheses concerning pathways by which New Hope exerted its effects on adolescent employment and future orientation are grounded in theory and empirical findings of prior New Hope evaluations. That is, only variables that were significantly impacted by the New Hope program at the 5-year follow-up were considered as possible mediators of the focal 8-year outcomes. Because the outcomes occurred five years after program benefits ended, it is important to understand what factors promoted stability in the positive effects on program group youth over time. Both contextual and individual level variables are considered as possible mediators, as they both provide constraints that produce stability in behavior over time. That is, effects of New Hope during the three year program period likely continued into later years because the program produced changes in the environments youth experienced and in the youths' own characteristics that were sustained even after cessation of program benefits (Cairns & Cairns, 1994). Next, I describe hypothesized mediators and review literature that supports their tenability as pathways of influence on the adolescent outcomes of interest. The hypothesized mediators are shown in Figures 1 and 2.

#### *Hypothesized mediators of New Hope's Effects on Adolescent Employment Outcomes*

*Parental employment.* Over the five years between random assignment and the second follow-up (which included three program years followed by two years during which participants received no New Hope benefits), program group parents were employed during significantly more quarters of the year than control group parents (Huston et al., 2003). Increases in parental employment among New Hope parents likely increased their *social capital*. Social capital is generally defined as the social networks and connections that an individual has access to through involvement in social activities and group memberships

(Bourdieu, 1986; Cusworth, 2009). Increases in social capital are linked to higher levels of parental knowledge of and connections to resources in the community (Cusworth, 2009). Prior research has highlighted the importance of these connections when adults are searching for jobs (Granovetter, 1973).

Given New Hope's impact on parental employment, program group parents likely experienced increases in social capital that consisted of more extensive networks of employed adults, who in turn could provide more connections to job opportunities for their children. In other words, increases in parental social capital may have translated to increases in social capital among New Hope youth. Ethnographic work on youth employment in urban areas has shown that familial employment contacts are a primary mechanism through which youth obtain jobs (Sullivan, 1989; Newman, 1999). In part, these connections are of heightened importance for adolescents in urban areas because of the challenges of depressed labor markets where youth often compete for jobs with adults who have more work experience (Newman, 1999).

*Out-of-home activities.* At the 5-year follow-up, New Hope youth spent significantly more time in center-based child care and participated in more structured activities than control group youth (Huston et al., 2003). Participation in these activities likely expanded youths' own social capital and social networks, and especially their contact with supportive adults. This contact may have resulted in job search assistance, as well as other forms of informational and emotional support. Adult contacts may also have increased the number of job opportunities youth were aware of, thereby increasing their chances of being hired (Granovetter, 1973).

Additionally, extra-curricular activities have been associated with a number of positive youth outcomes, including lower levels of risk behaviors and mental health problems, and higher academic achievement and engagement (Epps, 2008; Mahoney, Larson, Eccles, & Lord, 2005). Many of the benefits of extra-curricular activities stem from the opportunities they provide youth to develop initiative, set and achieve goals, and interact with adults and peers outside of school (Cairns, Mahoney, & Farmer, 2003). Furthermore, extra-curricular activities have been shown to be particularly important for socioeconomically disadvantaged and at-risk youth, in part because such youth typically lack opportunities to develop these skills and experience these supports elsewhere (Mahoney, 2000; Mahoney et al., 2005). These developmental opportunities and skills likely increase youths' ability to obtain a job and help to ensure successful experiences in the job over time.

*Academic skills and social behavior.* At the 5-year follow-up, program group youth had higher reading scores on a standardized exam, higher parent-reported reading achievement, and higher teacher-reported academic skills than control group youth, although these effects were concentrated among boys (Huston et al., 2005). Additionally, parents reported higher levels of positive social behavior among program group youth than did parents of control group youth at this time point. Teachers also reported higher levels of positive social behavior and classroom behavior skills among program group youth as compared to control group youth, although again, these impacts were concentrated among boys (Huston et al., 2005).

Academic abilities and social skills have often been thought of as a source of resiliency, especially among low-income youth who often face challenging environments and multiple risk factors. The process of resilience entails achieving positive developmental

outcomes despite exposure to adversity. Resiliency is not an individual trait, but a dynamic process between individuals and their surrounding contexts (Luthar & Cichetti, 2000).

Accordingly, the potency of academic skills and social behaviors as sources of resilience stems from the way that they shape the developmental environments that youth are experiencing. For example, youth with stronger social skills are more likely to have positive peer relationships (Crick & Dodge, 1996; Rubin, Bukowski, & Parker, 2006). Additionally, teachers may provide more resources and attention to students who are performing and behaving well in their classes (Kuklinski & Weinstein, 2009). Indeed, prior research has linked both academic skills and social behaviors among low-income early adolescents to a number of positive outcomes later in adolescence, including reduced probability of school dropout and drug use (Ripple & Luthar, 2000). Although previous research has not specifically examined these skills as a potential source of resiliency in relation to employment outcomes, there are a number of prior studies that support the hypothesis that the positive impacts of New Hope on youths' academic skills and social behavior mediated program impacts on adolescent employment. I review these studies below.

(a) *Academic skills.* Urban employers report basic communication, literacy, and math skills as key requisites for job hires (Wilson, 1996). Prior work among low-income youth has shown that youth with better academic skills are more likely to both secure and maintain employment than youth who are less academically competent. For example, in Leventhal and colleagues' (2001) longitudinal study of youth from primarily low-income families, adolescents who had failed a grade in school were less likely to be employed in subsequent years than their peers. Additionally, Entwisle, Alexander, and Olson (2000) found that youth who worked consistently across adolescence (ages 14-17) had higher test scores on

standardized exams during childhood than inconsistent workers, with consistency defined as working every year after employment was initiated. Thus, the academic advantages conferred to New Hope youth may have translated into increased labor market success during adolescence.

*(b) Social behaviors.* A number of social skills, including showing initiative and interacting with customers, are critical to success in employment settings. In fact, Wilson's (1996) work showed that, in addition to basic academic skills, employers in urban areas of Chicago strongly valued responsibility and dependability in their employees. Employers were more likely to hire and retain workers who showed positive work-related behaviors, such as being punctual, and who represented the company well through respectful interactions with customers. Other ethnographic work converges with Wilson's findings and highlights the ability to work with others as a key criterion employers use to select candidates from youth applicant pools (Newman, 1999). Empirical work on low-income youth has shown that youth who took on more responsibility in the home (e.g., through household chores) were more likely to be employed during early adolescence (Entwisle, Alexander, Olson, & Ross, 1999). This relation may be mediated by increases in responsibility skills conferred to youth who participate in household work. The increases in social and behavioral skills provided to program group youth may similarly mediate the impact of New Hope on adolescent employment.

#### *Hypothesized Mediators of New Hope's Effects on Adolescent Future Orientation*

*Parental employment and income.* In addition to New Hope's positive impact on parental employment, program group families had higher annual earnings over the three years of the program and the two years immediately thereafter. These impacts may have

facilitated more positive attitudes about work among program group youth. Because of increased employment, New Hope parents may have been stronger role models of employment whose working lives exemplified more prominently the value and rewards of employment. Prior research indicates that adolescents are more optimistic about their economic and occupational futures if their parents are employed (Quane & Rankin, 1998), if they perceive their families as experiencing less financial strain (Flanagan, 1990; Larson, 1984; McLoyd & Jozefowicz, 1996), and if they perceive their parents as having more favorable work experiences (Neblett & Cortina, 2006). Additionally, parents who experience economic hardship and job loss are more pessimistic about their children's future and feel less confident about their ability to help their children prepare for the world of work (Galambos & Silbereisen, 1987; Flanagan, 1990). It is probable that New Hope's effects on parental employment increased parents' expectations for their children's employment futures, which may have increased the amount of positive future-oriented messages youth received. Furthermore, New Hope-generated increases in family earnings may have accentuated the desirability and rewards of working. Taken together, it is plausible that the positive effects of New Hope on parental employment and earnings led youth to be more optimistic about their own economic and employment futures.

*Out-of-home activities.* New Hope's impact on extra-curricular activities likely increased youths' contact with extra-familial adults, thereby increasing their social capital. This contact with adults may have provided mentorship to youth and encouraged positive attitudes about future employment prospects. Supportive relationships with adults are critical resources that youth need to plan and prepare effectively for their future and the world of work (Phillips, Blustein, Jobin-Davis, & White, 2002). In addition to the attitudinal



advantages relationships with adults can provide, they are also likely to increase the tangible opportunities that youth have to prepare for their future. For example, a youth group leader may connect youth to community members who hold desirable jobs and who have the resources to organize job shadowing experiences for interested youth.

Furthermore, prior work has shown that among low-SES youth, participation in structured extra-curricular activities during early adolescence predicted higher educational expectations later in adolescence (Mahoney et al., 2003). Recent research has highlighted complex bidirectional influences between participation in extra-curricular activities and youths' educational and occupational expectations. Youths' participation in activities during early high school significantly predicted higher educational and occupational expectations one year later, above and beyond the effect of prior expectations (Beal & Crockett, 2010). This supports the hypothesis that participation in extra-curricular activities may increase youths' optimism about future events, such as employment and financial stability during adulthood. Additionally, qualitative research on educationally resilient low-income, urban youth has pointed to extra-curricular activities as a context that may help youth set concrete employment goals and enact strategies to achieve them (O'Connor, 1997).

*Academic skills.* It is probable that New Hope youth displayed greater optimism about the future because they experienced more success in their day-to-day lives. Specifically, youths' successes at school may have led them to be more positive about their employment and financial futures, in part, because success in school domains is closely linked to educational attainment. Low-income youths' academic success has been shown to predict educational expectations (Ensminger & Slusarcick, 1992; Mello, 2008) and it is likely

that similar relations hold between academic success and expectations for occupational and financial security.

Social cognitive theory posits that self-efficacy, or beliefs about one's capabilities to learn or perform behaviors, are grounded in one's environment and shape one's thoughts and choices about later tasks (Schunk & Pajares, 2002). Youth who are doing well in school are likely to develop higher levels of self-efficacy, which may translate into more positive attitudes about the future and more active approaches to career planning and preparation. Bandura and colleagues (2001) found that youths' efficacy beliefs about different career paths were grounded in their academic achievement and expectations. This supports the idea that higher levels of achievement may promote more positive attitudes and behaviors related to future careers.

Furthermore, youth with higher levels of academic achievement are more likely to be tracked into advanced courses and less likely to be tracked into remedial courses, which may reduce the number of barriers they perceive to future success in the labor market (Johnson, 2002). More specifically, youth tracked into higher level classes may receive more positive messages about opportunities for college and career success than youth in "regular" and remedial classes.

*Social behaviors.* Youths' social behaviors may have mediated the impact of New Hope on youths' optimism concerning future employment outcomes and their involvement in career preparation activities. Specifically, youth who displayed higher levels of social competence may have evoked more positive involvement from extra-familial adults in their lives, such as teachers, neighbors, and activity leaders, as compared to their less socially competent counterparts. This increased attention may have yielded additional mentorship

and investment from adults, which has the potential to induce positive feelings of optimism and efficacy, and to provide opportunities to discuss future career paths and to partake in career preparation activities (Philips et al., 2002).

*Educational expectations.* At the 5-year follow-up, program group boys had higher educational expectations than control group boys, which may have translated into greater optimism for future employment and financial security at the 8-year follow-up. According to expectancy-value theory, one's decisions to pursue a given task are grounded in their expectations for success on that task and the extent to which they view that task as valuable (Wigfield & Eccles, 2000; 2002). Although expectancy-value theory is most commonly applied to achievement related domains, the tenets likely hold for expectations, values, and behaviors related to future careers. Furthermore, expectations for success in academics may translate into expectations for success in careers because of the close connections between educational and occupational success in American society. Indeed, prior cross-sectional research has shown that among low-SES, minority youth, thoughts about educational and occupational futures are highly correlated (Kerpelman & Mosher, 2004). Other work conducted with low-income, urban boys found that youths' expectations for future careers (in terms of occupational prestige) were grounded in their expectations for educational attainment (Cook et al., 1996). Thus, the impact of New Hope on youths' optimism for future success may reflect carryover effects from earlier impacts on educational expectations.

#### *Understanding Gender and Ethnic Differences in Mediated Effects*

The second aim of this study is to explore mediational processes that might explain the disparities in New Hope effects found across gender and ethnic groups at the 8-year evaluation. The following sections discuss gender and ethnic differences in the impact of

New Hope on proposed mediating variables, as well as possible differences in the relations between the proposed mediating variables and adolescent employment and future orientation.

*Gender differences.* At the 8-year follow-up, there were gender differences in New Hope's impact on duration of employment and on pessimism about future employment. The stronger pattern of effects found for boys is likely a product of gender differences in New Hope effects found in previous follow-ups. At the 5-year follow-up, program group boys, compared to control group boys, had significantly higher levels of academic achievement (i.e., teacher reports of academic skills, parent reports of reading and literacy achievement), higher educational expectations, better classroom behavior skills (e.g., teacher reports of conformity to classroom rules and routines, ability to work and complete tasks independently), and better social behavior (e.g., teacher reports of social competence and sensitivity, self-control). In addition, they were significantly less likely than control boys to perceive hostile intent in vignettes about peer physical or social actions (Huston et al., 2005). This pattern contrasts with the dearth of effects found for girls at these follow-ups. Because there is evidence that better school achievement and fewer problem behaviors predict higher levels of employment among low-income youth, it is likely that these earlier impacts may account for gender differences in the impact of New Hope on employment duration (Entwisle et al., 2000; Leventhal et al., 2003). The wealth of positive impacts on boys may have provided them with a more positive outlook on their future and given them more hope that they would be able to obtain the employment and financial security they desired as adults. Boys' better school performance, for example, could have led to experiences of success and feelings of efficacy and optimism that were self-perpetuating. Thus, I hypothesize that the gender differences in New Hope's effects on adolescent employment intensity and pessimism

about future employment/financial security are primarily due to gender differences in earlier impacts on academic and social behavior.

*Ethnic differences.* Unlike the continued pattern of gender differences across follow-ups, there were no consistent ethnic differences in New Hope's impacts at either the two- or five-year time point, across indicators of child well-being (e.g., school achievement and social behavior), or across measures of children's environments (e.g., extra-curricular activities). Similarly, no other work has shown differential relations between the proposed mediators and the outcomes by ethnicity. That is, to my knowledge, there is no empirical work that shows differential benefits across ethnic groups of parental employment and income, extra-curricular activities, academic and social skills, and educational expectations in relation to adolescent employment and future orientation. Whether or not such a pattern of impacts occurred for New Hope participants is an empirical question that remains to be answered. Therefore, I make no specific hypotheses about mediated pathways that may account for ethnic group differences in New Hope's impacts. Instead, exploratory analyses were conducted to examine ethnic group differences in both the impact of New Hope on the proposed mediators and in the relation between the proposed mediators and the outcomes.

Table 1.1

*Study Measures, by Time Point and Reporter*

	<i>Child</i>	<i>Parent</i>	<i>Teacher</i>	<i>Administrative</i>
<i>Baseline</i>				
Exp. status				X
All control variables		X		
<i>5 yrs. post-baseline</i>				
Parental employment and income				X
Child care and structured activities		X		
Woodcock-Johnson reading scores	X			
Literacy achievement		X		
Academic performance			X	
Classroom behavior			X	
Positive behavior		X	X	
Intent attributions	X			
Educational expectations	X			
<i>8 yrs. post-baseline</i>				
Cynicism about work	X			
Pessimism about future employment	X			
Career preparation	X			
Work status	X			
Work duration	X			
Work intensity	X			
Earnings	X			

Figure 1.1

*Hypothesized Mediation Model of New Hope's Effects on Adolescent Employment*

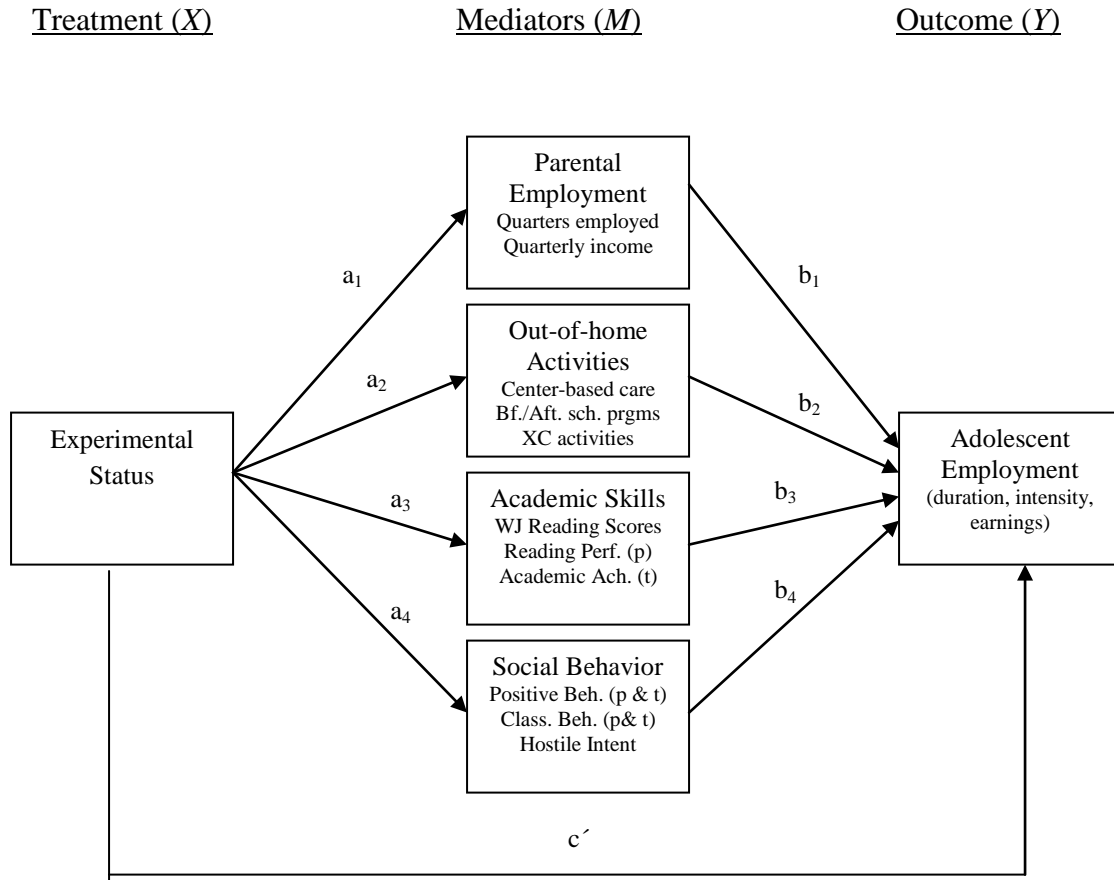
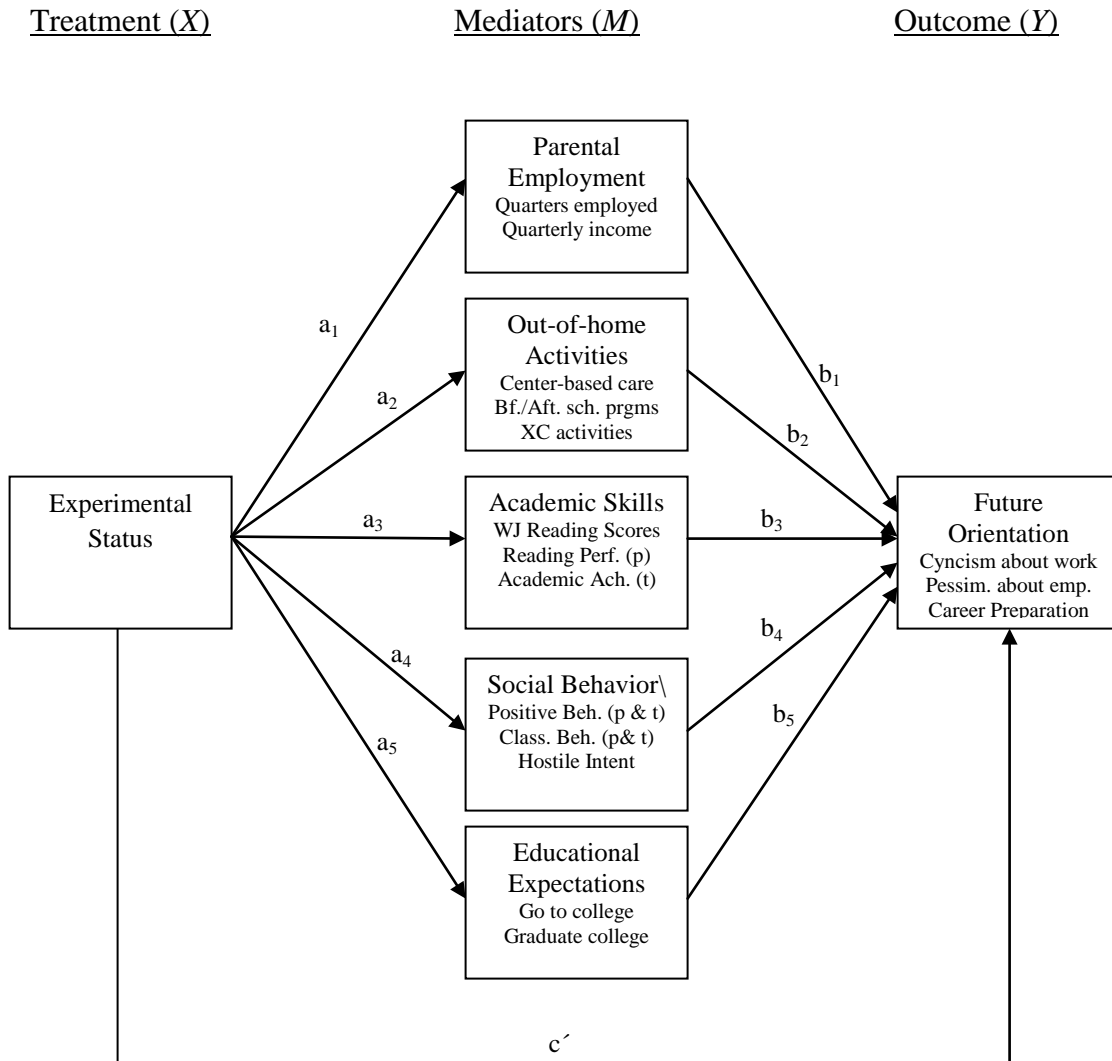


Figure 1.2

*Hypothesized Mediation Model of New Hope's Effects on Future Orientation*





## Method

### *Project Description*

The data for this project come from the New Hope Project, an anti-poverty, work-based program implemented in inner-city Milwaukee in 1994. The goal of the program was to improve the lives of low-income families by providing increases in employment and income. Four main principles guided the program:

1. People who are willing to work full-time should have the opportunity to do so.
2. People who work full-time should not be poor.
3. People should have an incentive to increase earnings.
4. Regular employment should be financially more rewarding than subsidized employment or other forms of public assistance.

