

Examining the Role of Intergroup Relations in Black and Hispanic Parents' Preschool
Enrollment Decisions

by

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Public Policy Studies
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Dissertation submitted in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy in Public Policy Studies
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ABSTRACT

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Abstract

State and local governments are seeking to expand preschool programs for low-income children and to enroll an increasingly ethnically and culturally diverse population. To ensure that expanded preschools equitably serve populations who are currently under-represented in current preschool programs, policymakers must understand the contexts that influence parents' enrollment decisions. This set of three mixed-methods studies examines the influence of inter-racial and inter-ethnic group relations on the preschool enrollment decisions of black and Hispanic parents in a region experiencing a burgeoning Hispanic population.

Paper 1: Historic and contemporary studies provide evidence that racial and ethnic relations affect parents' selection in to and out of schools in the K-12 education context. However, no study examines whether racial and ethnic group relations that influence school enrollment in the K-12 setting may also influence parents' selection in to or out of a public preschool program. This study addresses this gap by examining how intergroup relations are related to the public preschool enrollment status of low-income black and Hispanic parents in a region experiencing Hispanic population growth. Intergroup relations are measured through group identity, linked fate, competition and conflict. Through surveys of black and Hispanic parents in poverty (n=369), this study finds that linked fate has a negative relationship with enrollment for

Hispanic parents. In addition, there is a positive relationship between parents' report of conflict and Head Start enrollment.

With states and local government seeking to expand their preschool systems, findings that intergroup relations influence parents' preschool enrollment decisions will be an important policy, program, and outreach consideration for preschool expansion. Moreover, with the growth and dispersal of Hispanic populations into new regions and communities, intergroup relations will be a particularly important consideration for preschool expansion in a growing demographic context.

Paper 2: As state and local governments expand their public preschool systems targeting the enrollment of children from low-income families, understanding why some low-income families do not apply for public preschool may provide insights about barriers to enrollment. This study provides cluster analyses of data on 369 low-income parents with preschool-age children; 202 parents had children enrolled in preschool, while 167 parents did not apply for public preschool. Cluster analyses and a series of robustness checks reveal two distinct typologies of parents who do not apply for public preschool. The first group of parents exhibit several characteristics associated with non-enrollment. The second group of parents are distinguishable only by their lack of transportation. This exploratory analysis of types of non-enrollers is informative for the

local community from which these data were derived and provides a blueprint for further examination of typologies of parents who do not enroll.

Paper 3: Through in-depth interviews with 34 low-income, black and Hispanic mothers in a southern city experiencing a burgeoning Hispanic population, this study examines racial/ethnic relations as mothers engage in constrained labor and public preschool markets. This study reveals that while there is indeed a sense of competition for scarce labor market resources, these sentiments are more strongly expressed by black mothers than by Hispanic mothers. However, Hispanic and black mothers express similar levels of competition for public preschool. Interviews reveal family structure and policy determinants of intergroup tensions.

Dedication

To a more accurate understanding of the lived experiences of poor and marginalized children and families. To our sincere and collective effort to provide these families with the systems and services we would want, if we were in their position.

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1. Preschool Enrollment Decisions of Low-Income Parents in the South: Examining the Role of Group Identity, Linked Fate, Competition, and Conflict

1.1 Introduction

Attending preschool promotes school readiness and can have positive effects on a range of life outcomes, including higher levels of education, employment, and better health, especially for children from low-income backgrounds (Currie and Thomas 1993, Garces, Thomas et al. 2002, Schweinhart, Montie et al. 2005, Anderson 2008, Campbell, Pungello et al. 2012). Yet, 50 percent of low-income children between the ages of three and five years are not enrolled in formal preschool (NCES 2015). To increase the number of low-income children who benefit from preschool enrollment, many state and local governments are expanding their public preschool programs. With policies focused on increasing the supply of preschool programs, understanding and accommodating the contexts that influence low-income families' demand for public preschool will help to promote enrollment among low-income parents.

This study examines the role of intergroup relations on low-income parents' preschool enrollment decisions. Historic and contemporary studies provide evidence that racial and ethnic relations affect parents' selection in to and out of schools in the K-12 education context (Welch 1987, Orfield and Eaton 1997, Clotfelter 2011). However, no study examines whether racial and ethnic group relations that influence school

enrollment in the K-12 setting may also influence parents' selection in to or out of a public preschool program. This study addresses this gap by examining how intergroup relations are related to the public preschool enrollment status of low-income black and Hispanic parents in a region experiencing Hispanic population growth.

Understanding the influence of intergroup relations on low-income parents' preschool enrollment is particularly urgent in regions that are experiencing burgeoning Hispanic populations. Hispanic children make up the fastest growing demographic in the nation (Brown 2014), and they are less likely than black and white children to be enrolled in preschool (e.g., enrollment rates: 51.9 percent, 63.5 percent, 68.4 percent, respectively) (ChildTrends 2015). In addition, the Hispanic population is growing and dispersing beyond traditional immigrant destinations into new regions leading to new and growing instances of intergroup contact. Studies of intergroup relations find that in regions experiencing Hispanic population growth, communities are marred by sentiments of racial distancing, conflict, and competition for scarce community resources, which has evolved in to physical and institutional violence (Suarez-Orozco 1996, McClain, Lyle et al. 2007, Marrow 2008, Stacey, Carbone-López et al. 2011, Vázquez 2015). Given these findings in areas experiencing Hispanic population growth, it is important to examine whether racially- and ethnically-motivated sentiments that

influence engagement with other scarce community resources may also influence parents' preschool enrollment decisions.

1.2 Background

1.2.1 Hispanic Population Growth

In recent decades, there has been significant growth of the Hispanic population in the South (Durand, Massey et al. 2000, Massey 2008). Hispanic population growth is attributable to immigration from Mexico and Central America, migration from traditional immigrant destination states such as Texas, California, and New York, and births (Brown 2014). Hispanic populations are entering communities in the South that are segregated by both race and class, and populations are competing for scarce community resources (Glaeser and Vigdor 2000, Davis, Gardner et al. 2009). Due to these segregated social contexts, many community-based studies examine low-income whites' and low-income blacks' response to Hispanic population growth separately, but have similar and consistent findings. Specifically, existing black and white population see the new and growing Hispanic populations as competitive threats for zero sum resources particularly in the domains of employment and politics (Bobo and Hutchings 1996, Cravey 1997, Waldinger 1997, McClain and Tauber 1998, Winders 2005, Marrow 2008, Marrow 2009, Carey Jr, Martinez-Ebers et al. 2016). While competition in the domains of politics and labor is well-established in the literature, not much is known

about how these groups perceive each other and interact across other resource-scarce domains – specifically public preschool.

1.2.2 Theoretical Framework for Understanding Enrollment Decisions

Many studies examine the contexts that influence parents preschool enrollment decisions using Bronfenbrenner's ecological systems theory framework (Bronfenbrenner 1992). According to the ecological systems theory, life can be conceptualized as taking place within micro-, meso-, exo-, macro-, and chrono-systems, which are characterized as nested systems of expanding scope. Microsystems are the intra- and inter-personal relations that take place in each setting. Mesosystems are the linkages and processes taking place between two or more settings. Exosystems are the linkages and processes taking place between multiple settings and include major institutional systems and macrosystems are the overarching social context. Chronosystems refer to the time or historical period. These systems interact and influence development, beliefs, and practices enacted at each level (Bronfenbrenner 1992). Using this, and similar theories, many studies suggest that parents' preschool enrollment decisions are influenced by relations, linkages, and processes that occur in multiple, nested, interacting contextual systems (Chaudry, Henly et al. 2010).

While there is a robust literature on the contexts that influence enrollment that uses an ecological systems framework, extant studies do not examine the possible

influence of mesosystem relations between racial and ethnic groups. Research finds that mesosystem intergroup relations play a role in parents' selection in to and out of schools in the K-12 setting. Studies in the K-12 context primarily focus on white students' departure from integrated schools into private or charter schools, or in to less diverse school districts (Welch 1987, Orfield and Eaton 1997, Fairlie and Resch 2002, Clotfelter 2011). Studies also reveal intergroup tensions in integrated school settings that have progressed to violence (Wieder 1988, Hardie and Tyson 2013). These studies provide evidence that the racial composition of schools may affect parents' willingness to enroll their children, and that there may be group-based tensions amongst those who enroll in mixed-group settings. Examining whether racial and ethnic group relations may similarly influence parents' preschool enrollment decisions will provide a more thorough understanding of the contexts that influence preschool.

Social identity theory provides a guide for understanding how mesosystem intergroup relations may shape attitudes and affect preschool enrollment decisions (Tajfel and Turner 1979, Tajfel 1982). Social identity theory posits that individuals adopt group social identities based on socially relevant characteristics, develop a sense of a shared fate with their in-group, and exhibit in-group bias and competitive responses to maintain or establish superiority in symbolic or material resources (Tajfel and Turner 1979, Tajfel 1982).

Guided by social identity theory, studies examining intergroup relations point to group identity and linked fate as the psychological underpinnings of enacted competition and conflict (McClain, Johnson Carew et al. 2009). Group identity refers to an individual's awareness of belonging to a group based on perceptions of shared characteristics, beliefs, interests, and experiences (Chong and Rogers 2004, McClain, Johnson Carew et al. 2009). Black parents who have a long-standing presence in the American racialized social context are likely to be cognizant of their social identity as blacks (Tajfel 1982). In contrast, Hispanic parents who have a more recent presence in the country may less firmly identify with a pan-ethnic identity, and may have a social identity based on nationality, immigrant or migrant status, or language (McClain, Johnson Carew et al. 2009, Sanchez and Masuoka 2010).

Linked fate is a belief that one's social standing and well-being are linked to those of the group, (Chong and Rogers 2004, McClain, Johnson Carew et al. 2009, Gay and Hochschild 2010). Linked fate is more salient amongst group members with fewer resources and is hypothesized to activate competition and collective action on behalf of one's group (McClain, Johnson Carew et al. 2009, Sanchez and Masuoka 2010, Carey Jr, Martinez-Ebers et al. 2016). In the context of preschool enrollment in an area experiencing Hispanic population growth, social identity theory posits that parents will

develop a group identity based on a socially relevant characteristic and within their in-groups, exhibit bias and competitive attitudes towards scarce resources.

1.2.3 Previously Identified Predictors of Enrollment

Extant studies examining predictors of parents' use of early care and education services for their young children have largely examined enrollment along four domains: family need, human and social capital, beliefs and preferences, and supply. Family need for care drives enrollment. Specifically, the presence of multiple children in the household and the availability of family and friends to provide care are associated with lower rates of enrollment (Fuller, Holloway et al. 1996, Liang, Fuller et al. 2000, Han 2004, Hirshberg, Huang et al. 2005, Meyers and Jordan 2006, Crosnoe, Purtell et al. 2016). In addition, mothers who work are more likely to enroll their children than mothers who do not work (Han 2004, Barnett and Yarosz 2007, Yesil-Dagli 2011, Tang, Coley et al. 2012, Miller, Votruba-Drzal et al. 2014, Crosnoe, Purtell et al. 2016).

Parents' human capital, specifically, education level has a positive association with enrollment (Brandon 2004, Han 2004, Yesil-Dagli 2011, Tang, Coley et al. 2012, Crosnoe, Purtell et al. 2016). In addition, parents' experience and familiarity with other social services may encourage engagement with preschool systems (Liang, Fuller et al. 2000, Crosnoe, Purtell et al. 2016). Familiarity with one social service system might make parents more familiar with or adept at navigating other programs. In addition,

connections to social programs can serve as channels of information about other programs for which a family may be eligible.

Parents' preferences for their children's early developmental environments are predictors of preschool enrollment. Parents who prioritize learning activities (Fram and Kim 2008), socialization (Yesil-Dagli 2011), or a caregiver with training in early child care are more likely to enroll in a center (Early and Burchinal 2002). Whereas, parents who value a place where children can be cared for when they are sick are less likely to enroll in a center. Some studies suggest that cultural preferences may predict enrollment (Liang, Fuller et al. 2000, Brandon 2004). However, researchers caution that what is perceived as a cultural preference may be other unobserved social contexts (Uttal 1999, Fram and Kim 2008). Indeed, in many studies, racial and ethnic identity lose their predictive strength and significance with the inclusion of a more extensive set of controls for social contexts (Fram and Kim 2008, Tang, Coley et al. 2012, Miller, Votruba-Drzal et al. 2014).

Finally, parents are responsive to the supply of preschool in their community (Gordon and Chase-Lansdale 2001, Davis and Connelly 2005, Cascio and Schanzenbach 2013, Crosnoe, Purtell et al. 2016). With income and transportation limitations, low-income parents must select from affordable care options that are easily accessible (Sandstrom and Chaudry 2012). States with universal preschool programs have over

time achieved significantly higher rates of enrollment than areas without universal programs (Cascio and Schanzenbach 2013). However, even in contexts of universal preschool, there is evidence that families with the deepest financial need are less likely to enroll in preschool (Farrie and Weber 2014).

