RUNNING HEAD: Welfare Policy, Ethnicity, and School Dropout

# Welfare Policy, Race/Ethnicity, and School Dropout: Steps Towards Understanding the School Leaving Process

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It is generally accepted that dropping out of school has negative consequences for children's development. Children who do not complete high school are more likely to be unemployed and receive public assistance in adulthood. When employed, they make less money than their peers who possess a high school degree (U.S. Department of Education National Center for Education Statistics [NCES], 2001). Although the directionality of these associations has not been established, dropping out of school is itself an outcome of societal interest. Understanding what motivates children to leave school early can provide avenues towards future approaches to policy and prevention.

Over the past thirty years, dropout rates have declined in the United States, but there remain large differences by race/ethnicity. Data from the National Center for Education Statistics indicate that, as of the year 2000, 7% of White 16- through 24-year olds 13% of Blacks, and 28% of Latinos had left school early (NCES, 2001; President's Advisory Commission on Educational Excellency for Hispanic Americans, 2003). Recent evaluations suggest that the rates of Latino dropout may be inflated due to the inclusion of immigrant students who have never enrolled in the American school system. Although more stringent calculations suggest that the current Latino dropout rate is actually closer to 15 percent, this finding is still alarming given that it is double the dropout rate for White adolescents (Fry, 2003).

Given the drastic variations in dropout rates between ethnic groups, understanding the factors driving these differences becomes a first step towards increasing educational opportunities for all students. One potential explanation for dropout is found in human capital theory (Becker, 1993). Because of historical differences in educational opportunities, it is possible that there are racial/ethnic differences in educational values

and resources available to children. Additionally, lower levels of employment and earnings for Latino and Black parents may translate into less available funds to be used on education for their children, and in turn, higher rates of dropping out. An alternative explanation takes into consideration the role that family structure plays in children's academic achievement. Research has consistently shown the increased likelihood of dropping out for children in one- versus two-parent households. Given the significant variation in family structure across ethnic groups, this provides a potential pathway to understanding variations in dropout rates. A fourth possibility takes into consideration differences in parental beliefs and values that exist between ethnic groups. It is possible that parents' values concerning work and education affect the likelihood that a child will stay in or leave school. If this is the case, differences in values may be driving differences in dropout rates between ethnic groups.

The current study begins to untangle these questions by examining the effect that involvement in the welfare system has on White, Latino, and Black parents and their children, looking specifically at school dropout as an outcome. Research aimed at understanding the effects that anti-poverty programs have on recipients and their children often examine not only school dropout as an outcome, but also related factors such as adult education, employment, earnings, family structure, and parental values. Using data collected from the National Evaluation of Welfare-to Work Strategies (NEWWS), an experimental longitudinal evaluation of a mandatory employment program, this research will examine the effect that exposure to the program has on school dropout rates of racially/ethnically diverse adolescents. Additionally, we will explore the role that adult education, employment, earnings, family structure, and parental values play in explaining

racial/ethnic group variation in the effects of this mandatory employment program on adolescent school dropout rates. By examining the effect of welfare policy and factors influencing school dropout simultaneously, we are able to gain a more nuanced understanding of the barriers to education facing America's youth.

## Factors Influencing School Dropout

### *Human Capital*

One of the most commonly explored explanations for racial/ethnic variation in dropout rates is the relationship between human capital and children's educational attainment (Blau & Duncan, 1967; Duncan, Featherman, & Duncan, 1972; Hauser, 1971). Human capital theory posits that children's attainment is a function of family characteristics and behavior. Parents can increase their children's knowledge and skills through effective parenting, transmission of values, and provision of resources (Becker, 1993). Children who receive endowments from their parents, such as a commitment to learning, may be predisposed towards higher levels of academic achievement. Additionally, parents influence the success of their children by investing in their children's skills, health, and education. Parents whose own human capital is high, in the form of educational attainment and skills, have more disposable resources to invest in children's academic related activities, resulting in higher levels of educational attainment and later earnings (Becker & Tomes, 1986).

The positive relationship between parental education level and children's academic achievement has consistently been demonstrated in the literature (Duncan & Brooks-Gunn, 1997; Huston, McLoyd, & Garcia Coll, 1994; Neisser et al., 1996; Patterson, Kupersmidt, & Valden, 1990). Additionally, recent research suggests that the

association of maternal involvement in educational activities on children's cognitive ability may be causal (JCPR, 2002). Although this relationship has been firmly established, the pathway through which it operates remains unclear. Human capital theory suggests that parental resources positively affect children's academic attainment through investments in educational opportunities (Becker, 1993; Becker & Tomes, 1986). An alternative approach suggests that parental educational attainment indirectly affects children's academic achievement through ineffective discipline (DeBaryshe, Patterson, & Capaldi,1993).

*Income and Employment*

Research has also demonstrated a relationship between parental employment and children's academic achievement. The most direct effect of non-employment on academic achievement occurs through loss of income (Elder, 1974). However, additional negative consequences appear to operate independently of reduced income (Jahoda, 1979, 1981). These include decreased mental health for the non-employed individual (Catalano, 1991; Catalano & Dooley, 1977; Vinokur, Price, & Caplan, 1996; Winefield, Winefield, Tiggemann & Goldney, 1991) and deterioration of family relations (Broman, Hamilton, & Hoffman, 1990), outcomes which are likely to adversely affect children of the non-employed. A review of research examining the effects of maternal employment on children in low-income families demonstrates that overall, maternal employment has small positive associations with children's academic outcomes (Schmitt, Sacco, Ramey, Ramey, & Chan, 1999; Smolensky & Gootman, 2003). Additionally, factors such as favorable working conditions and higher wages may be positively related to children's outcomes (Zaslow & Emig, 1997).

There are several explanations for the roles that income and employment might play in the disparities found in dropout rates between ethnic groups. One explanation highlights the overrepresentation of racial/ethnic minority group members in the lower socioeconomic strata. Historically, the percentage of Black and Latino Americans living below the poverty line has been significantly higher than the corresponding percentage of White Americans. Although this disparity has begun to shift, an unequal distribution of resources is still the norm in the United States (U.S. Bureau of the Census, 2000). An alternative explanation is based on data that have shown that the effects of maternal employment on children's outcomes differ by socioeconomic status and family composition. Maternal employment is more likely to have advantageous effects on children's academic outcomes if they are from single-parent or poor families (Cherry & Eaton, 1977; Schmitt, Sacco, Ramey, Ramey, & Chan, 1999; Smolensky & Gootman, 2003). These patterns of variation may help to explain the differential rates of school dropout for ethnically diverse adolescents.

*Family Structure*

Family structure is another factor associated with high school dropout. Children with two parents in the home appear more likely to continue their schooling than those with only one parent in the home (Astone & McLanahan, 1991; Mulkey, Crain, & Harrington, 1992; Rumberger, 1995). Additionally, data from a variety of national studies show that children from disrupted or never-married families are less likely to have completed high school and more likely to have low earnings as adults than children from intact families (Astone & McLanahan, 1991; Corcoran, Gordan, Laren, & Solon, 1987; Krein & Beller, 1986; McLanahan, 1985; McLanahan & Sandefur, 1994). Although the

processes through which family structure influences academic achievement are not as clear, research suggests that two potential pathways include parental involvement in schooling and parenting style Astone & McLanahan, 1991; Rumberger, 1983; Rumberger, 1995).

The positive influence that having two adults in the home has on children's academic achievement may be explained through several pathways. The first of these is economic. Single-parent families have significantly lower household incomes than two-parent families. Additionally, children from households with higher overall incomes are more likely to participate in extracurricular activities, travel experiences, and summer camps; activities which are positively related to children's academic achievement (Heyns, 1985; Yeung, Linver, & Brooks-Gunn, 2002). As of 2002 approximately 26.5% of mother-only families were poor, compared to 5.3% of married-couple families (U.S. Bureau of the Census, 2000).

The level of parental involvement and supervision available in single versus two-parent homes, provides another explanation as to how family structure may influence children's academic achievement. Prior research exploring the effect that family structure has on parental socialization patterns has found that adolescents from single-parent families report significantly less parental involvement with schoolwork than children from two-parent families (McLanahan, Astone, & Marks, 1991). These findings are consistent across White, Black, and Latino families. Additionally, there is some evidence that parents in single-parent families exercise less supervision over their children than parents in two-parent families (McLanahan, Astone, & Marks, 1991).

Family living arrangements tend to vary by racial/ethnic group. Data from the 1999 National Survey of America's Families has shown that the living arrangements of poor Black children differ significantly from the living arrangements of poor Latino and White children (Mincy & Oliver, 2003). While 42% of poor White children and 45.2% of poor Latino children live in a household in which their parents are either married or cohabitating, this is the case for only 9.5% of poor Black children. The majority of poor Black children (91%) are also more likely than poor White (58%) or poor Latino children (55%) to have little to no contact with their fathers. These findings suggest that family structure may provide an avenue towards understanding ethnic group variation in school dropout rates.

*Parental Values*

Differences in levels of parental values regarding work and education may also influence children's educational attainment. The expectancy-value model of achievement states that the value individuals place on succeeding is a major determinant of their motivation to perform different achievement tasks (Atkinson, J.W., 1964; Eccles et al., 1983; Pervin, 1983). Additionally, observational learning theory posits that children develop many of their beliefs and goals by attending to the actions and beliefs of those around them (Bandura, 1986; Schunk & Zimmerman, 1996). These theories provide a framework for understanding how parents' work and education related goals may influence their children's educational attainment.

Past research has found racial/ethnic group differences in parents' education and employment values. Black women not only spend significantly more time in the labor market than White women, but are also more likely to feel that employment brings fewer

personal costs and more benefits for their children than White women (Bridges & Etaugh, 1994, 1996; Granrose & Cunningham, 1988). Additionally, in comparison to White welfare recipients, Black recipients report higher levels of favoring going to work over staying home with children, higher levels of valuing their own education, and lower levels of perceiving childcare as a barrier to work. Latina recipients report higher levels of valuing and liking school, as well as higher levels of child care availability if they were to increase their employment than White welfare recipients (Yoshikawa, et al., 2003).

Additionally, parents' values may interact with welfare policy approaches differently, producing variations in adult and child outcomes. Person-Environment Fit theory explores this possibility by positing that a match between individual and setting characteristics will produce more favorable and less negative outcomes (Moos, 1984). Applied within the policy context, a "fit" between welfare policy approach and recipient characteristics may mediate potential effects. Mandatory employment programs encompass two distinct approaches; the Education-First approach which promotes education and basic skills as a pathway to increase labor force attachment while the Work-First approach promotes entrance into the workforce as a means to promote attachment. Given the variations in policy approach and recipient values, Latina welfare recipients who have a high value of school may fit best within an Education-First program while Black welfare recipients who have a high value of work may fit best within a Work-First program. Furthermore, the degree of "fit" between welfare policy approach and recipient characteristics may mediate adult and child outcomes.

## Welfare Policy and Human Capital, Income and Employment, Family Structure, and Parental Values

It may be that welfare policies that impact human capital, income and employment, family structure, and parental values in turn affect school dropout rates. A synthesis of twenty welfare-to work programs found that overall, people in the program groups had higher earnings and lower welfare payments than people in the control group (Michalopoulos, Schwartz, & Adams-Ciardullo, 2001). Additionally, findings from the Minnesota Family Investment Program (MFIP), which was designed to increase both employment and earnings and was evaluated in a randomized trial, suggest that assignment to the program increased indicators of human capital such as employment rates, average earnings, and family income for single-parent long-term recipients (Miller et al., 2000). Additionally, MFIP increased long-term recipients' likelihood of marriage for single recipients and remaining married for coupled recipients during follow-up. Although several studies have reported an increase in marriage rates following 1996 welfare reform, it is difficult to establish a causal relationship (Acs & Nelson, 2001; Blank, 2002; Dupree & Primus, 2001; Smolensky & Gootman, 2002).