In order to participate in the New Hope program, adults had to be living in one of two zip-code defined neighborhoods in Milwaukee's poorest areas, be at least 18 years old, be willing and able to work at least thirty hours per week, and have a household income that was at or below 150% of the federally defined poverty level. Given the multiple barriers participants faced to working 40 hours per week, 30 hours of work was considered fulltime. Specifically, during the pilot study, New Hope staff discovered that many local employers did not consistently offer employees 35 or more hours. Additionally, 30 hours was the common threshold used by employers in deciding who received certain benefits. Finally, using 30 hours a week as a marker of fulltime employment instead of 35 or more hours provided individuals with the flexibility needed to allow for occasional work absences.

New Hope participants received benefits that were reflective of the program's guiding principles. First, participants were provided with individualized job search assistance. If after eight weeks they were unable to find employment in the regular job market, they were provided with a community service job in a nonprofit organization. Participants who were employed but were not working 30 hours per week were eligible for the community service jobs.

In addition to the employment benefits provided, participants in the New Hope program who met the minimum 30 hours per week work requirement had access to earnings supplements if their household income was still below 200 percent of the poverty line. Participants who were eligible to receive the federal and Wisconsin Earned Tax Income Credits still had the opportunity to take advantage of these benefits in conjunction with benefits of New Hope. These benefits ensured that the participants' household income was at or above the federal poverty line.

New Hope benefits also included health care subsidies for participants who did not receive health insurance coverage from their employer or through Medicaid. Furthermore, participants with children aged thirteen or younger were provided with subsidies to help cover the cost of child care. In order to receive the monetary support, participants had to enroll their children in child care homes or centers that were either state-licensed or county-certified.

Lastly, New Hope participants were provided with valuable support from staff members. Each participant had a specific representative who provided him or her with important information about the available benefits. The staff strived to be respectful and

supportive in all interactions with project participations. All of these benefits were available for three years, from 1994-1997.

Because participants were randomly assigned to program and control conditions, the effects of New Hope can be tested within an experimental framework. Applicants were assigned to either the program group or control group through a lottery process. Both groups were eligible for federal and state public assistance, but only the program group members had access to the additional New Hope benefits. Although New Hope was conceived as an alternative to the existing public welfare system, many New Hope participants continued to use public assistance and/or Medicaid in addition to or instead of New Hope benefits. Consequently, the evaluation of New Hope provides insight into what would happen if the supports available through the program were administered in conjunction with existing policies and programs; it does not shed light on what would happen if the existing welfare system were replaced with a work-based set of supports like those administered through New Hope (Bos et al., 1999).

### *Sample*

The sample for the present work was drawn from the Child and Family Study (CFS) of the New Hope Project. The Child and Family Study (CFS) sample includes all 745 adult sample members who had one or more children between the ages of 13 months and 10 years 11 months at the time of random assignment. If a family had more than one child within the targeted age range, two children were randomly chosen as “focal children,” with the restriction that opposite-sex siblings were given preference over same-sex siblings. The analyses for this study will be based on data from 866 youth (51% boys; 56% African American; 29% Latino, and 15% White non-Hispanic) in 595 families who participated in the 8-year follow-up. Of the 866 youth, 430 were from families that participated in New

Hope and 436 were in control families. Youth ranged in age from 9 to 19 and 48% were girls. Using the original 745 parents and 1,140 eligible focal children as a base, the response rate for the 8-year follow-up was 80% for parents and 76% for focal children. The percentages of program (75%) and control group (76%) youth who responded did not differ significantly. Table 3.3 provides parental baseline descriptives for the full sample, and for the sample of youth ages 12 and older.

Data were collected through in-home interviews, with youth providing information about themselves via face-to-face interviews with program staff and self-administered questionnaires. Data utilized in the present study were drawn from three different data collection points. New Hope status and control variables were collected at baseline, before New Hope benefits were initiated. Hypothesized mediators were measured at five years post-baseline, two years after New Hope benefits had ended. Outcome variables were collected eight years post-baseline, five years after the program ended. Some outcome measures deemed developmentally inappropriate for younger children were administered only to youth ages 12 and older ( $n = 623$ ; mean age = 15.7 years;  $s.d. = 2.39$ ). The demographic characteristics of this older youth subsample are comparable to those of the younger children. Mediators were assessed at the 5-year follow-up, the time point that is closest temporally to the outcome variables. If program effects on mediators were not sustained through the five-year time point, it is unlikely that they would represent processes through which the focal eight-year outcomes are produced. Parents, children, and children's teachers reported on mediating variables. To obtain teacher reports, older children or their parents were asked to provide the names of two teachers, while parents provided homeroom teachers' names for the younger children. Teacher report questionnaires were subsequently

mailed to the teachers of participating children. Response rates for teacher reports at the 5-year follow-up were approximately 63%. Table 1.1 shows both the time point at which study variables were collected and identifies the reporter.

### *Measures*

#### *Focal Independent Variable*

*New Hope status.* The focal independent variable for this study is assignment to the New Hope program group or control group, which was determined at the baseline of the experiment, 8 years before the outcome variables were measured.

#### *Focal Outcome Variables*

*Labor market attachment.* Youth ages 12 and older were interviewed about their employment experiences during the previous school year (September – May) and the previous summer (June- August). Employment during the school year was distinguished from employment during the summer because previous research indicates that there are different correlates of each (Marsh, 1991). However, there were no impacts of New Hope on summer employment so it was excluded from mediation analyses.

*(a) Employment duration and intensity.* To maintain the integrity of random assignment, analyses of New Hope's impacts on duration and intensity of employment were based on the full sample of youth ages 12 and older—both employed and non-employed. In these analyses, youth who were not employed received scores of 0. Youth indicated the number of months during which they worked for pay for someone other than their parents (1=*one month or less*, 2=*one to three months*, 3=*three to six months*, 4=*six to nine months*). To measure intensity of employment, youth reported the number of hours per week they worked for pay for someone other than their parents. Responses ranged from 1 to 9 (1=*one*

to five hours, 5=21-25 hours, 9=over 40 hours). These measures were adapted from items in the National Longitudinal Study of Adolescent Health and the New Futures Study.

(b) *Earnings.* Youth ages 12 and older who had worked during the previous school year for someone other than their parents reported the amount of money they earned per week from their employment, using a 6-point scale ranging from 1 (\$1-20) to 6 (over \$100). Again, to maintain the integrity of the experimental design, youth who had not worked during these periods received a score of 0.

*Future orientation.* Youth ages 9-19 completed scales assessing cynicism about work and pessimism about employment during adulthood. Items about involvement in career preparation activities were administered only to youth ages 12-19. All of this information was gathered via self-administered questionnaires.

(a) *Cynicism about work.* This 6-item scale, adapted from Stern et al. (1990), assesses youth's cynicism about work and the value they attach to work. The items are statements, and the child indicates on a four-point scale his or her level of agreement with each one (1 = *strongly disagree*; 4 = *strongly agree*). Sample items include, "If I had the chance, I would go through life without ever working," and "There is no such thing as a company that cares about its employees."

(b) *Pessimism about future employment.* Youth reported on their expectations for employment and financial difficulties during adulthood using a 6-point scale adapted from McLoyd and Jozefowicz (1996). They indicated how likely they were to experience difficulty finding a good job as an adult, lose a job, experience difficulty supporting a family financially, and have a good job as an adult (reverse coded), with response categories ranging from 1 (*very unlikely*) to 6 (*very likely*).

(c) *Involvement in employment and career preparation activities.* Youth ages 12-19 indicated on a 4-point scale how often during the past year they had done certain activities intended to help prepare for future employment and careers (1 = *never*; 4 = *more than five times*). Sample activities included talking with a teacher or other adult at school about post-high school plans and having discussions with adults outside of school about careers and work. Items were adapted from the Career Academies Study (Kemple, Poglinco, & Snipes, 1999).

#### *Mediator Variables*

*Parental employment.* Two dimensions of parental employment were assessed at the five year follow-up.

(a) *Number of quarters employed.* The number of quarters adults were employed between random assignment and the 5-year follow-up was assessed using unemployment insurance earnings records, which were obtained administratively.

(b) *Average annual earnings-related income (earnings, EITC, and supplement).* The average earnings-related income between random assignment and the 5-year follow-up was assessed using unemployment insurance earnings records, which were obtained administratively. This measure captures only the earnings of the focal parent participating in the New Hope experiment, not total household earnings.

#### *Out-of-home activities.*

(a) *Center based child care.* Parents were asked about the number of months over the prior year during which the focal child had been in *center-based care*, which included formal, out-of-home child-care centers. Parents were also asked about the frequency of focal

children's participation in before- and after-school programs and responded using a 5-point scale ranging from *never* to *about every day*.

(b) *Extra-curricular activities.* Parents reported on the frequency of children's participation in out-of-school activities during the school year and the summer. Responses for all questions were assessed using a 5-point scale ranging from *never* to *about every day*. Five activities were grouped under the rubric "structured activities" because they afforded opportunities for adult supervision, the acquisition of skills, and socializing with peers. These included lessons, organized sports, clubs and youth groups, religious classes and events, and recreation or community center activities.

*Youths' academic skills.*

(a) *Standardized reading scores.* To assess reading competency, children completed four scales from the Woodcock-Johnson Achievement Battery—Revised (Woodcock & Johnson, 1990). Two of these (Letter-Word Identification and Passage Comprehension) measure reading skills, and the average of these two constitutes the *Broad Reading* score. The Woodcock-Johnson was selected because its normative sample is large and representative and it includes children from diverse ethnic groups and diverse types of schooling. The standard score for each scale is obtained by comparing the child's score with norms for his or her chronological age group. The mean standard score for the population as a whole is 100, with a standard deviation of 15.

(b) *Parental perception of reading performance.* Based on knowledge of recent report cards, parents evaluated their child's performance in reading on a 5-point scale ranging from *poor* (1) to *excellent* (5).



*(c) Teacher report of academic performance.* Teachers completed the Academic subscale of the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). On this 10-item measure, teachers rated each focal child's performance in reading, math, intellectual functioning, academic motivation, oral communication, and parental encouragement in comparison to other children in the same classroom using a 5-point scale (1=*lowest 10% of class*; 3=*middle 40% of class*; 5=*highest 10% of class*).

*Youths' social behavior.*

*(a) Teacher report of classroom behavior.* The Classroom Behavior Scale (Wright & Huston, 1995) is a 12-item scale containing items concerning children's study skills, conformity to classroom rules and routines, ability to work and complete tasks independently, and ability to make transitions without becoming distracted. Teachers reported the frequency with which the target child displayed a given behavior using a 5-point scale (1=*almost never*; 5=*almost always*).

*(b) Positive behavior scale.* The Positive Behavior Scale was developed for the New Chance survey (Quint et al., 1997). Parallel versions of this instrument were given to parents and teachers in New Hope. Its 25 items address topics including compliance/self-control (e.g., "thinks before he/she acts," "usually does what I tell him/her"), social competence and sensitivity (e.g., "gets along well with other children," "shows concern for other people's feelings"), and autonomy (e.g., "tries to do things for him/herself," "is self-reliant"). Respondents reported the frequency with which the target child displayed a given behavior using a 5-point scale (1=*never*; 5=*all of the time*).

*(c) Intent attributions.* The Intent Attributions and Feelings of Distress Measure (Crick & Dodge, 1996) presents hypothetical vignettes to assess children's intent attributions

and feelings of distress when they are in provocation situations. The measure consists of four vignettes with two questions about each. Children's choices reflect their perceptions of the actor in the story as having either hostile or benign intent. In two of the stories, the provocation is physical (e.g., someone bumps into you); in the other two, it is social (e.g., someone has a party without inviting you). The number of hostile intent attributions youth made across the vignettes was averaged to create the hostile intent score.

*Youths' Educational Expectations.* Youths' (ages 9-16) expectations were assessed with 2 items asking how sure the child was that he or she would (a) go to college and (b) finish college (1 = *Not at all sure*; 5 = *Very sure*) (Cook, et al., 1996).

#### *Control Variables*

Although random assignment in a large sample should ensure that the two groups do not differ significantly with respect to background characteristics, the following parental baseline covariates were included in analyses to increase the precision of the experimental-control comparison: having a high school diploma or general equivalency diploma, gender of the reporting parent; parental age; parental ethnicity; having a child under the age of 2 years; having more than three children; receipt of welfare in the prior year; receiving AFDC in family of origin; having a car; having ever been employed full time; neighborhood (north side or south side); current employment status; and earnings during the year prior to random assignment. Child age, gender, and ethnicity were also entered as covariates. A complete description of research measures can be found in the appendix.

## *Analysis Plan*

### *Descriptive Analyses*

Three sets of descriptive analyses were completed prior to testing the models of interest. First, standard descriptive analyses were conducted. Specifically, univariate statistics such as means and standard deviations were examined, outliers were identified, and reliability of scales were assessed. Means and standard deviations were computed for each gender and ethnic group, for program and control groups, and for each gender or ethnic group by treatment status. Additionally, bivariate correlations were calculated for all study variables. Secondly, a series of scale diagnostics (e.g., Cronbach's  $\alpha$ ) were conducted to ensure that the scales have approximate measurement equivalence across the gender and ethnic groups in the model. These procedures ensure that differences found across groups in the multiple group analyses are in fact due to differences in bivariate relations, and not in measurement. Lastly, differences between participants who have full case data (i.e., those who participated at all three data collection points) and participants with partial data were examined.

### *Missing Data*

Because of participant attrition across the 8 years of the CFS, there are missing data at the 5 and 8 year data collection points. To correct for non-random attrition and missing data, multiple imputation was employed in all analyses. Multiple imputation has been shown to be a more efficient missing data technique and to produce less bias in coefficients than traditional methods such as listwise deletion, pairwise deletion, and mean imputation (Schafer & Graham, 2002). Multiple imputation programs predict each participant's missing values from his or her own observed values, while adding in random noise to preserve a

correct amount of variability in missing data. PROC MI in SAS 9.1.3 (SAS Institute, 2008) was utilized to generate 50 imputed datasets. Recent developments have indicated that a large number of multiply imputed datasets are needed for adequate power to detect small effect sizes (Graham, Olchowski, & Gilreath, 2007). For measures that should be missing — for example, measures given only to children age 12 and older — values were set to missing after the imputation. Additionally, missing values on the dependent variables were set to missing post-imputation, as simulation studies have shown that leaving imputed values of dependent variables in models does not provide additional information and can add noise (von Hippel, 2007).

All model testing was conducted using the MPLUS (Muthén & Muthén, 2007) software. MPLUS was optimal for these analyses because of its capacity to conduct path analyses and structural equation modeling and options for testing direct and indirect (mediated) effects. Additionally, MPLUS allows for the adjustment of standard errors to account for the non-independence present in the data because of fact that some study participants are siblings. In all model testing, Huber-White standard errors were estimated to correct for this clustering within families (Huber, 1967; White, 1982). Furthermore, MPLUS allows for the use of multiply imputed datasets.

#### *Multiple Mediators of New Hope's Effects*

As shown in Figure 1.1, the first set of hypotheses was tested by specifying a multiple mediation model, which estimated the direct effect of New Hope on each outcome variable and the indirect effects of New Hope through each of the hypothesized mediators. Separate models were estimated for each outcome variable. Additionally, because of the large number of mediating variables and the possibility of multicollinearity, latent constructs will

be created to combine across measures and reduce measurement error. Specifically, four latent constructs were tested: parental employment (number of quarters employed, average earnings), out-of-home activities (center-based child care, extra-curricular activities), academic skills (Woodcock-Johnson broad reading scores, teacher reports of achievement, parent report of reading achievement), and social behaviors (classroom behavior scale, positive behavior scale- teacher and parent report, intent attributions). Model fit of each of these constructs were examined. If the factor structure did not fit the data well, as indicated by fit indices and factor loadings, individual measures were used instead of the latent construct. Because of the possible correlations among mediators, models were initially tested with a single mediator at a time. If multiple measures were found to mediate New Hope's effect on an outcome, these mediators were then tested simultaneously in a multiple mediator model. This strategy prevents issues of collinearity among mediators, but allows for the elimination of spurious relations between variables.

Mediation effects were tested and evaluated according to procedures laid out by Preacher and Hayes (2008). Mediation effects were derived using the product-of-coefficients method (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2004, 2008). In this approach, the significance of the mediating variable is tested by dividing the coefficient of the variable by its standard error and then comparing this value to a standard normal distribution (MacKinnon et al., 2002). The mediating coefficient is the product of two coefficients: the mediator regressed on the independent variable ( $a$ ;  $X \rightarrow M$ ) and the dependent variable regressed on the mediator ( $b$ ;  $M \rightarrow Y$ ). Although the product-of-coefficients method provides a point estimate and standard error for each mediation effect, the standard error is typically computed under the assumption of multivariate normality.

Although bootstrapping methods are typically preferred to correct for the possibility of departure from multivariate normality (Preacher & Hayes, 2008), they are unavailable when the data structure requires standard error adjustments due to non-independence. Standard errors in the New Hope data do require this correction because of the presence of siblings. As a result, bootstrapping was not employed. Although less desirable, the standard errors of mediation effects computed through the product-of-coefficients method have been shown to be accurate in samples over 200 (MacKinnon et al., 2002) and thus were utilized. It is important to note that although the causal steps procedure (Baron & Kenny, 1986) is a commonly used procedure for assessing mediation, it will not be employed here due to its methodological flaws, such as a high chance probability of Type 1 error (Holmbeck, 2002), low statistical power (MacKinnon et al., 2002; Fritz & MacKinnon, 2007), and lack of direct testing of the mediation hypothesis (Preacher & Hayes, 2004).

#### *Gender and Ethnic Group Differences in New Hope's Impacts*

Models and coefficients were compared across subgroups to understand the processes that gave rise to the group differences in New Hope's impacts. As shown in Figure 2.1, three possible differences in mediating paths were explored. The possible models are:

- 1) *W* affects the *a* path. This indicates that there are subgroup differences in the effect of New Hope on the proposed mediating variable.
- 2) *W* affects the *b* path. This indicates that there are subgroup differences in the effect of the mediating variable on the outcome variable.
- 3) *W* affects both *a* and *b* paths. This indicates that there are subgroup differences in the effect of New Hope on the mediating variable and of the mediating variable on the outcome variable.

Broadly, these possible patterns of effects can be considered *conditional indirect effects*, which are defined as the magnitude of an indirect (mediated) effect at a particular value of a moderator (Preacher et al., 2007). Because of the use of multiple imputation and the specification of the indirect effect, constrained models across subgroups could not be employed. Therefore, to test for each of these three patterns of possible conditional indirect effects, analyses were conducted by subgroup. When significant mediating paths are detected within a subgroup, the *a*, *b*, and *ab* paths will be compared to the corresponding paths in the other subgroup(s). For example, if a mediating effect of a New Hope impact on boys was detected, the paths involved in this mediating effect were compared to the analogous paths for girls. To quantify differences in paths across groups, proportions of effects were obtained (Raver, Gershoff, & Aber, 2007). These proportions indicate differences across groups in the size of paths and are calculated by subtracting the smaller unstandardized path estimate from the larger unstandardized path estimate and then dividing by the larger standardized path estimate. The estimates were only generated for significant mediators found in subgroups, as they were the only paths that provided information on how the hypothesized mediators contributed to the differential impacts of New Hope across subgroups. Additionally, if the mediator is a latent construct, tests of model fit were also examined across the two groups.

