Children's social preferences can be influenced by several factors, including gender, age, and race. However, a potential factor that has largely remained unstudied in research on the development of social cognition is that of cultural concepts like familism. Past research has indicated that in early childhood, children may begin to manifest familial values in the form of behavior and are developing a sense of obligation and loyalty towards the family. In the present study, I examined whether 3- to 13-year-old children base their social preferences on familism values. Participants were introduced to a protagonist who has one cookie to share with two characters: either a family member (e.g., a sibling or parent) or a non-family member (e.g., a friend from school or stranger). Subsequently, children were asked with whom the protagonist should share the one cookie. I expected children whose parents scored higher on a short familism scale to prefer sharing with family members. Results did not reveal a significant effect of parent familism on children's family selections, yet there was a significant difference in family selections by ethnicity. Hispanic children were more likely to guide the protagonist to share with family members compared to non-Hispanic children. Further, results revealed a significant effect of age: with age, children were more likely to guide the protagonist to share with family members. These findings offered insight into the influence of familism and culture on children's social cognition. Future research should examine potential moderators and factors that could have influenced these results.

EXAMINING THE ASSOCIATION BETWEEN

FAMILISM AND SOCIAL COGNITION

ACROSS CHILDHOOD

by

Samantha Alvarado

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Approved by

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CHAPTER I: INTRODUCTION

Familism is a cultural value that emphasizes the importance of loyalty, obligation, and support towards the family (Stein et al., 2014). It has been characterized as one of the most important cultural values for Hispanics (Moore, 1970; Sabogal et al., 1987). Researchers have categorized familism into two types: attitudinal familism and behavioral familism. Attitudinal familism refers to an individual's actual beliefs and values, whereas behavioral familism refers to the behavioral demonstration of those beliefs (Stein et al., 2014). Familism has been found to serve as a protective factor against deviant peer exposure, interpersonal violence, and cigarette use among Latinx youth (German et al., 2009). In addition, past research suggests that behaviors consistent with familism promote psychological adjustment (Stein et al., 2015). Although research has indicated that familism does not directly influence academic performance, it has been found to increase motivation in Hispanic youth to attend college (Fuligni et al., 1999; German et al., 2009; Stein et al., 2015). However, despite most findings suggesting that familism has positive effects, other findings suggest the opposite. Stein et al. (2015) found that familism may also have elements that inhibit college attendance, like financial obligations towards the family.

Lastly, familism has been associated with prosocial behaviors such as helping others and playing fairly (Hernandez & Bamaca-Colbert, 2016). Studies have highlighted the relationship between Mexican American culture and prosocial behaviors. For instance, Mexican American adolescents were found to demonstrate a greater tendency of sharing resources with peers compared to Caucasian/White adolescents. Similarly, studies have suggested that the children of immigrant Mexican parents show higher levels of cooperation than Caucasian/White children (de Guzman & Carlo, 2004). In another study with Mexican American adolescents, participants

demonstrated a regard for others and adherence to values consistent with caring for others (relevent to familism) that was associated with prosocial behaviors (Carlo, 2006; Knight et al., 2014).

Limitations to the Study of Familism

Despite the growing body of research on familism, studies on this topic have been limited in two ways. First, studies have primarily focused on Hispanic adolescents and adults (Stein et al., 2014). Research in developmental psychology suggests that there are attitudes and behaviors observed in children that may be consistent with familism. A review of the development of familism (Stein et al., 2014) revealed several attitudes and behaviors consistent with familism in several age groups. They found that in early childhood (2- to 6-year-olds), parents are beginning to communicate cultural values and expectations to children, primarily values regarding respect and behavioral compliance. Additionally, at 2- to 6-years old, children are developing feelings of closeness towards parents and siblings. During middle childhood (7- to 11-year-olds) children begin experiencing stage-salient issues that may be related to familism, such as academic skills and increased independence. Further, at 7- to 11-year-olds, children begin developing an understanding of the need to provide support for family members and others. These findings raise the possibility that prior to adolescence (when familism has typically been studied), children could demonstrate some evidence of parent communication of cultural values through their behaviors and judgments, but younger children have been understudied.