Research dedicated to understanding the effect of parental involvement in the welfare system on children has expanded greatly within the past few years. Studies conducted in the 1990's have been able to provide experimental evidence of the effects of certain elements of post-1996 welfare policies on child development. This work consists of a series of eleven studies, which have looked at the influence of various approaches to welfare policy (Morris, Huston, Duncan, Crosby, & Bos, 2001). Although this research has demonstrates the effect that welfare policy has on child development, very little work

has explored potential racial/ethnic group differences in effects. Past research has revealed few racial/ethnic differences in the effects of earnings supplement programs, programs which increased income contingent on increases in employment, on children's outcomes (Morris, Gennetian, Yoshikawa, & Gassman-Pines, 2003). However, racial/ethnic group differences have been found in the effect of mandatory employment programs, programs which required work-related activities, but did not provide additional efforts to increase income, on children's academic achievement. Additionally, one such program (National Evaluation of Welfare-to-Work Strategies) employed multiple strategies for increasing labor force participation. One component of the program of the program (Work-First) encouraged immediate employment while the other (Education-First) emphasized adult basic education. Research focusing on children in middle childhood found that participation in the Education-First program produced an increase in math and reading scores for Black and Latino children, but a decrease in scores for White children (Yoshikawa et al., 2003).

Although these findings offer insight into the effects of mandatory employment programs on ethnically diverse children in middle childhood, it is still unclear whether these programs' effects on adolescents differ by race/ethnicity. A recent synthesis of sixteen experimentally evaluated welfare programs found overall negative effects on adolescent academic achievement outcomes (Gennetian et al., 2002). Overall, parents in the programs reported worse school performance, a higher rate of grade repetition, and more use of special services than control group parents. In general, involvement in these programs did not affect the proportion of adolescents who dropped out of, were

suspended from, or completed school. However, it is unclear whether these overall effects differed by race/ethnicity.

Based on these gaps in the relevant literatures, this study explores these research questions:

1) Does a mandatory employment program differentially affect dropout rates across ethnic groups at its five-year follow-up?
2) If yes, are these effects mediated by prior changes in human capital, income and employment, family structure, and parental values? Specifically, does variation in program-induced changes in adult education, income and employment, or marriage at 2 years explain ethnic differences in program effects on dropout at 5 years? Do baseline differences in values influence how individuals of different racial/ethnic groups respond to program involvement, and in turn differentially affect dropout?[1]

To address these questions, two types of mandatory employment programs were investigated: a "Work-First" approach, in which caseworkers emphasized immediate employment, and an "Education-First" approach, in which caseworkers emphasized adult basic education prior to employment. In both conditions participants had to meet hourly requirements for work and education or risk having their benefits reduced. It is hypothesized that program effects on dropout are more likely to be seen in the Education-First condition because of this program's focus on education. Program-induced changes in education will explain racial/ethnic differences in Education-First-program effects on dropout, while program-induced changes in employment, earnings, and income will explain racial/ethnic differences in Work-First-program effects. A competing hypothesis proposes that baseline differences in racial/ethnic values towards work and education will affect how recipients respond to either the Education-First or Work-First program approach, and as a result drive program effects. Positive effects will be seen for participants who have a high value of education and are placed in an Education-First

program or participants who have high values towards work and are placed in a Work-First program.

## Methods

*Sample*

Data for this study were drawn from the National Evaluation of Welfare-to-Work Strategies (NEWWS), an experimental longitudinal evaluation of a mandatory employment program. NEWWS was a federally mandated study conducted by the Manpower Demonstration Research Corporation (MDRC) to evaluate aspects of the 1988 Family Support Act (centrally, the Jobs Opportunity and Basic Skills programs, or JOBS). The NEWWS evaluation consisted of 11 experimental programs in a total of seven sites. The overall goal of these experiments was to test the impact of making employment-related activities mandatory for welfare recipients. In three of these sites, extensive data on children's development were collected at 2-year and 5-year follow-ups. In two of these three sites – Grand Rapids, Michigan and Riverside County, California – sufficient numbers of multiple racial/ethnic groups permit examination of differences in effects by ethnicity. In both Education-First and Work-First conditions, the respective activities were mandatory, that is, welfare benefits were reduced for non-compliance.

Respondents were eligible for participation in the overall NEWSS evaluation if they had applied for or were receiving AFDC at the time of enrollment, and if they were not exempt from participation in the Jobs Opportunity and Basic Skills program (i.e., exempt due to being ill or incapacitated, caring for a household member who was ill or incapacitated, pregnant past the first trimester, having a child younger than age three in Riverside and younger than age one in Grand Rapids).

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[1] Parental values were only measured at baseline.

Program enrollment occurred in 1992 and 1993. A control condition, consisting of AFDC rules, also existed at each site; the then-existing AFDC rules did not mandate employment-related activities. Thus, three-way random assignment was performed in each of the sites. Participants were either placed into the control condition, the Education-First program which emphasized adult education prior to employment, or the Work-First program which required immediate employment. Current welfare recipients were randomly assigned in welfare offices to one of the three conditions. The majority of recipients in Riverside and Grand Rapids were single mothers (91.9% and 96.7% respectively) at random assignment.

In the Education-First condition in Riverside, state regulations required that only recipients deemed in need of education be eligible for that condition. "In need" status consisted of meeting one of the following criteria: not proficient in English, no high school diploma or GED, and scoring below a cutoff on a basic math / reading skills exam. Thus, mothers in the Education-First condition (and, in the experimental analyses involving that condition, as well as for the corresponding control group) in Riverside were more disadvantaged, on average, than those in the other conditions in Riverside and Grand Rapids.

There were a total of 4,201 respondents, almost all Latino or White, who took part in one of the three conditions in Riverside County. According to the 1990 Census (closest to the time of enrollment), 88% of low income Latinos in Riverside County were Mexican (unfortunately the NEWWS data sets did not collect information on parents' country of origin). We examine Latino or White respondents who took part in the Education-First, Employment-First, or control conditions and had 15- to 18-year-old

children five years after random assignment. This particular age range was selected to maximize the effect that program involvement might have on a child's decision to either stay in or leave school. Given that this sample of children ranged in age from 10- to 13-years old at the time of random assignment, they experienced these programs during middle and high school, times when children are most likely to drop out of school. The total sample taken from Riverside County thus consists of 383 adolescents, 225 (58.75%) Latino and 158 (41.25%) White. There are a total of 4,155 respondents who took part in one of the three conditions at the Grand Rapids site. We examined only Black or White respondents who took part in the Education-First, Employment-First, or control conditions and had children between the ages of 15- and 18- years old. The final sample taken from the Grand Rapids site consists of a total of 711 adolescents, 301 (42.33%) Black and 410 (57.67%) White. All analyses correct for non-independence of observations (for some families, data were collected on more than one youth in our focal age range).

Tables 1 and 2 present descriptive statistics for the Grand Rapids and Riverside samples at baseline.

*Measures*

*Baseline Covariates.* To explore the unique contribution of program participation and race/ethnicity on high school dropout, human capital, income and education, family structure, and parental values, we include a set of nine variables in order to adjust for baseline differences in respondents. These variables, consist of mother's age at random assignment, if the mother was ever married, whether the mother had her high school diploma or GED (only in Grand Rapids), if the mother had received public assistance for

five years or more, the mother's literacy proficiency as measured by the Test of Adult Literacy Skills (TALS; OECD, 1995), if there were three or more children in the family, if the youngest child in the home was between the ages three and five, household earnings in the previous year, and household earnings in the previous year squared. All of these variables were asked of participants at baseline before random assignment, except the measures of socioeconomic status (previous yearly household earnings and previous yearly household earnings squared), which were obtained through administrative data at baseline.

*Predictor Variables.* The predictors we use include participants' race/ethnicity (coded as either Latino or White in Riverside and either Black or White in Grand Rapids) and program participation (coded as participants' placement in either the Education-First program versus control group or Work-First versus control group), as well as a race/ethnicity by program interaction. These variables were also measured at baseline.

*Dependent Variable.* Our dependent variable, high school dropout, is a binary variable, measured at the 5-year follow up. This measure consists of one question asked of the mother, "Has this child ever dropped out of school?". Participants responded either "yes" or "no".

*Mediator Measures.* The mediators in these analyses include human capital, income and employment, family structure, and parental values. The measure of involvement in *human capital* activities consists of total months in adult educational activities measured across the 2-year follow-up. For the measures of *income and employment* we use administrative data to assess total yearly earnings, total yearly income, and average quarterly employment, measured across the 2-year follow-up.

*Family structure* measures include whether the respondent was married (nearly all respondents were unmarried at baseline) and whether the respondent was cohabiting with a partner, at the 2-year follow-up. Finally, the measures of *parental values* include a set of four questions regarding valuing family over work ("family first") (sample: "I do not want a job because I would miss my kids too much") reported on a 4-point scale ranging from "disagree a lot" to "agree a lot" (alphas .67 and .72 for Latina and White parents in Riverside, respectively, and alphas .61 and .62 for Black and White parents in Grand Rapids). This scale is reverse coded so that higher scores indicate valuing work over family. Additionally, a 5-item scale which measures parents' value of education for themselves includes such items as "I would like to go to school for reading or math" (alphas .65 and .57 for Latina and White parents in Riverside, respectively, and alphas .59 and .59 for Black and White parents in Grand Rapids, respectively) and utilizes the same response categories as the "family first" scale.

*Analytic Plan*

*Questions 1 and 2*. Logistic regressions are used to explore the effect of parental participation in Education-First and Work-First programs, race/ethnicity, and the combined effect of race/ethnicity and program involvement on adolescent dropout rates. Separate analyses are run for the two program approaches. The variables entered into each model consist of the nine baseline covariates, race/ethnicity and program variables and the race/ethnicity by program interaction.

Six of the nine baseline covariates (if the mother was ever married, if the mother has her diploma or GED, if the mother was a long-term welfare recipient, if the mother scored below a specified cut-off on cognitive ability, if there are three or more children in

the family, if the youngest child in the home is between the ages three and five) and the dependent variable are binary variables. These variables are dummy coded so that 0 indicates that the event did not occur and 1 indicates that the event did occur. The remaining baseline covariates, mother's age at random assignment, the previous yearly household earnings, the previous yearly squared household earnings and parental values are continuous variables.

The race/ethnicity and program variables are also dummy coded. In Riverside, the race/ethnicity variable is coded so that 0 represents White and 1 represents Latino and in Grand Rapids the variable is coded so that 0 represents White and 1 represents Black. Program participation is represented by two variables, one which is coded so that assignment to Education-First is 1 and assignment to Work-First or control group is 0. The second is coded so that assignment to the Work-First condition is coded as 1 and assignment to the Education-First condition or control group is 0.

*Question 3*. To test mediation, it is necessary to estimate three regression equations. In the first equation, the dependent variable is regressed on the independent variable in order to establish the predictor's effect on the outcome. In the current study we predict high school dropout from program participation, race/ethnicity, and a program by race/ethnicity interaction. In the second equation the mediator is regressed on the independent variable. In our case, we predict each of the mediators and a program by mediator interaction from program participation, race/ethnicity, and program by race/ethnicity interaction. In the final equation the dependent variable is predicted by the independent variable and the mediator (Baron & Kenny, 1986; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002). For the current analyses we

predict high school dropout from program participation, race/ethnicity, a program by race/ethnicity interaction, and each of the mediators and a mediator by program interaction. Each analysis, using either OLS or logistic regression depending on the nature of the dependent variable, also include the nine baseline covariates. The degree of reduction in the program by race/ethnicity odds ratio when each of the mediators was individually introduced into the model is a measure of the influence of each of the hypothesized mediators (in the case of odds ratio less than 1, degree of increase will be assessed).