#### *A Note on Mediating Effects and Causal Inferences*

Although random assignment experiments provide strong support for causal relationships between the independent variable (e.g., receiving vs. not receiving New Hope benefits) and the dependent variables, mediating effects cannot be assumed to be causal in nature unless they are also randomly assigned. This is particularly challenging for developmental research, which often employs longitudinal data where the mediators cannot

be manipulated because they occur after a significant delay. Because of the importance of understanding mediating impacts to informing policy and understanding developmental processes, methodologists have begun to focus on analytic techniques that allow for causal inferences concerning these effects. One advancement in this area is the use of instrumental variable estimation to establish a causal relationship between the mediator and dependent variable (Gennetian et al., 2008; Kling, Liebman, & Katz, 2007). Despite the strengths of instrumental variable estimation, it is limited to being used with a single mediator, except in cases where there are multiple treatment sites that contain variation or where multiple comparison groups exist. Because New Hope only has a treatment and control group in one location, this approach will not allow for the exploration of multiple mediators, and will not be employed as an analytic method.

Other current research examines the conditions under which structural equation and path analysis models provide causal estimates of mediating parameters. Holland (1989) noted that path models do not automatically establish causal relations between non-randomized mediators and outcomes. Recent work (Morgan & Winship, 2007; Sobel, 2008) has established design and statistical conditions that enhance the plausibility that the effects of mediators are indeed causal effects. First, temporality is needed; mediating processes should occur after the independent variable and before the dependent variable (Sobel, 2008). In the current study, mediators were measured five years post-random assignment and three years prior to the measurement of outcomes. Furthermore, the focal outcomes (i.e., employment and future orientation) develop primarily in adolescence and are unlikely to occur prior to measurement of mediators. Morgan and Winship (2007) noted that mediators should be *isolated* and *exhaustive*. To be isolated, it is assumed that there are no unmeasured



variables that influence both the mediator and dependent variables. To be exhaustive, all mediators of the effect must be included in the model. Although these assumptions cannot be directly tested, the use of multiple mediators and random assignment of the treatment variable increases the likelihood that they hold. Additionally, if analytic results show full mediation, as indicated by a non-significant effect of New Hope on the outcomes once the mediators are included in the model, the assumption that the mediators are exhaustive is correct.

Figure 2.1

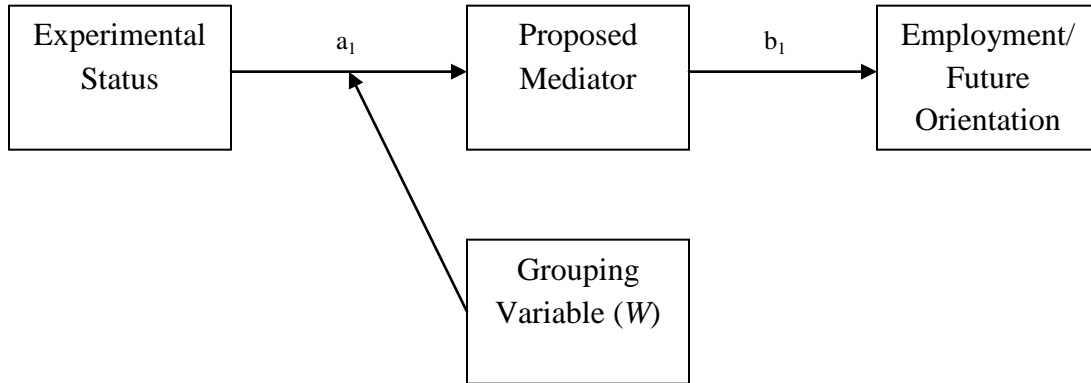
*Possible Subgroup Differences in New Hope's Impacts*

Treatment (X)

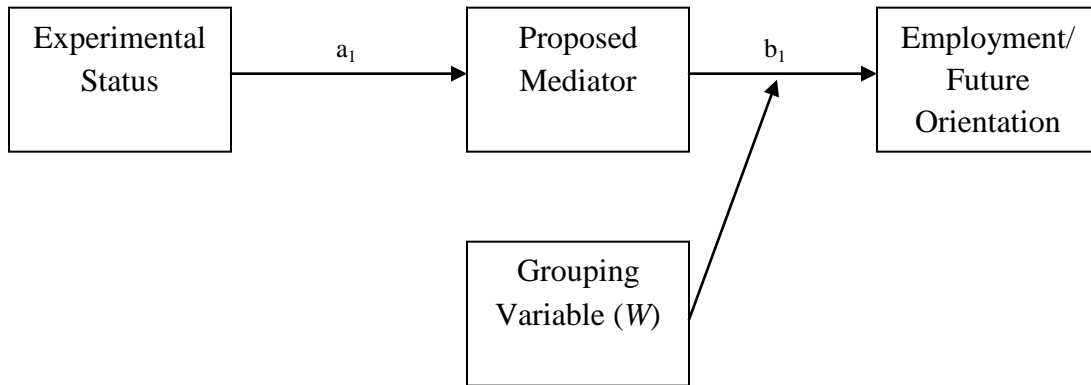
Mediator (M)

Outcome (Y)

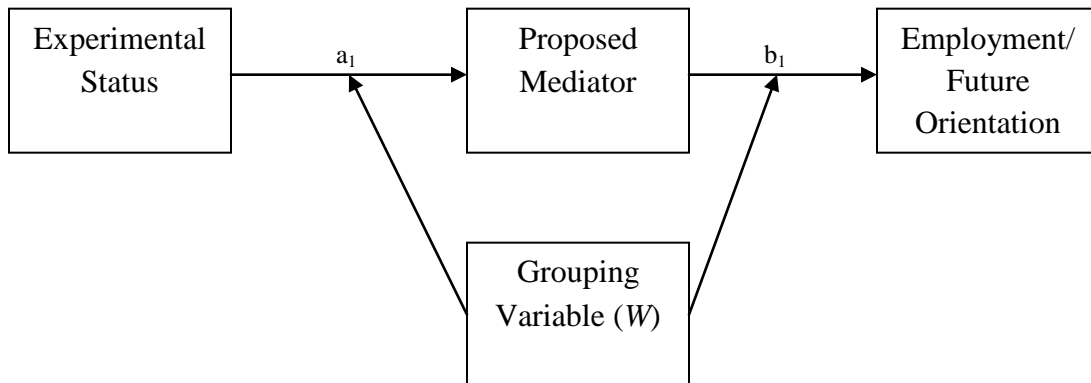
Model 1



Model 2



Model 3



## Results

### *Preliminary Analyses*

Prior to testing the study hypotheses, a number of preliminary analyses were conducted. First, data were checked for univariate outliers. Observations that fell outside of the possible range of values were changed to missing, as they were clearly due to data entry error. Second, distributions for all variables were assessed for normality. Variables for all hypothesized mediators were found to be approximately normally distributed. Among outcome variables, distributions for the future orientation variables (cynicism about work, pessimism about future employment, and career preparation) were approximately normal. However, the adolescent employment outcome variables (duration, intensity, and earnings) were positively skewed because of the large number of youth who reported no employment. Although various transformations were considered (e.g., square root, natural logarithm), none resulted in improvements to the distributions and were therefore not used in later analyses. Because of the desire to preserve the experimental properties of the study linked to random assignment, non-workers were included in the models for the analyses, even though the presence of their data contributed to the skewness of the distributions. Means, standard deviations, and bivariate correlations for all variables used in study models are presented in Tables 3.1 and 3.2. Note that all descriptive statistics presented in these tables are based on raw rather than imputed data. Means and standard deviations based on imputed data were examined and found to be similar to those obtained using the raw data.

In the second phase of preliminary analyses, I conducted a series of chi-square tests and ANOVAs to examine differences in all study variables by New Hope experimental vs. control condition, child gender, and child ethnicity. Results of these tests are presented in Tables 3.3-3.5. Table 3.3 shows program and control group percentages and means for the full sample and for the sample of youth who were age 12 or older at the 8-year follow-up. Because some measures were administered only to older youth, this older subsample was used for some of the focal analyses. As highlighted in the table, there were some significant differences at baseline (i.e., at the time of random assignment) between the program group and the control group, specifically with respect to parental current employment status and parental education. Because of these differences, it is particularly important to include baseline measures as control variables in all analyses rather than relying on the random assignment mechanism to have eliminated pre-existing differences between the groups. Also, not surprisingly, the subsample of older youth had parents who were significantly older, lived in homes with significantly more children, and had significantly fewer siblings younger than two years of age at the time of random assignment. Mean differences in mediator and outcome variables are presented in Tables 3.3-3.5, but will be discussed in later sections.

*Descriptives by gender.* Table 3.4 presents treatment and control group descriptive statistics by gender. Among boys at baseline, treatment group members were less likely to be in families with three or more children and were more likely to have parents who were employed at the time of random assignment than control group boys. Treatment group girls were less likely to have a parent under the age of 25 than control group girls. Examination of differences between boys and girls within the full sample revealed a higher proportion of

Latina girls than Latino boys. Additionally, girls were more likely than boys to have a parent who was employed at baseline and less likely to be in a family that was receiving AFDC benefits at the same time point.

*Descriptives by ethnicity.* The next set of comparisons examined potential differences between control and experimental group participants of the same ethnicity (e.g., comparing African American control group members with African American experimental group members). As seen in Table 3.5, within the African American subsample, there were two differences between treatment group youth and control group youth was for mean child age. New Hope youth were more likely to have a parent older than 34 years than treatment youth. Additionally, program group youth were significantly older than control group youth by approximately 10 months. It is important to note that this age difference occurred at the time of the third follow-up and reflects differences in the timing of survey assessment and not differences that occurred at baseline, as determined by examining differences in child birthdates. Among Latino youth, program group participants were less likely to come from families with three or more children and more likely to have a parent with a high school diploma or GED than their control group counterparts. Among White youth, program group youth were less likely than control group youth to be in a family that reported no income and more likely to be in family that reported an income of greater than \$5000 in the year prior to random assignment. Additionally, White youth in the program group were less likely to be in a family that reported receipt of AFDC benefits during the year prior to random assignment than White youth in the control group. Again, these baseline differences highlight the importance of using control variables in statistical models to isolate the effects of the New Hope program.

In these next comparisons, baseline characteristics of Latino and White participants were compared to baseline characteristics of African American youth, the largest racial/ethnic group in the study. Latino parents participating in the study were more likely to be male and were significantly older than African American parent participants. Parents of Latino youth were also significantly less likely to have earned between \$1 and \$5000 in the year prior to random assignment than parents of African American youth. In addition, parents of Latino youth were more likely to have access to a car and were less likely to be living in the “Northside” neighborhood of Milwaukee than parents of African American youth. Importantly, the proportion of boys in the Latino subsample of youth was smaller than that in the African American subsample.

There were also a number of significant differences at baseline between White participants and African American participants. Specifically, the White participants appeared to fare worse on some indicators of socioeconomic status. They were significantly less likely than African Americans to be employed at time of random assignment, significantly more likely to report zero earnings, and significantly more likely to report use of AFDC benefits in the year prior to random assignment.

*Descriptives by patterns of study participation.* Next, I examined differences in youth baseline characteristics as a function of different patterns of participation in the study over the 8 year period. Youth who participated at all three time points were compared to 1) youth who participated only at baseline, 2) youth who participated at baseline and the five year follow-up, and 3) youth who participated at baseline and the eight year follow-up. Youth were considered to have participated if there were any data available for him or her at a given time point, regardless of whether that data was parent-, youth-, or teacher-reported. The

baseline characteristics of youth who participated at all three time points were compared to characteristics of youth with the other three patterns of participation, and between treatment and control group participants with each of the four patterns of participation. Few differences among participation groups emerged. However, as shown in Table 3.6, in comparison to youth with data at all three time points, youth with data only at baseline were less likely to be in a family with more than three children in the family, less likely to be in a family that reported zero earnings, and more likely to be in a family that reported earnings between \$1 and \$5000 in the year prior to random assignment. A significantly smaller proportion of baseline plus 5-year follow-up families were African American, as compared to families who participated in all three assessments. A significantly larger proportion of baseline plus 5-year follow-up families were White, as compared to families who participated in all three assessments. Furthermore, families that participated at the baseline assessment and the 5-year follow-up were less likely to be headed by a parent under the age of 25 at baseline, more likely to be headed by a parent between the ages of 25-34, and were less likely to be residing in the “Northside” neighborhood of Milwaukee. Youth who participated only at the baseline and 8 year follow-up had parents who were less likely to have been employed at the time of random assignment, less likely to have a high school diploma or GED, and less likely to have a car than parents who participated in all three data collection time points. Although the pattern of differences across missing data groups is not consistent, it does show that data may not be completely missing at random, and consequently that listwise deletion is not an appropriate missing data approach.

Additionally, I compared the proportion of participants in each missing data category by treatment status. Results shown in Table 3.6 show that control group participants were

more likely to respond only at baseline than program group participants; however, this difference was not significant. It is important to note that this was the least frequent pattern of participation overall. There were also no differences between treatment and control participants in either of the two other participation patterns. The baseline characteristics of control and experimental group participants that fell into each of these categories are presented in Table 3.7.

*Selection of siblings.* Although families were randomly assigned to treatment and control groups, the focal youth within families were not chosen completely at random. In families with multiple children, the first eligible child within a family (children had to be between the ages of 1 and 10) was randomly chosen, but the second was specifically selected to be opposite gender. Because of this non-random process and the potential influence that the presence of younger siblings could have on focal employment-related outcomes, a number of descriptive comparisons were made. First, the presence of a younger sibling at baseline was compared across treatment and control groups and as shown in Table 3.3, no significant differences were found. However, among older youth, control group youth were slightly more likely to have a younger sibling. No differences were found across treatment and control groups within each gender and ethnic groups. Lastly, the presence of younger siblings or other children residing in the household at the 8-year follow-up (when the employment data was collected) was compared across treatment and control groups in the full sample and in each gender and ethnic subgroup. Again, no significant differences were found. When comparing across gender and ethnic groups, the only significant difference that emerged was that White youth were slightly less likely to have a younger sibling than African American youth. Results are presented in Tables 3.3-3.5.



*Reliability of scales.* Next, the reliability of measures was tested by examining Cronbach's alpha values for all scales in the study. Alpha estimates are presented in Table 3.8. Estimates for all scales were acceptable ( $\alpha > .50$ ), although alphas for the educational expectations and cynicism about work measures were relatively low. No other configuration of the cynicism about work items produced higher reliability estimates. Because the educational expectations measure was composed of only two items, no other configurations were possible. Additionally, measurement equivalence was assessed by examining the reliability of the scales within each focal subgroup: boys, girls, African American youth, Latino youth, and White youth. Although alpha values varied slightly across groups, they were quite similar; thus, the same scales were used for all participants in the statistical analyses.

*Construction of factors.* Multiple measures were available for four of the hypothesized mediators (parental employment and income, out-of-home activities, academic skills, social behavior). Therefore, for each mediator, a confirmatory factor analysis was conducted to determine whether the multiple measures could be modeled as a latent construct in subsequent analyses. Adequate factor structures were not found for any of the hypothesized mediators, as indicated by factor loadings and model fit statistics. Therefore, each measure was considered separately in later analyses. Because of collinearity among mediators and power issues, all mediators were tested in separate models. If multiple significant mediators of an outcome were found, they were then tested in a multiple mediation framework to rule out spurious relationships between variables.

#### *Focal Analyses.*

##### *Mediated effects of New Hope's Impacts on Full Sample*

To test the first set of hypotheses, mediators of New Hope's impact on employment duration, cynicism about work, and career preparation were examined. Baseline covariates were included in all analyses. Two-tailed tests with an alpha of .10 were used to assess the statistical significance of relationships between independent and dependent variables. This alpha level is equivalent to a one-tailed test at  $p \leq .05$ , which is appropriate for detecting the hypothesized program effects, but leaves open the possibility of detecting unpredicted effects as well. Although the mediation effect was directly tested, results are presented in line with the *causal steps approach* (Baron & Kenny, 1986) for ease of interpretation. *Causal steps* requires examining four different paths ( $a$ ,  $b$ ,  $c$ ,  $a \times b$ ) and each section is organized by path to prevent repetition of findings. First, effects of New Hope on the outcome variables observed in prior work (i.e., McLoyd et al., in press) were reassessed. As shown in Table 3.9, this established that New Hope youth did in fact work more months during the school year ( $B=.26(.11)$ ;  $p \leq .05$ ), reported lower levels of cynicism about work ( $B=-.08(.04)$ ;  $p \leq .10$ ), and engaged in higher levels of career preparation activities ( $B=.10(.06)$ ;  $p \leq .10$ ). Additionally, New Hope significantly impacted youths' earnings ( $B=.26(.26)$ ;  $p \leq .10$ ) and pessimism about future employment ( $B=-.16(.07)$ ;  $p \leq .05$ ). Although these findings were not reported in the other examinations of findings at the 8-year follow-up, they were close to significance. The fluctuation is likely due to differences in the imputation model, including the larger number of imputed datasets utilized. These findings represent the  $c$  paths depicted in Figures 1.1 and 1.2.

*Effects of New Hope on hypothesized mediators.* Next, the  $a$  paths, which represent the paths from New Hope status to the mediators were examined. All mediators were assessed at the 5-year follow-up, three years prior to the assessment of focal outcomes.

Although these paths were chosen based on prior empirical reports of New Hope's program effects (Huston et al., 2005), they were re-tested in this study because of differences in the handling of missing data. Specifically, in this study, missing data were imputed, whereas in previous analyses they were not. Although some impacts were previously found only for certain subgroups (Huston et al., 2005), in the present study they were tested both within the full sample and within subgroups. Coefficients for paths between New Hope and mediating variables are presented in Table 3.10. The models show that, within the full sample, New Hope parents worked significantly more quarters per year ( $B=.21(09)$ ;  $p\leq.05$ ) and had higher earnings ( $B=1.19(.53)$ ;  $p\leq.05$ ) across the five year period than control group parents. Additionally, in comparison to controls, New Hope parents reported that their children were enrolled in center-based child care more months per year ( $B=.81(.29)$ ;  $p\leq.01$ ) and participated more frequently in before- and after-school programs ( $B=.20(12)$ ;  $p\leq.10$ ). Coefficients for program effects on youths' academic achievement revealed that New Hope youth scored higher on the reading component of the Woodcock-Johnson battery ( $B=2.12(1.15)$ ;  $p\leq.10$ ) and were rated by their parents as doing better in reading during the prior school year ( $B=.23(.08)$ ;  $p\leq.01$ ) than control group youth. New Hope parents also reported higher levels of positive behaviors among their children ( $B=.07(.04)$ ;  $p\leq.10$ ) than did control group parents. New Hope youth reported lower levels of hostile attributions ( $B=-.13(.07)$ ;  $p\leq.10$ ) and reported stronger educational expectations ( $B=.19(.09)$ ;  $p\leq.05$ ) than their control group counterparts. As shown in Table 3.10, no effects of New Hope teacher-reported academic achievement, positive behavior or classroom behavior were found in the full sample or across any subgroup. Therefore, these variables were not examined as potential mediators in later analyses. Although these findings were significant in prior

reports (Huston et al., 2005), they were found only for boys and were quite small. The use of multiple imputation, as opposed to listwise deletion, likely created this discrepancy.

*Relations between hypothesized mediators and outcome variables.* Next, paths between mediators and outcome variables were tested (*b* paths). Results are presented in Table 3.11 (labeled as  $M \rightarrow Y$ ). Paths between specific mediators and outcomes were tested regardless of the significance of New Hope's impact on the specific mediator in order to fully examine processes that led to effects on the outcomes. Both measures of academic skill, the Woodcock-Johnson reading scores ( $B=.01(.00)$ ;  $p \leq .10$ ) and parent-reported reading performance ( $B=.09(.05)$ ;  $p \leq .01$ ), significantly and positively predicted duration of employment during the school year. However, higher levels of participation in extra-curricular activities ( $B=-.05(.02)$ ;  $p \leq .05$ ) predicted shorter duration of employment. On the contrary, only youths' Woodcock-Johnson reading scores predicted earnings ( $B=.02(.01)$ ;  $p \leq .05$ ).

Several of the hypothesized mediators were related to youths' cynicism about work in the expected direction, including youths' academic achievement, participation in organized activities, and educational expectations. Specifically, higher scores on the reading section of the Woodcock-Johnson battery ( $B=-.01(.00)$ ;  $p \leq .01$ ) and higher parent-reported reading performance ( $B=-.04(.02)$ ;  $p \leq .05$ ) both predicted lower levels of cynicism about work. More frequent participation in before- and after-school programs ( $B=-.03(.01)$ ;  $p \leq .10$ ) and in extra-curricular activities ( $B=-.05(.02)$ ;  $p \leq .05$ ) were predictive of lower levels of cynicism about work. Youth who reported stronger educational expectations also reported lower levels of cynicism about work ( $B=-.05(.03)$ ;  $p \leq .10$ ).