1.2.4 The Influence of Intergroup Relations on Enrollment

While the existing body of research on preschool enrollment does not speak to the influence of group relations, historic and contemporary research outside of the preschool context provides evidence of parents' selection in to and out of schools based on racial community relations and school composition (Welch 1987, Orfield and Eaton 1997, Fairlie and Resch 2002, Clotfelter 2011). These studies primarily focus on white students' departure from integrated schools into private or charter schools, or in to less diverse school districts. Studies also reveal intergroup tensions in integrated school settings that have progressed to violence (Wieder 1988, Hardie and Tyson 2013). While outside of the preschool context, these studies show that the racial composition of schools affects parents' willingness to enroll their children, and that there may be group-based tensions amongst those who enroll in mixed settings. Evidence of group relations affecting school enrollment signals the importance of understanding whether racial and ethnic group relations may also influence parents' preschool enrollment decisions in regions experiencing Hispanic population growth.

1.2.5 Current Study

Although previous research identifies factors helpful for understanding contexts that predict enrollment, an examination of the effects of group-based contexts is missing. This study advances our understanding of the contexts that influence preschool enrollment by assessing the influence of a previously unexplored mesosystem domain: intergroup relations. Informed by social identity theory and previous studies of intergroup relations, this study measures the relationship between group identity, linked fate, competition, and conflict, and black and Hispanic parents' public preschool enrollment. Through surveys with 369 low-income black and Hispanic parents whose children are enrolled and not enrolled in public preschool in a mid-sized city in the South that has recently experienced growth in its Hispanic population, this study is well-suited to examine intergroup relations and public preschool enrollment amidst a population experiencing a demographic shift.

1.3 Method

1.3.1 Location

This study was conducted in Durham, North Carolina, an area experiencing demographic transition. Between 2000 and 2015, the Hispanic population in Durham county grew from 8 percent to 13 percent of the Durham population (ACS 2017). Hispanic population growth has been even more dramatic among school-age

populations, growing from 22 percent in the 2007/08 academic year to 31 percent by the 2014/15 academic year (Durham Public SchoolRecords 2017). In Durham, as in many areas in the south, Hispanic immigrants and migrants are settling into communities segregated along black/white racial lines and class (Glaeser and Vigdor 2000). Given this segregation, this study focuses on relations between low-income black and Hispanic parents. .

1.3.2 Sample

This study includes 369 low-income parents with preschool-age children (i.e., between the ages of 3 and 5 years old) enrolled and not-enrolled in preschool.¹ Analysis of black and Hispanic parents is restricted to parents who self-identified as black or Hispanic (i.e., 357 of 369, 97 percent of full sample).

The recruitment team was comprised of one black female and two Hispanic females with strong ties to the community. Recruitment was conducted in English and in Spanish. Half of the sample was recruited from Head Start centers across the county while the other half was recruited through robust neighborhood canvassing in communities identified as high-poverty census blocks. Given the eligibility requirements of Head Start, parents in the enrolled sample had incomes below the

¹ Public preschool in Durham is coordinated between Head Start, Durham Public Schools, and state-funded private providers. The application for these three programs is centralized. Parents complete one application which is reviewed by representatives from the three sponsoring institutions to determine best fit based on criteria including students' needs, proximity to home, siblings in program.

federal poverty level. The target non-enrolled sample were parents with preschool-age children in poverty who had not applied for preschool services. To verify that parents met these eligibility criteria, parents completed a brief screener survey about the age of their child(ren), whether they had applied for preschool for their child(ren), their family size, and their household income. Table 1 provides descriptive statistics of the sample population.

1.3.3 Measures

A multiple-choice survey measured previously identified predictors of preschool enrollment (i.e., family need; human/social capital; parents' preferences and beliefs) as well as intergroup relation measures (i.e., group identity, linked fate, competition, and conflict) on parents' enrollment decisions. Participants chose whether to complete the survey themselves, or be orally administered the survey, to accommodate potential literacy limitations. Participants also chose whether to complete the survey in English or Spanish. Surveys required 15 to 30 minutes to complete and participants were compensated \$10 for their time. Table 2 provides a description, means, and scales for dependent and independent variables.

Enrollment is measured as a dichotomous indicator. Parents with children enrolled in preschool were identified at pick up or drop off time at the five Head Start centers. Parents who were not enrolled in preschool were identified through

community canvassing and through the completion of a short screener survey verifying child age, family size, income, and parent having not applied for preschool.

Family Need for Care was operationalized in three ways: (1) whether there is another adult in the household (dichotomous indicator); (2) whether parent has friends or family who live close by (dichotomous indicator); and (3) a continuous measure of the number of children who live in the household.

Human/Social Capital and Resources were operationalized four ways: (1) whether parent has a high school degree (dichotomous indicator); (2) whether parent is employed or not employed (without distinction to unemployed and not in the labor market) (dichotomous indicator); (3) whether parent has experience with any of the following social service programs, TANF, SSI, WIC, SNAP, housing assistance (dichotomous indicator); (4) whether parent owns a car (dichotomous indicator).

Parents' preferences and beliefs were operationalized in three ways: (1) if given a choice, whether parent prefers for child to be at home or be in a child care center (dichotomous indicator); (2) a 4-item scale measuring parent's belief in his or her own ability to provide child with school readiness skills. Items asked about parent's beliefs about his or her ability to provide child with: (a) academic skills; (b) social skills; (c) language skills; and (d) cultural/behavioral skills necessary for kindergarten, with responses on a 5-point scale from strongly disagree (1) to strongly agree (5). Cronbach's

alpha (α), a commonly used measure of internal consistency, is 0.93. (3) A 4-item scale measuring parent's belief in the ability of early education centers to provide his or her child with school readiness skills using the four domains and response scale described above Cronbach's alpha (α), a commonly used measure of internal consistency, was 0.82.

Intergroup relations were operationalized in five ways: (1) group identity is measured as parent's belief of belonging to a community based on race or ethnic identity; (2) linked fate is measured as parent's belief that when others who have the same racial or ethnic identity do well, it means that he or she will benefit, too; (3) sense of competition is measured as parent's feeling that he or she has to compete with others of a different racial or ethnic identity; (4) experience of competition is measured as parent's experience of competing with others of a different racial or ethnic identity; (5) group competition is measured as parent's experience with verbal or physical conflict with others of a different racial or ethnic identity. The inclusion of two measures of competition teases out perceived/sensed competition which may be influenced by messages and perceptions in one's social environment, and real/experienced competition which is more closely tied to an actual experience. All five measures of group relations were assessed along a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

1.4 Analytic Plan

This study uses logistic regression to measure the likelihood of a given variable being associated with preschool enrollment. Logistic regression models are appropriate because the key outcome variable is binary: enrollment or non-enrollment. Logistic coefficients present the relationship between the variable and the likelihood or the odds of the outcome taking place.

This study examines the relationship of the various context domains (i.e., intergroup relations, family need, human capital, and parents' preferences) independently, then all together. The independent analyses of domains allow for the comparison of the relative influence of each domain. In addition, this study estimates the relationship between the various context domains separately for blacks and Hispanics. In the sample 90 percent of Hispanic respondents are immigrants. It is likely that these Hispanic parents were exposed to different macro, exo systems in their native country, and are currently different micro and meso level system contexts that shape their beliefs and decision-making about preschool when compared to black parents. Separating black and Hispanic analysis allows for the assessment of whether the contexts have differential relationships with the enrollment status for black and Hispanic parents.

Missing data were imputed using the `mi impute` function in Stata13. Data were assumed to be missing at random, in some instances due to parents' non-completion of the backside of a 2-sided survey form. Multiple imputations generated 20 sets of data with plausible values of missing data (Stata 2013). Analyses are performed using `mi estimate`, which pools the imputed values across the sets of data.

1.5 Results

Table 2 provides descriptive statistics of black and Hispanic parents' intergroup relations. Black parents report a higher sense of group identity and more experience with competition and conflict. Hispanic parents report a higher sense of linked fate and a higher sense of competition. Tables 3A through 5 provide the logistic regression coefficients, and when statistically significant, the odds ratios for the relationship between intergroup relations and Head Start enrollment.

Tables 3A through 3D depict the relationship between each domain and preschool enrollment for the full sample and the black and Hispanic samples separately. These tables provide evidence that the contexts that influence enrollment largely differ for black and Hispanic parents. Table 3A shows that the intergroup relation variables do not have a significant relationship with black parents' enrollment. However, for Hispanic parents, linked fate has a negative association with enrollment and experience of conflict is has a positive association with enrollment. In addition, for Hispanic

families, the model fit statistics suggests that the model containing intergroup relations has the highest level of significance when compared to other models. Table 3B depicts the family need domain and shows that having additional children has a negative association with enrollment and being employed has a positive association with enrollment, but only for black parents. Table 3C depicts capital and resources and shows that having a high school diploma, having experience with social services, and owning a car all have positive associations with enrollment, however, this relationship is driven by black parents. Table 3D depicts beliefs and preferences and shows that preference for a center care is positively associated with enrollment for black and Hispanic parents. However, a parent's belief that he or she is able to prepare his or her child for kindergarten is positively associated with enrollment only for Hispanic children. A parent's belief that a center is able to prepare his or her child for kindergarten is positively associated with enrollment for black parents.

Table 4 provides the logistic regression coefficients for the relationship between previously identified predictors of enrollment. Table 5 provides the logistic regression coefficients for the combined relationship of group relations and previously identified predictors on enrollment. These tables underscore that the contexts that influence enrollment for black and Hispanic parents differ for all contexts except for preference for a center which has a positive relationship with enrollment for blacks and Hispanics.

Further, the model fit statistics suggest that while the models are significant for black parents, the models are not significant for Hispanic parents.

1.6 Discussion

The purpose of this study is to measure the relationship between intergroup relations and black and Hispanic parents' enrollment into preschool in a region that is experiencing Hispanic population growth. Hispanic children are the fastest growing demographic group in the country; however, Hispanic children have lower rates of preschool enrollment when compared to blacks and whites. Evidence of intergroup relations affecting parents' enrollment decisions in other school contexts and evidence of group-based tensions around scarce community resources in areas experiencing Hispanic population growth suggest that intergroup relations may similarly affect parents' enrollment into the community's limited supply of public preschool. As state and local governments seek to expand their preschool program, this study sheds light on important contextual factors that may influence low-income parents' preschool enrollment decisions.

This study brings together and builds on two distinct areas of study: contexts that influence preschool enrollment and intergroup relations. By examining the influence of group relations on parents' preschool enrollment decisions, this study explores a mesosystem context that is overlooked in existing studies of the determinants

of preschool enrollment. In addition, by examining parents' enrollment into public preschool with limited availability, this study extends the domains of analysis of intergroup relations, which currently focuses on other resource-scarce domains such as employment and politics. Guided by social identity theory and research on group relations from the fields of social psychology and political science, this study examines group relations along five dimensions: (1) group identity, (2) linked fate, (3) sense of competition, (4) experience of competition, and (5) conflict. Analyses reveal findings about the relationship between intergroup relations and enrollment that are important for policy and program development.

This study contributes two key findings to the field. First, this study finds that intergroup relations are related to low-income Hispanic parents' preschool enrollment. In fact, for Hispanic parents, analyses of domains independently reveal that the model containing intergroup relations is significant, whereas other models containing previously identified contexts that predict enrollment are not significant. This finding signals the need for future studies to incorporate the domain of intergroup relations into their examinations of the contexts that predict low-income parents' public preschool enrollment. The second contribution of this study is the finding that contexts may that influence preschool enrollment differ for black and Hispanic parents.

Findings of Intergroup Relations

Group identity is not associated with preschool enrollment for black or Hispanic parents. Black parents report a higher sense of group identity than Hispanic parents. This result is consistent with social identity theory's position that longer-standing populations, with a longer experiences of oppression are more attuned to their group identity and may be more protective of their group's relative social position (Tajfel and Turner 1979). However,

Linked fate is positively associated with enrollment for Hispanic parents. Linked fate is the belief that one's personal well-being is tied to the well-being of one's group (McClain, Johnson Carew et al. 2009). Hispanic parents report a higher sense of linked fate when compared to black parents. This higher sense of linked fate may reflect a consciousness of a shared vulnerability that was activated during the timeframe when the surveys were administered (January 2015 through June 2016). During that time, increased Immigration and Customs Enforcement raids targeting undocumented immigrants were occurring in communities throughout the country, especially in areas with burgeoning Hispanic populations in the south. While these raids were not widely covered in mainstream English-language media, they were widely reported by Spanish language news outlets, and were therefore salient for many Hispanic parents (Anderson, 2016). In addition, presidential political campaigns may have been perceived by some parents as anti-immigrant and anti-Hispanic. Regardless of a parent's documentation

status, Hispanic parents' awareness of their shared vulnerability to harassment and mistreatment may have activated their sense of linked fate.

Given this shared vulnerability, linked fate may have a negative relationship with enrollment because Hispanic parents are reluctant to expose themselves to the multiple institutions associated with preschool enrollment (e.g., hospitals for doctor's records, proof of income, proof of address, etc.), or to individuals who may harbor these negative sentiments. News reports that some Hispanic parents are not sending their children to school for fear of being harassed or arrested at schools or bus stops, further corroborate the idea that linked fate may be capturing a sense of shared vulnerability that deters Hispanic parents from enrolling their children in preschool (Anderson 2016, Mitchell 2016, Funk 2017). Linked fate may also be associated with decreased odds of Hispanic parents' enrollment into preschool because it is a signal of a comfort with or preference for communities based on ethnicity, nationality, or language similarities. Since most preschools in Durham are not racially or ethnically homogenous spaces, parents who prefer in-group spaces may be less willing to enroll.

An alternative understanding of linked fate may be that as a result of enrolling in a racially and ethnically mixed preschool setting, Hispanic parents developed a diminished sense of linked fate with their group. In this condition, being exposed to

parents from other backgrounds may result in a decline in a parent's sense of intra-group cohesion.