Because the measures of values are only available at baseline, assessing the role that these variables play in explaining a program by race/ethnicity effect on dropout require a slightly different analysis. First, we predict dropout from program participation, race/ethnicity, and the program by race/ethnicity interaction. Then, to test whether baseline differences in values explains a program by race/ethnicity interaction, the value of school variable, value of work variable, and program by value interactions are added to the original model. If the program by race/ethnicity interaction is reduced and the value by program interactions are significant, we will conclude that values are driving the program differences in dropout.

Finally, baseline covariate by experiment interactions are added to the original model, as well as each of the mediated models, to assess whether baseline differences in human capital, employment, and income affect program implementation. Because the program by mother's age, program by three or more children in the household, and program by yearly earnings squared are highly correlated (>.65) with other program by baseline covariate interactions, they will be excluded from the model.

## Results

*Differences in Dropout by Racial/Ethnic Group.* We found that participation in the Education-First program differentially affects rates of adolescent dropout dependent on race/ethnicity. The findings from Riverside County Education-First program are presented in Table 3, Column 1. After adjusting for baseline differences, the Education-First by race/ethnicity interaction significantly predicts high school dropout (odds ratio = 0.15; 95% CI = .03 to 0.73; $p$ = .02). Examining this interaction (Figure 1), it is apparent that while involvement in the Education-First condition increases dropout rates for White adolescents, it significantly decreases dropout rates for Latino adolescents. No effects were found in the Work-First condition (Table 4, Column 1).

In Grand Rapids, participation in Education-First also differentially affects adolescent dropout dependent on race/ethnicity. The findings from Grand Rapids are presented in Table 5, Column 1. Once again, in the Education-First condition, after adjusting for baseline differences, the Education-First by race/ethnicity interaction significantly predicts high school dropout (odds ratio = 3.6; 95% CI = 1.14 to 11.02; $p$ = .03). Examining this interaction (Figure 2), it is apparent that while there is a slight decrease in dropout rates for White adolescents, there is a significant increase in dropout for Black adolescents. No effects were found in the Work-First condition (Table 6, Column 1).

*Mediation of the program by race/ethnicity interaction.*

Four sets of mediators (involvement in human capital activities, income and employment, family structure, and parental values) were examined to see whether they explained the effect of the Education-First by race/ethnicity interaction on dropout in

Riverside and Grand Rapids. To examine the potential role of each of these mediators, each mediator variable (months in adult education, total yearly earnings, total yearly income, average number of quarters employed, marriage, cohabitation, parents' value of school, and parents' value of work over family) and a mediator by program interaction were introduced into the original model one at a time. In the Grand Rapids Education-First condition, the inclusion of the mediators and the mediator by program interactions did not reduce the magnitude of the racial/ethnic difference in the high school dropout odds ratio (Table 5, Columns 2-7). However, in the Riverside Education-First condition, the inclusion of both the Work First and Value of School Indexes, and their program interactions, significantly reduces the significance of the racial/ethnic difference in high school dropout (Table 3, Column 2). When values are included, the odds ratio of the original Education-First by racial/ethnic interaction increases from 0.15 to 0.41 and is no longer significant (odds ratio = 0.41; 95% CI = .04 to 4.1; $p = 0.45$). Additionally, the Education-First by Value of School Index interaction is significant at the trend level (odds ratio = .21; 95% CI = .04 to 1.11; $p = .07$). Examining this relationship (Figure 3), it is apparent that while children of Education-First participants who have a high value of school (one SD above the mean) experience a slight decrease in dropout, children of Education-First participants who have a low value of school (one SD below the mean) experience a significant increase in dropout.

To evaluate the effects that other racial/ethnic differences in baseline covariates may have on participants' response to the program, Education-First by baseline covariate interactions were introduced into the original Riverside Education-First model (Table 7, Model 3). When this is done, the Education-First by race/ethnicity interaction remains

significant (odds ratio = .15; 95% CI = .02 to 1.08; $p$ = .04). Additionally, the interaction between Education-First and long term recipient status (odds ratio = 10.07; 95% CI = 3.3 to 105.64; $p$ = .06) and the interaction between Education-First and mother's cognitive ability (odds ratio = .18; 95% CI = .03 to 1.06; $p$ = .06) are significant at the trend level. When the Value of School Index, the Value of Work Index and their respective interactions are introduced into the model, the Education-First by race/ethnicity interaction odds ratio is once again reduced in significance(odds ratio = .29; 95% CI = .02 to 4.39; $p$ = .37). Additionally, the Education-First by Value of School Index interaction odds ratio increases from .16 to .21. Although this interaction is no longer significant, it is likely that this is due to the drop in statistical power when all baseline interactions are added into the model (odds ratio = .16; 95% CI = .01 to 1.9; $p$ = .15). Additionally, the baseline by long term receipt variable remains significant (odds ratio = 12.94; 95% CI = 1.16 to 144.03; $p$ = .04) even after values and the values by HCD interactions are introduced into the model.

## Discussion

The goal of the present study was to examine whether parental participation in a mandatory employment program differentially affects adolescent high school dropout across racial/ethnic groups. Additionally, to explore concurrent sub-group differences that might drive the difference in dropout rates.

The results of this study demonstrate that program participation does differentially affect dropout rates of adolescents across racial/ethnic groups. However, this is only the case for recipients who participated in the Education-First approach of NEWWS. No significant differences were found for individuals who participated in the Work-First

program. In both the Riverside County and Grand Rapids sites, significant differences between racial/ethnic groups in dropout were found when comparing those in the Education-First program group to the control group. In Riverside, White adolescents whose parents participated in the Education-First program experienced a significant increase in rates of dropout compared to those whose parents participated in the control program. Conversely, Latino adolescents whose parents participated in the Education-First program experienced a significant decrease in rates of dropout compared with controls. However, a different pattern of effects was seen in Grand Rapids. While there was no significant difference in rates of dropout for White adolescents whose parents participated in the Education-First group, there was a significant increase in rates of dropout for Black adolescents whose parents participated in Education-First compared to the control group.

In an attempt to explain these somewhat counterintuitive findings several sets of mediators were considered. Although measures of human capital activities, employment and income, and family structure were unable to explain differences in dropout, in Riverside, measures of parental values towards work and school did reduce the magnitude of differences in program effects on dropout, providing evidence to support the role of Person-Environment Fit. When the program by value of work and program by value of school interactions were included in the original regression model, the interaction of Education-First and race/ethnicity was reduced in magnitude and significance. Additionally, a significant Education-First by value of school effect was found. This interaction demonstrated that adolescents whose parents were in the Education-First program, and had a low value of school, experienced a significant

increase in rates of dropout compared to adolescents whose parents were in the control condition and had a high value of school. Adolescents whose parents were in the Education-First condition and had a high value of school experienced a slight decrease in rates of dropout when compared to controls. These results suggest that ethnicity and value of school may have been correlated. In fact, Latina mothers scored significantly higher on the value of school index than White mothers (2.96 vs. 2.78, $p = .03$). Additionally, this interaction held up even after program by baseline interactions were introduced into the equation.

Limitations of this study include the following. First, mediator by program interactions, with the exception of those at baseline, were conducted with mediators assessed across the 2-year follow-up. Unobserved mediators may bias estimates of these interaction effects. However, our principle findings of interaction effects pertained to those assessed at baseline, which are less subject to endogenetic bias since baseline variables were collected before random assignment. Second, maternal reports of dropout may potentially be biased, and the degree of bias may differ by ethnicity. We cannot assess the degree to which such bias may have influenced our results. Third, specific measures of ethnicity or immigration status among the Latino parents were not collected. Future evaluations of welfare and anti-poverty programs must collect these data.

These findings suggest that individual differences in values can affect the impact that policy approaches have on program recipients and their families. Person-environment fit theory posits that congruence between individual characteristics and environmental provisions can result in an increase in positive outcomes as well as a decrease in negative ones (Moos, 1984). The current study lends support to this theory

by demonstrating that a match between program recipients' values and program approach may be associated with variation in program effects on children. And, when a program approach does not "fit" with values of the recipient, negative effects on children may occur. In Riverside, the Education-First program's emphasis on adult education may have fit well with the Latina mothers' relatively high value of education for themselves. As a result, Latina mothers may have responded more positively towards the program and this may have positively affected their children's academic outcomes. Conversely, White mothers, whose values did not as closely match the goals of the program, may have had a more negative response, and as a result, inadvertently affected their children's academic outcomes. Although we were not able identify the particular way in which the Latina mothers may have responded based on their values, several hypotheses may be drawn. Two potential explanations are that involvement in an Education-First program, which provided a good fit with educational goals, may have increased mother's cognitive abilities or educational expectations. In turn, these outcomes may have then influenced the academic achievement of their children.

Although the findings in Riverside provide support for the role of Person-Environment Fit in explaining ethnic differences in program impacts, the outcomes in Grand Rapids were less clear cut. Although the interaction of participation in an Education-First program and race/ethnicity on dropout rates was clearly established, the significance of this finding was not reduced after including human capital, employment and income, family structure, and values variables into the model. Unfortunately, this may be a result of the limitations of the data. Although it has been clearly established in the literature that male and female adolescents often dropout out of school for different

reasons, we were unable to consider this variation in the current study (Jordan, Lara, McPartland, 1996; Rumberger, 1995). Additionally, the mediators proposed in this study are just some of the many factors that may be driving these rates of dropout. However, we were limited to possibilities for which we had the necessary measures.

Although we were not able to explain dropout variation in the Grand Rapids HCD condition, this does not negate the importance of Person-Environment Fit. It could be that unlike the Latinas in Riverside, the HCD program did not provide as good a match for the Black women in Grand Rapids. Even though Black and White recipients did not have significant differences on the Value of School Index, it could be that baseline variation in an unmeasured third variable affected how these women approached the HCD program, and in turn the effect that it had on their children.

This work is the first to demonstrate the importance of considering Person-Environment Fit in research on welfare or anti-poverty programs and child development. Although policymakers and researchers alike have begun to consider how changes in policy may differentially affect subgroups of the population, they have yet to consider the potential interaction between program characteristics and group differences. As demonstrated by the current work, ignoring the interplay between the person and the environment can not only affect how recipients respond to a program, it can affect their children's outcomes as well. It is necessary that researchers continue to explore the interplay between policy and recipient, and in turn, inform the development and implementation of future policy approaches.

## References

Acs, G. & Nelson, S. (2001). *"Honey I'm home": Changes in living arrangements in the late 1990s.* Washington, D.C.: The Urban Institute. *Assessing the New Federalism* Policy Brief B-38.

Astone, N.M., & McLanahan, S.S. (1991). Family structure, parental practices and high school completion. *American Sociological Review*, 56, 1-12.

Atkinson, J.W. (1964). *An Introduction to motivation.* Princeton, NJ: Van Nostrand.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Baron, R.M. & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51(6),* 1173-1182.

Becker, G.S. & Tomes N. (1979). An equilibrium theory of the distribution of income and intergenerational mobility. *Journal of Political Economy, 79(3),* 1153-89.

Becker, G.S. & Tomes N. (1986). Human capital and the rise and fall of families. *Journal of Labor Economics, 4,* S1-S39.

Blank, R.M. (2002). Evaluating welfare reform in the United States. *Journal of Economic Literature, XL,* 1105-1166.

Blau, P. & Duncan, O.D. (1967). The American Occupational Structure, Wiley, New York.

Becker, G.S. (1993). *Human Capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). Chicago, IL: The University of Chicago Press.

Bridges, J.S. & Etaugh, C. (1994). Black and white college women's perceptions of early maternal employment. *Psychology of Women Quarterly, 18(3),* 427-431.