A number of predictors of pessimism about future employment also emerged. Woodcock-Johnson reading scores ( $B = -.01(.00)$ ;  $p \leq .01$ ), parent-reported reading performance ( $B = -.13(.03)$ ;  $p \leq .01$ ), and parent-reported positive behavior ( $B = -.24(.08)$ ;  $p \leq .01$ ) were all negatively associated with pessimism about employment. More frequent time in before- and after-school programs ( $B = -.05(.02)$ ;  $p \leq .05$ ) predicted lower levels of pessimism about employment. Additionally, youths' educational expectations ( $B = -.11(.06)$ ;  $p \leq .05$ ) negatively predicted pessimism about employment.

Few predictors of career preparation emerged. As hypothesized, extra-curricular activity participation ( $B = .06(.03)$ ;  $p \leq .10$ ) and educational expectations ( $B = .06(.04)$ ;  $p \leq .10$ ) positively predicted involvement in career preparation activities. Contrary to hypotheses, parental employment ( $B = -.06(.03)$ ;  $p \leq .10$ ) and parental earnings ( $B = -.01(.01)$ ;  $p \leq .05$ ) both predicted lower involvement in career preparatory activities.

*Tests of Mediation.* Lastly, to test for mediating effects, the path  $a$  times  $b$  was created and its significance was tested. Results are presented in Table 3.11. This provides a direct test of mediating effects. Effect sizes ( $es$ ) for significant mediating effects were obtained by dividing the mediated effect ( $ab$ ) by the total effect ( $c$ ). This indicates the proportion of the total effect that is explained through the mediating pathway (MacKinnon, 2008). Only parental perceptions of reading performance ( $B = .02(.01)$ ;  $p \leq .10$ ,  $es = .08$ ) emerged as a significant mediator of the effect of the New Hope program on duration of employment. The effect size indicates that parental perceptions of reading performance only explained 8% of the total effect of New Hope on duration of employment. There were no significant mediators of the effect on earnings. Parent-reported reading performance ( $B = -.01(.01)$ ;  $p \leq .10$ ,  $es = .13$ ) was also the only significant mediator of the effect of New Hope on youths'

cynicism about work. Importantly, when the mediating effect was included in the models, the effects of New Hope were still significant, indicating partial, not full, mediation. Similarly, parental reports of reading performance partially mediated the effect of New Hope on youths' pessimism about future employment ( $B = -.03(.01)$ ;  $p \leq .05$ ,  $es = .19$ ). Surprisingly, parental income ( $B = -.02(.01)$ ;  $p \leq .10$ ;  $es = .15$ ) negatively mediated the relationship between New Hope and career preparation. More specifically, New Hope increased parental earnings which then predicted lower levels of career preparation. Because the overall effect of New Hope on career preparation was positive, other unmeasured mediators must be contributing to the effect.

*Summary of findings.* Parental perceptions of reading performance were found to significantly mediate the effect of New Hope on youths' duration of employment, cynicism about work, and pessimism about future employment. Effect sizes were relatively small, ranging from .08 to .19. No other hypothesized mediators were significant. However, parental income negatively mediated the effect of New Hope on career preparation. No mediators of the effect of New Hope on youths' earnings were found.

#### *Mediated Effects of New Hope's Impacts on Boys*

As shown in Table 3.9, compared to control group boys, boys in the program group worked more months during the year ( $B = .30(.15)$ ;  $p \leq .05$ ), engaged in more career preparation activities ( $B = .19(.09)$ ;  $p \leq .05$ ), and reported less cynicism about work ( $B = -.19(.06)$ ;  $p \leq .01$ ) and pessimism about their own future employment and financial security ( $B = -.26(.10)$ ;  $p \leq .01$ ). (As shown in Table 3.9, corresponding effects were not observed for girls.) Analyses were conducted to explore possible mediators of New Hope's effects on boys' employment and future orientation.

*Effects of New Hope on hypothesized mediators.* Paths between New Hope status and the mediators were explored for boys (the *a* paths). Results of these models are shown in Table 3.10. New Hope boys were enrolled in significantly more months of center-based child care ( $B=.77(.38)$ ;  $p\leq.05$ ) than control boys. New Hope boys also had significantly higher levels of reading achievement ( $B=.24(.11)$ ;  $p\leq.05$ ) than control boys, as indicated by parental perceptions. Furthermore, New Hope boys reported lower levels of hostile attributions ( $B=-.26(.10)$ ;  $p\leq.01$ ) and stronger educational expectations ( $B=.25(.12)$ ;  $p\leq.05$ ) than their control group counterparts.

*Relations between hypothesized mediators and outcome variables.* Among boys, a number of paths between mediators and outcomes were significant. Results are shown in Table 3.12. First, relations between mediators and employment duration were explored. Similar to results for the full sample, higher Woodcock-Johnson reading scores ( $B=.02(.01)$ ;  $p\leq.01$ ) and parent-reported reading performance ( $B=.12(.07)$ ;  $p\leq.10$ ) positively predicted duration of employment among boys.

Higher Woodcock-Johnson scores ( $B=-.01(.00)$ ;  $p\leq.01$ ) and parental perceptions of reading performance ( $B=-.05(.03)$ ;  $p\leq.05$ ) predicted lower levels of cynicism about work. Boys with stronger educational expectations ( $B=.08(.04)$ ;  $p\leq.10$ ) also reported lower levels of cynicism about work.

Several hypothesized mediators predicted lower levels of pessimism about future employment among boys. Specifically, higher levels of center-based childcare ( $B=-.03(.01)$ ;  $p\leq.10$ ) and participation in before- and after-school programs ( $B=-.09(.03)$ ;  $p\leq.01$ ) predicted less pessimism about future employment. Woodcock-Johnson reading scores ( $B=-.01(.00)$ ;  $p\leq.05$ ), parental perceptions of reading performance ( $B=-.15(.04)$ ;  $p\leq.01$ ) and parent-reported

positive behavior ( $B=-.23(.11)$ ;  $p\leq.05$ ) also predicted lower levels of pessimism about future employment. Lastly, boys with stronger educational expectations ( $B=-.20(.08)$ ;  $p\leq.01$ ) reported lower levels of pessimism about their future employment.

In contrast to results for pessimism about future employment, few predictors of career preparation emerged. Only educational expectations predicted higher levels of career preparation among boys ( $B=.08(.05)$ ;  $p\leq.10$ ).

*Tests of Mediation.* Next, direct tests of mediation of New Hope's effects on boys' employment duration and future orientation were conducted. As shown in Table 3.12, no significant mediators of the program effects on boys' duration of employment, cynicism about work, or career preparation were found. However, both parent-reported reading performance ( $B=-.04(.02)$ ;  $p\leq.10$ ,  $es=.14$ ) and youths' educational expectations ( $B=-.05(.03)$ ;  $p\leq.10$ ,  $es=.20$ ) were significant mediators of New Hope's effect on boys' pessimism about employment. When both were entered into a multiple mediator model, depicted in Figure 3.1, each mediator remained statistically significant ( $p\leq.10$ ). Additionally, the effect of New Hope remained significant, indicating that together the two mediators still only partially accounted for the New Hope effect on boys' pessimism about future employment. Effect size estimates indicated that parental perceptions of reading performance and educational expectations explain approximately 32% of the total effect of New Hope on boys' pessimism about future employment.

*Understanding gender differences.* Next, the coefficients predicting parental perceptions of reading performance and educational expectations from New Hope status and the coefficients of these mediators on boys' pessimism about employment were compared across boys and girls to investigate which model paths might have given rise to gender



differences in outcomes; these coefficients are presented in Table 3.13. This provides a way to examine whether the differences in New Hope's impacts across gender are at all a function of the mediators found above and which of the mediating paths (*a*, *b*, or *ab*) are contributing to the differential impacts. Only gender differences in pessimism about future employment are explored because it is the only outcome variable for which mediated effects were detected. Additionally, differences in *ab* paths were only examined if both *a* and *b* paths were significant in boys and girls, as no new information would be gleaned from comparisons when paths are insignificant. Differences in parameter estimates across gender groups were calculated in proportional terms. Proportions were calculated by subtracting the smaller unstandardized path estimate from the larger unstandardized path estimate and then dividing by the larger unstandardized path estimate (Raver, et al., 2007). These proportions can be interpreted according to Cohen's effect size guidelines, which suggest that values over .20 should be considered non-trivial differences (Cohen, 1998; Raver et al., 2007). These proportions provide a way to compare differences in path sizes across groups, but are less meaningful, and thus not presented, when one (or both) of the coefficients being compared is not significantly different from zero. Note that due to the lack of latent variables, model fit indices were not available, and therefore, not compared across subgroups.

New Hope had a stronger impact on girls' parent-reported reading performance ( $B=.33(.11)$ ;  $p\leq.05$ ) than boys' ( $B=.24(.11)$ ;  $p\leq.05$ : proportion difference=.27), but the relation between reading performance and pessimism about future employment was stronger among boys ( $B=-.15(.04)$ ;  $p\leq.01$ ) than girls ( $B=-.11(.05)$ ;  $p\leq.05$ : proportion difference=.27). Furthermore, the mediated effect (*ab*) was not significant among girls ( $B=-.02(.02)$ ;  $p=ns$ ).

This pattern of relations suggests that factors other than reading performance are likely influencing girls' pessimism about their future employment.

On the contrary, New Hope's effect on educational expectations was much stronger for boys ( $B=.25(.12)$ ;  $p\leq.05$ ) than girls ( $B=.08(.11)$ ;  $p=ns$ ), and the relation between educational expectations and pessimism about the future was stronger for boys ( $B=-.20(.08)$ ;  $p\leq.01$ ) than girls ( $B=.01(.07)$ ;  $p=ns$ ). This supports the idea that New Hope had differential impacts on boys' and girls' educational expectations *and* that the link between educational expectations and pessimism about the future varies across gender.

*Summary of Findings.* Parent-reported reading performance and youths' educational expectations both significantly and uniquely mediated New Hope's effects on youths' pessimism about future employment. No other mediators were significant. Additionally, no mediators of New Hope's effects on duration of employment, cynicism about work, and career preparation were found. Examining differences in paths across gender indicates that both differential impacts in New Hope on the mediators and differences in the relations between mediators and pessimism about employment contributed to the gender difference in New Hope's effect on pessimism about employment.

#### *Mediated Effects of New Hope's Impacts on African American Youth*

As shown in Table 3.9, African American program group youth worked more months during the year ( $B=.26(.13)$ ;  $p\leq.05$ ), worked more hours per week ( $B=.34(.18)$ ;  $p\leq.10$ ), earned more money per week ( $B=.34(.20)$ ;  $p\leq.10$ ), reported lower levels of cynicism about work ( $B=-.16(.06)$ ;  $p\leq.10$ ) and pessimism about future employment ( $B=-.19(.10)$ ;  $p\leq.10$ ), and engaged in more career preparation activities ( $B=.22(.09)$ ;  $p\leq.05$ ).

*Effects of New Hope on hypothesized mediators.* To explore mediators of these effects, paths from New Hope status to the potential mediators (*a* paths) were examined. As shown in Table 3.10, African American program group youth spent more time in center-based child care ( $B=.68(.20)$ ;  $p\leq.10$ ), had higher Woodcock-Johnson reading scores ( $B=2.28(1.55)$ ;  $p\leq.10$ ), and higher parent-reported reading performance ( $B=.31(.11)$ ,  $p\leq.01$ ) than African American youth in the control group. Additionally, African American program group youth had lower levels of hostile intent attributions ( $B=-.17(.10)$ ;  $p\leq.10$ ) and reported stronger educational expectations ( $B=.24(.11)$ ;  $p\leq.05$ ) than their control group counterparts.

*Relations between hypothesized mediators and outcome variables.* Paths from mediators to outcomes were then examined. As shown in Table 3.14, participation in extra-curricular activities ( $B=.13(.07)$ ;  $p\leq.10$ ), Woodcock-Johnson reading scores ( $B=.02(.01)$ ;  $p\leq.01$ ), parent-reported reading performance ( $B=.14(.06)$ ;  $p\leq.05$ ), parent-reported positive behavior ( $B=.31(.16)$ ;  $p\leq.05$ ), and hostile intent attributions ( $B=-.12(.08)$ ;  $p\leq.10$ ) predicted duration of employment. Interestingly, higher levels of parental employment ( $B=.17(.09)$ ;  $p\leq.10$ ) and earnings ( $B=.04(.02)$ ;  $p\leq.05$ ) were predictive of higher work intensity among African American youth, but not of other dimensions of employment. Parental perceptions of reading performance ( $B=.15(.08)$ ;  $p\leq.10$ ), parent-reported positive behavior ( $B=.35(.21)$ ;  $p\leq.10$ ), and hostile intent attributions ( $B=-.24(.11)$ ;  $p\leq.05$ ) were also associated with intensity of employment. Woodcock-Johnson reading scores ( $B=.02(.01)$ ;  $p\leq.05$ ), parent-reported positive behavior ( $B=.43(.25)$ ;  $p\leq.10$ ), and hostile intent attributions ( $B=-.25(.11)$ ;  $p\leq.05$ ) were predictive of earnings.

Academic skills and social behavior were also negatively predictive of both cynicism about work and pessimism about future employment. Specifically, Woodcock-Johnson

reading scores ( $B=-.01(.00)$ ;  $p\leq.05$ ), parent-reported reading performance ( $B=-.05(.03)$ ;  $p\leq.05$ ), and parent-reported positive behavior ( $B=-.13(.07)$ ;  $p\leq.10$ ) all predicted lower levels of cynicism about work. Woodcock-Johnson reading scores ( $B=-.01(.00)$ ;  $p\leq.05$ ), parent-reported reading performance ( $B=-.12(.04)$ ;  $p\leq.01$ ), parent-reported positive behavior ( $B=-.24(.12)$ ;  $p\leq.05$ ), and youths' educational expectations ( $B=-.13(.07)$ ;  $p\leq.10$ ) all negatively predicted pessimism about employment. Additionally, greater participation in before- and after-school programs ( $B=-.07(.03)$ ;  $p\leq.05$ ) and extra-curricular activities ( $B=.10(.05)$ ;  $p\leq.05$ ) were predictive of lower pessimism about the future among African American youth.

*Tests of Mediation.* Lastly, direct tests of mediation ( $a$  times  $b$  paths) were tested. Results for African American youth are provided in Table 3.14. Parent-reported reading performance was found to significantly mediate the effect of New Hope on African American youths' employment duration ( $B=.04(.02)$ ;  $p\leq.10$ ,  $es=.13$ ) and pessimism about future employment ( $B=-.03(.02)$ ;  $p\leq.10$ ,  $es=.16$ ). Parental perceptions of reading performance only partially mediated the effect of New Hope on duration of employment, but it completely mediated the effect of New Hope on pessimism about future employment. There were no significant mediators of New Hope's impact on African American youths' employment intensity, employment earnings, cynicism about work, or involvement in career preparation. Because parent-reported reading performance was the only significant mediator found, no models with multiple mediators were tested.

#### *Mediated Effects of New Hope's Impacts on White Youth*

White program group youth reported lower levels of pessimism about future employment than White control group youth ( $B=-.32(.16)$ ;  $p\leq.10$ ). Notably, there were no effects of New Hope on Latino youths' employment and future orientation.

(a) *Effects of New Hope on hypothesized mediators.* Examination of paths from New Hope status to the potential mediators (*a* paths) among White youth revealed that program group youth spent more time in before- and after-school programs ( $B=.52(.30)$ ;  $p\leq .10$ ) than control group youth.

(b) *Relations between hypothesized mediators and outcome variables.* An examination of paths from mediators to pessimism about future employment (*b* paths) among White youth indicated that greater participation in before- and after-school programs ( $B=-.09(.05)$ ;  $p\leq .10$ ) predicted lower levels of pessimism about future employment.

(c) *Tests of Mediation.* As shown in Table 3.15, no mediators of the effect of New Hope on White youths' pessimism about future employment were found.

*Understanding ethnic differences.* Coefficients (*a*, *b*, *ab*) in significant mediator models were examined across ethnic groups to investigate what model paths gave rise to differences in outcomes. These coefficients are presented in Table 3.16. It is important to note that because there were no situations where both *a* and *b* paths were significant in each of the ethnic groups examined, the *ab* paths were not examined. The impact of New Hope on parental perceptions of reading performance was stronger for African Americans ( $B=.31(.11)$ ;  $p\leq .01$ ) than Latino ( $B=.14(.15)$ ;  $p=ns$ ) or White youth ( $B=.25(.21)$ ;  $p=ns$ ) and this likely contributed to the eventual differences across ethnicities in New Hope's effects on both employment duration and pessimism about future employment. However, there were also differences in the relation between parental reports of reading performance and these two outcomes across ethnicity. Specifically parent-reported reading performance was not predictive of employment duration for Latino ( $B=.03(.11)$ ;  $p=ns$ ) or White youth ( $B=-.05(.12)$ ;  $p=ns$ ). Parent-reported reading performance did predict lower levels of pessimism

about the future among Latino youth ( $B=-.19(.06)$ ;  $p\leq.05$ ). In fact, the relationship was larger among Latino youth than African American youth ( $B=-.12(.04)$ ;  $p\leq.05$ : proportion difference=.37). However, the relationship was not significant among White youth ( $B=-.08(.08)$ ;  $p=ns$ ). This suggests it is a function of both New Hope's effects on the mediators and the effects of the mediators on the outcomes that led to ethnic differences. It is important to note that some of these differences may also be related to issues of statistical power, as the samples of Latino and especially White youth were much smaller than the sample of African American youth.

*Summary of findings.* Parental perceptions of reading performance mediated the effect of New Hope on African American youths' duration of employment and pessimism about future employment. No other significant mediators were found. There were no significant mediators of New Hope's effects on African American youths' employment intensity, earnings, cynicism about work, or career preparation. Additionally, there were no significant mediating effects of New Hope's impact on pessimism about future employment among White youth. Examination of mediating pathways across ethnic groups revealed that the differences across ethnicity were due to a confluence of factors, including stronger effects of New Hope on African American youth, stronger relations between parent-reported reading performance and duration of employment for African American youth, and unequal sample sizes across ethnic groups.

### *Supplementary Analyses*

Three sets of supplementary analyses were conducted to address limitations of primary study analyses. The goal of these analyses was still to examine potential mediators of New Hope's effects on youths' employment and future orientation. These analyses were

designed to investigate potential issues related to the measurement specification of particular mediators (extra-curricular activities) and outcomes (career preparation), and to the developmental relevance of employment outcomes. Specific rationales for each set of analyses are provided below.

*Extra-curricular activities.* The first set of supplementary analyses decomposed the scale measure of extra-curricular activities into the five individual questions, which each asked about a different type of activity. Although single item measures are typically not favored, prior work has found that different types of activities have been found to predict different psychological and educational outcomes (Eccles, Barber, Stone, & Hunt, 2003). New Hope youth participated in significantly more religious activity groups than control group counterparts ( $B=.25(.10)$ ;  $p\leq .05$ ); New Hope did not significantly increase participation in any of the other four types of activities (dance/music/art lessons, sports lessons/teams, youth groups/clubs, and community center activities). Furthermore, religious activity participation did not significantly predict youths' employment duration, earnings, cynicism about work, pessimism about future employment, or involvement in career preparation activities. Therefore, religious activity participation did not mediate the effects of New Hope in the full sample.

New Hope also significantly increased religious activity participation among boys ( $B=.25(.14)$ ;  $p\leq .10$ ) and African American youth ( $B=.26(.14)$ ;  $p\leq .10$ ). However, within these two subgroups, religious activity participation did not predict to any of the employment or future orientation outcomes that New Hope affected. Specifically, among boys, religious activity participation was not associated with duration of employment, cynicism about work, pessimism about future employment, or career preparation. Within African American youth,

religious activity participation was not associated with employment duration, employment intensity, earnings from employment, cynicism about work, pessimism about future employment, or career preparation. Because none of these paths were significant, religious activity participation did not significantly mediate New Hope's effect on boys or African American youth.

*Adolescent employment.* The next set of supplementary analyses examined mediators of adolescent employment only among youth ages fourteen and older. Due to sample size limitations, mediational analyses of employment among adolescents less than 14 years old could not be conducted. Although there are some twelve and thirteen year olds engaged in employment activities, both in this study and in national data (Bureau of Labor Statistics, 2000), they work at lower rates and are more likely to work in informal settings, due to child labor laws. Thus, the predictors of employment among older adolescents may differ from the predictors of employment among younger adolescents. Similar to results for the full age range, results for youth ages 14 and older indicate that New Hope significantly impacted duration of employment ( $B=26(.15)$ ;  $p \leq .10$ ). However, there was no significant effect of New Hope on older youths' earnings ( $B=.29(.21)$ ;  $p=ns$ ), so mediation effects were not explored.

Examination of impacts of New Hope on the potential mediators of duration of indicated that New Hope significantly impacted parent-reported reading performance ( $B=.24(.11)$ ;  $p \leq .05$ ) and positive behavior ( $B=.12(.06)$ ;  $p \leq .05$ ) among youth ages 14 and older. Only parent-reported reading performance ( $B=.13(.06)$ ;  $p \leq .05$ ) predicted duration of employment, but it did not significantly mediate the effect of New Hope.