This study distinguishes between socially perceived and personal experiences of competition. Hispanic parents report a higher sense of competition, while black parents report higher experiences of competition. However, neither measure of competition has a significant relationship with parents' enrollment decisions. The null findings of the relationship between competition and enrollment is surprising because competition is one of the main characterizations of the relationship between low-income blacks and Hispanic in regions experiencing Hispanic population growth (Bobo and Hutchings 1996, Waldinger 1997, McClain and Tauber 1998, Carey Jr, Martinez-Ebers et al. 2016). However, it is possible that competition may have differential effects on parents' enrollment decisions. For some parents, competition may encourage their pursuit of preschool enrollment, while for others, competition may cause them to resign that they will not be able to enroll. Unfortunately, analysis of the directional effects of competition is out the scope of this work.

Conflict

While more black parents report experiences of conflict, conflict is associated with an increase in the odds of enrollment for Hispanic parents only. It is not likely that experiences of conflict encourage preschool enrollment. However, it is likely and

consistent with previous studies showing that racially and ethnically mixed spaces may give way to tensions, animosity, and conflict (Wieder 1988, Hardie and Tyson 2013).

From the data, it is not clear whether preschools were the locations of conflict or if parents who enroll in preschool are also likely to engage in other mixed group spaces that serve as the location of conflict. However, it is important to note that parents have had experiences of intergroup conflict that may shape their interaction with other parents in the preschool space.

Previously Identified Predictors

Many of the previously identified predictors of enrollment are associated with parents' preschool enrollment in the sample population. Parents' education predicts preschool enrollment for both blacks and Hispanics and has one of the strongest relationships with likelihood of enrollment. Parents' skill and ability to navigate educational institutions on behalf of their children is a mainstay of education systems and is a mechanism for the transfer of inter-generational inequalities (Sewell and Shah 1968, Dubow, Boxer et al. 2009). Parents' preference for center-based care over personal/home-based care is another factor that influences enrollment for both black and Hispanic parents. This preference for center-based care exists even when the model accounts for parents' belief in the ability for centers to prepare child for kindergarten,

suggesting that parents preference for center-based care is based on more than just preparation for kindergarten.

Analyses of the relationship between factors for black and Hispanic parents separately distinguish which factors influence enrollment for each group. Specifically, for black parents, social service experience, owning a car, and believing that a center can prepare child for kindergarten were associated with increased odds of preschool enrollment. These factors point to the importance of channels of information and logistical concerns for parents' enrollment decisions. Only group relation factors (i.e., linked fate and conflict) were unique to Hispanic parents. Two factors, the number of children in the household and belief in own ability to prepare child for kindergarten are significant for the larger population of parents, but not specifically for black parents or Hispanic parents.

Despite small sample sizes analysis of black parents and Hispanic parents separately provides interesting insights about the contexts that influence black and Hispanic parents' preschool enrollment decisions. Separated analyses reveal that the set of factors that influence enrollment for each group differs, and that one group may be more sensitive to a given condition. For example, Hispanic parents are more likely to report owning a car than black parents, but owning a car is only associated with preschool enrollment for black parents. Similarly, black and Hispanic parents report

similar rates of experience with social service, but experience with social service was only associated with increased odds of enrollment for black parents. These analyses reveal that the current focus on understanding the predictive power of individual factors may be insufficient for understanding how systems of factors operate together to influence parents' enrollment decisions.

1.7 Conclusion: Addressing the Effects of Group Relations and Other Factors on Preschool Enrollment

Expansion of preschool for low-income children will ameliorate issues of scarcity, but will not address the full set of conditions that affect enrollment. As policies and programs address issues of supply, they must also address contexts that affect demand. It is important to build and expand systems designed to provide services to children and families in need accounting for what research shows to be barriers to enrollment (e.g., parents' low levels of education, lack of transportation, weak information channels about programs). In addition, given the influences of parents' preferences on enrollment, campaigns to promote the benefits of preschool enrollment may affect parents' preferences.

As the Hispanic population grows and continues to disperse into regions outside of traditional gateway destinations, it is reasonable to expect that populations will continue to face group-based challenges around access to scarce preschool resources. The finding that parents who are enrolled in public preschool are more likely to have

had experience of conflict with other groups points to the need for targeted programming to address tensions that may manifest in the communities or in the preschool center. Efforts by preschool institutions to ameliorate group-based tensions may be helpful to mixed group parents who enroll, however the over-arching social and political issues, enacting institutional violence on Hispanic populations will continue to be a significant barrier to Hispanic parents' engagement with preschool and other institutions. Given this social and political climate, it is unclear whether the development of Hispanic-serving preschool institutions will allay Hispanic parents' fears associated with engaging with public institutions. Such institutions may be seen as safe havens or targets. While community and municipal declarations of safe space may help to allay fears, large scale changes in federal leadership and immigration policies are necessary. It is important to note that the non-random selection of parent participants may present a source of bias. However, this community-based study provides rich information about preschool enrollment patterns among racial and ethnic minorities within a context undergoing rapid demographic shifts. Future research should conduct similar analyses in other regions and communities, which would address issues of generalizability. In-depth qualitative and ethnographic studies will advance this line of research and provide nuanced information about how parents perceive and engage with each other as they navigate constrained public preschool markets. While this study

focuses on black and Hispanic relations in a new immigrant destination, evidence of intergroup relations affecting preschool enrollment decisions suggest the need to examine how group relations may influence parents' preschool enrollment decisions along other socially relevant divides (e.g., race, class).

2. Typologies of Parents Who Do Not Enroll in Preschool: Three Types Derived from Cluster Analysis of Low-Income Parents in the South

2.1 Introduction

Fifty percent of low-income preschool-age children (i.e. between the ages of 3 and 5 years old) do not enroll in formal preschool (NCES 2015). Children across class backgrounds do not enroll in preschool. However, non-enrollment by low-income children is of particular concern because enrollment in high-quality preschool can alleviate some of the developmental risks associated with poverty. Specifically, enrollment promotes school readiness and can have significant benefits on long-term outcomes across health, education, and employment domains for children from low-income backgrounds (Currie and Thomas 1993, Barnett and Yarosz 2007, Anderson 2008, Barnett 2011, Campbell, Pungello et al. 2012). Many state and local governments recognize the benefits of enrollment in high-quality preschools and seek to expand public preschool for low-income children. In the context of preschool program expansion, understanding barriers to enrollment can inform the development of more inclusive and accommodating preschool systems.

Different reasons for preschool non-enrollment may require different policy interventions to promote enrollment. Therefore, it is important to distinguish between parents who do not apply and parents who do not enroll.

Some low-income parents do not enroll their children in public preschool because they do not apply. Other low-income parents do not enroll in public preschool because they apply, but existing programs do not have the capacity to accommodate them. Other low-income parents do not enroll in public preschool because they apply, are admitted, but do not enroll or do not sustain enrollment because they are unable to meet the demands associated with daily preschool attendance (e.g. transportation, drop offs, and pick-ups) (Sandstrom and Chaudry 2012). The barriers to enrollment differ for these three groups. While preschool expansion may promote enrollment amongst the type of parents who are not enrolled due to capacity issues, it is not clear whether simply expanding existing preschool systems will promote enrollment amongst the types of parents who do not apply or those who once accepted, are unable to follow through with enrollment.

This study focuses on parents who do not apply for public preschool. Understanding the profiles of parents who do not apply to the current public preschool systems can provide policy-relevant insights into possible misalignments between dimensions of existing preschool systems and the needs of low-income parents. Further, understanding the profiles of parents who do not apply can inform the design of more inclusive and accommodating preschool systems, and the development of more targeted parent outreach.

2.2 Background

2.2.1 Research on Predictors of Enrollment

There is a robust and evolving literature examining the contexts associated with preschool enrollment for low-income parents. The theoretical frameworks commonly applied to understanding parents' child care decisions are explicit in the joint effects of multiple, complex, and nested contextual factors (Bronfenbrenner 1992, Meyers and Jordan 2006, Chaudry, Henly et al. 2010). Studies consistently point to factors that span nested systems in the domains of family need, human and social capital, preference, and supply. In the domain of family need, not being employed and having multiple adults and children in the household are associated with lower rates of preschool enrollment (Singer, Fuller et al. 1998, Early and Burchinal 2002, Crosnoe, Purtell et al. 2016). In the domain of human and social capital, lower levels of education and less experience with social services are associated with lower rates of enrollment (Liang, Fuller et al. 2000, Brandon 2004, Yesil-Dagli 2011, Tang, Coley et al. 2012, Crosnoe, Purtell et al. 2016). In the domain of preferences, a lower prioritization of academic development, socialization, and professionally trained care-givers, and a higher prioritization of flexible care are associated with lower rates of enrollment (Fuller, Holloway et al. 1996, Liang, Fuller et al. 2000, Early and Burchinal 2002, Fram and Kim 2008, Yesil-Dagli 2011). In addition, parents' perception that local programs are low quality is associated with

lower rates of enrollment (Crosnoe, Purtell et al. 2016). In the domain of supply, communities with fewer preschools have lower rates of enrollment (NIEER 2017). In addition to contexts that fall within these domains, transportation limitations and lack of knowledge about free or subsidized early childcare are associated with lower rates of enrollment (Sandstrom and Chaudry 2012).

An important, though less explored domain associated with preschool enrollment, is intergroup relations. Research in the K-12 context suggests that parents' selection into and out of schools is influenced by racial and ethnic school composition (Welch 1987, Orfield and Eaton 1997, Fairlie and Resch 2002, Clotfelter 2011). This literature focuses on white parents' selection out of schools that are black and white integrated. However, with the growing Hispanic population, not much is known about how the diversifying preschool and K-12 school composition may affect the enrollment decisions of parents of different racial and ethnic backgrounds (Brown 2014).

2.2.2 Limitations of Existing Literature

There are two main limitations in the existing literature for understanding why some low-income parents do not apply to existing public preschool. First, most studies are unable to distinguish between non-enrollment that occurs because of limited program supply, because of an inability of a parent to follow through with enrollment, or because a parent did not apply (Fuller, Holloway et al. 1996, Liang, Fuller et al. 2000,

Brandon 2004, Yesil-Dagli 2011, Tang, Coley et al. 2012, Crosnoe, Purtell et al. 2016).

These studies observe whether a parent has a preschool-age child enrolled or not enrolled and assess the contexts associated with (non)enrollment (Fuller, Holloway et al. 1996, Liang, Fuller et al. 2000, Brandon 2004, Yesil-Dagli 2011, Tang, Coley et al. 2012, Crosnoe, Purtell et al. 2016). This type of analysis answers important questions about who uses existing programs. However, from a policy perspective, the distinction between parents who are not enrolled because of a lack of program capacity and parents who are not enrolled because they were unable to follow through with enrollment or because they never applied, has different implications for the types of policy needed to increase enrollment. For the former group, increasing program supply will likely increase enrollment. For the latter two groups, increasing supply alone will likely not be enough.

A second limitation of this literature is that while the theories used to understand enrollment decisions describe the influence of complex, simultaneous factors, studies that use multivariate regression analysis to measure the relationship between a set of factors and enrollment are limited in their ability to capture the co-occurrence of contexts (Fuller, Holloway et al. 1996, Liang, Fuller et al. 2000, Early and Burchinal 2002, Brandon 2004, Han 2004, Yesil-Dagli 2011, Tang, Coley et al. 2012, Crosnoe, Purtell et al. 2016). The coefficients of multivariate regression analysis measure the isolated effect of

each independent variable on preschool enrollment. This data analysis strategy is informative of the influence of each independent variable; however, it is unable to capture the extent to which sets of factors may co-occur for groups of parents in substantive ways that may influence enrollment.

This study addresses both limitations in the extant literature by performing cluster analysis using survey data from parents who did not apply to public preschool. Cluster analysis is a data analysis strategy grounded in identifying the systematic co-occurrence of a set of variables, which will allow for the identification of typologies of parents who do not apply for preschool. Cluster analysis complements multivariate analyses and provides a richer understanding of the contextual profiles of parents who do not apply for preschool.

While cluster analysis has not yet been used in research on the contexts associated with low-income parents' preschool enrollment, the analytic strategy of parsing out groups to conduct more narrowly tailored analyses of contexts is common in the literature. For example, studies examine the factors associated with preschool enrollment for high-income and low-income parents separately (Tang, Coley et al. 2012, Crosnoe, Purtell et al. 2016). These studies find that whereas preschool enrollment for low-income families is sensitive to contexts such as the local supply of care and to the number of children in the household, these contexts are not associated with enrollment

for higher-income families (Crosnoe, Purtell et al. 2016). The analytic strategy of examining the contexts associated with enrollment for distinguishable groups provides more exacting understanding of each populations' enrollment contexts.

In addition, while cluster analysis has not yet been used in research on parents' preschool enrollment decisions, disciplines as varied as medical science (McLachlan 1992, Eisen, Spellman et al. 1998, Van't Veer, Dai et al. 2002, Kan, Nagar et al. 2014, Schatz, Hsu et al. 2014), social science (Saunders 1992, Kuhn and Culhane 1998, Odom, Zercher et al. 2006, La Rocca, Staglianò et al. 2015), and marketing (Punj and Stewart 1983, Ross 2007) have used this analysis strategy. In these research contexts, understanding the taxonomy of populations of interest facilitates theory building and informs applied work and targeted outreach and treatment. For example, research using cluster analysis to understand the shelter use of homeless individuals was able to discern chronic and episodic typologies of users and identify patterns of healthcare and support needs for the development of targeted programming and support services (Kuhn and Culhane 1998).