Bridges, J.S. & Etaugh, C. (1996). Black and white college women's maternal employment outcome expectations and their desired timing of maternal employment. *Sex Roles, 35(9-10),* 543-562.

Broman, C.L., Hamilton, V.L., & Hoffman, W.S. (1990). Unemployment and its effects on families: Evidence from a plant closing study. *American Journal of Community Psychology, 18,* 643-659.

Catalano, R. (1991). The health effects of economic insecurity. *American Journal of Public Health, 81*, 1148–1152.

Catalano, R., & Dooley, D. (1977). Economic predictors of depressed mood and stressful life events in a metropolitan community. *Journal of Health and Social Behavior, 18*, 292–307.

Cherry, F.F., & Eaton, E.L. (1977). Physical and cognitive development in children of low-income mothers working in the child's early years. *Child Development, 48,* 158-166.

Corcoran, M., Gordon, R., Laren, D., & Solon, G. (1987). *Intergenerational transmission of education, income, and earnings: Final report to the Ford Foundation.* Ann Arbor, MI: University of Michigan, Institute for Policy Studies.

DeBaryshe, B.D., Patterson, G.R., & Capaldi, D.M. (1993). A performance model for academic achievement in early adolescent boys. *Developmental Psychology, 29(5),* 795-804

Duncan, G.J. & Brooks-Gunn, J. (Eds.) (1997). *Consequences of growing up poor.* New York: Russell Sage Foundation.

Duncan, O.D., Featherman, D.L., & Duncan, B. (1972). Socioeconomic Background- and Achievement, Seminar Press, New York.

Dupree, A. & Primus, W. (2001). *Declining share of children lived with single mothers in the late 1990s*. Mimeo. Washington, D.C.: Center on Budget and Policy Priorities.

Eccles (Parsons), J., Adler, T.F., Futterman, R., Goff, S.B., Kaczala, C.M., Meece, J.L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J.T. Spence (Ed.), *Achievement and achievement motivation* (pp.75-146). San Francisco: W.H. Freeman.

Elder, G.H. (1974). *Children of the Great Depression: Social change in life experience.* Chicago: University of Chicago Press.

Fry, R. (2003). Hispanic youth dropping out of U.S. schools: Measuring the challenge. Retrieved December 14, 2003 from http://www.pewhispanic.org/site/docs/pdf/high%20school%20dropout%20report--final.pdf. Washington, DC: Pew Hispanic Center.

Garfinkel, I., & McLanahan, S.S. (1986). *Single mothers and their children*. Washington, DC: Urban Institute Press.

Gennetian, L.A., Duncan, G.J., Knox, V.W., Vargas, W.G., Clark-Kauffman, E., & London, A.S. (2002). *How Welfare and Work Policies for Parents Affect Adolescents: A Synthesis of Research.* New York, N.Y: Manpower Demonstration Research Corporation.

Granrose, C.S. & Cunningham, E.A. (1988). Postpartum work intentions among black and white college women. *Career Development Quarterly, 37(2),* 149-164.

Hauser, R.M. (1971). Socioeconomic Background and Educational Performance, American Sociological Association, Washington DC.

Heyns, B. (1985). The influence of parental work on children's school achievement. In S.B. Kamerman & C.D. Hayes (Eds.), *Families that work: Children in a changing world* (pp. 229-267). Washington, DC: National Academy Press.

Huston, A.C., McLoyd, V., & Garcia Coll, C. (1994). Children and poverty: Issues in contemporary research. *Child Development, 65,* 264-273.

Jahoda, M. (1979). The impact of unemployment in the thirties and seventies. *British Psychological Society Bulletin, 32,* 309-314.

Jahoda, M. (1980). Work, employment, and unemployment: Values, theories, and approaches in social research. *American Psychologist, 36,* 184-191.

Joint Center for Poverty Research. (2002, February). *The effect of increasing welfare mothers' education on their young children's academic problems and school readiness* (Working Paper No. 280). Chicago, IL: Magnuson & McGroder.

Krein, S.F., & Beller, A.H. (1986). *Family structure and the educational structure attainment of children: Differences by duration, age, and gender.* Paper presented to the annual meetings of the Population Association of America, San Francisco.

MacKinnon, D.P., Lockwood, C.M., Hoffman, J.M., West, S.G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7(1),* 83-104.

McLanahan, S.S. (1985). Family structure and the reproduction of poverty. *American Journal of Sociology*, 90, 873-901.

McLanahan, S.S., Astone, N.M., & Marks, N.F. (1991). The role of mother-only families in reproducing poverty. In A.C. Huston (Ed.), *Children in poverty: child development and public policy* (pp.51-78). Cambridge: Cambridge University Press.

McLanahan, S.S. & Sandefur, G. (1994). *Growing up with a single parent: What hurts, what helps.* Cambridge, MA: Harvard University.

Michalopoulos, C., Schwartz, C., & Adams-Ciardullo, D. (2001). *National evaluation of welfare-to-work strategies; What works best for whom: Impacts of 20 welfare-to-work programs by subgroup.* New York, NY: Manpower Research Demonstration Corporation.

Mincy, R.B. & Oliver, H. (2003). *Age, race, and children's living arrangements: Implications for TANF reauthorization.* Washington, D.C.: The Urban Institute. *Assessing the New Federalism.* Policy Brief B-53.

Miller, C., Knox, L., Gennetian, L.A., Dodoo, M., Hunter, J., & Redcross, C. (2000).*Reforming welfare and rewarding work: Final report on the Minnesota Family Investment Program* (Vol. 1, Effects on adults). New York, NY.: Manpower Demonstration Research Corporation.

Moos, R.H. (1984). Context and coping: Toward a unifying conceptual framework. *American Journal of Community Psychology, 12(1)*, 1-25.

Morris, P.A., Gennetian, L.A., Yoshikawa, H., & Gassman-Pines, A. (2002). Do short-term impacts of welfare and employment policies on middle-childhood outcomes

differ by race/ethnicity? A meta-analysis. *Paper presented at Association of Public Policy Analysts and Managers Annual Meeting*, Dallas, TX.

Morris, P.A., Huston, A.C., Duncan, G.J., Crosby, D.A. & Bos, J.M. (2001). *How welfare and work policies affect children: A synthesis of research.* New York, NY.: Manpower Demonstration Research Corporation.

Mulkey, L.M., Crain, R.L., & Harrington, A.J.C. (1992). One-parent households and achievement: Economic and behavioral explanations of a small effect. *Sociology of Education, 65,* 48-65.

Neisser, U., Boodoo, G., Bouchard, T.J., Boykin, A.W., Brody, N., Ceci, S.J., Halpern, D.F., Loehlink, J.C., Perloff, R., Steinberg, R., & Urbina, S. (1996). Intelligence: knowns and unknowns. *American Psychologist, 51,* 77-101.

Organization for Economic Co-operation and Development (1995). *Literacy, Economy and Society: Results of the First International Adult Literacy Survey*. Ottawa, Ontario: Statistics Canada.

Patterson, C.J., Kupersmidt, J.B., & Valden, N.A. (1990). Income level, gender, ethnicity, and household composition as predictors of children's school-based competence. *Child Development, 61,* 485-494.

Pervin, L. A. (1983). The stasis and flow of behavior: Toward a theory of goals. In M. M. Page (Ed.), Nebraska Symposium on Motivation 1982 (pp. 1–53). Lincoln: University of Nebraska Press.

President's Advisory Commission on Educational Excellence for Hispanic Americans (2003). From risk to opportunity: Fulfilling the needs of Hispanic Americans in

the 21st century. Retrieved November 8, 2003 from http://www.yesican.gov/paceea/finalreport.pdf.

Rumberger, R.W. (1983). Dropping out of high school: The influence of race, sex, and family background. *American Educational Research Journal, 32,* 583-625.

Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, 32, 583-625.

Schmitt, N., Sacco, J.M., Ramey, S., Ramey, C, & Chan, D (1999). Parental employment, school climate, and children's academic and social development. *Journal of Applied Psychology,* 84(5*),* 737-753.

Schunck, D.H., & Zimmerman, B.J. (1996). Modeling and self-efficacy influences on children's development and self-regulation. In J. Juvonen & K.R. Wentzel (Eds.), *Social motivation: Understanding children's school adjustment* (pp. 154-180). New York: Cambridge University Press.

Shrout, P. & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7(4),* 422-445.

Smolensky, E., & Gootman, J. (2003). Working families and growing kids: Caring for children and adolescents. Washington, DC: National Academy Press.

U.S. Census. (2000). *Poverty:1999* (Publication No. C2KBR-19). Washington, D.C.: Bishaw, A. & Iceland, J.

U.S. Census. (2000). *Poverty 2000 highlights*. Retrieved February 19, 2004 from http://www.census.gov/hhes/poverty/poverty00/pov00hi.html.

U.S. Department of Education. (2001). *Dropout rates in the united states 2000* (NCES 2002-114). Washington, DC.

Vinokur, A.D., Price, R.H., & Caplan, R.D. (1996). Hard times and hurtful partners: How financial strain affects depression and relationship satisfaction of unemployed persons and their spouses. *Journal of Personality and Social Psychology, 71*(1), 166-179.

Winefield, A.H., Winefield, H.R., Tiggemann, M., & Goldney, R.D. (1991). A longitudinal study of the psychological effects of unemployment and unsatisfactory employment on young adults. *Journal of Applied Psychology, 76,* 424-431.

Yeung, J.W., Linver, M.R., & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family processes. *Child Development, 73(6),* 1861-1879.

Yoshikawa, H., Gassman-Pines, G., Morris, P., Gennetian, L., Godfrey, E., & Roy, A. (2003, April). Racial/Ethnic differences in five-year impacts of welfare policies on middle-childhood standardized achievement. Paper presented at the annual meeting of the Society for Research on Child Development, Tampa, FL.

Zaslow, M.J. & Emig, C.A. (1997). When low-income mothers go to work: Implications for children. *The Future of Children, 7(1),* 110-115.