The effects of New Hope on employment among older youth were also examined within gender and ethnic subgroups. Similar to results for the full sample, New Hope only significantly impacted duration of employment among boys and African American youth. Among older boys, a number of potential mediators were impacted by New Hope, including time spent in center-based child care ( $B=1.17(.49)$ ;  $p\leq.05$ ), hostile intent attributions ( $B=-.26(.15)$ ;  $p\leq.10$ ), and participation in extra-curricular activities ( $B=.26(.13)$ ;  $p\leq.05$ ). However, none significantly predicted duration of employment.

Among African American youth, New Hope significantly impacted both parent-reported reading performance ( $B=.25(.14)$ ;  $p\leq.10$ ) and positive behavior ( $B=.14(.07)$ ;  $p\leq.05$ ) but only parent-reported reading performance ( $B=.16(.07)$ ;  $p\leq.05$ ) was predictive of employment duration. However, parent-reported reading performance did not significantly mediate the effect of New Hope on employment duration. New Hope also significantly impacted employment intensity ( $B=.47(.23)$ ;  $p\leq.05$ ) and earnings ( $B=.49(.26)$ ;  $p\leq.10$ ) among older African American youth. Parent-reported literacy achievement ( $B=.19(.10)$ ;  $p\leq.10$ ) significantly predicted employment intensity, but was not a significant mediator. Neither parent-reported reading performance nor positive behavior predicted earnings, and thus, no mediating relations were found. In conclusion, examination of older youth, who were more likely to be working than younger youth, showed no mediating relations not found in the full sample of youth.

*Career preparation.* The last set of supplementary analyses was conducted to further examine mediators of New Hope's effect on career preparation. The full measure of career preparation included a number of items that were school-based in nature (i.e., "How often have you taken a school field trip to learn about a business or industry?"), which were less

likely to be influenced by the mediators examined. To address this limitation, a new measure of career preparation was created ( $\alpha=.66$ ) using only three items that were thought to be more influenced by the individual and by out-of-school experiences. The items included were: “How often have you gotten instruction or counseling on how to find a job?”, “How often have you had discussions with adults outside of school about careers and work?,” and “How often have you talked about what you’ll do after high school with one of your teachers or another adult at school, either one-on-one or in a group?”.

New Hope’s effect on this alternate career preparation measure was assessed in the full sample and in each of the gender and ethnic subgroups. Similar to earlier results, New Hope did significantly impact youths’ involvement in career preparation, both in the full sample ( $B=.14(.07)$ ;  $p\leq .10$ ) and in the subgroups of boys ( $B=.23(.10)$ ;  $p\leq .05$ ) and African American youth ( $B=.26(.10)$ ;  $p\leq .01$ ). Next, relations between potential mediators and career preparation were explored in the full sample. Parental earnings ( $B=-.01(.01)$ ;  $p\leq .05$ ) was negatively associated with career preparation and was found to significantly mediate the relation between New Hope and youths’ career preparation ( $B=-.02(.01)$ ;  $p\leq .10$ ). Again, this path was opposite of the hypothesized direction, with New Hope-induced increases in parental earnings predicting lower levels of career preparation. Participation in extra-curricular activities ( $B=.09(.04)$ ;  $p\leq .01$ ) positively predicted career preparation, but did not significantly mediate the program effect.

Among boys, parent-reported positive behavior ( $B=.22(.11)$ ;  $p\leq .05$ ) and participation in extra-curricular activities ( $B=.12(.06)$ ;  $p\leq .05$ ) positively predicted career preparation. However, due to insignificant or small effects of New Hope on these potential mediators, neither were found to significant mediate the effect of New Hope on boys’ career

preparation. Among African American youth, participation in extra-curricular activities ( $B=.10(.05)$ ;  $p\leq.10$ ) was predictive of higher levels of career preparation, but did not significantly mediate the effect of New Hope on career preparation among African American youth. To summarize, using the alternate career preparation scale provided no new results as compared to the full career preparation scale used in primary analyses.

#### *Overall Summary of Findings*

Little evidence for mediation was found in both the full sample and in the gender and ethnic subgroups. However, reading performance was a consistent mediator across outcomes and subgroups. In the full sample, youths' reading performance at the five year follow-up significantly mediated New Hope's effects on youths' employment duration, cynicism about work, and pessimism about future employment at the eight year follow-up. Within boys, youths' reading performance mediated the effect of New Hope on boys' pessimism about future employment. Boys' educational expectations also significantly mediated this relationship. Among African American youth, reading performance mediated the effect of New Hope on youths' employment duration and pessimism about future employment. No mediators of New Hope's effect on White youths' pessimism about future employment were found.

Table 3.1

*Descriptive Characteristics of Parents & Youth in New Hope Child & Family Study Sample (n=1105)*

Variable		
<i>Baseline Characteristics</i>		
Parent gender		
Female		92%
Male		8%
Parent ethnicity		
African American		55%
Latino		30%
White		15%
Parent age		
<25		30%
25-34		53%
35 and up		18%
Child < 2 years old		49%
Three or more children		54%
Parent employment		
Ever worked full time		84%
Currently employed		39%
Earnings in past 12 months		
\$0		37%
\$1-\$4,999		39%
\$5,000 and higher		23%
Currently receive AFDC		83%
Neighborhood		
Northside		48%
Southside		52%
High school diploma/GED		60%
Access to car		44%
AFDC as child		49%
Child Age (8 yr. follow-up)		14.23(3.01)
Child Gender		
Boys		52%
Girls		48%

*Mediating Variables (5-year follow-up)*

Parental Employment (avg. qtrs. per yr.)	3.05(1.09)
Parent Earnings (avg. per yr.)	11,481(7,096)
Center-Based Child Care	2.50(3.89)
Before/After School Program	2.05(1.62)
Extra-Curricular Activities	2.37(.93)
Woodcock-Johnson Literacy Scores	97.09(16.28)
Reading Performance (parent report)	3.58(1.16)
Mock Report Card	2.88(.98)
Academic Achievement (teacher report)	3.22(1.00)
Classroom Behavior	3.67(1.02)
Positive Behavior (parent report)	3.85(.52)
Positive Behavior (teacher report)	3.58(.68)
Hostile Intent Attributions	1.55(1.02)
Youth Educational Expectations	4.27(.97)
<i>Outcome Variables (8-year follow-up)</i>	
Duration of Employment	.67(1.26)
Intensity of Employment	.82(1.84)
Youth Earnings	.96(1.87)
Cynicism about Employment	2.53(.58)
Pessimism about Future Employment	2.25(.94)
Career Preparation	2.35(.71)

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Table 3.2 Bivariate Correlations among Key Study Variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Experimental Status (1=NH)	--																				
2. Parental Employment	.11*	--																			
3. Parent Earnings	.11*	.76*	--																		
4. Child Care	.09*	.08*	.05	--																	
5. Before/After School Programs	.05	.02	.02	.57*	--																
6. XC Activities	.06	-.04	.01	.15*	.27*	--															
7. WJ Broad Reading	.05	.05	.08*	.11*	.09*	.01	--														
8. Literacy Rating	.09*	.02	.07*	.03	.03*	.07*	.41*	--													
9. Mock Report Card	.01	.06	.11*	.15*	.13*	.08	.51*	.43*	--												
10. Academic Achievement	.05	.09	.16*	.10*	.09	.03	.45*	.44*	.87*	--											
11. Classroom Behavior	.01	.03	.12*	-.08	-.06	-.02	.22*	.26*	.54*	.67*	--										
12. Positive Beh. (parent)	.08*	.05	.06	.02	-.02	.11*	.19*	.25*	.23*	.27*	.16*	--									
13. Positive Beh. (teacher)	-.01	.07	.13*	.00	.00	.04	.27*	.24*	.58*	.73*	.86*	.24*	--								
14. Hostile Intent Attributions	-.06	-.02	.01	-.02	-.01	-.01	-.10*	-.02	-.15*	-.17*	-.04	-.12*	-.10*	--							
15. Educational Expectations	.09*	.03	.07	.03	.05	.11*	.19*	.14*	.22*	.22*	.22*	.20*	.26*	.00	--						
16. Youth Emp. Duration	.09*	.04	.02	-.08*	-.05	.08*	.02	.04	.03	.08	.03	.02	.01	-.02	.01	--					
17. Youth Emp. Intensity	.07	.08*	.03	-.09*	-.09*	.05	-.02	.03	.02	.07	-.02	.01	-.05	-.03	-.03	.83*	--				
18. Youth Earnings	.07*	.04	.02	-.10*	-.10*	.07	-.02	.02	.01	.07	.02	.01	-.01	-.03	.03	.89*	.87	--			
19. Cyn. about Work	-.09*	-.04	-.05	-.01	-.03	-.12*	-.07	-.11*	-.06	-.08	-.03	-.06	-.01	.02	-.06	-.12*	-.12	-.14*	--		
20. Pess. about Employment	-.08*	-.06	-.05	-.01	-.05	-.05	-.10*	-.17*	-.13*	-.14*	-.03	-.12*	-.07	.00	-.11*	-.12*	-.09	-.11*	.26*	--	
21. Career Prep.	.09	-.07	-.10*	-.02	.02	.09	.00	.02	.05	.04	.05	.01	.08	-.04	.09	.06	-.00	.06	-.08*	-.11*	--

\*  $p < .05$

Table 3.3

*Descriptive Characteristics of Parents & Youth in New Hope Child & Family Study Sample, by Experimental Status*

Variable	9 and older (n = 1105)		12 and older (n = 746)	
	New Hope (n=544)	Control (n=560)	New Hope (n=376)	Control (n=370)
<i>Baseline Characteristics</i>				
Parent gender				
Female	91%	93%	92%	93%
Male	9%	7%	8%	7%
Parent ethnicity				
African American	58%	53%	60%*	52%
Latino	28%	31%	27%	31%
White	14%	16%	13%	17%
Parent age				
<25	28% <sup>+</sup>	31%	20%	21%
25-34	53% <sup>+</sup>	52%	59%	60%
35 and up	19% <sup>+</sup>	17%	21%	19%
Child < 2 years old	48% <sup>+</sup>	51%	31%	34%
Three or more children	52% <sup>+</sup>	56%	60%	65%
Parent employment				
Ever worked full time	85% <sup>+</sup>	84%	85%	86%
Currently employed	42%*	36%	42%	36%
Earnings in past 12 months				
\$0	37%	38%	38%	39%
\$1-\$4,999	40%	39%	40%	37%
\$5,000 and higher	23%	23%	23%	24%
Currently receive AFDC	83%	84%	82%	85%
Neighborhood				
Northside	52%*	44%	54%*	42%
Southside	48%	56%	46%	58%
High school diploma/GED	63%*	57%	64%*	55%
Access to car	46%	43%	47%	43%
AFDC as child	48%	50%	48%	48%
Child Age (8 yr. follow-up)	14.43(3.07) <sup>+*</sup>	14.01(2.93)	15.79(2.47)	15.47(2.28)
Child Gender				
Boys	54%	50%	52%	48%

Girls	46%	50%	48%	52%
Younger Siblings (baseline)	48%	52%	58%*	65%
Younger Siblings (8 yr. follow-up)	71%	69%	72%	74%
<i>Mediating Variables (5-year follow-up)</i>				
Parental Employment (avg. qtrs. per yr.)	3.17(1.04)*	2.93(1.12)	3.15(1.04)*	2.97(1.12)
Parent Income (avg. per yr.)	12,236(7215)*	10,748(6898)	12,011(7149)	11,202(7140)
Center-Based Child Care	2.85(4.06) <sup>+</sup> *	2.13(3.67)	2.47(3.90)*	1.74(3.42)
Before/After School Programs	2.13(1.64) <sup>+</sup>	1.97(1.60)	1.88(1.48)	1.83*(1.48)
Extra-Curricular Activities	2.43(.91) <sup>+</sup>	2.31(.95)	2.51(.92)	2.37(.94)
Woodcock-Johnson Literacy Scores	97.92(16.17) <sup>+</sup>	96.26(96.27)	95.99(16.41)	93.62(15.58)
Reading Performance (parent report)	3.69(1.13)*	3.47(1.18)	3.69(1.10)*	3.44(1.17)
Mock Report Card	2.89(.97)	2.87(1.00)	2.86(1.02)	2.79(1.04)
Academic Achievement (teacher report)	3.27(.98)	3.18(1.01)	3.28(.97)	3.11(1.02)
Classroom Behavior	3.68(1.03)	3.67(1.02)	3.74(1.06)	3.68(1.05)
Positive Behavior (parent report)	3.89(.54) <sup>+</sup> *	3.81(.50)	3.88(.54)*	3.76(.48)
Positive Behavior (teacher report)	3.57(.66)	3.59(.71)	3.57(.65)	3.53(.73)
Hostile Intent Attributions	1.50(.97) <sup>+</sup>	1.61(1.07)	1.54(.97)	1.68(1.04)
Youth Educational Expectations	n/a	n/a	4.34(.93)	4.18(1.02)
<i>Outcome Variables (8-year follow-up)</i>				
Duration of Employment	n/a	n/a	.98(1.49)*	.66(1.19)
Intensity of Employment	n/a	n/a	1.18(2.22)	.88(1.86)
Youth Earnings	n/a	n/a	1.41(2.21)*	1.04(1.93)
Cynicism about Employment	2.48(.60) <sup>+</sup> *	2.59(.56)	2.41(.59)*	2.56(.54)
Pessimism about Future Employment	2.17(.93) <sup>+</sup> *	2.34(.93)	2.08(.91)*	2.26(.86)
Career Preparation	n/a	n/a	2.42(.75)*	2.29(.66)

Note: \* indicates significant difference between treatment and control groups (p<.05).

<sup>+</sup> indicate significant difference between children under the age of 12 and children over the age of 12 (p<.05).



Table 3.4

*Descriptive Characteristics of Parents & Youth in New Hope Child & Family Study Sample, by Child Gender & Experimental Status (n = 1105)*

Variable	Boys (n = 566)		Girls (n = 524)	
	New Hope (n=289)	Control (n=277)	New Hope (n=248)	Control (n=276)
<i>Baseline Characteristics</i>				
Parent gender				
Female	91%	94%	91%	92%
Male	9%	6%	9%	8%
Parent ethnicity				
African American	61%	55%	54%	51%
Latino	23% <sup>+</sup>	29%	33%	31%
White	16%	16%	13%	18%
Parent age				
<25	33%	29%	23%*	33%
25-34	51%	55%	55%	50%
35 and up	16%	16%	22%	17%
Child < 2 years old	51%	49%	50%	46%
Three or more children	46%*	56%	57%	57%
Parent employment				
Ever worked full time	86%	82%	84%	85%
Currently employed	41% <sup>++</sup>	30%	44%	41%
Earnings in past 12 months				
\$0	36%	42%	38%	36%
\$1-\$4,999	40%	37%	41%	41%
\$5,000 and higher	24%	21%	22%	24%
Currently receive AFDC	84% <sup>+</sup>	88%	81%	82%
Neighborhood				
Northside	55%*	46%	48%	43%
Southside	45%	54%	52%	57%
High school diploma/GED	62%	56%	64%	58%
Access to car	45%	42%	48%	44%
AFDC as child	50%	55%	47%	46%
Child Age (8 yr. follow-up)	14.28(3.05)	13.98(2.91)	14.60(3.11)	14.21(1.21)
Younger Siblings (baseline)	47%	48%	49%	56%

Younger Siblings (8 yr. follow-up)	71%	70%	68%	69%
<i>Mediating Variables (5-year follow-up)</i>				
Parental Employment (avg. qtrs. per yr.)	3.13(1.08)	2.97(1.10)	3.23(.98)*	2.88(1.15)
Parent Income (avg. per yr.) 10,251(6,926)	11,930(7,288)	11,251(6,849)	12,652(7,093)*	
Center-Based Child Care	2.76(4.02)	2.14(3.68)	2.97(4.11) *	2.12(3.67)
Before/After School Programs	2.07(1.61)	1.99(1.59)	2.2(1.68)	1.95(1.61)
Extra-Curricular Activities	2.42(.89)	2.28(.97)	2.44(.94)	2.36(.92)
Woodcock-Johnson Literacy Scores	97.78(17.00)	94.77(16.42)	98.11(15.14)	97.72(16.26)
Reading Performance (parent report)	3.52(1.18) <sup>+</sup> *	3.29(1.18)	3.89(1.05)*	3.67(1.14)
Mock Report Card	2.83(.92)	2.77(.95)	2.95(1.03)	2.96(1.05)
Academic Achievement (teacher report)	3.21(1.00) <sup>+</sup>	2.97(1.04)	3.33(.97)	3.35(.96)
Classroom Behavior	3.64(1.02) <sup>+</sup> *	3.33(1.02)	3.72(1.05)*	3.97(.93)
Positive Behavior (parent report)	3.84(.55) <sup>+</sup>	3.75(.51)	3.96(.51)	3.86(.48)
Positive Behavior (teacher report)	3.59(.65) <sup>+</sup> *	3.40(.70)	3.56(.67) *	3.74(.67)
Hostile Intent Attributions	1.50(.99) <sup>+</sup> *	1.77(1.06)	1.50(.95)	1.46(1.04)
Youth Educational Expectations	4.36(.92) *	4.05(1.11)	4.34(.94)	4.31(.91)
<i>Outcome Variables (8-year follow-up)</i>				
Duration of Employment	.78(1.43) *	.52(1.03)	.78(1.33)	.61(1.18)
Intensity of Employment	.91(2.00)	.66(1.53)	.97(2.04)	.74(1.77)
Youth Earnings	1.12(1.95)	.81(1.68)	1.08(2.04)	.85(1.77)
Cynicism about Employment	2.50(.58) <sup>+</sup> *	2.68(.54)	2.48(.62)	2.49(.56)
Pessimism about Future Employment	2.15(.98) *	2.44(.94)	2.19(.91)	2.24(.92)
<u>Career Preparation</u>	<u>2.49(.72) *</u>	<u>2.28(.64)</u>	<u>2.34(.77)</u>	<u>2.30(.68)</u>

Note: \* indicates significant difference between treatment and control groups (p<.05).

<sup>+</sup> indicate significant difference between boys and girls (p<.05).

Table 3.5

*Descriptive Characteristics of Parents & Youth in New Hope Child & Family Study Sample, by Ethnicity & Experimental Status (n = 1105)*

Variable	<u>African American (n = 577)</u>		<u>Latino (n = 304)</u>		<u>White (n= 160)</u>	
	New Hope (n=300)	Control (n=277)	New Hope (n=143)	Control (n=161)	New Hope (n=72)	Control (n=88)
<i>Baseline Characteristics</i>						
Parent gender						
Female	91%	94%	88%	88%	93%	94%
Male	9%	6%	12% <sup>+</sup>	12%	7%	6%
Parent age						
<25	30%	38%	27% <sup>+</sup>	24%	24%	24%
25-34	48%	48%	57%	53%	63% <sup>+</sup>	63%
35 and up	21% <sup>*</sup>	14%	16%	22%	14% <sup>+</sup>	14%
Child < 2 years old	45%	52%	52%	49%	51%	53%
Three or more children	56%	55%	43% <sup>*</sup>	58%	47%	57%
Parent employment						
Ever worked full time	86%	82%	81%	87%	88%	85%
Currently employed	44%	39%	44%	38%	33% <sup>+</sup>	21%
Earnings in past 12 months						
\$0	35%	33%	40%	39%	36% <sup>+</sup> *	55%
\$1-\$4,999	44%	45%	36% <sup>+</sup>	32%	35% <sup>+</sup>	31%
\$5,000 and higher	21%	22%	24%	30%	29% <sup>*</sup>	15%
Currently receive AFDC	83%	84%	82%	81%	81% <sup>+</sup> *	93%
Neighborhood						
Northside	83%	79%	4% <sup>+</sup>	6%	18% <sup>+</sup> *	5%
Southside	17%	22%	96%	94%	82%	95%

High school diploma/GED	60%	60%	71%*	52%	65%	55%
Access to car	41%	39%	55% <sup>+</sup>	48%	49%	45%
AFDC as child	56%	56%	41% <sup>+</sup>	44%	30% <sup>+</sup>	42%
Child Age (8 yr. follow-up)	14.68(3.10) *	14.09(2.88)	14.30(3.07)	14.11(2.90)	14.16(3.08)	14.36(3.14)
Child Gender						
Boys	57%	52%	45% <sup>+</sup>	49%	58%	48%
Girls	43%	48%	55%	51%	42%	52%
Younger Siblings (Baseline)	49%	50%	41%	56%	46%	51%
Younger Siblings (8 yr. follow-up)	70%	70%	74%	73%	65% <sup>+</sup>	60%
<i>Mediating Variables (5-year follow-up)</i>						
Parental Employment (avg. qtrs./yr.)	3.12(1.11)	3.03(1.06)	3.31(.88) *	2.68(1.24)	3.07(1.04)	3.01(1.05)
Parent Income (avg. per yr.)	11,528(7,254)	10,804(6,628)	14,244(7,208) <sup>+</sup> *	10,684(7,445)	11,141(6,347)	10,686(6,833)
Center-Based Child Care	2.68(3.96)	2.27(3.79)	3.34(4.27) *	2.10(3.64)	2.55(4.00)	1.72(3.31)
Before/After School Programs	2.18(1.63)	2.17(1.67)	2.01(1.62)	1.87(1.61)	2.16(1.74) <sup>+</sup> *	1.49(1.25)
Extra-Curricular Activities	2.51(.87)	2.48(.98)	2.28(.96) <sup>+</sup>	2.17(.85)	2.39(.96) <sup>+</sup> *	2.07(.88)
Woodcock-Johnson Literacy Scores	97.04(17.03)	95.38(15.42)	100.54(15.45) <sup>+</sup>	98.57(17.56)	96.51(12.89)	95.25(17.06)
Reading Performance (parent report)	3.64(1.18)	3.38(1.20)	3.82(1.06) <sup>+</sup>	3.67(1.08)	3.65(1.07)	3.44(1.24)
Mock Report Card	2.76(.97)	2.77(1.06)	3.19(.95) <sup>+</sup>	3.07(.93)	2.69(.89)	2.79(.92)
Academic Achievement (teacher report)	3.23(1.02)	3.07(1.06)	3.50(.88) <sup>+</sup>	3.32(.98)	2.89(.95)	3.25(.92)
Classroom Behavior	3.67(1.03)	3.61(1.03)	3.80(1.03)	3.80(1.02)	3.46(1.04)	3.62(.1.00)
Positive Behavior (parent report)	3.87(.51)	3.77(.48)	3.96(.58) <sup>+</sup>	3.90(.54)	3.89(.55)	3.75(.49)

Positive Behavior (teacher report)	3.56(.68)	3.60(.75)	3.67(.66)	3.62(.68)	3.43(.59)	3.52(.61)
Hostile Intent Attributions	1.49(.99)	1.63(1.02)	1.50(.93)	1.51(1.13)	1.51(.99)	1.75(1.06)
Youth Educational Expectations	4.44(.87)	4.25(.96)	4.26(1.01)	4.19(1.03)	4.12(1.00) <sup>+</sup>	3.93(1.14)
<i>Outcome Variables (8-year follow-up)</i>						
Duration of Employment	.78(1.38) *	.50(.97)	.78(1.45)	.59(1.24)	1.04(1.43) <sup>+</sup>	.88(1.36)
Intensity of Employment	.91(.51) *	.51(1.13)	.90(1.90)	.75(1.78)	1.44(2.48) <sup>+</sup>	1.41(2.56)
Youth Earnings	1.16(2.09) *	.72(1.50)	1.04(1.97)	.84(1.87)	1.22(1.85)	1.35(2.16)
Cynicism about Employment	2.47(.63) *	2.61(.57)	2.53(.56)	2.60(.54)	2.41(.50)	2.48(.54)
Pessimism about Future Employment	2.16(1.00)	2.32(.98)	2.22(.87)	2.29(.86)	2.04(.86) *	2.45(.86)
Career Preparation	2.57(.76) *	2.37(.69)	2.16(.70) <sup>+</sup>	2.23(.61)	2.14(.56) <sup>+</sup>	2.07(.63)

Note: \* indicates significant difference between treatment and control groups (p<.05).