2.2.3 Current Study

The purpose of this study is to better understand why some low-income parents do not apply to public preschool. To answer this question, this study uses cluster analysis to examine the profiles of low-income parents with preschool-age children who

did not apply to the existing public preschool system in Durham, North Carolina. The identification of distinct sub-populations of parents who did not apply provides insights into the contexts associated with parents' application decisions. This information can inform preschool program development and parent outreach to support preschool enrollment in the community from which these data were derived.

2.3 Methods

2.3.1 Location

Durham is a mid-sized city in the South that is experiencing Hispanic population growth. As such, it is well-suited for the examination of the relationship between intergroup relations and preschool enrollment. Each year, there are approximately 900 public preschool slots available to serve approximately 3,800 low-income families with preschool-age children (Durham's Partnership for Children 2017, HSES 2017, Department of Public Instruction 2017, Durham Public Schools 2017). Preschool services are provided by three entities: Head Start, a federally funded program for children and families in poverty; NC PreK, a state-funded program that partners with private and public providers; and the local school district. Low-income families apply to public preschool using one universal application form. A board comprised of representatives from all three provider entities reviews applications and selects families for admission. Administrators describe that admission is given to families with the "greatest need" and

for whom programs offer a “good fit” (Head Start Administrators Informal Interview 2015). However, their rubric for admission is not public. This streamlined application process facilitates the distinction between parents who apply for public preschool and those who do not.

2.3.2 Sample

Respondents in this study are part of a larger survey on low-income parents’ preschool enrollment in Durham. The larger study includes 369 low-income parents with preschool-age children. Of this group, 202 parents have children enrolled in public preschool and 167 parents did not apply for public preschool. The average age is 32 years old (SD = 8.2), and the modal category of monthly income is \$701 - \$1,100. The survey was open to primary caretakers of preschool-age children and most respondents are female (87.7 percent). Table 1 provides descriptive statistics of the population of parents included in the study, including the full sample and by parents who never applied, and parents who are enrolled.

Between February 2015 and February 2016, a team of researchers solicited parents to participate in a survey to inform early education in the community. Low-income parents with children enrolled in public preschool were solicited to participate in the survey at Head Start sites throughout the city. Low-income parents who had not applied to preschool were identified through robust community canvassing in

neighborhoods with high levels of poverty as derived from U.S. Census block data (U.S. Census 2012). Parents who were identified in the community completed a brief screener survey to verify their eligibility for public preschool. The screener verified that the parent had a child between the age of 3 and 5 years old, inquired about the family size and household income to verify eligibility for public preschool for low-income families, and asked whether the parent had ever applied for preschool/Head Start. Some parents identified through the community canvassing had children enrolled in public preschool and are included in the population of enrolled parents.

2.3.3 Measures

Informed by previous literature, measures of the factors that influence preschool enrollment span the domains of: intergroup relations; family need for care; human/social capital and resources; and beliefs and preference.

Intergroup relations measure: (1) a parent's belief of belonging to a community based on race or ethnic identity; (2) a parent's belief that when others who have the same racial or ethnic identity do well, it means that he or she will benefit, too; (3) a parent's feeling that he or she has to compete with others of a different racial or ethnic identity; (4) a parent's experience of competing with others of a different racial or ethnic identity; and (5) a parent's experience with verbal or physical conflict with others of a different

racial or ethnic identity. All five measures of intergroup relations used a 5-point Likert scale ranging from strongly disagree [1] to strongly agree [5].

Family need for care measures: (1) whether there is another adult in the household (dichotomous); (2) whether a parent has friends or family who live close by (dichotomous); and (3) the number of children who live in the household (continuous).

Human/social capital and resources measure: (1) whether a parent has a high school degree (dichotomous); (2) whether a parent is employed or not employed (without distinction to unemployed and not in the labor market) (dichotomous); (3) whether a parent has experience with any of the following social service programs: TANF, SSI, WIC, SNAP, or housing assistance (dichotomous); and (4) whether a parent owns a car (dichotomous).

Parents' preferences and beliefs measure: (1) a parent's preference for home or center-based care (dichotomous); (2) a 4-item scale of a parent's belief in his or her own ability to provide child with (a) academic skills; (b) social skills; (c) language skills; and (d) cultural/behavioral skills necessary for kindergarten, with responses on a 5-point scale from strongly disagree [1] to strongly agree [5]. Cronbach's alpha (α), a measure of internal consistency for the 4-item scale, is 0.93. (3) A second 4-item scale measuring a parent's belief in the ability of early education centers to provide his or her child with school readiness skills in the domains and response scale described above, Cronbach's

alpha (α) is 0.82. Table 2 provides descriptive statistics for all study variables, for the full sample and by parents who are enrolled and parents who never applied.

2.4 Analysis

Cluster analysis is performed using Stata SE13. Cluster analysis provides two types of clustering methods: iterative partitioning and hierarchical agglomerative. Iterative partitioning divides the observations into a pre-determined number of clusters specified by the researcher, then shifts observations into groups in a way that minimizes the difference within groups. Hierarchical agglomerative cluster analysis begins with each observation serving as its own cluster. Through a repeated process, clusters that are the most similar are joined together (Ketchen Jr and Shook 1996). Because this study does not have any theoretically grounded reason to pre-suppose a specific number of clusters, this study uses a hierarchical agglomerative, allowing the data to reveal the number of clusters.

Stopping rules are statistical analyses that measure variance between clusters and provide guidance on the most distinct number of clusters. This study uses Calinski and Harabasz index and the $J_e(2)/J_e(1)$ /Duda and Hart rules because they provide the most consistent identification of distinct clusters (Milligan and Cooper 1985). In addition, StataSE 13's cluster analysis function produces dendrograms (i.e., graphs of cluster variance) which allows for a more subjective visual identification of clusters.

Cluster analysis also provides several methods for linking or measuring the similarities between observations to form clusters. This analysis uses Ward's method because it outperforms other linking methods in reproducibility (Punj and Stewart 1983).

Robustness checks test for the internal validity of the clusters. First, I randomly divide the sample into halves and perform cluster analysis on each half-group. If the half samples produce cluster structures that are similar to the clusters found in the full sample, there is evidence of cluster stability. Second, I perform cluster analysis on imputed data. Because cluster analysis can only be performed on observations with full data, cluster analysis on non-imputed data drops 20 observations (12 percent). Analysis on imputed data assumes that data are missing at random and seeks to maintain the full sample of observations.

2.5 Results

The initial comparison of parents who enroll and parents who never applied reveals differences between the two groups across many of the previously identified contexts. First, in the domain of intergroup relations, parents who never applied report a higher sense of group cohesion (as measured through linked fate) and report a higher sense of competition with other groups. In the domain of family need, parents who never enroll report having more children in their household. In the domain of capital and resources, parents who never enroll report lower levels of education and less

experience with social services and are less likely to own a car. In the domain of beliefs and preferences, parents who never enrolled report a higher preference for home-based care, and are less confident in their ability and the ability of centers to prepare their children for kindergarten.

For cluster analyses, observations with missing data were not included, resulting in the loss of 20 observations. Figure 2 provides a dendrogram depicting the iterative process of forming clusters. The Calinski and Harabasz index and the $Je(2)/Je(1)$ /Duda and Hart stopping rules recommend that two clusters minimize the variance within clusters and maximize the variance between clusters.

Cluster one has 42 parents who did not apply to preschool while cluster two has 105 parents who did not apply. In the domain of intergroup relations, compared to parents in cluster two, parents in cluster one report more instances of conflict with individuals with a different racial or ethnic identity. In the domain of family need for care, more parents in cluster one report living with another adult and having more children in the household. In the domain of capital and resources, more parents in cluster one report owning a car. In the domain of preferences and beliefs, more parents in cluster one report preferring home-based care and believing less in the ability of a center to prepare their child for kindergarten. Table 3 provides t-test comparison of the

means for all variables included in the analysis for each cluster. Figure 3 depicts the co-occurrence of constructs for each cluster.

The first robustness check with randomly drawn half samples yields similar cluster structures, providing evidence of stable clusters and internal validity. Table 3 provides t-test comparison of means for the clusters identified in both half samples. Figures 4 and 5 depict the co-occurrence of constructs for each cluster. A second robustness check using imputed data has mixed findings about the recommended number of clusters. The $Je(2)/Je(1)/Duda$ and Hart stopping rule recommends two clusters, however, the Calinski and Harabasz index recommends that five clusters provide the most distinct groups. The two clusters recommended by the $Je(2)/Je(1)/Duda$ and Hart stopping rule yields a similar cluster structures as the non-imputed data. Table 4 includes a t-test comparison of the means for all variables for the imputed 2-group clusters.

2.6 Discussion

The purpose of this study is to understand the profiles of low-income parents who do not enroll in public preschool. A more exacting understanding of the co-occurring contexts that may influence parents' decision to not apply can inform the design of expanded preschool systems and the development of targeted parent outreach strategies. This study uses cluster analysis of survey data from 167 parents to examine

the profiles of low-income parents with preschool-age children who did not apply to enroll in the existing public preschool system in Durham, North Carolina. Analysis identifies two clusters of parents who do not enroll.

Cluster one contains 42 parents and makes up 28 percent of the population of parents included in the cluster analyses (n=147). Compared to parents in cluster two, parents in cluster one are more likely to report experience of conflict with individuals of other groups. Cluster one parents are also more likely to have another adult and more children in the household, and are more likely to have a car. Parents in cluster one express a higher preference for home-based care and are less confident in the ability of centers to prepare their children for kindergarten.

Parents who fit the cluster one profile may not apply for public preschool because they have strong ties to home-based care and are less convinced of the benefits of center-based care. These ties to home-based care are driven by having additional adults and children in the household. Previous studies find that having another adult in the household and having additional children in the household are associated with lower likelihood of enrollment (Singer, Fuller et al. 1998, Early and Burchinal 2002, Crosnoe, Purtell et al. 2016). Having an additional adult in the household may cause a parent to not apply for public preschool because the additional person may provide care for children, or because he or she may require care. The additional children in the

household may cause a parent to not apply for preschool because of the difficulty of finding and coordinating care and school for multiple children. The difficulty of coordinating care for multiple children may be over and above just having transportation, since parents in cluster one, are more likely to have a car.

Parents who fit the profile of cluster one express a lower level of confidence in the ability of centers to prepare their children for kindergarten. A previous study finds that parents' perception of low quality is associated with lower rates of enrollment (Crosnoe, Purtell et al. 2016). Parents' lower level of confidence in the ability of centers to prepare a child for kindergarten is not accompanied by a heightened sense of being able to personally prepare a child for kindergarten. This suggests that parents may be open to enrolling in a center if their perception of quality was higher.

Cluster two contains 105 parents, and makes up 73 percent of the population of parents included in the cluster analyses (n=147). Unlike parents in cluster one who have multiple risk factors associated with lower rates of preschool enrollment, for parents in cluster two, their context associated with lower rates of enrollment is not owning a car. Lack of transportation is a significant barrier to parents and children participating in public preschool (Sandstrom and Chaudry 2012). In Durham, where public transportation is limited and public preschool providers do not provide transportation, not owning a car may cause parents to not apply to preschool.

This study highlights that efforts to increase enrollment that rely only on expanding existing supply will systematically exclude populations of parents and children. Further, the identification of two distinct clusters of parents who did not apply to preschool suggests that a one-size-fits-all approach to outreach and expansion may also leave out groups of parents and children. Instead, an understanding and accommodation of the complex and co-occurring contexts that influence enrollment will allow for the development of more equitable preschool systems.

The identification of two distinct clusters of parents who never applied together with a more general comparison between parents who enrolled and those who never applied provide insights that can inform preschool system expansion and parent outreach in the community from which these data were derived. Parents who fit the cluster one profile have multiple risk factors associated with non-enrollment. They have ties to home-based care and are less confident in the ability of centers to prepare their children for kindergarten. Simply expanding existing systems may not be sufficient to promote the enrollment of parents who fit this profile. Instead, efforts to improve the quality of centers and/or campaigns that correct misinformation about poor quality and promote messages of school readiness may address parents' beliefs and help to promote enrollment. Parents who fit the profile of cluster one are also tied to home-based care. Efforts to publicize the benefits of center-based care and facilitate the coordination of

care for multiple children may promote enrollment. These parents also report more experience with out-group conflict, and they may benefit from center-based programming aimed at building positive relationships between parents across racial and ethnic groups.

Parents who fit the cluster two profile already express a preference for center-based care and confidence in the ability of centers to prepare their children for kindergarten. However, like with cluster one, simply expanding existing systems may not be sufficient to promote the enrollment of this group. Promoting preschool enrollment for this profile of parents may require addressing structural constraints, specifically the lack of transportation.

Limitations

Cluster analysis allows for the classification of groups along numerous variables and therefore provides a theoretically supported analysis of the co-occurrence of contexts that may influence preschool enrollment. However, this analysis strategy it has some limitations. Cluster analysis relies on the researcher's discretion for a variety of empirical choices that can affect the types of clusters that emerge from the data (Punj and Stewart 1983, Milligan and Cooper 1985, Ketchen Jr and Shook 1996, Clatworthy, Buick et al. 2005). The lack of fit statistics makes it difficult to compare clusters derived using different types of analyses (e.g. iterative partitioning). For example, one of the

stopping rules used with the imputed data robustness check recommended five clusters. Because the half-sample robustness checks and the other stopping rule supported the use of two clusters, I chose to focus on two clusters.