**Table 1.**
**Sample Characteristics at Baseline, Grand Rapids**

| | All ($n$ = 711) | White ($n$ = 410) | Black ($n$ = 301) |
|---|---|---|---|
| Ever Married | | | |
| Yes | 66.81% | 86.83% | 39.53% |
| No | 33.19% | 13.17% | 60.47% |
| Three or more children in household | | | |
| Yes | 53.87% | 50% | 59.14% |
| No | 46.13% | 50% | 40.86% |
| Youngest child between the ages of 3 and 5 | | | |
| Yes | 21.10% | 19.51% | 23.26% |
| No | 78.90% | 80.49% | 76.74% |
| Has high school degree or GED | | | |
| Yes | 62.03% | 35.12% | 58.14% |
| No | 37.97% | 64.88% | 41.86% |
| Over 2 years of welfare receipt | | | |
| Yes | 75.25% | 69.27% | 83.39% |
| No | 24.75% | 30.73% | 16.61% |
| Mean age of mother | 33.04 | 33.64 | 32.21 |
| | (4.80) | (4.97) | (4.43) |
| Mean earnings for prior year | 2172.67 (4563.33) | $2076.86 (5008.84) | $2303.17 (3879.40) |

**Note: Percentages given for categorical variables; means (standard deviations) given for continuous variables.**

**Table 2.**
**Sample Characteristics at Baseline, Riverside**

| | All ($n$ = 338) | White ($n$ = 158) | Latino ($n$ = 225) |
|---|---|---|---|
| Ever Married | | | |
| Yes | 78.07% | 84.81% | 73.33% |
| No | 21.93% | 15.19% | 26.67% |
| Three or more children in household | | | |
| Yes | 58.75% | 53.16% | 62.67% |
| No | 41.25% | 46.84% | 37.33% |
| Youngest child between the ages of 3 and 5 | | | |
| Yes | 46.74% | 37.97% | 52.89% |
| No | 53.26% | 62.03% | 47.11% |
| Over 2 years of welfare receipt | | | |
| Yes | 68.59% | 73.42% | 65.18% |
| No | 31.40% | 26.58% | 34.82% |
| Mean age of mother | 34(5.4) | 33.3(4.8) | 34.6(5.7) |
| Mean earnings for prior year | $1711.03 (3499.33) | $1498.08 (3364.23) | $1860.57 (3591.02) |

**Note: Percentages given for categorical variables; means (standard deviations) given for continuous variables.**

| Coulumn 5 | | | | | Coulumn 6 | | | | | Coulumn 7 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Quarterly Employment | | | | | Total Months Education | | | | | Cohabitation | | | | |
| b | SE | | EXP(b) | Low CI | High CI | b | SE | | EXP(b) | Low CI | High CI | b | SE | | EXP(b) | Low CI | High CI |
| 0.7 | 0.55 | | 2.0138 | 0.6771 | 5.9299 | 0.68 | 0.56 | | 1.9739 | 0.6637 | 5.8709 | 0.57 | 0.54 | | 1.7683 | 0.6126 | 5.1552 |
| 1.8 | 0.65 | ** | 6.0496 | 1.6989 | 21.542 | 1.24 | 0.59 | * | 3.4556 | 1.0833 | 10.913 | 0.76 | 0.55 | | 2.1383 | 0.7261 | 6.2965 |
| -2.19 | 0.86 | * | 0.1119 | 0.0209 | 0.6065 | -1.84 | 0.84 | * | 0.1588 | 0.0308 | 0.827 | -1.91 | 0.82 | * | 0.1481 | 0.0299 | 0.7334 |
| -0.14 | 0.53 | | 0.8694 | 0.3104 | 2.4351 | -0.06 | 0.53 | | 0.9418 | 0.3329 | 2.6645 | -0.14 | 0.53 | | 0.8694 | 0.3073 | 2.4351 |
| 0.41 | 0.54 | | 1.5068 | 0.5273 | 4.306 | 0.15 | 0.58 | | 1.1618 | 0.3716 | 3.5966 | 0.09 | 0.57 | | 1.0942 | 0.3606 | 3.3535 |
| 0.28 | 0.48 | | 1.3231 | 0.5169 | 3.3872 | 0.18 | 0.53 | | 1.1972 | 0.4274 | 3.3535 | 0.12 | 0.52 | | 1.1275 | 0.4066 | 3.1582 |
| -0.67 | 0.51 | | 0.5117 | 0.1882 | 1.391 | -0.36 | 0.52 | | 0.6977 | 0.2516 | 1.9348 | -0.3 | 0.53 | | 0.7408 | 0.2618 | 2.117 |
| 0.01 | 0.04 | | 1.0101 | 0.9324 | 1.0942 | 0.02 | 0.04 | | 1.0202 | 0.9512 | 1.1052 | 0.03 | 0.04 | | 1.0305 | 0.9418 | 1.1163 |
| 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 |
| 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 |
| 0.2 | 0.47 | | 1.2214 | 0.4819 | 3.0649 | 0.12 | 0.42 | | 1.1275 | 0.5016 | 2.56 | 0.06 | 0.4 | | 1.0618 | 0.4771 | 2.3396 |
| 0.03 | 0.01 | * | 1.0305 | 1.0101 | 1.0513 | | | | | | | | | | | | |
| -0.08 | 0.02 | ** | 0.9231 | 0.8869 | 0.9704 | | | | | | | | | | | | |
| | | | | | | 0.1 | 0.07 | | 1.1052 | 0.9608 | 1.2712 | | | | | | |
| | | | | | | -0.26 | 0.12 | * | 0.7711 | 0.6126 | 0.9802 | | | | | | |
| | | | | | | | | | | | | -0.7 | 1.07 | | 0.4966 | 0.0608 | 4.0552 |
| | | | | | | | | | | | | 0.6 | 1.53 | | 1.8221 | 0.0907 | 36.598 |

Table 4

Summary of Regression Results Predicting Dropout for Riverside LFA

| | Coulumn16 | | | | | Coulumn 2 | | | | | Coulumn 3 | | | | | Coulumn 4 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Overall | | | | | Values | | | | | Total Earnings | | | | | Total Income | | | | |
| | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI |
| Measured at baseline | | | | | | | | | | | | | | | | | | | | |
| Latino | 0.48 | 0.57 | 1.6161 | 0.5326 | 4.855 | 0.36 | 0.78 | 1.4333 | 0.3135 | 6.6194 | 0.56 | 0.54 | 1.7507 | 0.6065 | 5.1039 | 0.54 | 0.58 | 1.716 | 0.5543 | 5.2593 |
| LFA | 0.02 | 0.62 | 1.0202 | 0.3042 | 3.4212 | -1.54 | 4.45 | 0.2144 | 3E-05 | 1326.1 | 0.42 | 0.64 | 1.522 | 0.4317 | 5.3122 | -1.31 | 1.2 | 0.2698 | 0.0257 | 2.8292 |
| LFA*Latino | -0.97 | 0.99 | 0.3791 | 0.0545 | 2.6379 | -0.37 | 1.27 | 0.6907 | 0.0578 | 8.3311 | -0.83 | 0.97 | 0.436 | 0.0659 | 2.8864 | -1.13 | 1.07 | 0.323 | 0.04 | 2.6379 |
| Ever married | -0.29 | 0.54 | 0.7483 | 0.2592 | 2.1598 | -0.06 | 0.75 | 0.9418 | 0.2144 | 4.096 | -0.15 | 0.51 | 0.8607 | 0.3166 | 2.3164 | -0.54 | 0.54 | 0.5827 | 0.2039 | 1.6653 |
| On AFDC 5+ years | -0.86 | 0.51 | 0.4232 | 0.1572 | 1.1388 | 0.49 | 0.76 | 1.6323 | 0.1381 | 2.7456 | -0.73 | 0.49 | 0.4819 | 0.1827 | 1.2712 | -0.76 | 0.51 | 0.4677 | 0.1738 | 1.2586 |
| 3+ Children | 0.3 | 0.58 | 1.3499 | 0.4274 | 4.2207 | -0.63 | 1.13 | 0.5326 | 0.0584 | 4.9037 | 0.36 | 0.58 | 1.4333 | 0.4584 | 4.4371 | 0.59 | 0.51 | 1.804 | 0.6703 | 4.9037 |
| Youngest child 3-5 | -0.51 | 0.61 | 0.6005 | 0.1809 | 1.9937 | 0.42 | 1.18 | 1.522 | 0.1481 | 15.487 | -0.65 | 0.6 | 0.522 | 0.162 | 1.6989 | -0.4 | 0.62 | 0.6703 | 0.1979 | 2.2705 |
| Age of parent | 0.05 | 0.04 | 1.0513 | 0.9704 | 1.1388 | 0.1 | 0.05 * | 1.1052 | 1.1052 | 1.2214 | 0.04 | 0.04 | 1.0408 | 0.9512 | 1.1388 | 0.05 | 0.04 | 1.0513 | 0.9704 | 1.1388 |
| Average yearly earnings | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Average yearly earnings sq | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Mother's cognitive ability | 0.79 | 0.54 t | 2.2034 | 0.7634 | 6.2965 | -0.52 | 0.59 | 0.5945 | 0.1864 | 1.8965 | 0.94 | 0.59 | 2.56 | 0.8106 | 8.0849 | 0.7 | 0.52 | 2.0138 | 0.7189 | 5.5845 |
| Combined values: | | | | | | | | | | | | | | | | | | | | |
| Value of work | | | | | | -0.56 | 0.72 | 0.5712 | 0.1381 | 2.3632 | | | | | | | | | | |
| LFA*Value of work | | | | | | -2.13 | 1.39 | 0.1188 | 0.0078 | 1.804 | | | | | | | | | | |
| Value of school | | | | | | 0.78 | 0.66 | 2.1815 | 0.6005 | 8.0045 | | | | | | | | | | |
| LFA*Value of school | | | | | | 2.58 | 1.36 t | 13.197 | 0.9139 | 190.57 | | | | | | | | | | |
| Measured two years after RA | | | | | | | | | | | | | | | | | | | | |
| Total earnings in yrs 1-2 | | | | | | | | | | | 0 | 0 * | 1 | 1 | 1 | | | | | |
| LFA*Total earnings | | | | | | | | | | | 0 | 0 ** | 1 | 1 | 1 | | | | | |
| Total income in yrs 1-2 | | | | | | | | | | | | | | | | 0 | 0 t | 1 | 1 | 1 |
| LFA*Total income | | | | | | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 |
| # Quarters employed | | | | | | | | | | | | | | | | | | | | |
| LFA*# Quarters emplyed | | | | | | | | | | | | | | | | | | | | |
| Avg. quarterly employment | | | | | | | | | | | | | | | | | | | | |
| LFA*Avg.quarterly employ. | | | | | | | | | | | | | | | | | | | | |

| Coulumn 5 | | | | | Coulumn 6 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Average Quarterly Employment | | | | | Marriage | | | | |
| b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI |
| 0.42 | 0.57 | 1.522 | 0.4916 | 4.6646 | 0.56 | 0.63 | 1.7507 | 0.5117 | 5.9895 |
| 0.36 | 0.78 | 1.4333 | 0.3073 | 6.6194 | 0.16 | 0.74 | 1.1735 | 0.2725 | 5.0531 |
| -0.99 | 0.86 | 0.3716 | 0.0686 | 1.9937 | -1.09 | 1.07 | 0.3362 | 0.042 | 2.7183 |
| -0.4 | 0.51 | 0.6703 | 0.2491 | 1.8221 | -0.32 | 0.54 | 0.7261 | 0.2516 | 2.0959 |
| -0.66 | 0.48 | 0.5169 | 0.2019 | 1.3364 | -0.83 | 0.51 t | 0.436 | 0.1588 | 1.1853 |
| 0.58 | 0.51 | 1.786 | 0.6637 | 4.855 | 0.25 | 0.59 | 1.284 | 0.4066 | 4.0552 |
| -0.83 | 0.56 | 0.436 | 0.1451 | 1.2969 | -0.53 | 0.62 | 0.5886 | 0.1755 | 1.9739 |
| 0.04 | 0.04 | 1.0408 | 0.9608 | 1.1388 | 0.05 | 0.04 | 1.0513 | 0.9704 | 1.1503 |
| 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1.08 | 0.61 t | 2.9447 | 0.8781 | 9.7767 | 0.85 | 0.52 t | 2.3396 | 0.8437 | 6.5535 |
| 0.04 | 0.01 ** | 1.0408 | 1.0202 | 1.0618 | | | | | |
| -0.03 | 0.02 | 0.9704 | 0.9324 | 1.0202 | | | | | |
| | | | | | 0.58 | 0.93 | 1.786 | 0.2865 | 11.023 |
| | | | | | -0.78 | 1.52 | 0.4584 | 0.0233 | 9.1157 |