<sup>+</sup> indicate significant difference between African American youth and other ethnic group (p<.05).

Table 3.6

*Descriptive Characteristics of Parents & Youth in New Hope Child & Family Study Sample, by Participation Status (n = 1105)*

Variable	Baseline, 5 yr., & 8 yr. (n = 736)	Baseline only (n = 101)	Baseline & 5 yr. (n= 134)	Baseline & 8 yr. (n=134)
<i>Baseline Characteristics</i>				
Parent gender				
Female	93%	88%	92%	95%
Male	7%	22% *	8%	5%
Parent ethnicity				
African American	58%	52%	41% *	60%
Latino	28%	37%	35%	24%
White	14%	11%	24% *	16%
Parent age				
<25	32%	29%	24% *	29%
25-34	50%	55%	81% *	60%
35 and up	18%	17%	28%	11%
Child < 2 years old	49%	55%	52%	55%
Three or more children	55%	39% *	52%	63%
Parent employment				
Ever worked full time	84%	84%	90%	78%
Currently employed	41%	32%	38%	26% *
Earnings in past 12 months				
\$0	38%	26% *	40%	40%
\$1-\$4,999	39%	51% *	33%	40%
\$5,000 and higher	23%	23%	36%	20%
Currently receive AFDC	83%	80%	46%	91%

Neighborhood				
Northside	50%	45%	38%*	44%
Southside	50%	55%	62%	56%
High school diploma/GED	61%	70%*	61%	38%*
Access to car	45%	47%	43%	32%*
AFDC as child	51%	42%	46%	51%
Treatment Status				
Treatment	50%	43%	49%	51%
Control	50%	57%	51%	49%
Child Gender				
Boys	50%	57%	59%	50%
Girls	50%	43%	41%	50%

Note: \* indicate significant difference between reported group and participants from all three waves ( $p < .05$ ).

Table 3.7

*Descriptive Characteristics of Parents & Youth in New Hope Child & Family Study Sample, by Participation & Experimental Status (n = 1105)*

Variable	Baseline, 5 yr., & 8 yr. (n = 736)		Baseline only (n = 101)		Baseline & 5 yr. (n= 134)		Baseline & 8 yr. (n=134)	
	New Hope (n=370)	Control (n=366)	New Hope (n=43)	Control (n=58)	New Hope (n=65)	Control (n=68)	New Hope (n=66)	Control (n=68)
<i>Baseline Characteristics</i>								
Parent gender								
Female	92%	94%	72%	83%	94%	90%	95%	95%
Male	8%	6%	28% <sup>+</sup>	17%	6%	10%	5%	5%
Parent ethnicity								
African American	61%	55%	51%	52%	38%	43%	71%*	50%
Latino	27%	28%	33%	40%	36%	35%	20%	30%
White	12%	17%	16%	8%	24%	22%	9%	20%
Parent age								
<25	30%	34%	31%	27%	14%	22%	33%	25%
25-34	50%	50%	49%	60%	70%*	51%	52%	68%
35 and up	20%	16%	21%	13%	16%	26%	14%	8%
Child < 2 years old	48%	50%	51%	58%	42%	49%	52%	58%
Three or more children	54%	56%	26%*	48%	45%	59%	64%	63%
Parent employment								
Ever worked full time	84%	84%	90%	79%	95%	87%	71%	85%
Currently employed	46%*	36%	35%	30%	38%	40%	24%	28%
Earnings in past 12 months								
\$0	35%	41%	31%	23%	38%	43%	50%	30%
\$1-\$4,999	42%	36%	46%	54%	36%	29%	27%*	55%
\$5,000 and higher	23%	23%	23%	23%	27%	28%	23%	15%



Currently receive AFDC	81%	85%	79%	81%	86%	78%	91%	93%
Neighborhood								
Northside	55%*	46%	44%	46%	38%	40%	52%	35%
Southside	45%	54%	56%	44%	62%	60%	48%	65%
High school diploma/GED	64%	58%	74%	67%	70%*	53%	36%	40%
Access to car	47%	44%	49%	46%	41%	46%	38%	28%
AFDC as child	49%	52%	41%	43%	45%	48%	50%	51%
Child Gender								
Boys	51%	50%	61%	54%	71%*	49%	52%	49%
Girls	49%	50%	39%	46%	29%	51%	48%	51%

Note: \* indicates significant difference between treatment and control groups ( $p < .05$ ).

Table 3.8 *Reliability estimates (Cronbach's  $\alpha$ ) for study scales, by subgroup*

Scale	Full Sample	Youth over age 12	Boys	Girls	African American Youth	Latino Youth	White Youth
Extra-curricular activities (5 items)	.67	.67	.67	.68	.69	.64	.67
Academic Achievement (10 items)	.94	.94	.94	.94	.95	.94	.92
Classroom Behavior (12 items)	.97	.98	.97	.97	.98	.98	.97
Positive Behavior (parent report: 25 items)	.92	.92	.93	.92	.91	.93	.94
Positive Behavior (teacher report: 25 items)	.96	.96	.96	.96	.97	.96	.94
Educational Expectations (2 items)	--	.63	.59	.67	.63	.53	.70
Cynicism about Work (6 items)	.56	.56	.52	.60	.59	.55	.49
Pessimism about Future Employment (4 items)	.64	.68	.63	.65	.65	.64	.67
Career Preparation (6 items)	--	.78	.76	.80	.80	.74	.72

Table 3.9

*New Hope's Impacts on Adolescent Employment & Future Orientation, by Subgroup*

Outcome Variable	Full Sample	Boys	Girls	African American	Latino	White
	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)
<i>Adolescent Employment</i>						
Duration	.26(.11)**	.30(.15)**	.19(.14)	.26(.13)**	.27(.28)	.14(.32)
Intensity	.22(.15)	.26(.21)	.17(.19)	.34(.18)*	-.01(.33)	.28(.57)
Earnings	.26(.16)*	.18(.23)	.28(.20)	.34(.20)*	.25(.34)	-.02(.48)
<i>Future Orientation</i>						
Cynicism about Work	-.08(.04)*	-.19(.06)***	.00(.06)	-.16(.06)*	-.03(.08)	-.09(.09)
Pessimism about Employment	-.16(.07)**	-.26(.10)***	-.03(.09)	-.19(.10)*	.04(.12)	-.32(.16)*
Career Preparation	.10(.06)*	.19(.09)**	-.01(.08)	.22(.09)**	-.08(.11)	.15(.14)

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ 

Note: All coefficients are unstandardized.

Table 3.10

*New Hope's Impacts on Mediators, by Subgroup*

	Full Sample	Boys	Girls	African American	Latino	White
	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)
<i>Employment &amp; Earnings</i>						
Average Quarters Employed	.21(.09)**	.14(.11)	.30(.11)***	.09(.12)	.57(.17)***	.10(.21)
Average Earnings (in \$1000s)	1.19(.53)**	.64(.70)	1.81(.68)***	.70(.70)	3.14(1.13)***	-.06(.05)
<i>Out-of-home Activities</i>						
Center-Based Child Care	.81(.29)***	.77(.38)**	.96(.39)**	.68(.20)*	.99(.57)*	.65(.76)
Before/After School Programs	.20(.12)*	.11(.15)	.31(.16)*	.13(.16)	.09(.24)	.52(.30)*
Extra-curricular activities	.09(.07)	.14(.09)	.03(.09)	.03(.10)	.10(.13)	.25(.17)
<i>Academic Skills</i>						
WJ Broad Reading Scores	2.12(1.15)*	2.50(1.60)	1.82(1.56)	2.28(1.55)*	1.75(2.06)	.37(2.93)
Reading Performance	.23(.08)***	.24(.11)**	.33(.11)**	.31(.11)***	.14(.15)	.25(.21)
Mock Report Card	.05(.08)	.08(.11)	.01(.11)	.04(.11)	.05(.13)	.03(.19)
Academic Achievement	.10(.09)	.18(.12)	.00(.11)	.14(.12)	.09(.14)	-.06(.20)
<i>Social Behavior</i>						
Classroom Behavior	.04(.09)	.16(.12)	-.10(.12)	.07(.11)	.00(.15)	-.07(.20)
Positive Behavior (parent)	.07(.04)*	.07(.05)	.07(.06)	.08(.06)	.07(.08)	.15(.10)
Positive Behavior (teacher)	.01(.06)	.08(.08)	-.08(.08)	.01(.08)	.02(.10)	-.05(.13)
Hostile Intent Attributions	-.13(.07)*	-.26(.10)***	-.02(.10)	-.17(.10)*	.02(.13)	-.17(.19)
Educational Expectations	.19(.09)**	.25(.12)**	.08(.11)	.24(.11)**	.19(.17)	.23(.21)

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ 

Note: All coefficients are unstandardized.

Table 3.11

*Mediation Effects of New Hope Treatment on Employment and Future Orientation, Full Sample*

	Duration of Employment		Earnings		Cynicism about Work		Pessimism about Employment		Career Preparation	
	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)
	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)
<i>Employment &amp; Earnings</i>										
Average Quarters Employed	.03(.05)	.01(.01)	.08(.08)	.02(.02)	-.01(.02)	.00(.01)	-.04(.04)	-.01(.01)	-.06(.03)*	-.01(.01)
Average Yearly Earnings	.01(.01)	.01(.01)	.02(.01)	.02(.02)	.00(.00)	.00(.00)	.00(.01)	.00(.01)	-.01(.01)**	.02(.01)*
<i>Out-of-home Activities</i>										
Center-Based Child Care	.01(.02)	.00(.01)	-.01(.02)	-.01(.02)	.00(.01)	.00(.01)	-.01(.01)	-.01(.01)	-.00(.01)	.00(.01)
Before/After School Programs	.05(.04)	.01(.01)	.00(.05)	.00(.01)	-.03(.01)*	.00(.00)	-.05(.02)**	-.01(.01)	.02(.02)	.00(.00)
Extra-curricular activities	-.05(.02)**	.01(.01)	.13(.09)	.02(.01)	-.05(.02)**	-.01(.01)	-.03(.04)	.00(.01)	.06(.03)*	.01(.01)
<i>Academic Skills</i>										
WJ Broad Reading Scores	.01(.00)***	.03(.02)	.02(.01)**	.03(.02)	-.01(.00)***	-.01(.01)	-.01(.00)***	-.02(.01)	.00(.00)	.00(.01)
Reading Performance	.09(.05)**	.02(.01)*	.09(.07)	.02(.02)	-.04(.02)**	-.01(.01)*	-.13(.03)***	-.03(.01)**	.03(.03)	.01(.01)
<i>Social Behavior</i>										
Positive Behavior (parent)	.09(.12)	.01(.01)	.18(.19)	.01(.02)	-.08(.05)	-.01(.01)	-.24(.08)***	-.02(.01)	.04(.07)	.00(.01)
Hostile Intent Attributions	-.04(.06)	.01(.01)	-.11(.09)	.01(.01)	.01(.02)	.00(.00)	.01(.03)	.00(.01)	-.03(.03)	.00(.01)
Educational Expectations	--	--	--	--	-.05(.03)*	-.01(.01)	-.11(.06)**	-.02(.01)	.06(.04)*	.01(.01)

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ 

Note: All coefficients are unstandardized.

Table 3.12

*Mediation Effects of New Hope Treatment on Duration of Employment and Future Orientation, Boys Only*

	Duration of Employment		Cynicism about Work		Pessimism about Employment		Career Preparation	
	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)	M→Y (b)	Mediated Effect (ab)
	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)
<i>Employment &amp; Earnings</i>								
Average Quarters Employed	-.02(.08)	.00(.02)	-.03(.04)	-.01(.01)	-.08(.06)	-.02(.02)	-.06(.05)	-.01(.01)
Average Yearly Earnings	.01(.01)	.01(.02)	.00(.01)	-.01(.01)	.00(.01)	.00(.01)	-.01(.10)	-.01(.01)
<i>Out-of-home Activities</i>								
Center-Based Child Care	.01(.02)	.00(.02)	.00(.01)	.00(.01)	-.03(.01)*	-.02(.02)	.00(.01)	.00(.01)
Before/After School Programs	.07(.06)	.01(.01)	-.03(.02)	.00(.01)	-.09(.03)***	-.01(.02)	.02(.03)	.00(.01)
Extra-curricular activities	.12(.09)	.02(.02)	-.04(.03)	-.01(.01)	-.03(.06)	.00(.01)	.07(.05)	.01(.01)
<i>Academic Skills</i>								
WJ Broad Reading Scores	.02(.01)***	.04(.03)	-.01(.00)***	-.02(.01)	-.01(.00)**	-.02(.02)	.00(.00)	.00(.01)
Reading Performance	.12(.07)*	.03(.02)	-.05(.03)**	-.01(.01)	-.15(.04)***	-.04(.02)*	.00(.04)	.00(.01)
<i>Social Behavior</i>								
Positive Behavior (parent report)	.20(.17)	.02(.02)	-.08(.06)	-.01(.01)	-.23(.11)**	-.02(.02)	.14(.09)	.01(.01)
Hostile Intent Attributions	-.01(.08)	.00(.02)	.01(.03)	.00(.01)	-.01(.05)	.00(.01)	-.03(.04)	.01(.01)
Educational Expectations	--	--	-.08(.04)*	-.02(.01)	-.20(.08)***	-.05(.03)*	.08(.05)*	.02(.02)

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ 

Note: All coefficients are unstandardized.

Table 3.13

*Gender Differences in Mediation Pathways*

	<i>a</i> path (X→M)		<i>Proportion Difference</i>	<i>b</i> path (M→Y)		<i>Proportion Difference</i>	<i>ab</i> path (mediated effect)		<i>Proportion Difference</i>
	<u>Boys</u>	<u>Girls</u>		<u>Boys</u>	<u>Girls</u>		<u>Boys</u>	<u>Girls</u>	
<i>Pessimism about Future Employment</i>									
Reading Performance	.24(.11)**	.33(.11)**	.27	-.15(.04)***	-.11(.05)**	.27	-.04(.02)*	-.02(.02)	--
Educational Expectations	.25(.12)**	.08(.11)	--	-.20(.08)***	.01(.07)	--	--	--	--

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ 

Note: All coefficients are unstandardized.

Table 3.14

*Mediation Effects of New Hope Treatment on Employment and Future Orientation, African American Youth Only*

	Duration of Employment		Intensity of Employment		Earnings		Cynicism about Work		Pessimism about Future Employment		Career Preparation	
	M→Y (b)	Mediated Path (ab)	M→Y (b)	Mediated Path (ab)	M→Y (b)	Mediated Path (ab)	M→Y (b)	Mediated Path (ab)	M→Y (b)	Mediated Path (ab)	M→Y (b)	Mediated Path (ab)
	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)	B(S.E.)
<i>Employment &amp; Earnings</i>												
Avg. Quarters Employed	-.01(.07)	.00(.01)	.17(.09)*	.02(.02)	.04(.11)	.01(.02)	-.03(.04)	.00(.01)	-.07(.06)	-.01(.01)	-.04(.05)	-.01(.01)
Avg. Yearly Earnings	.01(.01)	.01(.02)	.04(.02)**	.03(.03)	.03(.02)	.03(.03)	.00(.01)	.00(.01)	-.01(.01)	-.01(.01)	.00(.01)	.00(.01)
<i>Out-of-home Activities</i>												
Center-Based Child Care	-.01(.02)	-.01(.01)	-.01(.03)	.00(.01)	-.03(.03)	-.02(.02)	-.01(.01)	.00(.00)	-.02(.01)	-.01(.01)	.00(.01)	.00(.01)
Before/After Sch. Program	.01(.04)	.00(.01)	.03(.06)	.00(.01)	-.02(.07)	.00(.01)	-.03(.02)*	.00(.01)	-.07(.03)**	.00(.01)	.03(.03)	.00(.01)
Extra-curricular activities	.13(.07)*	.01(.01)	.09(.10)	.00(.01)	.18(.12)	.01(.02)	-.05(.03)	.00(.01)	-.10(.05)**	.00(.01)	.07(.05)	.00(.01)
<i>Academic Skills</i>												
WJ Broad Reading Scores	.02(.01)***	.03(.03)	.01(.01)	.02(.03)	.02(.01)**	.03(.03)	-.01(.00)**	-.01(.01)	-.01(.00)**	-.01(.01)	.00(.00)	.01(.01)
Reading Performance	.14(.06)**	.04(.02)*	.15(.08)*	.04(.03)	.14(.09)	.03(.03)	-.05(.03)**	-.01(.01)	-.12(.04)***	-.03(.02)*	.05(.04)	.01(.01)
<i>Social Behavior</i>												
Positive Behavior (parent)	.31(.16)**	.02(.02)	.35(.21)*	.02(.03)	.43(.25)*	.03(.03)	-.13(.07)*	-.01(.01)	-.24(.12)**	-.02(.02)	-.01(.10)	.00(.01)
Hostile Intent Attributions	-.12(.08)*	.02(.02)	-.24(.11)**	.03(.03)	-.25(.11)**	.04(.03)	.01(.03)	.00(.01)	.02(.05)	.00(.01)	-.01(.04)	.00(.01)
Educational Expectations	--	--	--	--	--	--	-.03(.04)	-.01(.01)	-.13(.07)*	-.03(.02)	.07(.05)	.01(.01)

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ 

Note: All coefficients are unstandardized.