This study uses several strategies to circumscribe the limitations of cluster analysis. First, this study uses theoretically driven variables derived from other research to anchor the study in previous work and provide a complementary analysis of data. Second, robustness checks verify stability of findings within data (e.g. by randomly dividing the sample and re-running analyses) (Ketchen Jr and Shook 1996). Third, I detail the strategies used in my analyses to facilitate study replication with other sets of data. Replication using other data of parents who do not apply for preschool can assess the external validity of the clusters identified in this study.

3. Black and Hispanic Mothers' Competition in Labor and Public Preschool Markets in the South

3.1 Introduction

Contexts of scarcity can result in a sense of competition amongst those vying for scarce resources (Olzak 1994, Garcia, Tor et al. 2013). The sense of competition may be heightened when individuals seeking resources are from different racial or ethnic groups (Bonacich 1972, Olzak 1994, Bobo and Hutchings 1996). Issues of resource scarcity and intergroup competition are particularly salient in the growing number of low-income communities in the South experiencing Hispanic population growth (Massey 2008).

Studies of intergroup relations in regions experiencing Hispanic population growth show that long-standing populations view the new Hispanic population as competition for already scarce community resources (McClain, Lyle et al. 2007, Marrow 2008). In some instances, the sense of competition has given rise to negative affect, animosity, and violence against out-groups (Suarez-Orozco 1996, Lee, Ottati et al. 2001, Stacey, Carbone-López et al. 2011, Vázquez 2015). Hispanic population growth in the South is occurring in communities that are segregated by both race and class (Cravey 1997, Glaeser and Vigdor 2000, Iceland and Wilkes 2006, Davis, Gardner et al. 2009). As

a result, many studies examine black and Hispanic relations and white and Hispanic relations separately.

Extant studies of black and Hispanic relations in regions experiencing Hispanic population growth commonly examine competition for scarce labor and political resources (Waldinger 1997, McClain and Tauber 1998, Crowley, Lichter et al. 2006, McClain, Lyle et al. 2007, Fennelly 2008, Zúñiga and Hernández-León 2009, Carey Jr, Martinez-Ebers et al. 2016). However, less is known about how groups perceive each other in the context of other scarce community resources. Despite the importance of preschool for young children's education and for supporting low-income parents' labor force participation, research has not yet examined how black and Hispanic parents perceive each other in the context of scarce public preschool.

In addition, extant studies of black and Hispanic relations examine the experiences of men and women together. However, many social contexts, including child rearing and labor are stratified by gender (Hegewisch and Hartmann 2014). These stratified social contexts likely result in men and women having different social experiences. A few studies of group relations in regions experiencing Hispanic population growth find that women report lower levels of negative out-group affect when compared to men (Burns and Gimpel 2000, McClain, Carter et al. 2006). This

difference in out-group sentiment may be due in part to men's and women's different social contexts.

This study uses in-depth interviews with 34 low-income black and Hispanic mothers in city in the South with a growing Hispanic population to understand mothers' perceptions of scarcity and competition as they navigate constrained preschool and labor markets. Understanding how women navigate scarce labor and preschool markets will provide insights into whether women's experiences accessing labor markets differ from what is reported in mixed gender experiences. This study will also provide insights into mothers' experiences in the previously unexplored domain of scarce public preschool markets.

3.2 Background

3.2.1 Theory

There are two complementary theories that together, provide a framework for understanding how low-income black and Hispanic mothers might perceive each other as they engage in resource-constrained preschool and labor markets: social identity theory and group position model. Social identity theory posits that individuals take on group social identities based on socially relevant characteristics. Individuals develop a sense of shared fate with their in-group, and exhibit in-group bias and competitive responses to establish superiority in symbolic or material resources (Tajfel and Turner

1979, Tajfel 1982). An individual who espouses a social identity does not need a personal feeling of threat to activate competition or antagonism. Rather, threat experienced by one's group is sufficient for activation (Tajfel and Turner 1979).

Group position model adds to this theoretical foundation by positing that a group's sense of threat and competition is not constant, rather it is dynamic and responds to changes in social organization and allocation of resources (Blumer 1958, Olzak 1994, Bobo and Hutchings 1996). Group position model further holds that groups with a longer-standing history of disenfranchisement and alienation are more likely to see other groups as competitive threats (Bobo and Hutchings 1996). Together, these theories suggest that blacks and Hispanics will have a sense of competition for scarce community resources, but blacks may have a heightened sense of competition when compared to Hispanics.

3.2.2 Blacks and Hispanics in Low-Wage Labor

Interview and survey studies of laborers in regions experiencing Hispanic population growth find that some blacks perceive Hispanics as competition for low-wage, low-skill labor (Bonacich 1972, McClain, Lyle et al. 2007, Marrow 2008).

However, there is evidence that blacks' sentiments toward Hispanics vary, "caught somewhere between welcome and animosity," with the availability of work and the recency and volume of Hispanic population growth (Viglucci 2000, Rich and Miranda

2005, O'Neil and Tienda 2010). Though studies of Hispanics' sentiments towards blacks are limited, the few extant studies find that some Hispanics hold negative stereotypes of blacks in general (McClain, Carter et al. 2006, Marrow 2008) and negative stereotypes of blacks as laborers (Viglucci 2000).

Interview and survey studies of employers reveal discriminatory hiring practices in favor of Hispanic workers, suggesting that blacks' sense of competition is not only perceived or for symbolic resources. Employers use Hispanic workers' social networks for recruitment, which leads to the systematic exclusion of blacks in certain jobs and to the development of ethnic niches in labor markets (Waldinger 1997, Tilly 1998, Rivera-Batiz 1999, Johnson-Webb 2002). Some employers hold stereotyped views of black workers as lazy and Hispanic workers as enjoying hard work, and use these stereotypes to justify denying employment to black workers and paying Hispanic workers low wages (Kirschenman and Neckerman 1991, Johnson-Webb 2002). Some employers prefer undocumented Hispanic laborers and those with limited English language skills because of their lower reservation wage compared to black laborers (Rivera-Batiz 1999, LeDuff 2000, Maldonado 2009).

Despite these findings of competition and discrimination from survey and interview studies with laborers and employers, empirical studies using large scale data find mixed effects of Hispanic population growth on blacks' participation in low-wage

labor and economic well-being. Some studies find that the infusion of low-skilled Hispanic immigrant workers into the labor force was accompanied by reduced wages for black low-skilled workers, increased levels of black unemployment, and increased rates of black crime, and increased rates of black incarceration (Altonji and Card 1991, Topel 1994, Borjas, Grogger et al. 2010, Shihadeh and Barranco 2010). However a few studies find that immigration led to a slight increase in wages of native workers or had no effect on blacks' economic condition (Ottaviano and Peri 2012, Crowley, Lichter et al. 2015). These inconsistent findings may be part due to researchers' use of different levels of data (e.g. local, state, national), for different time frames, with different methodological procedures and controls. Inconsistent findings may also be due in part to researchers' inability to accurately account for the effect of the sizeable population of Hispanic undocumented laborers, estimated to be approximately 4 million (Pew Research Center 2016). Empirical research that relies on institutional data may also be limited in its ability to measure effects of Hispanic population growth in informal labor markets (Gutmann 1985).

3.2.3 Blacks and Hispanics in Public Preschool

While there is robust literature examining black and Hispanic relations in the low-wage labor market, research has not directly examined how low-income black and Hispanic parents perceive and engage with each other in the context of scarce public

preschool. Instead, administrative reports provide evidence of program scarcity and under-utilization by Hispanic families. Head Start is the largest provider of preschool services in the nation. It is a federally funded, locally administered preschool program for children and families in poverty that serves approximately 1 million children each year (ACF 2016). Administrative reports of waitlists for Head Start provide evidence of parent demand and program scarcity (U.S. Health and Human Services 2001). State-level Head Start enrollment data and public preschool reports show an under-enrollment of Hispanic children relative to the percentage of low-income Hispanic children in the population (Barnett and Yarosz 2007, HSES 2017).

The lack of direct studies on black and Hispanic parents' intergroup experience in the scarce public preschool market is surprising given the value of public preschool. Parents who are selected to receive a slot in a public preschool essentially "win" services valued at approximately \$8,800 per child, the rate of federal Head Start funding. The financial value of preschool services is a significant in-kind addition to low-income families' income. In addition, having a child enrolled in public preschool provides parents with the flexibility to pursue employment during the albeit, limited school hours. Finally, there are significant short-term and long-term benefits of preschool enrollment for children, including increased school readiness, higher levels of

educational attainment, higher rates of employment, and better self-reported health (Garces, Thomas et al. 2002, Schweinhart, Montie et al. 2005, Anderson 2008).

While extant research is generally informative of blacks' perceptions of Hispanics in the labor market, there are gaps for understanding of how blacks and Hispanic mothers perceive and engage with each other within scarce labor and preschool markets. First, existing studies do not address public preschool. Second, existing studies of black and Hispanic relations in the labor market examine the experience of men and women together. This aggregation of the experiences of men and women may obscure important gender differences because low-wage occupations are highly segregated by gender (Blau, Brummund et al. 2013, Hegewisch and Hartmann 2014). Third, there is a relative imbalance in reports of perceptions in the labor market. Most studies present black laborers' perspectives of Hispanics in the labor market, but very few studies present Hispanics' perceptions of blacks in the labor market. While this imbalance may reflect a consistency with theory, that blacks, with a longer-standing presence in the social context may more readily and fervently perceive Hispanics as competition, it is also possible that the imbalance is an artifact of researchers' focus on black populations.

3.2.4 Current Study

Through in-depth interviews with black and Hispanic mothers about their perceptions and experiences in labor and public preschool markets, this study directly

addresses these three gaps in existing literature. First, mothers describe their perspectives and experiences in the preschool and labor markets, thereby providing the first account of intergroup experiences in constrained public preschool markets. Second, mothers' description of their experiences in the labor market allows for an assessment of the extent to which women's experiences may differ from that described in mixed gender studies. Third, Hispanic and black mothers are asked the same questions, thereby allowing for a comparison in the frequency and extent to which mothers from each group discusses competition.

This study's focus on the experience of mothers is especially important because over 61 percent of families in poverty with preschool-age children have a non-married female head of household (ACS, 2015). While mothers are spending more time in paid labor, mothers still report spending significantly more time providing primary care to children when compared to fathers (ATUS, 2015). In addition, given the gender-segmented nature of social structures and low-wage occupations (Waldinger and Lichter 2003, Hegewisch and Hartmann 2014), the contexts of intergroup relations in labor may be different for women/mothers than for men/fathers. These stratified social contexts likely result in men and women having different social experiences. This study focuses on the experiences of low-income black and Hispanic mothers and thus provides insights on this important demographic in understudied contexts.

3.3 Method

3.3.1 Location

Population and growth. This research was conducted in Durham, North Carolina, a medium-sized city in the South. Like many cities in the region, between 2000 and 2015, Durham experienced population growth and a significant demographic shift. Between 2000 and 2015, the population of Durham increased by 31 percent (i.e. from 187,035 to 246,084) (ACS 2001, ACS 2016). In that same time, the Hispanic population increased by 112 percent (i.e. from 16,012 to 33,959), or from representing 8.6 percent to 13.8 percent of the total population (ACS 2001, ACS 2016). Population growth in the city was accompanied by growth in the number and percentage of individuals and families in poverty. Between 2000 and 2015, the number of families in poverty with children under 5 years old increased by 125 percent (i.e. from 989 to 2,233) (ACS 2000, ACS 2016).

Changes in Low-Wage Labor Market in North Carolina. Between 2001 and 2015, there were increases in the percentage of Hispanic laborers in many of the low-wage occupations that employed black female and male laborers. Table 1 provides a comparison of the black and Hispanic workforce composition for occupations that employed the highest number of black women and men in North Carolina in 2001. In most occupations, there was growth in the Hispanic percentage of the workforce. Table 1 shows that except for the occupation cooks, occupations that are the top employers

differ for men and women, providing evidence of gender segregation in low-wage occupations.

Between 2009 and 2015 there were changes in the demographic composition of children enrolled in Durham Head Start. Ethnic and racial enrollment data collected by Durham Head Start between 2009 and 2015 report an increase in the percentage of children Hispanic (regardless of race), and a decrease in the percentage of black children (regardless of ethnicity). In 2009, Durham Head Start provided preschool services to 459 children and their families, 36 percent were Hispanic and 64 percent were non-Hispanic (Head Start, PIR, 2017). In that same year, 64 percent of the children enrolled were black (Head Start, PIR, 2017). In 2015, Durham Head Start provided preschool services to 403 children and their families, 39 percent were Hispanic, 61 percent were non-Hispanic (Head Start, PIR, 2017). In that same year, 53 percent of the children enrolled were black.

3.3.2 Procedure

Data collection for a larger study on parents' use of early education services began in February 2015 and concluded in February 2016. I solicited parents with children enrolled in Head Start to participate in a survey at the five Durham Head Start locations throughout the city. I solicited parents with preschool-age children not enrolled in any preschool to participate in the study using targeted community

canvassing in high-poverty neighborhoods. A total of 369 parents participated in the survey.