Table 5

Summary of Regression Results Predicting Dropout for Grand Rapids HCD

| | Coulumn 1 | | | | | Coulumn 2 | | | | | Coulumn 3 | | | | | Coulumn 4 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Overall | | | | | Values | | | | | Total Earnings | | | | | Total Income | | | | |
| | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI |
| Measured at baseline | | | | | | | | | | | | | | | | | | | | |
| Black | -1.23 | 0.47 ** | 0.2923 | 0.1153 | 0.7408 | -1.33 | 0.47 ** | 0.2645 | 0.1044 | 0.6637 | -1.24 | 0.47 ** | 0.2894 | 0.1153 | 0.7189 | -1.25 | 0.47 ** | 0.2865 | 0.1142 | 0.7189 |
| HCD | -0.27 | 0.35 | 0.7634 | 0.3829 | 1.5068 | 1.34 | 1.64 | 3.819 | 0.1526 | 95.583 | 0.25 | 0.41 | 1.284 | 0.5712 | 2.8864 | 0.61 | 0.69 | 1.8404 | 0.4771 | 7.0287 |
| HCD*Black | 1.27 | 0.58 * | 3.5609 | 1.1388 | 11.023 | 1.41 | 0.58 * | 4.096 | 1.3231 | 12.807 | 1.18 | 0.59 * | 3.2544 | 1.0305 | 10.278 | 1.32 | 0.58 * | 3.7434 | 1.1972 | 11.822 |
| Ever married | 0.05 | 0.34 | 1.0513 | 0.5434 | 2.0138 | 0.06 | 0.34 | 1.0618 | 0.5379 | 2.0751 | 0.01 | 0.34 | 1.0101 | 0.5117 | 1.9739 | 0.04 | 0.34 | 1.0408 | 0.5273 | 2.034 |
| On AFDC 5+ years | 0.03 | 0.31 | 1.0305 | 0.5543 | 1.8965 | 0.12 | 0.32 | 1.1275 | 0.6005 | 2.117 | -0.03 | 0.31 | 0.9704 | 0.5326 | 1.786 | 0 | 0.32 | 1 | 0.5379 | 1.8776 |
| 3+ Children | -0.12 | 0.3 | 0.8869 | 0.4916 | 1.6 | -0.05 | 0.31 | 0.9512 | 0.5169 | 1.7507 | -0.15 | 0.3 | 0.8607 | 0.4771 | 1.5527 | -0.11 | 0.31 | 0.8958 | 0.4868 | 1.6323 |
| Youngest child 3-5 | -0.28 | 0.39 | 0.7558 | 0.3499 | 1.6161 | -0.21 | 0.4 | 0.8106 | 0.3679 | 1.786 | -0.31 | 0.4 | 0.7334 | 0.3362 | 1.5841 | -0.27 | 0.4 | 0.7634 | 0.3465 | 1.682 |
| Age of parent | 0.07 | 0.03 * | 1.0725 | 1.0202 | 1.1388 | 0.08 | 0.03 ** | 1.0833 | 1.0202 | 1.1503 | 0.07 | 0.03 * | 1.0725 | 1.0101 | 1.1275 | 0.07 | 0.03 * | 1.0725 | 1.0202 | 1.1388 |
| Average yearly earnings | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Average yearly earnings sq | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Mother's cognitive ability | 0.24 | 0.32 | 1.2712 | 0.6839 | 2.3632 | 0.17 | 0.33 | 1.1853 | 0.625 | 2.2479 | 0.22 | 0.32 | 1.2461 | 0.657 | 2.3396 | 0.21 | 0.32 | 1.2337 | 0.657 | 2.2933 |
| Has diploma | 0 | 0.31 | 1 | 0.5434 | 1.8221 | -0.07 | 0.31 | 0.9324 | 0.5066 | 1.716 | 0.1 | 0.33 | 1.1052 | 0.5886 | 2.0959 | 0.01 | 0.32 | 1.0101 | 0.5434 | 1.8776 |
| Values: | | | | | | | | 1 | 1 | 1 | | | | | | | | | | |
| Value of work | | | | | | 0.57 | 0.38 | 1.7683 | 0.8353 | 3.7434 | | | | | | | | | | |
| HCD*Value of work | | | | | | -0.79 | 0.45 t | 0.4538 | 0.1901 | 1.0942 | | | | | | | | | | |
| Value of school | | | | | | 0.06 | 0.28 | 1.0618 | 0.6188 | 1.8221 | | | | | | | | | | |
| HCD*Value of school | | | | | | 0.22 | 0.38 | 1.2461 | 0.5945 | 2.6117 | | | | | | | | | | |
| Measured two years after RA | | | | | | | | | | | | | | | | | | | | |
| Total earnings in yrs 1-2 | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 | | | | | |
| HCD*Total earnings | | | | | | | | | | | 0 | 0 ** | 1 | 1 | 1 | | | | | |
| Total income in yrs 1-2 | | | | | | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 |
| HCD*Total income | | | | | | | | | | | | | | | | 0 | 0 t | 1 | 1 | 1 |
| # Quarters employed | | | | | | | | | | | | | | | | | | | | |
| HCD*# Quarters employed | | | | | | | | | | | | | | | | | | | | |
| Avg. quarterly employment | | | | | | | | | | | | | | | | | | | | |
| HCD*Avg.quarterly employ. | | | | | | | | | | | | | | | | | | | | |
| Months of education | | | | | | | | | | | | | | | | | | | | |
| HCD*Mos. of education | | | | | | | | | | | | | | | | | | | | |
| Married | | | | | | | | | | | | | | | | | | | | |
| HCD*Married | | | | | | | | | | | | | | | | | | | | |

| Coulumn 5 | | | | | Coulumn 6 | | | | | Coulumn 7 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Quarterly Employment | | | | | Total Months Education | | | | | Marriage | | | | |
| b | SE | | EXP(b) | Low CI | High CI | b | SE | | EXP(b) | Low CI | High CI | b | SE | | EXP(b) | Low CI | High CI |
| -1.24 | 0.47 | ** | 0.2894 | 0.1165 | 0.7189 | -1.25 | 0.51 | | 0.2865 | 0.1054 | 0.7788 | -1.16 | 0.48 | * | 0.3135 | 0.1212 | 0.8025 |
| 0.03 | 0.46 | | 1.0305 | 0.4148 | 2.56 | -0.44 | 0.44 | | 0.644 | 0.2698 | 1.5373 | -0.36 | 0.38 | | 0.6977 | 0.3329 | 1.4623 |
| 1.26 | 0.58 | * | 3.5254 | 1.1388 | 11.023 | 1.34 | 0.63 | * | 3.819 | 1.1052 | 13.197 | 1.31 | 0.6 | * | 3.7062 | 1.1503 | 11.941 |
| 0.04 | 0.33 | | 1.0408 | 0.5434 | 1.9937 | 0.02 | 0.35 | | 1.0202 | 0.5169 | 2.0138 | -0.01 | 0.34 | | 0.99 | 0.5066 | 1.9542 |
| 0.03 | 0.31 | | 1.0305 | 0.5655 | 1.8965 | 0.01 | 0.35 | | 1.0101 | 0.5169 | 1.9937 | 0.04 | 0.34 | | 1.0408 | 0.5326 | 2.0138 |
| -0.1 | 0.3 | | 0.9048 | 0.4966 | 1.6323 | -0.13 | 0.32 | | 0.8781 | 0.4677 | 1.6487 | -0.12 | 0.32 | | 0.8869 | 0.4819 | 1.6487 |
| -0.29 | 0.39 | | 0.7483 | 0.3499 | 1.6 | -0.21 | 0.4 | | 0.8106 | 0.3679 | 1.786 | -0.18 | 0.4 | | 0.8353 | 0.3753 | 1.8404 |
| 0.07 | 0.03 | * | 1.0725 | 1.0101 | 1.1275 | 0.07 | 0.03 | * | 1.0725 | 1.0101 | 1.1388 | 0.08 | 0.03 | ** | 1.0833 | 1.0202 | 1.1503 |
| 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 |
| 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 | 0 | 0 | | 1 | 1 | 1 |
| 0.23 | 0.32 | | 1.2586 | 0.6703 | 2.3396 | 0.22 | 0.32 | | 1.2461 | 0.657 | 2.3396 | 0.22 | 0.31 | | 1.2461 | 0.6771 | 2.2705 |
| 0.01 | 0.32 | | 1.0101 | 0.5379 | 1.8776 | 0.04 | 0.31 | | 1.0408 | 0.5599 | 1.9155 | 0.02 | 0.31 | | 1.0202 | 0.5543 | 1.8965 |
| 0 | 0 | | 1 | 0.99 | 1.0202 | | | | | | | | | | | | |
| -0.01 | 0.01 | | 0.99 | 0.9704 | 1.0101 | | | | | | | | | | | | |
| | | | | | | -0.09 | 0.09 | | 0.9139 | 0.7711 | 1.0942 | | | | | | |
| | | | | | | 0.08 | 0.09 | | 1.0833 | 0.9139 | 1.2969 | | | | | | |
| | | | | | | | | | | | | -0.46 | 0.72 | | 0.6313 | 0.1541 | 2.5857 |
| | | | | | | | | | | | | 0.92 | 0.95 | | 2.5093 | 0.3946 | 16.119 |

Table 6

Summary of Regression Results Predicting Dropout for Grand Rapids LFA



| | Coulumn 1 | | | | | Coulumn 2 | | | | | Coulumn 3 | | | | | Coulumn 4 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Overall | | | | | Values | | | | | Total Earnings | | | | | Total Income | | | | |
| | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI |
| Measured at baseline | | | | | | | | | | | | | | | | | | | | |
| Black | -1.36 | 0.47 ** | 0.2567 | 0.1033 | 0.644 | -1.57 | 0.47 ** | 0.208 | 0.0821 | 0.522 | -1.35 | 0.46 ** | 0.2592 | 0.1054 | 0.644 | -1.37 | 0.47 | 0.2541 | 0.1013 | 0.6313 |
| LFA | -0.01 | 0.32 | 0.99 | 0.5273 | 1.8589 | -0.69 | 1.74 | 0.5016 | 0.0164 | 15.18 | 0.13 | 0.4 | 1.1388 | 0.522 | 2.5093 | 0.37 | 0.67 ** | 1.4477 | 0.3906 | 5.3122 |
| LFA*Black | 0.41 | 0.62 | 1.5068 | 0.4493 | 5.0531 | 0.3 | 0.63 | 1.3499 | 0.3906 | 4.6646 | 0.41 | 0.62 | 1.5068 | 0.4493 | 5.0531 | 0.46 | 0.62 | 1.5841 | 0.4724 | 5.3656 |
| Ever married | -0.3 | 0.33 | 0.7408 | 0.3906 | 1.4049 | -0.38 | 0.35 | 0.6839 | 0.3465 | 1.3634 | -0.28 | 0.33 | 0.7558 | 0.3946 | 1.4477 | -0.29 | 0.33 | 0.7483 | 0.3906 | 1.4191 |
| On AFDC 5+ years | 0.44 | 0.34 | 1.5527 | 0.7945 | 3.0344 | 0.52 | 0.36 | 1.682 | 0.8353 | 3.3872 | 0.45 | 0.34 | 1.5683 | 0.8106 | 3.0344 | 0.44 | 0.35 | 1.5527 | 0.7866 | 3.0649 |
| 3+ Children | -0.07 | 0.31 | 0.9324 | 0.5016 | 1.716 | 0.05 | 0.32 | 1.0513 | 0.5543 | 1.9739 | -0.07 | 0.31 | 0.9324 | 0.5016 | 1.716 | -0.09 | 0.31 | 0.9139 | 0.4966 | 1.6653 |
| Youngest child 3-5 | -0.12 | 0.37 | 0.8869 | 0.4274 | 1.8404 | -0.04 | 0.38 | 0.9608 | 0.4584 | 2.0138 | -0.1 | 0.38 | 0.9048 | 0.4274 | 1.8965 | -0.11 | 0.38 | 0.8958 | 0.4232 | 1.8776 |
| Age of parent | 0.06 | 0.03 * | 1.0618 | 1.0101 | 1.1163 | 0.06 | 0.03 * | 1.0618 | 1.0101 | 1.1275 | 0.06 | 0.03 * | 1.0618 | 1.0101 | 1.1163 | 0.06 | 0.03 * | 1.0618 | 1 | 1.1163 |
| Average yearly earnings | 0 | 0 t | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 |
| Average yearly earnings sq | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Mother's cognitive ability | -0.26 | 0.34 | 0.7711 | 0.3946 | 1.522 | -0.06 | 0.5 | 0.9418 | 4.2631 | 17.462 | -0.25 | 0.35 | 0.7788 | 0.3985 | 1.5373 | -0.25 | 0.34 | 0.7788 | 0.3985 | 1.5068 |
| Has diploma | 0.03 | 0.31 | 1.0305 | 1.768 | 1.896 | 0.04 | 0.31 | 1.0408 | 0.5655 | 1.9348 | 0.01 | 0.31 | 1.0101 | 0.5488 | 1.8589 | 0.01 | 0.31 | 1.0101 | 0.5488 | 1.8589 |
| Combined values: | | | | | | | | | | | | | | | | | | | | |
| Value of work | | | | | | 0.47 | 0.38 | 1.6 | 0.7634 | 3.3535 | | | | | | | | | | |
| LFA*Value of work | | | | | | 0.2 | 0.47 | 1.2214 | 0.4819 | 3.0649 | | | | | | | | | | |
| Value of school | | | | | | 0.18 | 0.27 | 1.1972 | 0.6977 | 2.034 | | | | | | | | | | |
| LFA*Value of school | | | | | | 0.06 | 0.36 | 1.0618 | 0.522 | 2.1598 | | | | | | | | | | |
| Measured two years after RA | | | | | | | | | | | | | | | | | | | | |
| Total earnings in yrs 1-2 | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 | | | | | |
| LFA*Total earnings | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 | | | | | |
| Total income in yrs 1-2 | | | | | | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 |
| LFA*Total income | | | | | | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 |
| # Quarters employed | | | | | | | | | | | | | | | | | | | | |
| LFA*# Quarters emplyed | | | | | | | | | | | | | | | | | | | | |
| Avg. quarterly employment | | | | | | | | | | | | | | | | | | | | |
| LFA*Avg.quarterly employ. | | | | | | | | | | | | | | | | | | | | |
| Months of education | | | | | | | | | | | | | | | | | | | | |
| LFA*Months of education | | | | | | | | | | | | | | | | | | | | |
| Marriage | | | | | | | | | | | | | | | | | | | | |
| LFA*Marriage | | | | | | | | | | | | | | | | | | | | |
| Cohabitation | | | | | | | | | | | | | | | | | | | | |
| LFA*Cohabitation | | | | | | | | | | | | | | | | | | | | |