Table 3.15 *Mediation Effects of New Hope Treatment on Pessimism about Future Employment, White Youth Only*

	Pessimism about Future Employment	
	M→Y	Mediated Path (ab)
	B(S.E.)	B(S.E.)
<i>Employment &amp; Earnings</i>		
Average Quarters Employed	-.02(.10)	.00(.01)
Average Yearly Earnings	.00(.01)	.00(.01)
<i>Out-of-home Activities</i>		
Center-Based Child Care	-.01(.02)	-.01(.02)
Before/After School Program	-.09(.05)*	-.05(.04)
Extra-curricular activities	.02(.10)	.00(.03)
<i>Academic Skills</i>		
WJ Broad Reading Scores	-.01(.01)	-.01(.02)
Reading Performance	-.08(.08)	-.02(.03)
<i>Social Behavior</i>		
Positive Behavior (parent)	-.25(.17)	-.03(.03)
Hostile Intent Attributions	.05(.08)	-.01(.02)
Educational Expectations	.02(.12)	.00(.03)

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$

Table 3.16

Ethnic Differences in Mediational Pathways

	A path (X→M)					B path (M→Y)				
	African American	Latino	Proportion Difference (Latino)	White	Proportion Difference (White)	African American	Latino	Proportion Difference (Latino)	White	Proportion Difference (White)
Duration of Employment										
Reading Performance	.31(.11)***	.14(.15)	--	.25(.21)	--	.14(.06)**	.03(.11)	--	-.05(.12)	--
Pessimism about Future Employment										
Reading Performance	.31(.11)***	.14(.15)	--	.25(.21)	--	-.12(.04)***	-.19(.06)***	.37	-.08(.08)	--

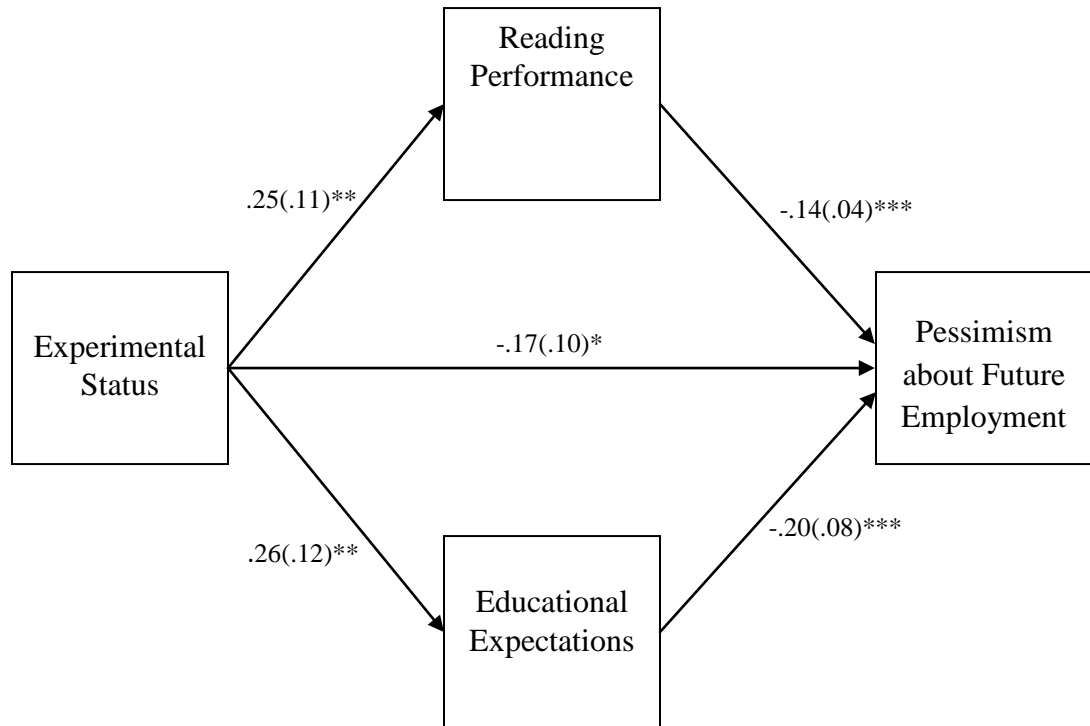
Note: Proportion differences are compared to African American youth.

Note: \* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$

Note: All coefficients are unstandardized.

Figure 3.1

*Mediated Effects of New Hope on Boys' Pessimism about Future Employment*



Note: Coefficients were taken from multiple mediation model. Each *ab* path was significant. The path from experimental status to pessimism about future employment represents the effect of New Hope not explained through the mediators.

## Discussion

The goal of this study was to test factors that mediated the positive impacts of New Hope Project, a parent-directed antipoverty experiment, on the employment and future orientation of youth. Specifically, I sought to understand how program impacts on families and children measured at the 5-year post random assignment time point may have explained impacts on youths' involvement in employment and future orientation measured 8 years post random assignment. A secondary goal was to examine the extent to which differences in the hypothesized mediating mechanisms contributed to the differential program impacts across gender and ethnic groups. Understanding these mediating processes not only provides critical information about *how* the program impacted the lives of participants, but also generates empirical information about how future programs and policies might be designed to produce maximally beneficial effects on families and children.

A number of potential mediating effects were examined. Although hypothesized mediators impacted by New Hope three years earlier included both contextual, such as parental employment and participation in out-of-home activities, and individual level factors, such as youths' academic skills and social behaviors, few factors emerged as significant mediators of program effects on youths' employment and future orientation. Parent reports of youths' reading performance were identified as a mediator of program effects across outcomes and subgroups. Despite the large number of statistical tests conducted, the consistency of this finding bolsters confidence in the validity of the results.

### *Mediators of New Hope's Effects on Employment Duration*

In the full sample of youth, only prior reading performance, as reported by parents, mediated the effect of New Hope on duration of employment. Reading and related skills, such as communication abilities, likely provide youth with advantages in the labor market, both when looking for work and while on the job. Although there has been little prior work on precursors of employment, two longitudinal studies have found comparable relations within other samples of economically disadvantaged youth. Entwisle and colleagues (2000) found that youth with higher standardized test scores in childhood were more likely to be consistently employed during adolescence. Similarly, Leventhal, Graber, and Brooks-Gunn (2003) found that youth who had been retained in school during childhood were less likely to be employed than their non-retained, same-age peers.

Although these studies corroborate the importance of reading and other academic skills to adolescent employment, the most insightful information on *why* these skills may matter comes from Wilson's (1996) seminal work on employment in urban areas of Chicago. Through extensive surveys and interviews with employers, Wilson documented the importance of basic skills to urban labor market success. Numerous employers discussed the importance of literacy and communication skills as precursors to being hired. For example, one local business owner described the experiences he had when interviewing local economically disadvantaged, Black applicants:

They have no verbal facility with the language...and these...you know, they just don't know how to speak and they'll say 'salesmens' instead of 'salesmen' and that's a problem. They don't know punctuation, they don't

know how to use correct grammar, and they cannot spell. And I can't hire them. (p. 119)

This vivid account underscores the importance of well-developed basic literacy skills for labor market success within urban contexts. Job prospects are particularly scarce for youth in urban labor markets; it is often the case that urban youth must compete for jobs with adults who have more work experience than youth, but who are not qualified for higher-skilled employment (Newman, 1999). This set of circumstances perhaps magnified the importance of the improved literacy skills experienced by New Hope youth for participation in the job market. Moreover, these literacy skills likely helped youth to be successful once they had procured a job, thereby reducing the likelihood that they would be fired.

It is important to note that, although math achievement was not examined in this study (because New Hope did not significantly impact these skills), mathematics ability is likely also important to youths' success in the labor market. Employers in Wilson's (1996) study discussed the need for employees to be able to perform basic math tasks, such as counting, reading rulers, and multiplying. Furthermore, employers noted that many of the youth coming out of the local schools did not possess these skills.

It is somewhat striking that New Hope increased both parental reports of reading performance and reading test scores while having no discernible effect on mathematics skills; however, this pattern of findings is consistent with prior work suggesting that reading achievement is influenced by multiple contexts, whereas influences on math achievement are more concentrated within the school setting. For example, research on school influences on student learning consistently finds stronger effects in math than in reading (Clotfelter, Ladd, & Vigdor, 2007; Henry, Thompson, Fortner, & Zulli, 2009). Because New Hope was a

family-level intervention program, it is not surprising that reading skills were more sensitive to treatment than math skills.

#### *Mediators of New Hope's Effects on Future Orientation*

Parent-reported literacy also emerged as a significant mediator New Hope's effect on youths' pessimism about future employment. Because the measure of pessimism asked youth to think about their own employment and financial futures, it is not surprising that higher levels of reading performance predicted lower levels of pessimism about the future. Youth may be using their academic skill as an index for the likelihood of procuring and maintaining employment in the future. Prior work has consistently shown that youths' educational expectations are grounded in their academic achievement (Ensminger & Slusarcick, 1992; Mello, 2008). Similar processes may operate for this broader set of future expectations as well.

Additionally, parent-reported reading performance mediated the effect of New Hope on youths' cynicism about work. The importance of reading performance to youths' attitudes about the meaning of work is not immediately obvious. One possible explanation is that there is a direct effect of literacy skills on cynicism about work. Youth who have stronger literacy skills may process information about the world of work differently than those with weaker skills, which in turn may lead to different attitudes. Another perhaps more likely explanation is that youth with strong literacy skills evoke different inputs from their developmental contexts than do youth with lower levels of literacy, and these differential experiences may shape attitudes about work. For example, youth with stronger reading skills may have more positive relationships with adults in their schools and neighborhoods. These relationships may provide them with information about work and its meaning. Of course,

these possible mechanisms need to be examined empirically before firm conclusions can be drawn.

One surprising finding that emerged was the mediated effect of parental earnings on youths' career preparation. Contrary to hypotheses, the program-induced increase in earnings *negatively* predicted involvement in career preparation activities. In the U.S. educational and occupational structure, career preparation during adolescence is often considered to be less important for youth planning to attend college (Rosenbaum, 2001). Thus, it may be that increases in earnings led New Hope parents and youth to focus more on college preparation because it was more financially feasible. Although youths' expectations about educational and occupational attainment are clearly linked (Cook et al., 2006; Kerpelman & Mosher, 2004), I was unable to identify any prior work that examines linkages between college preparation and career preparation among low-income youth. This is an important area of future research.

An alternate explanation is that youth whose parents were earning more were also working more hours, which decreased the time available for them to engage in career preparatory activities with their children. Because New Hope did not provide job training, it is likely that the increases in parental earnings were due primarily to increases in the numbers of hours worked, not to increases in hourly wages. Although the increased earnings may have provided other benefits to families, it may have decreased the free time parents had to help their children explore future career paths. It is also important to note that because New Hope actually exerted a *positive* direct effect on youths' career preparation, there are clearly other untested mediators of the effect.



The effect sizes of the mediated paths, which indicate how much of the program impact on the outcome variable is explained through the mediating variables, were all relatively small (.08-.20). It is important to note that the mediators were assessed two years after program benefits ended and the size of New Hope's effects on these variables had already decreased from effects measured while program benefits were still available. If the program lasted beyond three years, impacts on both the mediating variables and youths' employment and future orientation would likely be larger. Although only implemented for three years (due to limited financial resources), the program is designed to operate as a continuous economic support policy that would be available to low-income families at any time throughout children's developmental course.

#### *Mediators of New Hope's Effects on Boys*

Among boys, mediating effects were found only for the impact of New Hope on pessimism about future employment and financial security. Again, parent-reported reading performance emerged as a significant mediator. Similarly to the mechanisms posited for the full sample, it is likely that boys are considering their academic performance when forming expectations about future success in the world of work. Additionally, higher performing boys may be receiving more positive messages from adults and peers around them, which are fostering the less pessimistic attitudes about their futures.

Boys' educational expectations also uniquely mediated New Hope's effect on pessimism about future employment. This continuity of high expectations corroborates empirical work that has shown that low-income boys ground their occupational expectations in their educational expectations. Cook and colleagues (1996) found evidence that boys who possessed stronger educational expectations also expected to obtain higher prestige jobs in

adulthood. Because New Hope boys were more certain that they would attend and graduate from college than control group boys, they may have also been more optimistic about their job prospects during adulthood.

By examining differences in the mediating pathways across gender groups, it became clear that the absence of an effect of New Hope on girls' pessimism about future employment lacked a simple explanation. New Hope significantly impacted reading performance for both boys and girls. (In fact, the effect was larger for girls.) Furthermore, reading performance was significantly and negatively related to pessimism about future employment for both genders, but the relation was smaller for girls. This suggests that, although literacy skills may have influenced pessimism about employment across genders, other factors played a larger role for girls. When looking at the mediating paths of educational expectations across the gender groups, the pattern of coefficients is quite different. Not only did New Hope not impact girls' educational expectations, but educational expectations did not predict pessimism about employment. This suggests that boys' thoughts about future careers and finances may more be grounded in their educational expectations than is the case for girls. An alternate explanation might be that, in comparison to girls, boys' future expectations are more stable across the three years between the measurement of the mediators and the outcomes. However, other work on future orientation has suggested the reverse. That is, prior work has found girls' future orientation to be more stable and less susceptible to influence than that of boys (Kerpelman & Mosher, 2004; Seginer & Lilach, 2004; Seginer, Vermulst, & Shoyer, 2004).

It is important to note that across treatment conditions, boys reported higher levels of pessimism about employment than girls. When examining mean levels, it becomes apparent

that New Hope reduced boys' levels of pessimism such that they were comparable to the levels experienced by treatment and control group girls. That is, New Hope boys and both groups of girls reported similar levels of pessimism, whereas control group boys reported higher levels than youth in the other three groups. This pattern indicates that, although the program did not impact girls, they were still reporting relatively low levels of pessimism about the future.

Although no mechanisms that contribute to gender differences in the impact of New Hope on youths' academic and social skills have been quantitatively identified, ethnographic data on a subset of New Hope and control group families revealed that differential family expenditures on boys and girls may explain part of the observed differences. Parents repeatedly discussed awareness of the vulnerability of boys growing up in urban environments, where street-influences, such as gangs, are present and where high school dropout rates are high (Duncan et al., 2007). Because of these heightened concerns, parents may have disproportionately directed the benefits provided by New Hope towards their sons, to help ensure positive development. For example, some families likely used the additional income provided to program group families to provide tutoring for their sons. It is important to note that parents' concerns about their sons were not unfounded. Among control group youth, girls were doing much better than boys academically and behaviorally (Duncan et al., 2007).

#### *Mediators of New Hope's Effects on African American Youth*

The mediated effects of New Hope on African American youth again signal the importance of literacy skills. Similar to the finding in the full sample, the effect of New Hope on duration of employment was significantly mediated by parent-reported reading

performance. Although this in part probably reflects the fact that African American youth constituted the majority of the sample, it is significant that these linkages held for this ethnic group. Wilson's work (1996) highlights that inner-city employers hold especially negative attitudes about young African American males. Thus, the mediated effect on duration of employment suggests that increases in reading performance can produce more positive employment outcomes even among the most disadvantaged group in the labor market. The effect of New Hope on African American youths' pessimism about future employment was also mediated by parent-reported reading performance. Similar to boys, it is likely that youth in this subgroup had expectations for future career and financial success that were grounded in their experiences of academic success and failure.

Unfortunately, and probably because of unequal sample sizes across ethnic groups, testing mediated paths across these groups does not provide insight into processes that led to ethnic differences in program effects. For example, the effect of New Hope on reading performance was only significant among African American youth, despite the fact that the paths are in the predicted direction and only slightly smaller among the other ethnic groups. This suggests that ethnic group differences may be more of an artifact of unequal power to detect effects than true differences in how the program impacted youth. When examining differences in the effect of literacy on pessimism about future employment, a similar pattern emerges. Among Latino youth, there was a significant association between reading performance and pessimism, but it is smaller in magnitude than the same association within the African American subsample. In addition, the path is not significant among the small sample of White youth, although it is in the predicted direction. The path between reading performance and duration of employment is significant only among African American youth,

and is much larger than the analogous paths for Latino and White youth. This suggests that reading performance may play a larger role in employment outcomes for African American youth than for youth of other ethnicities. However, the possibility that this difference is attributable to differences in sample size cannot be ruled out.

Unlike the findings for gender, there were no significant differences in mean levels of pessimism across ethnic groups. However, examination of differences across ethnic groups in levels of employment duration reveals that African American youth, regardless of treatment condition, worked during fewer months of the year than White youth. This finding is consistent with other work on ethnic differences in youth employment in urban areas. In one study of low-SES youth, White youth were more likely to be employed than their African American peers, despite the fact that the African American youth had applied for more jobs (Entwisle et al., 2000). This suggests that discrimination observed in the adult labor market (Bertrand & Mullainathan, 2004) may also permeate the youth labor market. It also highlights that having strong academic skills, including literacy skills, may be particularly important for African American youth as they are more likely to face barriers to employment than youth from other ethnic groups.

#### *Parental Perceptions of Reading Performance*

The most consistent mediator of New Hope's effects on youths' employment and future orientation was parental perceptions of reading performance. Although this item asked parents to report their child's reading skills based on their school report card from the previous year, it is certainly a more subjective measure than the Woodcock-Johnson reading score. Because of this subjectivity, it is important to understand what the item is measuring. One possibility is that parental characteristics, such as mental health, may be influencing the

reported levels of reading. However, while parental mental health is correlated with reports of reading performance ( $p=-.14$ ), the correlation is relatively small, especially when compared to the correlation between parent-reported reading performance and the Woodcock-Johnson broad reading score ( $p=.41$ ). Furthermore, while highly correlated, parental reports of youths' reading performance and math performance did diverge ( $p=.55$ ), indicating that parents were not rating their child's performance globally. Taken as a whole, these correlations provide evidence that while subjective, parents' perceptions of reading performance are likely grounded in their child's actual reading performance. It is important to note that this measure likely encompasses a wide range of reading skills that youth display throughout the school year, as opposed to the skills required to be successful on a single standardized test.

#### *Understanding the Absence of Mediating Effects*

Although reading performance emerged as a consistent mediator, and there was some evidence for the importance of educational expectations as a mediator, overall, the study yielded little evidence of mediation. Within the full sample, a single mediator emerged for four out of the five effects of New Hope; however, in no instance did the mediators fully explain the effects of the program. Among boys, mediated effects were detected for only one of four New Hope effects. Among African American youth, mediated effects were found for two of six New Hope effects. Although this dearth of findings is inconsistent with my predictions, it is consistent with prior examinations of the mediated effects of antipoverty experiments. For example, no prior work has detected significant mediators of New Hope effects (Walker, 2008), although this is the first examination of mediators of 8-year effects.

New Hope was designed to be a flexible program that allowed families to tailor use of benefits to their own needs. Although this flexibility may be a strong approach to intervention, it presents challenges when trying to disentangle the precise mechanisms through which the program produced change. Because New Hope families utilized benefits in individualized ways, there were not uniform changes on the contexts children were experiencing. Therefore, the processes that led to program-induced changes in children's academic and social development also varied across families. For example, the income supplement may have allowed parents in some families to purchase more cognitively-stimulating toys and books for children to use at home, which led to increased academic achievement. Other families may have utilized the childcare subsidy, which provided children with access to learning experiences outside the home. This flexibility was a key component of the New Hope design; it allowed families to "make the program work for them." Because of this variability in the use of program benefits, isolating mediators of program effects across families is difficult.

Another factor that may explain why few mediated effects were found concerns the size of New Hope's effects on some of the hypothesized mediators. The effects of New Hope on some of the hypothesized mediators were relatively small, making it unlikely that they would operate as mediators of later program impacts. The pattern of effects for youths' scores on the reading portion of the Woodcock-Johnson, a non-significant mediator, showed a pattern of effects that was similar to the pattern observed for parent-reported literacy skill, which was a significant mediator. The fact that the effect of New Hope on Woodcock-Johnson scores was smaller than the effect on parent-reported literacy may explain why the former variable did not significantly mediate program impacts. Similarly, the small effect of

New Hope on parental employment may explain why this variable did not emerge as a significant mediator, whereas parental earnings significantly (albeit negatively) mediated New Hope's effect on career preparation.

Although the cafeteria-style design of New Hope, which allowed families to utilize only benefits they needed, makes it difficult to isolate specific mediators of the program's impact, the possibility remains that New Hope produced changes in families and children through its influence on unmeasured variables. Aspects of family life not assessed in the study may have mediated effects on youths' employment and future orientation. At each wave of data collection, extensive information on parents, youth, family life, health, and out-of-home experiences was gathered from both parents and children; even so, several potential mediators were not measured. For example, New Hope may have increased parents' social networks, particularly their employment-related contacts, and this additional social capital may have assisted youth in their employment search and career planning. Parent employment and earnings served as a proxy for this process, but a more direct measure may have yielded stronger evidence of mediation. Another possible mechanism is impacts on parents' ability to change their children's developmental contexts. An in-depth ethnography conducted on a subsample of New Hope program and control group families suggested that New Hope benefits helped parents provide youth with higher quality out-of-home contexts. This included moving to better neighborhoods, seeking out higher quality child care, and enrolling their children in better schools, such as local charter schools (Duncan et al., 2007). Although not captured in the quantitative data, these efforts may have served as important mediator of New Hope's effects.



## *Policy Implications*

*Importance of literacy skills.* The most obvious implication of these findings is the importance of literacy skills to youths' later success. Although the importance of reading and literacy has been well-documented (Duncan et al., 2007), this study expands on prior work by linking reading performance to broader outcomes, namely adolescent employment and attitudes about work and future employment. These linkages are particularly important to consider among economically disadvantaged youth, as they likely will provide advantages during the transition to adulthood.

Although not directly examined in this study, it is important to consider mechanisms that led to New Hope's impact on reading performance. Based on the program design and prior theoretical and empirical work, parental investment in the home and out-of-home experiences likely facilitated positive trajectories of academic development among program group youth. The *investment theory* posits that low-income youth have lower average levels of academic performance than their middle class counterparts because their parents do not have income available to invest in the child's learning (Gershoff et al., 2007; Linver, Brooks-Gunn, & Kohen, 2002; Yeung, Linver, & Brooks-Gunn, 2002). For example, more affluent families can purchase educational materials and provide educational experiences, such as trips to the museum, through expendable income, whereas low-income families do not have money available to provide such advantages. The increases in income provided by New Hope may have enabled parents to invest more in their children's academic development. Policies that provide additional monetary resources to low-income families, such as the Earned Income Tax Credit (EITC), may increase children's academic skills, which in turn can promote other positive outcomes, such as enhanced future orientation.