In the survey, parents indicated whether they would be interested in participating in an in-depth interview; 77 percent of parents indicated a willingness to be interviewed. I identified a subset of 34 black and Hispanic mothers to participate in interviews. In identifying mothers to interview, I sought equal numbers of black and Hispanic mothers, as well as a balance of mothers with preschool-age children enrolled and not enrolled in Head Start. However, when I reached out to mothers using the phone numbers provided, many phone numbers were disconnected. Technology maintenance is a concern for populations in poverty (Gonzales, Ems et al. 2016). Due to selection by technology maintenance, mothers who participated in the in-depth interviews may have greater economic security than mothers in the larger survey sample from which the in-depth interview sample was drawn.

Between March 2016 and August 2016, a team of three interviewers conducted in-depth interviews with mothers in their homes or in private rooms at public libraries. Interviewers were two Hispanic women and one black woman. Interviewers and mothers were matched on racial and ethnic identity to encourage candid discussion about sensitive out-group perceptions. Interviews were conducted in English and Spanish. Hispanic mothers were provided the option of interviewing in English or

Spanish; all chose to conduct the interview in Spanish. Prior to data collection, the research team piloted interview questions for comprehension and sensitivity.

Interviews ranged in length from 14 to 83 minutes. Interviews were audio recorded then transcribed. Spanish language interviews were translated and transcribed into English for analysis.

3.3.3 Sample

Table 2 provides descriptive statistics of mothers who participated in the in-depth interviews. The research team interviewed 18 black mothers and 16 Hispanic mothers. On average, mothers were between 31 and 32 years old and had 2 to 3 children. Black and Hispanic mothers had similar rates of employment (28 percent vs. 25 percent, respectively). More Hispanic mothers lived with a husband or partner (75 percent vs. 22 percent) and had children enrolled in Head Start (63 percent vs. 33 percent). More black mothers had a high school degree (55 percent vs. 43 percent), were born in the United States (94 percent vs. 13 percent), and on average, resided in Durham for more years (22 years vs. 10 years).

3.4 Analysis

I used a combination of inductive and deductive analysis. Deductive analysis examined the extent to which the theorized relationship of group-based competition held true for mothers in the context of labor and preschool markets. Specifically, social

identity theory, group position model, and findings from previous studies predict that mothers will have a sense of group identity and group-based competition for scarce resources. Theories and previous studies further predict that black mothers will express a deeper sense of competition.

Interview questions asked about mothers' experiences in constrained labor and preschool markets to assess to assess: (1) do black and Hispanic mothers report a sense of group identity? (2) do black and Hispanic mothers perceive competition around scarce labor /preschool resources? (3) if present, is competition based on group identity? (4) do black mothers express a stronger sense of competition than Hispanic mothers?

Inductive analyses focused on understanding the contexts and experiences that informed mothers' perspectives. Semi-structured follow up questions allowed mothers to elaborate on the contexts of their experiences. Mothers' responses to interview questions were assessed, coded, and grouped by themes and similarities. Transcriptions were analyzed using Dedoose and Excel.

3.5 Results

3.5.1 Personal Experience vs. Group Experience: The Role of Group Identity

Mothers responded to questions about personal and group experiences interacting with others from different racial and ethnic backgrounds. Mothers' perceptions of their groups' experiences were not always consistent with their personal experiences. Even in

instances of inconsistency between personal and group experiences, mothers saw themselves as a part of the group, owned the collective experience, and referred to the group as “we.”

Eleven black mothers described negative personal experiences interacting with whites and Hispanics in the community. These interactions occurred with teachers, bosses, store clerks, police officers, and co-workers. The other seven reported positive personal relationships with childhood friends, colleagues, and co-workers. When asked to describe the experience of blacks as a group in the community, 14 black mothers discussed racism, stereotypes, and racial tensions. Even mothers who reported neutral interactions with Hispanics and whites described negative treatment of blacks as a group. For example, one black mother with neutral personal experiences reports negative group experiences:

“My grandmother is black and white. I don't have nothing against white people, I do talk to white people, but I'm not too big on the experience.” Lakisha (black mother, hereafter, BM)

“I think living black is hard, because we still being ... I feel like we still being in slavery. It's not slavery, but it's hard for us. We are judged by our skin color, so we still living in slavery to me.” Lakisha (BM)

The sentiment of being judged based on skin color is echoed by another mother who reported negative personal experiences:

“... I still feel like they might be looked down upon as ghetto, or ignorant just because the color of our skin. It's people out there who are still racist, you know.” Monique (BM)

These quotes describe that these mothers' sense of group identity is based on skin color.

Both mothers underscore the persistence of a historic racism and racial structure when they describe that “we are *still* living in slavery” and that people are “*still* racist.”

Hispanic mothers reported few, but generally neutral or positive personal experiences with blacks and whites in the community. Several mothers reported that language barriers prevent them from forming relationships with others who do not speak Spanish. Only one Hispanic mother commented on unfriendly interactions with blacks. However, when describing how Hispanics as a group are treated by the community, seven (43 percent) of the Hispanic mothers described negative group experiences and restrictions of their rights. Five reported neutral experiences (e.g. challenges communicating with others), two reported mixed experiences, and two reported good experiences. Even mothers who reported positive individual experiences, reported negative group experiences. For example, two Hispanic mothers describe:

“It's good. I've met a lot of good American people, very nice, I have also a couple of friends that are African-American, they're nice too.” Maria (Hispanic mother, hereafter, HM)

“For what I see it would seem like we are treated like less because we're not from here, we have no rights.” Maria (HM)

“No, I get along really well with my neighbors regardless of their race. I get along with everyone. For example, all of the neighbors at my neighborhood great (with) each other.” - Angela (HM)

“They say that there is much discrimination because of the fact that we are Mexican.” - Angela (HM)

These quotes provide examples of inconsistent personal and group experiences. Maria describes “good” and “nice” people but also describes that her group is treated like less. Maria also describes that her group identity is based on being an immigrant. Similarly, Angela describes getting along with everyone, regardless of race, but also describes discrimination against Mexicans. Angela’s statement also reveals that she sees her group identity as being Mexican, not Hispanic.

Black and Hispanic mothers are aware of their group identities. For black and Hispanic mothers, discussion of the shared group identity reveals the salience of the shared vulnerability to conditions that afflict the larger group, even if the individual had not directly experienced that threat. Black mothers reported a range of individual experiences with whites and Hispanics, but, the majority were negative (61 percent). When reporting on group experiences, 14 black mothers (77 percent) perceived that their group identity is associated with a vulnerability to racism and discrimination based on their skin color. In contrast, Hispanic mothers reported few but generally positive

interactions with blacks and whites. However, seven Hispanic mothers (43 percent) perceived that their group identity is associated with discrimination and fewer rights. Consistent with social identity theory, mothers owned the threats experienced by their group, even if they did not personally experience the threat (Tajfel and Turner 1979).

3.5.2 Competition in the Labor Market

Black and Hispanic mothers responded to questions about their experience in the labor market. All black mothers and seven Hispanic mothers (43 percent) reveal that they feel a sense of competition in the labor market, however the sources of their competition varied. Twelve black mothers (66 percent) reported feeling that they need to compete with Hispanics for labor, and the other six (34 percent) described that labor competition is due to job scarcity and is race/ethnicity neutral. Seven Hispanic mothers reported feeling that they need to compete for labor, and reported that they compete with others who have legal status or who speak English.

When describing why they believe they are in competition with Hispanics for labor, black mothers reported personal experiences in which they felt passed over in favor of Hispanic workers and pointed to the growing Hispanic workforce as evidence that Hispanic workers receive preferential treatment in the labor market.

“I had worked at ... It was a whole lot of Mexicans and somebody had told me they ... It was a temp job ... That they was going to keep all the Mexicans or whatever. I was trying to

do good so that they can keep me but they still didn't. They just kept the Mexicans." Kim (BM)

"You know how when you go to McDonald's, and you used to see a lot of Black people working at McDonald's? Now all you see is a bunch of Mexican managers, or mostly Mexican workers. I think they're given more opportunities than Blacks." Monique (BM)

"I mean, I have seen with my own eyes a Hispanic manager that would only hire Hispanics. I can't prove it, but that's all I see when I come in here, when I ask for application, you are never hiring. That kind of makes me feel some type of way, but it's like I don't even bother with it anymore. What can I do about it? I'm just one person." Cierra (BM)

These quotes are examples of the contexts and experiences that led black mothers to believe that they are in competition with Hispanics for labor. All three mothers point to work crews that are predominantly or exclusively Hispanic. Kim and Cierra describe their failed attempts at getting or maintaining employment in these crews. Monique does not describe a personal experience, rather she describes the change in the racial composition of the workforce over time as evidence of the need to compete with Hispanics for labor.

When probed further about why they believe Hispanics receive preferential treatment in the labor force, Black mothers provided explanations that fell into three categories: stereotypes of black workers as lazy, white employers' preference

for Hispanics because of their lighter skin, and Hispanic workers' lower reservation wage.

"Because they say that we are lazy and we come to work late and we don't like to do anything ... and they don't consider them (Hispanic) lazy." Kim (BM)

"You got some that are educated and successful and know what they're doing but you got the other ones, they only have the job because they look white." Dionna (BM)

"The Mexicans going to go in there and work for \$7.25, but ask us, we going to be like, we're not working for \$7.25. That work is hard, you know, stuff like that. I feel like we do have to compete, I have to compete, everybody has to compete with the Mexicans nowadays." Lakisha (BM)

In these quotes, black mothers explain why they believe Hispanic workers are favored by employers. Kim describes that employers hold stereotyped views of black and Hispanic workers, wherein Hispanics are perceived to be the more productive worker. Dionna describes that employers prefer Hispanic workers because of skin color discrimination and a preference for lighter skin. Lakisha describes that employers prefer Hispanic workers because they are willing to work for low wages.

Seven Hispanic mothers reported a sense of competition in the labor market, describing that Hispanic workers have fewer opportunities in the labor market because they do not have their papers or because they do not speak English. Only one of these mothers described a personal experience of competing with others who had their

papers. However, given the sensitive nature of legal status it is not surprising that more Hispanic mothers did not provide personal stories. In describing competition in the labor market, one Hispanic mother explains:

“It’s just that Hispanic people don’t have their papers in order and you are not as eligible, right? Because you are going to apply for work and they don’t choose you because you don’t have your papers with you and other people do have the paperwork.” Alma (HM)

In this quote, Alma describes that labor competition is based on immigration status.

Two Hispanic mothers described that their perspectives about competition for labor are shaped by their husbands’ employment experience. These mothers explain:

“...it’s my husband the one who works now. What can I say? I haven’t had the need to work.” Magdalena (HM)

“Well, I haven’t worked here in Durham, but my husband has. And in regards to that, there are opportunities... based on what my husband says, for everybody.” Dalia (HM)

Both mothers reported not having personal experience in the labor market, and suggesting that because their husbands work, they did not have to. Based on her husband’s experience, Dalia believes that jobs are plentiful for everyone. Because their husbands were employed, these mothers were buffered from needing to engage in scarce labor markets.

While the interview did not directly ask about the labor status of partners or household members, survey data for the mothers who were interviewed show that 77 percent of Hispanic mothers lived with a partner or spouse. In comparison, only 22 percent of black mothers reported living with a partner. In households where mothers have employed partners, mothers may experience a lower sense of urgency for engaging in the scarce low-wage labor market.

Black and Hispanic mothers reported competition in the labor market, however, black mothers were more consistent in this report. The majority of black mothers described that Hispanics are their competitors for labor. Mothers described personal experiences of feeling passed over for Hispanic workers and pointed to the changing demographics of work crews or the exclusivity of Hispanics on work crews as evidence of Hispanic labor competition. Black mothers described that Hispanic workers receive preferential treatment because of employers' stereotypes of blacks as lazy and their preference for lighter-skinned laborers, and because of Hispanic workers' lower reservation wage. In contrast, fewer Hispanic mothers reported feeling a sense of competition for labor. Whereas black mothers pointed to employers' preference for Hispanic workers, Hispanic mothers pointed to employers' preference for workers with papers and who speak English.

Mothers' employment was not correlated with mothers' sense or experience of competition in the labor market. At the time of the interviews, only four Hispanic mothers reported employment: three worked in housekeeping and one worked at the airport. At the time of interviews only six black mothers were employed: two worked in food service, one worked in housekeeping, one worked at a small tax chain office, one worked for her church, and one was a mental health therapist. However, there is evidence that mothers with employed partners may be buffered from the urgency of engaging in the scarce, low-wage labor market.

3.5.3 Competition in Public Preschool Market

While most black mothers perceived competition with Hispanics in the labor market, only four reported a sense of competition with Hispanics in the public preschool market. All mothers reported a belief that Hispanic children are given preferential treatment by administrators, two of these mothers report being told by a trusted source, while the other two mothers do not elaborate on the context that informed their perception. One mother explains being told explicitly by a program administrator that children who do not speak English are given preferential treatment. If this policy is true, it would indeed give preferential treatment to Hispanics. She describes:

"I felt like that was kind of messed up and the teacher told me, so I know it's not a lie, but she was like, "Yeah, we have to take the Hispanic kids over everybody; white, black, whatever because half of them don't know

how to speak English." I just thought that was crazy, but that goes just back to people saying they are coming and taking over. In a sense, they come and they get more than we can. I feel that way. I don't feel like they are coming and taking over, I feel like they come and they get more than we could ever get and we've been living all our lives."
Cherry (BM)

In her statement, Cherry speaks to the recency of the Hispanic population and their access of resources. Consistent with group position model, Cherry's sense of competitions seems to be activated by the re-allocation of resources (Blumer 1958, Olzak 1994, Bobo and Hutchings 1996).