| Coulumn 5 | | | | | Coulumn 6 | | | | | Coulumn 7 | | | | | Coulumn 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Quarterly Employment | | | | | Total Months Education | | | | | Marriage | | | | | Cohabitation | | | | |
| b | SE | | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI |
| -1.37 | 0.46 | ** | 0.2541 | 0.1033 | 0.6313 | -1.43 | 0.52 ** | 0.2393 | 0.088 | 0.657 | -1.21 | 0.47 * | 0.2982 | 0.1177 | 0.7483 | -1.37 | 0.48 ** | 0.2541 | 0.0993 | 0.657 |
| -0.03 | 0.46 | | 0.9704 | 0.3946 | 2.3869 | -0.09 | 0.4 | 0.9139 | 0.419 | 2.0138 | 0.09 | 0.35 | 1.0942 | 0.5543 | 2.1815 | -0.29 | 0.38 | 0.7483 | 0.3535 | 1.5683 |
| 0.41 | 0.61 | | 1.5068 | 0.4538 | 5.0028 | 0.53 | 0.68 | 1.6989 | 0.4538 | 6.4237 | 0.34 | 0.63 | 1.4049 | 0.4107 | 4.8066 | 0.66 | 0.65 | 1.9348 | 0.5434 | 6.9588 |
| -0.31 | 0.32 | | 0.7334 | 0.3906 | 1.391 | -0.28 | 0.33 | 0.7558 | 0.3946 | 1.4623 | -0.24 | 0.32 | 0.7866 | 0.419 | 1.4918 | -0.19 | 0.34 | 0.827 | 0.4274 | 1.5841 |
| 0.45 | 0.34 | | 1.5683 | 0.8106 | 3.0649 | 0.45 | 0.35 | 1.5683 | 0.7788 | 3.1268 | 0.39 | 0.35 | 1.477 | 0.7334 | 2.9447 | 0.44 | 0.35 | 1.5527 | 0.7866 | 3.0649 |
| -0.07 | 0.32 | | 0.9324 | 0.5016 | 1.7333 | -0.06 | 0.32 | 0.9418 | 0.4966 | 1.7683 | -0.13 | 0.33 | 0.8781 | 0.4584 | 1.682 | -0.04 | 0.33 | 0.9608 | 0.5016 | 1.8404 |
| -0.13 | 0.37 | | 0.8781 | 0.4274 | 1.8221 | -0.06 | 0.38 | 0.9418 | 0.4449 | 1.9937 | 0.04 | 0.39 | 1.0408 | 0.4819 | 2.2479 | 0.06 | 0.38 | 1.0618 | 0.5016 | 2.2479 |
| 0.06 | 0.03 | * | 1.0618 | 1 | 1.1163 | 0.05 | 0.03 * | 1.0513 | 1 | 1.1163 | 0.06 | 0.03 * | 1.0618 | 1.0101 | 1.1275 | 0.07 | 0.03 * | 1.0725 | 1.0202 | 1.1275 |
| 0 | 0 | t | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 |
| 0 | 0 | | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| -0.26 | 0.35 | | 0.7711 | 0.3906 | 1.522 | -0.33 | 0.36 | 0.7189 | 0.3535 | 1.4477 | -0.26 | 0.35 | 0.7711 | 0.3867 | 1.5373 | -0.16 | 0.37 | 0.8521 | 0.4148 | 1.7683 |
| 0.01 | 0.3 | | 1.0101 | 0.5599 | 1.8404 | 0.16 | 0.32 | 1.1735 | 0.6313 | 2.1815 | 0.19 | 0.32 | 1.2092 | 0.644 | 2.2705 | 0.26 | 0.33 | 1.2969 | 0.6703 | 2.4843 |
| 0 | 0 | | 1 | 0.99 | 1.0202 | | | | | | | | | | | | | | | |
| 0 | 0.01 | | 1 | 0.9802 | 1.0202 | | | | | | | | | | | | | | | |
| | | | | | | -0.1 | 0.09 | 0.9048 | 0.7558 | 1.0725 | | | | | | | | | | |
| | | | | | | -0.05 | 0.12 | 0.9512 | 0.7558 | 1.1853 | | | | | | | | | | |
| | | | | | | | | | | | -0.39 | 0.67 | 0.6771 | 0.1827 | 2.5093 | | | | | |
| | | | | | | | | | | | -0.41 | 0.9 | 0.6637 | 0.113 | 3.8962 | | | | | |
| | | | | | | | | | | | | | | | | -1.82 | 0.92 * | 0.162 | 0.0265 | 0.9802 |
| | | | | | | | | | | | | | | | | 2.54 | 1.06 * | 12.68 | 1.5841 | 100.48 |

Table 7

Summary of Regression Results Predicting Dropout for Riverside HCD Including Baseline Interactions

| | Model 1 | | | | | Model 2 | | | | | Model 3 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI | b | SE | EXP(b) | Low CI | High CI |
| Measured at baseline | | | | | | | | | | | | | | | |
| Latino | 0.58 | 0.54 | 1.786 | 0.625 | 5.1039 | 0.5 | 0.8 | 1.6487 | 0.343 | 8.0045 | 0.52 | 0.86 | 1.682 | 0.3104 | 9.1157 |
| HCD | 0.81 | 0.54 | 2.2479 | 0.7788 | 6.4883 | 5.16 | 2.97 t | 174.16 | 0.5117 | 59278 | 5.01 | 3.9 | 149.9 | 0.0721 | 311763 |
| HCD*Latino | -1.91 | 0.82 * | 0.1481 | 0.0299 | 0.7334 | -0.88 | 1.17 | 0.4148 | 0.042 | 4.096 | -1.24 | 1.39 | 0.2894 | 0.0191 | 4.3929 |
| Ever married | -0.09 | 0.52 | 0.9139 | 0.3263 | 2.5345 | -0.01 | 0.64 | 0.99 | 0.2865 | 3.4556 | 0.76 | 1.17 | 2.1383 | 0.2165 | 21.115 |
| On AFDC 5+ years | 0.15 | 0.57 | 1.1618 | 0.3829 | 3.5609 | 0.52 | 0.72 | 1.682 | 0.4107 | 6.9588 | -0.24 | 0.72 | 0.7866 | 0.1901 | 3.2544 |
| 3+ Children | 0.11 | 0.52 | 1.1163 | 0.4025 | 3.0957 | -0.13 | 0.76 | 0.8781 | 0.1959 | 3.8962 | -0.65 | 1.14 | 0.522 | 0.0567 | 4.855 |
| Youngest child 3-5 | -0.28 | 0.53 | 0.7558 | 0.2698 | 2.117 | 0.5 | 0.77 | 1.6487 | 0.3679 | 7.3891 | 0.44 | 0.94 | 1.5527 | 0.2491 | 9.7767 |
| Age of parent | 0.03 | 0.04 | 1.0305 | 0.9512 | 1.1163 | 0.06 | 0.06 | 1.0618 | 0.9512 | 1.1853 | 0.06 | 0.06 | 1.0618 | 0.9512 | 1.1972 |
| Average yearly earnings | 0 | 0 | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Average yearly earnings sq | 0 | 0 | 1 | 1 | 1 | 0 | 0 t | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| Mother's cognitive ability | 0.08 | 0.41 | 1.0833 | 0.4868 | 2.4109 | -0.46 | 0.52 | 0.6313 | 0.2299 | 1.7333 | -0.43 | 0.84 | 0.6505 | 0.1249 | 3.3872 |
| Values: | | | | | | | | | | | | | | | |
| Value of work | | | | | | -0.29 | 0.6 | 0.7483 | 0.2322 | 2.3869 | -0.44 | 0.64 | 0.644 | 0.1845 | 2.2479 |
| HCD*Value of work | | | | | | 0.03 | 0.73 | 1.0305 | 0.2466 | 4.306 | 0.23 | 0.77 | 1.2586 | 0.2753 | 5.6973 |
| Value of school | | | | | | 0.8 | 0.6 | 2.2255 | 0.6839 | 7.1707 | 0.68 | 0.7 | 1.9739 | 0.5016 | 7.846 |
| HCD*Value of school | | | | | | -1.54 | 0.84 t | 0.2144 | 0.0412 | 1.1052 | -1.78 | 1.24 | 0.1686 | 0.0148 | 1.8965 |
| HCD*Ever married | | | | | | | | | | | -2.3 | 1.53 | 0.1003 | 0.005 | 2.0138 |
| HCD*3+ children | | | | | | | | | | | 1.21 | 1.69 | 3.3535 | 0.1237 | 90.017 |
| HCD*Average yearly earnings | | | | | | | | | | | 0 | 0 | 1 | 1 | 1 |
| HCD*On AFDC 5+ years | | | | | | | | | | | 2.56 | 1.23 * | 12.936 | 1.1618 | 144.03 |
| HCD*Mother's cognitive ability | | | | | | | | | | | -0.88 | 1.28 | 0.4148 | 0.034 | 5.1039 |