The second potential mechanism of New Hope's impact on literacy was the added use of center-based child care. A wealth of research, both experimental and observational, has shown positive benefits of high quality child care on children's cognitive abilities (Barnett, 1995; Campbell & Ramey, 1994; Lamb, 1997; Loeb, Fuller, Kagan, & Carrol, 2004; NICHD Early Child Care Research Network, 2005). Because New Hope provided families with subsidies to pay for licensed child care, program group youth were more likely than controls to develop enhanced academic and cognitive skills because of these child care experiences. Evaluations of intensive, high quality pre-school programs, such as the High Scope Perry Preschool Program, have shown program impacts lasting into adulthood, on outcomes including increased earnings and decreased welfare use (Nores, Belfled, Barnett, & Schweinhart, 2005). Although mediators of the effects on these specific outcomes have not been fully explored, research has shown that the impacts of Perry Preschool on adolescent achievement and educational attainment were mediated by early gains in cognitive abilities (Barnett, Young, & Schweinhart, 1998). These increases in cognitive abilities may also have contributed to income-related outcomes later in life. If this is indeed the case, there is a convergence of evidence that increases in youths' cognitive abilities, including literacy skills, mediate the effects of experimental programs on long-term employment-related outcomes.

Because New Hope is a costly (approximately \$6000 per family per year in 2005 dollars) program and because the structure of Temporary Aid for Needy Families (TANF) is unlikely to change in coming years, it is important to consider other policies that may confer some of the same benefits that New Hope provided. For example, Earned Income Tax Credits provide low-income families with additional resources that can promote child well-being. Similarly, investments that increase the availability of high quality child care for low-

income families, whether through improvements in and expansions of federal (e.g., Head Start) and state (e.g., pre-kindergarten) programs, or through increased child care subsidies for families, represent one possible route to producing long-term impacts on low-income youths' reading performance and other indicators of well-being.

### *Implications for Future Research*

*Understanding paths between literacy skills and outcomes.* Although this study and others have documented the linkages of literacy (and other academic) skills with adolescent employment and future orientation (Ensminger & Slusarcick, 1992; Entwisle et al., 2000), little is known about *why* these associations exist. Future research needs to examine potential mechanisms that link these constructs across development, and especially to illuminate the association between literacy skills and future orientation. For example, while although it is possible that youths' literacy skills have a direct impact on their future orientation, it is also plausible that there are contextual factors that 1) produced this continuity, because youths' skills have evoked positive features within contexts (e.g., increased interest and investments from adults), or 2) underlie both literacy skills and future orientation. In the latter possibility, the association between literacy skills and future orientation would be the result of unmeasured third variables. For example, multiple barriers to success, such as few family resources, lack of social support, and residence in a poor neighborhood may simultaneously affect youths' chances for academic success and thoughts about their economic and employment futures (Hill, Ramirez, & Dumka, 2003; Sameroff, Seifer, Barocas, & Zax, 1987). More research on the mechanisms, particularly contextual mechanisms, that underlie this relation will provide new, more fine-tuned targets for policies and programs seeking to promote positive future orientation among economically disadvantaged youth.

*Understanding subgroup differences.* Subgroup differences in this study were examined in order to shed light on the processes that led to subgroup differences in program impacts on youths' employment and future orientation. Because there were not specific hypotheses about subgroup differences in developmental processes, these analyses should be regarded as exploratory in nature. In general, differences in New Hope's impact on potential mediators across gender were documented, especially in the impact on youths' educational expectations, but few differences in developmental processes (across gender and race/ethnicity) were detected. Small effects on potential mediating variables and unequal sample sizes across racial/ethnic groups limited the information available to understand differences across subgroups. Future work should rely on theory and prior empirical work to further explore mechanisms that may lead to differential impacts of policies across subgroups of youth. Additionally, exploration of large, longitudinal datasets with large samples of multiple racial/ethnic groups should be employed to examine the relative contribution of literacy skills to adolescent employment across subgroups. Because of the documented barriers that African American youth and adults face in the labor market (Bertrand & Mullainathan, 2004; Wilson, 1996), it is reasonable to hypothesize that the importance of literacy skills may be magnified for this group of youth. Research studies such as the example described here do not need to be experimental in nature to provide insights into why the experimental effects of New Hope produced differential effects across gender and ethnic subgroups.

*Understanding effects of New Hope.* Although the search for individual mediators within New Hope is challenging because of the program's design, other types of analyses can provide insight into how New Hope affected children's development. For example, research

that has applied a *cumulative risk* framework, which counts the number of risks present in a child's life (Sameroff et al., 1987; Rutter, 1985), has found that New Hope decreased the number of risks children face, and that this decrease mediated the effects of New Hope on children's school achievement (Gassman-Pines & Yoshikawa, 2006). However, this mediated effect was found only for children whose parents were long-term welfare recipients at the start of the program. Similarly, Walker (2008) used a *cumulative advantage* approach to understanding New Hope's effects on children's academic and social behavior outcomes. In her study, New Hope was found to increase the number of advantages present in children's developmentally-salient environments at the two-year follow-up (when program benefits were still available), and these cumulative advantages partially mediated the effect of New Hope on children's academic achievement at the five-year follow-up. Environments examined overlap with mediators examined in this study, including parental employment and center-based childcare, but also include advantages in the home context, such as quality of parenting. These cumulative approaches to mediation in New Hope and other similar programs highlight the unique analytic approaches that may be necessary to address individual family differences in the uptake of program benefits. Furthermore, they suggest that program impacts on multiple as opposed to singular indicators of well-being may explain the power of anti-poverty programs to alter children's developmental trajectories.

Despite the advantages of cumulative frameworks, they do not provide information about the specific components of a program that led to its success, in part because different components may matter more different families. Group-based methods, such as cluster analysis or latent class analysis, could provide important information on how the program benefited families in different ways. These models seek to identify naturally occurring

groups in a sample that show similar profiles across a number of variables (Hagenaars & McCutcheon, 2002). One could conduct a group-based analysis on the mediators of interest. Such an analysis would provide information on how the potential mediators naturally co-occur in families. For example, some family clusters may exhibit relatively high use of child care and earnings, whereas others show only one of these characteristics. Membership in each of these groups could be tested as a mediating effect. That is, one could test whether New Hope predicted membership in these clusters and whether these clusters are predictive of child outcomes. This would provide insight about whether specific *combinations* of mediators led to later program effects. These combinations could then be utilized as potential targets for future policy initiatives.

#### *Examination of Existing Policy Effects on Children*

Although randomized experiments allow for more rigorous causal inference about program effects, the cost of conducting them is quite high. Additionally, because they usually only take place in one geographic location, the results have limited generalizability. Because of these limitations, it is important to explore alternate routes to producing research that provides insights into how policies can be designed to promote positive development among economically disadvantaged youth. One way to do this is to examine effects of current policies on youth, as was done in Chase-Lansdale and colleagues' (2002) analysis of the impacts of welfare reform on children and families. An alternative is to focus on exploring potential policy targets, such as family income, and the mechanisms through which they influence children. Although many researchers have taken this approach (e.g., Duncan & Brooks-Gunn, 1997), incorporating methods that eliminate biases, particularly selection biases, will provide stronger evidence for the importance of the focal variables as constructs

about which policy makers should be concerned. For example, studies that incorporate propensity scores can provide more accurate estimates of the effects of the use of governmental benefits, such as WIC, on child outcomes (Jiang, Foster, & Gibson-Davis, 2010). Utilizing non-experimental methods that address selection and other biases can increase the knowledge available to policy-makers while foregoing the high financial costs associated with carrying out large-scale anti-poverty experiments.

### *Limitations*

There are a number of limitations in the current study. First, because there was only one treatment group, instrumental variable estimation, which can use random assignment as an instrument to establish causal relations between the mediators and the dependent variables, could not be employed to examine multiple mediators (Gennetian et al., 2008). This prohibits statements about the relations between mediators and outcomes as causal. However, the timing of measurement of mediators and the use of random assignment to treatment do increase confidence in the directionality of these relations.

Additionally, because New Hope operated only in one city and in the context of a strong economic climate, the generalizability of findings is limited. Future replications across different types of geographic locations and within differing macro-level economic conditions are critical to determining how New Hope would work on a larger scale (Duncan et al., 2007). Furthermore, New Hope took place in Milwaukee, WI, a city that is quite unique in terms of both politics and public assistance policies (Buenker, 2004). In 1996, during the time New Hope benefits were available, the federal government passed the Personal Responsibility and Work Opportunity Act (PRWORA), which replaced the existing Aid to Families with Dependent Children (AFDC) with Temporary Assistance for Needy

Families (TANF), which allowed states more flexibility in the benefits provided. Wisconsin transitioned to W-2 (Wisconsin Works), which was considered to be the most radical state welfare reform initiative implemented (Piliavin, Courtney, & Dworsky, 2001). Although this program focuses on moving poor people into jobs, the benefits it provides are far more generous than many other TANF programs. For example, W-2 provides job search benefits similar to those provided by New Hope and provides some allowances for child care (Piliavin et al., 2001). Because these benefits were available to control group members, their success in the job market may have been higher than similar workers in other states. It is possible that in states where programs created under PRWORA provided fewer benefits, the effects of New Hope may have been larger. Other characteristics of Milwaukee, such as its history of socialist politicians (Buenker, 2004) and high levels of racial segregation (Iceland & Weinberg, 2002), limit the generalizability of findings to other areas of the U.S.

Another limitation of this work concerns the measurement of focal constructs. Because mediators and outcomes were all measured using single scales, and in some cases individual items, it is possible that measurement error may be concealing program effects. Additionally, the reliabilities of the future orientation measures were relatively low. Future work should seek to test and validate alternative measures of these constructs that have stronger psychometric properties within low-income samples. The career preparation variable is particularly problematic because several of its indicators are school-based (e.g., going on field trips related to careers), and therefore were unlikely to be impacted by this family-level program. Also related to measurement issues is the large number of teacher reports that were missing (over 35% missing at 5-year follow-up). Although the study did a reasonably good job of maintaining participation of families across eight years, especially



given the challenges of retaining low-income study samples, teachers had particularly low rates of participation. The teacher information is valuable because it provides information from a reporter who was not aware of youths' program status; however, the high frequency of missingness for teacher variables compromises the usefulness of the teacher data.

The Child and Family Study of New Hope was designed to assess the impacts of New Hope on children between the ages of 1 and 10. Although the effects on children across age ranges is important, the wide age range in this study prevented examination of *timing* within development. For example, predictors of future orientation may be different across different ages. However, because the wide age range of sample members and the small numbers of youth at any given age, these data are unsuitable for assessing developmental differences.

Despite these limitations, this study used multi-informant, longitudinal data to provide evidence that the effects of a parent-directed, work-based, antipoverty program's effects on youths' employment duration and future orientation were partially mediated by increased reading performance during middle childhood and early adolescence. Because the program was time limited, it was important to examine what developmental processes led to positive effects after program benefits ceased. By exploring these processes, this study isolated literacy skills as a potent target for future policy and program development.

## Appendix

### Adolescent School Year Employment

<u>Item</u>	<u>Response Options</u>
Duration: Altogether, during the <u>last school year</u> , how many months did you work for someone other than your parents?	1=1 month or less 2=1 to 3 months 3=3 to 6 months 4=6 to 0 months
Intensity: In a typical week during the <u>last school year</u> , how many hours did you spend working for someone other than your parents?	1= 1-5; 2=6-10; 3=11-15; 4=16-20; 5=21-25; 6=26-30; 7=31-35; 8=36-40
Earnings: On average, during the last school year, how much money <u>per week</u> did you earn from all your jobs combined including work for your parents <u>and</u> work for someone other than your parents?	1=\$1-20; 2=\$21-40; 3=\$41-60; 4=\$61-80; 5=\$81-100; 6=over \$100

### Cynicism about Employment

<u>Item</u>	<u>Response Options</u>
How much do you agree or disagree with each of the following statements?	1=Strongly Disagree; 2= Somewhat Disagree; 3=Somewhat Agree; 4=Strongly Agree
To me, working is nothing more than making a living.	
There's no such thing as a company that cares about its employees.	
Most people today are stuck in dead-end, go-nowhere jobs.	
Workers are entitled to "call in sick" when they don't feel like working.	
I believe in working only as hard as I have to.	
If I had the chance I'd go through life without ever working.	

### Pessimism about Future Employment and Financial Security

<u>Item</u>	<u>Response Options</u>
Please mark on your answer sheet <u>how likely</u> you think each of the following will be.	1= Very Unlikely; 2=Unlikely; 3=Somewhat Unlikely; 4=Somewhat Likely; 5=Likely; 6=Very Likely
You will have difficulty finding a good job when you become an adult.	
You will have difficulty supporting your family financially.	
As an adult, you will lose your job or be laid off from your job.	
You will have a good job when you become an adult. (reverse coded)	

### Career Preparation

<u>Item</u>	<u>Response Options</u>
During the last year, how often have you done the following to help you think about getting a job...	1=Never; 2=Once or Twice; 3=3-5 Times; 4=More than 5 Times
Taken a school field trip to learn about a business or industry?	
Heard someone from a business or industry give a talk at school?	
Talked about what you'll do after high school with one of your teachers or another adult at school, either one-on-one or in a group?	
Gotten instruction or counseling on how to find a job?	
Studied about different kinds of jobs and their requirements in class?	
Had discussions with adults outside of school about careers and work?	

Parental Employment & Income (from administrative records)

<u>Item</u>	<u>Response Options</u>
Number of Quarters Employed Annually, over 5 years	0=0 Quarters; 1=1 Quarter; 2=2 Quarters; 3=3 Quarters; 4=4 Quarters
Annual Earnings, over 5 years	Continuous variable

Center-Based Care

<u>Item</u>	<u>Response Options</u>
During the past year...	1=1 month; 12=12-months etc.
How many months did your child spend in a child care center, before/after-school program, community center, or Head Start?	

Structured Extra-Curricular Activities

<u>Item</u>	<u>Response Option</u>
How often does your child...	1=Never; 2= Less than once a month; 3= About every month; 4= About every week; 5= About every day
Take <u>lessons</u> such as dance, music, or arts and crafts that do <u>not</u> involve sports?	
Play a sport or take lessons <u>with a coach or instructor</u> , things like gymnastics, karate, Little League, or soccer?	
Belong to a club or youth group like cubs, or boy scouts/girl scouts, drama club, or a youth group associated with a church or temple?	
Go to Sunday school or religious services, take religion classes, or participate in church or temple choir?	
Go to <u>recreation</u> or <u>community centers</u> where there were <u>adults supervising</u> , such as the Y, the Boys and Girls Club?	

## Standardized Literacy Scores

<u>Item</u>	<u>Response Options</u>
Average score on Woodcock-Johnson Letter-Word Identification and Passage Comprehension	Continuous measure (population mean=100; population S.D.=15)

## Parent Report of Reading Performance

<u>Item</u>	<u>Response Options</u>
Based on your knowledge of your child's most recent report card, how well did he/she do in reading?	1=Not well at all; 2=Below average; 3=Average; 4=Above average; 5=Very Well

## Teacher Report of Academic Achievement

<u>Item</u>	<u>Response Options</u>
Compared to other students in the class, please rate...	1= Lowest 10% of class; 2=Next lowest 20% of class; 3=Middle 40% of class; 4=Next highest 20% of class; 5=Highest 10% of class
Child's overall academic performance	
Child's reading ability	
Child's math ability	
Grade-expectation reading skills	
Grade-expectation math skills	
Child's overall motivation	
Child's parental encouragement	
Child's intellectual functioning	
Child's communication skills	

## Teacher Report of Classroom Behavior

<u>Item</u>	<u>Response Options</u>
Please report how often the child...	1 = Almost never; 2 = Rarely; 3 = Sometimes; 4 = Frequently; 5 = Almost always
Complies with teacher requests.	
Observes classroom rules.	
Does not disturb peers.	
Recognizes transition cues.	
Moves quickly.	
Completes transition routine.	
Begins work promptly.	
Follows task instructions.	

Completes tasks independently.  
 Follows prescribed routine.  
 Remains on-task.  
 Manages free time constructively.

#### Positive Behavior Scale (Parent and Teacher Reported)

<u>Item</u>	<u>Response Options</u>
My (this) child...	1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Most of the time; 5 = All of the time
is cheerful, happy.	
waits turn during activities.	
is warm, loving.	
is curious/likes new experiences.	
thinks before acting/not impulsive.	
gets along well with other kids.	
can get over being upset quickly.	
usually does what I tell him/her.	
is well liked by other kids.	
does things for (him/her)self.	
when does something well.	
can find things to do on own.	
is proud.	
is easily calmed when angry.	
is able to concentrate on an activity.	
is helpful & cooperative.	
is considerate of other kids.	
tends to give, lend, and share.	
is obedient, follows rules.	
is calm, easy-going.	
sticks w/ activity until finished.	
is eager to please.	
is patient when wants something.	
sticks up for him/herself.	
does things him/herself.	

#### Hostile Intent Attributions

<u>Item</u>	<u>Response Options</u>
Imagine that you are sitting at the lunch table at school, eating lunch. You look up and see another kid coming over to your table with a carton of milk. You turn around to eat your lunch, and the next thing that happens is that the kid spills the milk all over your back. The milk gets your shirt all wet.	1) 1 = The kid slipped on something. 2 = The kid just does stupid things like that to you. 3= The kid wanted to make fun of you. 4= The kid wasn't looking where (he/she) was going.

- 1) Why did the kid get milk all over your back?
- 2) In the story do you think the kid was, ...

Imagine that you are walking to school wearing your new shoes. You really like your new shoes, and this is the first day you have worn them. Suddenly, you are bumped from behind by another kid. You stumble and fall into a mud puddle and your new shoes get muddy.

- 1) Why did the kid bump you from behind?
- 2) In the story do you think the kid was,...

Imagine that you are in the bathroom at school one day. While you are in there, two other kids from your class come in and start talking to each other. You hear one of the kids invite the other one to a birthday party. The kid says that there is going to be a lot of people at the party. You have not been invited to the party.

- 1) Why hasn't the kid invited you to the party?
- 2) In the story do you think the kid was, ...

Imagine that you are taking a walk in your neighborhood one day. After you walk a block or two, you see two kids that you know from school. You walk over to the kids and say "hi". The two kids act as if you are not there --- they don't say anything to you. Then they say something to each other that you can't hear and they walk the other way.

- 1) Why didn't the two kids say hello to you?
- 2) In the story do you think the kids were, ...

- 2) 1= Trying to be mean  
2= Not trying to be mean

- 1) 1 = The kid was being mean.  
2 = The kid was fooling around and pushed too hard by accident.  
3= The kid was running down the street and didn't see you.  
4= The kid was trying to push you down.

- 2) 1= Trying to be mean  
2= Not trying to be mean

- 1) 1 = The kid doesn't want you to go to the party.  
2 = The kid hasn't had the chance to invite you yet.  
3= The kid is trying to get back at you for something.  
4= The kid was planning to invite you later.

- 2) 1= Trying to be mean  
2= Not trying to be mean

- 1) 1 = They didn't see you standing there.  
2 = They didn't hear you say hi first.  
3= They were mad at you about something.  
4= They don't like you.

- 2) 1= Trying to be mean  
2= Not trying to be mean

## Youths' Educational Expectations

<u>Item</u>	<u>Response Options</u>
How sure are you that you will...	1=Not at all sure; 2=Not really sure;
a) Go to college?	3=Somewhat sure; 4= Mostly sure; 5=Very
b) Finish college?	sure

## Control Variables

<u>Item</u>	<u>Response Options</u>
Parent reported:	
Do you have a high school diploma or GED?	1= Has diploma or GED; 0= Does not have
Parent Gender	1=Male 0=Female
Parent Age	Continuous Variable (in years)
Parent Ethnicity	2 indicator variables: African American: 1= African American; 0=Not African American Latino: 1=Latino; 0=Not Latino
Parent have child under age of 2 at baseline	1=Parent has child under age 2; 0=Parent does not
Parent has more than 3 children at baseline	1=more than 3 children; 0=3 or less children
Parent receipt of welfare in prior year	1=receipt in prior year; 0=no receipt
Parental receipt of AFDC in family of origin	1=AFDC receipt; 0=no receipt
Parental car possession	1=has car; 2= does not have car
Parent ever worked full-time	1=Parent has worked full-time; 0=Parent has not worked full-time
Neighborhood	1=Northside; 2=Southside
Parent employment status at baseline	1=Employed; 2=Not employed
Earnings in year prior to random assignment	0=None; 1=\$1-999; 2=\$1,000-4,999; 3=\$5,000-9,999; 4=\$10,000-14,999; 5=\$15,000+
Child age	Continuous variable (in years)



Child gender

1=boy; 0=girl

Child ethnicity

2 indicator variables:

African American: 1= African American;

0=Not African American

Latino: 1=Latino; 0=Not Latino

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