The second mother reported being cautioned by her mother about preferences given to Hispanic applicants. She explains:

"My mom would always tell me, she always say, she had nothing against Hispanics but she would always tell me, they would be considered first. She never said why or she never knew why but they would get in..."
Kam (BM)

In this example, Kam's sense of competition with Hispanics was passed down from her mother. The third and fourth mothers describe that administrators will give preference to Hispanic children, but do not elaborate.

"The Hispanics come before blacks. Some daycare people is white and our experience is going to come like that."
Tori (BM)

“ Yeah, because they can get in their quicker. They get- They instantly, like, they get in their quicker” Dionna (BM)

Another four black mothers reported frustration at systemic scarcity, however they do not perceive race- or ethnicity-based competition. The remaining ten black mothers report that they do not perceive any competition for preschool. Mothers’ sense of competition or sense of scarcity in preschool markets is not correlated with the enrollment status of their children.

Four Hispanic mothers report that they feel as sense of competition for preschool based on race and ethnicity. Of these four, two are not able to identify why they feel this way, while the other two report negative interactions with other parents in when picking their children up from school.

“I think that maybe yes, there are people that you find in schools that might not want to rub elbows with you or don’t want to have a conversation with you or anything.” Sonya (HM)

“I heard comments when I picked up the kids... but never directly....” Lorena (HM)

“I don’t know buy I already think that we the Hispanics are left for the last; but I really don’t know that.” Yajara (HM)

In these quotes Sonya and Lorena describe negative comments or interactions with other parents in the Head Start center that lead them to believe that there is a

competition for preschool resources. Yajara describes that she believes that Hispanics are considered last. This comment is in direct contradiction to the expressed sentiment of the four black mothers that Hispanic children are given preferential treatment. Two Hispanic mothers comment on scarcity of preschool resources and the remaining ten Hispanic mothers report that they have no sense of competition for preschool.

Compared to competition in the labor market, fewer black and Hispanic mothers reported competition in the public preschool market. For black mothers only eight (44 percent) reported a sense of competition for public preschool. Amongst that eight, four (22 percent) describe a sense of competition with Hispanics, and four describe a general sense of competition based on program scarcity. Six Hispanic mothers (37 percent) also reported competition for public preschool. Amongst that six, four (25 percent) describe a sense of competition based on their group identity, and two report a general sense of program scarcity. As such, blacks and Hispanic mothers had a more balanced report of competition in the public preschool domain.

3.6 Discussion

The purpose of this study is to understand how low-income black and Hispanic mothers in a region experiencing demographic transition, navigate constrained labor market and public preschool markets. Given the persistent role of women as the primary caretakers of young children and the prevalence of female-headed households

understanding how women navigate labor and preschool markets a growing and understudied social context. Grounded in social identity theory (Tajfel and Turner 1979, Tajfel 1982) and group position model (Blumer 1958, Bobo and Hutchings 1996), this study was guided by four main questions: (1) Do black and Hispanic mothers report a sense of group identity? (2) Do black and Hispanic mothers perceive competition around scarce labor /preschool resources? (3) If present, is competition based on group identity? (4) Do black mothers express a stronger sense of competition than Hispanic mothers?

Consistent with social identity theory, this study found that mothers develop group social identities based on socially relevant characteristics. For black mothers, skin color is the socially relevant characteristic around which they form their group identity. Given the long-standing color-line divide in America, this color-based identity is not surprising. In contrast, the socially relevant characteristic for Hispanic mothers is not as uniform. Interviews suggest that some mothers see their social groups based on nationality or immigration status, while others ascribe to a pan-Hispanic identity.

Consistent with theory and with previous findings, this study found that mothers do perceive competition in the low-wage labor markets. In addition, this study found that black mother express a stronger sense of competition for labor than Hispanic mothers. All black mothers reported a sense of competition in the labor market. The

majority of black mothers (66 percent) perceived Hispanics to be competition for labor (Bonacich 1972, McClain, Lyle et al. 2007, Marrow 2008). Black mothers described their own experience of feeling passed over for Hispanic workers and pointed to the changing composition of the labor force. Black mothers' sense of threat based on the change in allocation of resources is consistent with group position model (Blumer 1958, Olzak 1994, Bobo and Hutchings 1996). Black mothers reported feeling discriminated against in favor of Hispanic workers and described discriminatory hiring practices that have been reported in other studies (Waldinger 1997, Tilly 1998, Rivera-Batiz 1999, Johnson-Webb 2002). Seven Hispanic mothers (43 percent) reported a sense of competition in the labor market, however, this sense of competition was not necessarily directed towards blacks. Instead, Hispanic mothers reported that they need to compete with others who are documented and with those who spoke English.

This study found that mothers feel a sense of competition for the scarce public preschool resources. Reports of competition for public preschool were more balanced between black and Hispanic mothers. For black mothers, 44 percent reported a sense of competition for preschool, and 22 percent of all black mothers described that Hispanic children are the source of competition. For Hispanic mothers, 37 percent reported a sense of competition for preschool, and 25 percent of all Hispanic mothers described that competition was based on their group identity.

Survey data and interviews provide some insights about what might account for black and Hispanic mothers' differing sense of competition in the labor and preschool markets. Black mothers reported a high sense of competition in the labor market and a lower sense of competition in the preschool market. This lower report of competition for public preschool may be attributed to mothers' ability to find substitutes for center-based child care. However, mothers are less able to obtain a substitute for wage income.

In addition, black mothers reported a significantly higher level of competition for labor than Hispanic mothers. It is possible that mothers' sense of labor competition may be affected by their household structure. While the survey did not ask about the labor force connections of household members, two Hispanic mothers revealed that because their husbands work, they did not need to work. More Hispanic mothers reported living in a household with a spouse or partner than black mothers. A partner's labor force connection may reduce a mother's sense of urgency to engage in the labor market and therefore result in their lower reports of competition.

While black and Hispanic mothers reported competition across groups for scarce resources, they did not describe animosity towards these groups. Rather, they pointed to unfair systems for distributing resources. Mothers' reports of their experience suggest that social programs intended to provide services to children and families in poverty, in

their scarcity and un-transparent distribution practices may be a source of racial and ethnic animus.

Table 1. Descriptive Statistics of Sample Population

	Enrolled	Non-Enrolled	Black	Hispanic
N	202	167	227	130
Female (%)	87.94%	87.42%	84.55%	93.65%
Age (SD)	32.12 (8.29)	32.05 (8.16)	32.17 (8.86)	31.87 (7.05)
Monthly Income (Mode)	\$701-\$1,100	\$701-\$1,100	\$701-\$1,100	\$701-\$1,100
Black	72.77%	47.90%		
Hispanic	25.25%	47.31%		
Immigrant	22.89%	43.83%	8.90%	90.48%
Years in Durham (SD)	19.84 (13.26)	16.77 12.20	23.25 (13.57)	10.9 (6.51)
HS or more	77.72%	61.08%	78.85%	53.85%
Employed	51.98%	52.10%	48.02%	60.00%

Table 2. Descriptions, Means, and Standard Deviations for Variables Used in the Analysis

Variable Name	Description	Metric	Means (SD)	
			Black	Hispanic
Outcome				
Preschool	Enrolled in Head Start	0 = No / 1 = Yes	.64 ^{***} (.47)	.39 (.48)
Group Relations				
Group Identity	I belong to a community based on my race or ethnic identity	1 = Strongly Disagree 5 = Strongly Agree	3.60 ^{***} (1.11)	3.41 (1.20)
Linked Fate	I believe that when other people who have the same race or ethnic identity as me do well, it means that I will benefit, too	1 = Strongly Disagree 5 = Strongly Agree	3.14 ^{***} (1.12)	3.43 (1.14)
Sense of Competition	I feel like I have to compete with other people who have a different race or ethnic identity	1 = Strongly Disagree 5 = Strongly Agree	2.69 ^{***} (1.26)	2.81 (1.22)
Experience of Competition	I have personal experience of having to compete with people who have a different race or ethnic identity	1 = Strongly Disagree 5 = Strongly Agree	2.80 ^{***} (1.26)	2.65 (1.16)
Conflict	I have personal experience of having a verbal or physical conflict with people who have a different race or ethnic identity	1 = Strongly Disagree 5 = Strongly Agree	2.74 ^{***} (1.27)	2.51 (1.11)
Family Need				
Another Adult in HH	Another adult in the household	0 = No / 1 = Yes	.69 [*] (.46)	.73 (.44)
Friends or Family Close	I have friends of family who live close by	0 = No / 1 = Yes	.82 (.37)	.80 (.39)
# of Children in HH	# of children in the household	Continuous Variable	2.48 ^{**} (1.39)	2.62 (.49)
Employed	Employed/ Not employed (unemployed and not in labor force)	0 = No / 1 = Yes	.48 ^{***} (.49)	.60 (.49)
Human/Social Capital				
High School	Less than high school/ High School +	1 = Strongly Disagree	.78 ^{***} (.45)	.53 (.47)
Experience with Social Service	Ever had experience with TANF, SSI, WIC, SNAP, housing assistance	0 = No / 1 = Yes	.86 (.34)	.87 (.32)
Own a Car	I have my own car or source of transportation	0 = No / 1 = Yes	.65 [*] (.47)	.76 (.42)
Beliefs and Preferences				
Prefer Home or Center	If you had a choice, would you rather your child stay at home with you or be in a center	0 = Home / 1 = Center	.81 (.39)	.76 (.43)
I Can Prepare My Child for K	I am able to provide my child with school readiness skills (academic, social, language behavioral, culture)	1 = Strongly Disagree 5 = Strongly Agree	3.92 ^{***} (.82)	2.58 (1.05)
Center Can Prepare My Child for K	Centers are able to provide my child with school readiness skills (academic, social, language behavioral, culture)	1 = Strongly Disagree 5 = Strongly Agree	4.46 (.47)	4.41 (.43)

† <.1 * $p < .05$ ** $p < .01$ *** $p < .001$

**Table 3A. Logistic Coefficients and Odds Ratios for Intergroup Relations on
Preschool Enrollment**

Variables	Full Sample		Blacks		Hispanics	
	(1)	Odds	(2)	Odds	(3)	Odds
Group Identity	0.12 (0.11)		0.05 (0.15)		0.04 (0.21)	
Linked Fate	-0.41*** (0.11)	.65	-0.18 (0.15)		-0.51** (0.19)	.59
Sense of Competition	-0.20 (0.14)		-0.28 (0.20)		0.01 (0.23)	
Experience of Competition	-0.02 (0.16)		0.09 (0.22)		-0.27 (0.29)	
Experience of Conflict	0.26* (0.12)	1.29	0.14 (0.15)		0.42† (0.23)	1.53
Prob >F	0.001		0.417		0.048	
<i>n</i>	369		227		130	

Note: Numbers in parentheses are standard errors.

† < .1 * *p* < .05 ** *p* < .01 *** *p* < .001 (two-tailed tests)

Table 3B. Logistic Coefficients and Odds Ratios for Family Need on Preschool Enrollment

Variables	Full Sample		Blacks		Hispanics	
	(1)	Odds	(2)	Odds	(3)	Odds
Live with another adult	-0.17 (0.23)		-0.25 (0.31)		-0.05 (0.41)	
Friend/family live close	-0.13 (0.27)		0.02 (0.37)		-0.32 (0.46)	
# of children in HH	-0.17* (0.08)	0.83	-0.19* (0.10)	0.82	0.82 (0.16)	-0.13
Employed	0.00 (0.21)		0.44† (0.28)	1.56	-0.46 (0.37)	
Prob >F	0.201		0.146		0.587	
<i>n</i>	369		227		130	

Note: Numbers in parentheses are standard errors.

† <.1 * $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed tests)

**Table 3C. Logistic Coefficients and Odds Ratios for Capital and Resources on
Preschool Enrollment**

Variables	Full Sample		Blacks		Hispanics	
	(1)	Odds	(2)	Odds	(3)	Odds
High school diploma	0.81*** (0.23)	2.25	0.97** (0.34)	2.64	0.48 (0.37)	
Social service exp.	0.51† (0.32)	1.67	1.11** (0.41)	3.06	-0.33 (0.55)	
Own a car	0.61** (0.23)	1.84	0.87** (0.30)	2.40	0.52 (0.45)	
Prob >F	0.000		0.000		0.360	
<i>n</i>	369		227		130	

Note: Numbers in parentheses are standard errors.

†<.1 * $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed tests)

Table 3D. Logistic Coefficients and Odds Ratios for Preferences on Preschool Enrollment

Variables	Full Sample		Blacks		Hispanics	
	(1)	Odds	(2)	Odds	(3)	Odds
Prefer home or center	0.79** (0.27)	2.21	0.79* (0.36)	2.21	0.79† (0.37)	2.19
I am able to prepare	0.31*** (0.10)	1.37	-0.09 (0.41)		0.32† (0.17)	1.37
Center able to prepare	0.60* (0.24)	1.82	0.74* (0.30)	2.11	0.26 (0.43)	
Prob >F		0.000		0.005		0.139
<i>n</i>		369		227		130

Note: Numbers in parentheses are standard errors.