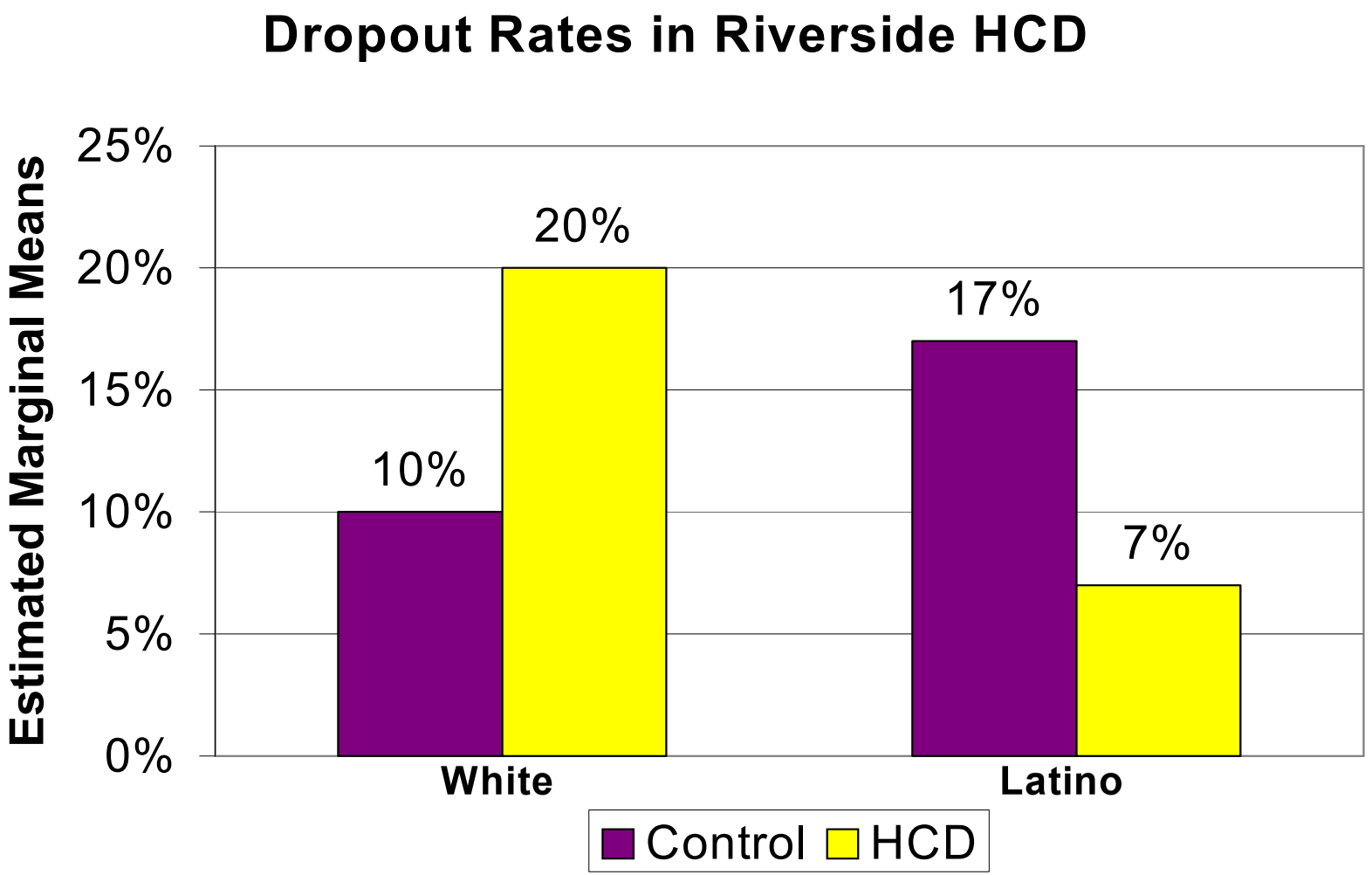
Dropout Rates in Riverside HCD
Estimated Marginal Means
25%
20%
15%
10%
5%
0%
10%
20%
17%
7%
White
Latino
Control
HCD

Figure 1.

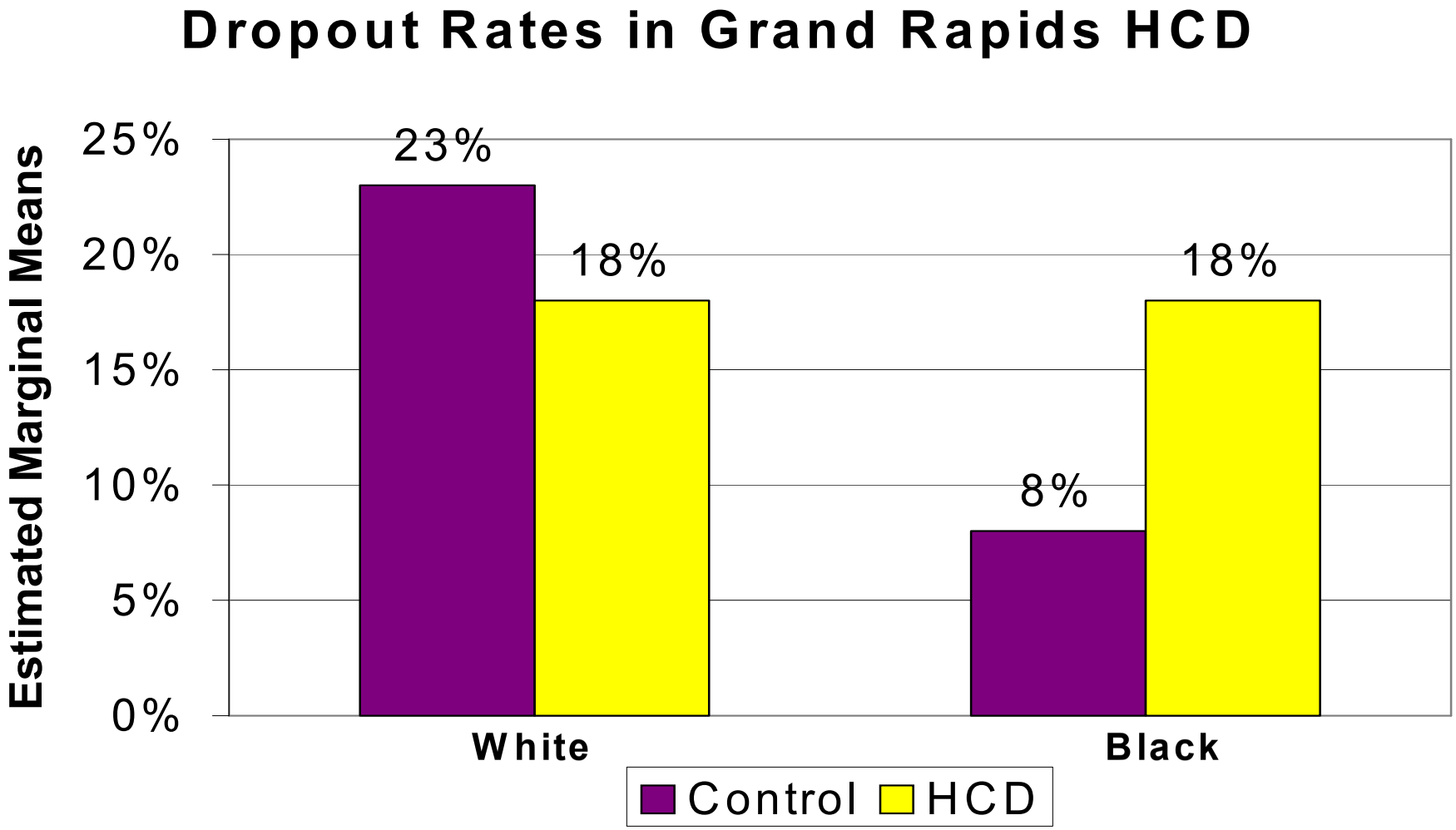
Dropout Rates in Grand Rapids HCD
Estimated Marginal Means
25%
20%
15%
10%
5%
0%
23%
18%
8%
18%
White
Black
Control
HCD

Figure 2.

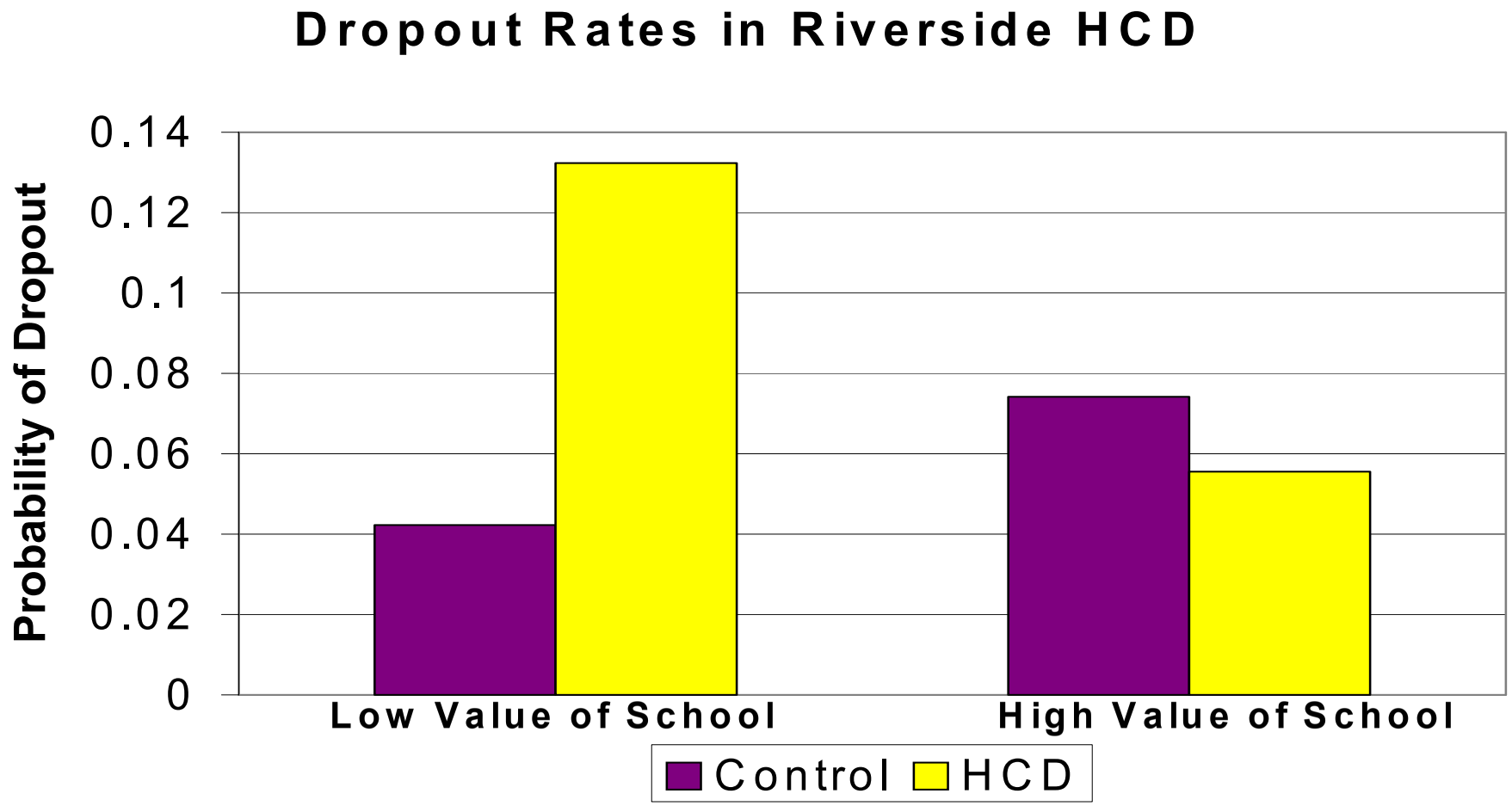
Dropout Rates in Riverside HCD
Probability of Dropout
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Low Value of School
High Value of School
Control
HCD

Figure 3.