†<.1 * $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed tests)

**Table 4. Logistic Coefficients and Odds Ratios for Previously Identified Predictors on
Preschool Enrollment**

Variables	Full Sample		Blacks		Hispanics	
	(1)	Odds	(2)	Odds	(3)	Odds
Family Need						
Another adult in HH	-0.09 (0.25)		-0.24 (0.34)		0.12 (0.44)	
Friends and family live close	-0.26 (0.30)		-0.21 (0.41)		-0.54 (0.50)	
Number of children in the HH	-0.18* (0.09)	0.83	-0.18† (0.11)	0.83	-0.18 (0.17)	
Employed	-0.03 (0.23)		0.04 (0.33)		-0.55 (0.39)	
Human / Social Capital						
High School	0.86*** (0.25)	2.37	1.18** (0.37)	3.27	0.62 (0.39)	
Social service experience	0.51 (0.34)		1.09** (0.44)	2.99	-0.37 (0.59)	
Own car / have transportation	0.89*** (0.26)	2.45	1.06** (0.34)	2.90	0.74 (0.48)	
Beliefs and Preferences						
Prefer center (vs. home)	0.80** (0.29)	2.23	0.89* (0.41)	2.45	0.78† (0.49)	2.20
I can prepare my child for K	0.31** (0.10)	1.36	-0.14 (0.20)		0.38* (0.19)	1.46
Center can prepare my child for K	0.79** (0.25)	2.22	0.88* (0.34)	2.42	0.43 (0.48)	
Prob >F	0.000		0.000		0.268	
<i>n</i>	369		227		130	

Note: Numbers in parentheses are standard errors

† < .1 * $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed tests)

Table 5. Logistic Coefficients and Odds Ratios for Group Relations and Previously Identified Predictors on Preschool Enrollment

Variables	Full Sample		Blacks		Hispanics	
	(1)	Odds	(2)	Odds	(3)	Odds
Group Relations						
Belong to Group	0.04 (0.12)		0.03 (0.17)		0.01 (0.21)	
Linked Fate	-0.45*** (0.12)	.63	-0.22 (0.17)		-0.53** (0.21)	0.58
Sense of Competition	-0.13 (0.15)		-0.18 (0.22)		-0.03 (0.24)	
Experience of Competition	-0.00 (0.18)		0.02 (0.25)		-0.19 (0.31)	
Experience of conflict	0.26* (0.14)	1.30	0.26 (0.18)		0.46† (0.27)	1.59
Family Need						
Another adult in HH	-0.18 (0.26)		-0.32 (0.36)		-0.03 (0.48)	
Friends and family live close	-0.27 (0.31)		-0.17 (0.42)		-0.69 (0.53)	
Number of children in the HH	-0.18* (0.09)	0.83	-0.17 (0.11)		-0.16 (0.19)	
Employed	-0.02 (0.24)		0.02 (0.34)		-0.49 (0.43)	
Human / Social Capital						
High School	0.91*** (0.26)	2.49	1.19** (0.38)	3.31	0.69† (0.42)	2.00
Social service experience	0.45 (0.35)		1.05* (0.45)	2.87	-0.49 (0.64)	
Own car / have transportation	0.81** (0.27)	2.26	1.03** (0.35)	2.82	0.51 (0.53)	
Beliefs and Preferences						
Prefer center (vs. home)	0.91** (0.30)	2.49	0.99* (0.42)	2.71	0.88† (0.52)	2.42
I can prepare my child for K	0.27** (0.11)	1.32	-0.11 (0.21)		0.30 (0.20)	
Center can prepare my child for K	0.89*** (0.27)	2.45	0.91** (0.35)	2.49	0.57 (0.52)	
Prob >F	0.000		0.002		0.193	
<i>n</i>	369		227		130	

Note: Numbers in parentheses are standard errors.
 † < .1 * *p* < .05 ** *p* < .01 *** *p* < .001 (two-tailed tests)

Table 6. Means and SD for Non-Enrolled Typologies

	Non-Enrolled Parents		Half Sample	
	Type 1	Type 2	Type1	Type 2
Group Relations				
Group Identity	.65 (.24)	.64 (.30)	.71 (.18)	.63 (.30)
Linked Fate	.58 (.24)	.65 (.32)	.57 (.25)	.67 (.32)
Sense of Competition	.46 (.30)	.43 (.32)	.42 (.30)	.49 (.35)
Experience of Competition	.48 (.29)	.41 (.30)	.47 (.31)	.44 (.32)
Experience of Conflict	.49 (.30)	** (.26)	.47 (.31)	.37 (.29)
Family Need				
Another Adult in HH	0.90 (.29)	** (.46)	0.92 (.27)	** (.47)
Friends or Family Close By	0.90 (.29)	0.82 (.37)	.76 (.42)	* (.26)
# of Children in HH	.32 (.17)	+ (.14)	.31 (.12)	+ (.14)
Employed	.42 (.50)	.54 (.50)	.46 (.25)	.50 (.36)
Human/Social Capital				
High school	.66 (.47)	.60 (.49)	.76 (.42)	.61 (.49)
Experience with Social Service	.88 (.32)	.82 (.37)	.88 (.32)	.83 (.37)
Own a Car	.76 (.43)	+ (.49)	.80 (.40)	+ (.49)
Beliefs and Preferences				
Prefer Home or Center	.07 (.26)	*** (.16)	.11 (.32)	*** (.13)
I Can Prepare My Child for K	.60 (.23)	.53 (.29)	.61 (.22)	.51 (.30)
Center Can Prepare My Child for K	.59 (.22)	*** (.19)	.60 (.25)	** (.21)

Table 7. 2001/2015 Comparison of the Black and Hispanic Composition of Labor Force for Occupations that were the Top Employers for Black Women and Men 2001

	Black (Non-Hispanic)			Hispanic		
	2001	2015	Change	2001	2015	Change
% of Low-Income Population	39%	32%	-7%	8%	17%	9%
Top 5 Low-Wage Occupations for Black Women in NC (2001)						
Cashier	59%	41%	-18%	3%	9%	6%
Cooks	59%	42%	-17%	2%	19%	17%
Maids and Housekeeping Cleaners	54%	25%	-29%	5%	30%	25%
Customer Service Representatives	34%	49%	15%	7%	8%	1%
Nursing, Psychiatric, and Home Health Aides	32%	53%	21%	1%	1%	0%
Top Low-Wage Occupations for Black Men in NC (2001)						
Cooks	59%	42%	-17%	2%	19%	17%
Janitors and Building Cleaners	49%	38%	-11%	1%	21%	20%
Laborers and Freight, Stock, and Material Movers, Hand	40%	43%	3%	18%	11%	-7%
Driver/Sales Workers and Truck Drivers	22%	34%	12%	0%	11%	11%
Construction Laborers	16%	22%	6%	24%	23%	-1%

Source: IPUMS, 2015

Table 8. Descriptive Statistics of Mothers Interviewed

	Black Mothers	Hispanic Mothers
n	18	16
Age	31.4	32.3
# of Children	2.6	2.7
# of Children in HH	3.1	2.5
Partner/Husband in HH	22%	77%
High School +	55%	31%
Monthly HH Income (mode)	\$1,001 - \$1500	\$700-\$1,100
Born in US	94%	15%
Years in Durham	22.6	10.6
Employed	28%	31%
% Enrolled in Head Start	33%	63%

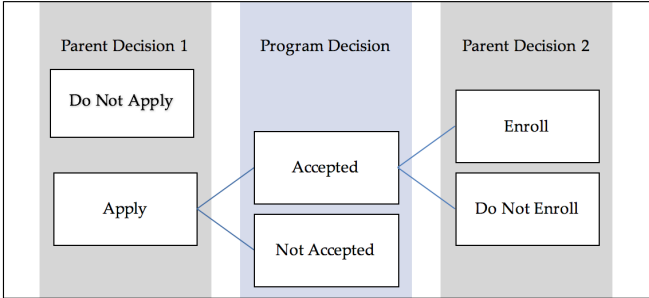


FIGURE 1: Chart of Preschool Enrollment Decision Points

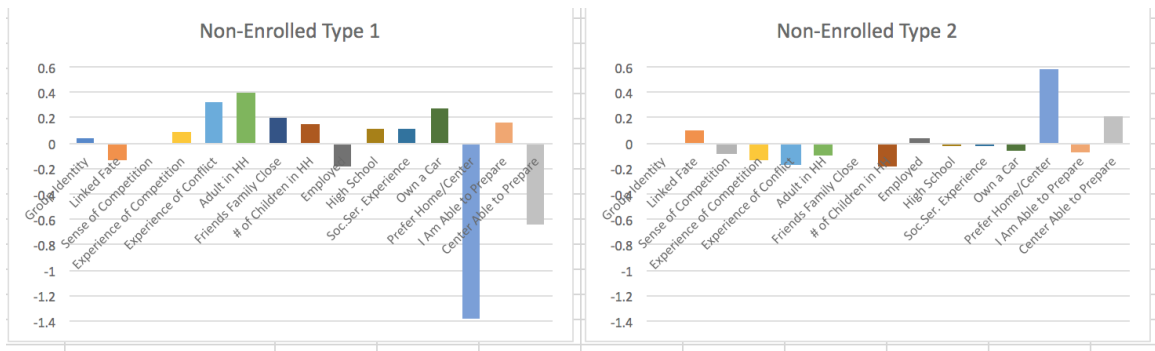


Figure 2. Typologies of Non-Enrollers

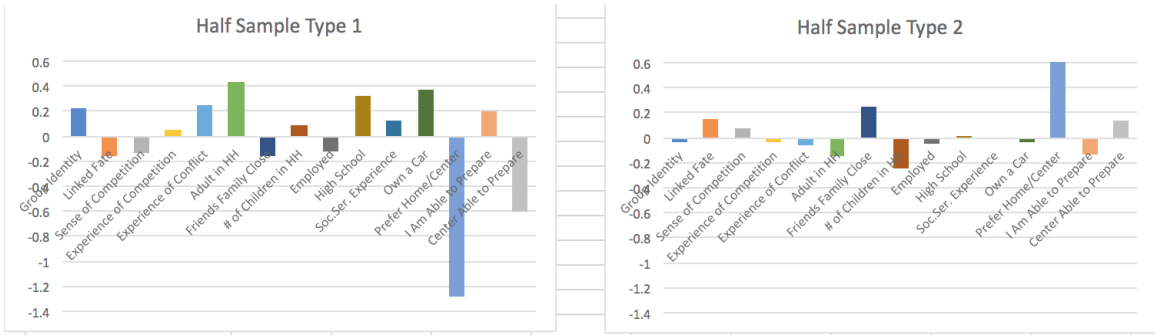


Figure 3. Typologies of Enrollers (Robustness Check)

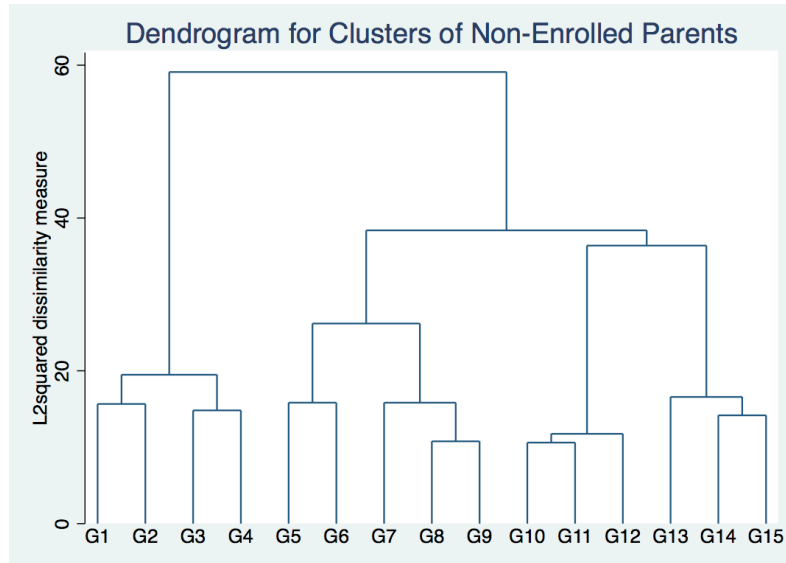


Figure 4. Dendrogram of Clusters

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Biography

Zoelene Hill is a scholar of early education policies and family and school connections. Her work focuses on connections between low-income and minority families and schools.

Zoelene Hill was born in Queens, New York on September 26, 1983. She attended Jefferson and Kilmer Elementary Schools in Trenton, New Jersey and Stuart Country Day School in Princeton, New Jersey. She received her bachelor's degree in politics from Princeton University in Princeton, New Jersey in 2004, and a master's degree in education policy and management from the Harvard Graduate School of Education in Cambridge, Massachusetts in 2005. She obtained a teaching certificate from the Graduate School of Education at the University of Pennsylvania in Philadelphia, Pennsylvania in 2010. She will receive her doctorate degree in public policy studies from the Graduate School at Duke University in Durham, North Carolina.

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She had been the recipient of the Emerging Scholar Award from the Annie E. Casey Foundation, (2017); Head Start Graduate Student Research Grant from the Administration for Children and Families, U.S. Department of Health and Human Services, (2015); Minority Dissertation Fellowship Finalist Award from the American Education Research Association, (2015); Aleane Webb Dissertation Research Award from Duke University, (2015); Small Research Grants from the Sanford School of Public Policy at Duke University (2014, 2015, 2016); Bass Instructional Fellowship from Duke University (2014); College Board Professional Fellowship Program (2014); Sulzberger Family/Dan Levitan Social Policy Graduate Research Fellowship from the Sanford School of Public Policy at Duke University (2013); the Dean's Graduate Fellowship from Duke University (2011). She is a member of the Society of Duke Fellows.