The second way in which research on familism has been limited is its lack of connection to other topics. Research on the influence of familism on child development outside of its role as a protective factor is scarce, and few developmental studies have focused on familism as a predictor of children's social cognition processes. The Integrative Model of Ethnic Minority

Child Development suggests that adaptive cultural values, like familism, may influence child developmental competencies such as social, linguistic, and bicultural competencies (Garcia Coll et al., 1996). Further, research has revealed that familism may have both direct and indirect effects on physical and mental health as well as life outcomes. For instance, researchers speculate that familism may alter the trajectory of a chronic illness by influencing behaviors that may be important for managing an illness (Perez, 2011). Additionally, research has indicated that familism serves as a protective factor against mental health problems and a catalyst for child development (Zeiders et al., 2013). In studies examining familism's influence on substance abuse, findings have indicated that Hispanics may have lower substance abuse, drinking, and smoking rates which could be attributed to the familial honor aspect of familism (Soto et al., 2011).

The present study seeks to address these limitations by including a wide age range of children (between the ages of 3- to 13-year-olds) and closing the gap between clinical and developmental psychology by examining the association between parents' familism values on children's social preferences. The study will take a direct approach to examining the potential link between parent familism and child social reasoning by using a sharing task, as sharing resources is described in several familism measures. In the sharing task, I examine children's sharing expectations, particularly how they think resources should be allocated between family members and non-family members.

To my knowledge, this is one of the only studies examining familism in children as young as 3-years-old and its influence on children's sharing habits. This study expands on previous research of familism which have focused on clinical topics, such as mental health and substance abuse, to shed light on how cultural values like familism may influence children's

prosocial tendencies. Further, it extends the field of developmental psychology by examining familism as a predictor of sharing behaviors, enhancing the understanding of socioemotional development within cultural contexts.

Children's Beliefs About Resource Distribution

Although familism has been studied in limited contexts, research in other fields, such as the development of social cognition, may have some overlap with this topic. A broad range of studies show that children reflect on social considerations, including family members, when thinking about distributing resources (a key area asked about in familism questionnaires). Studies on resource distribution show that children are more likely to prioritize in-group members over out-group members (DeJesus et al., 2014). Decety et al. (2021) suggests that social influences may guide the decisions children make about sharing. Similarly, Killen and colleagues have found that children may take several considerations into account for fairness and justice in situations with obligations that arise from social relationships or concerns about their in-group's identity and well-being, including reciprocity and in-group loyalty (Killen et al., 2016; Rutland et al., 2010; Smetana et al., 1991). Further, studies on children's social preferences have suggested that culture may play a role in children's resource allocation preferences. Blake et al. (2015) conducted a study focused on the development of fairness by examining disadvantageous inequity aversion (DIA) and advantageous inequity aversion (AIA) in children from 7 different countries, including the United States and Mexico. DIA refers to the tendency to avoid receiving less than others and is associated with having long-term benefits such as a relative advantage over competitors, whereas AIA refers to the tendency to avoid receiving more than a peer and is associated with the rejection of a relative advantage and entails immediate sacrifice. The findings suggest that children from western countries (Canada and USA) were more likely to show DIA

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tendencies at 4 years old compared to non-western countries (India, Mexico, Peru, Senegal, and Uganda). In addition, in all groups except Mexico, DIA increased with age. These findings suggest that there is some evidence that children may take cultural beliefs into consideration when thinking of sharing resources. However, studying children at the country-level does not provide insight into what aspects of culture might be contributing to their developing beliefs.

A few studies have directly examined children's beliefs about resource distribution in the context of family relationships. A study conducted by Spokes and Spelke (2016) examined whether 3- to 5-year-old children understood family relations when compared to non-familial relations. They found that 3- to 4-year-olds did not show a preference for siblings over friends and strangers. In past research that especially motivates the present study, Olson and Spelke (2008) examined children's preferences for sharing resources with close others, people who have shared resources with them (direct givers), and people who have shared resources with others (indirect givers). Their study used a third person giving task that introduced participants to a protagonist doll who has sought-after resources. Participants were then introduced to six other dolls of varying relationships to the protagonist (siblings, friends, and strangers) and were tasked with guiding the protagonist to share their resources with one of the two relationships. Their results found that 3.5-year-old children guided the story protagonist to allocate cookies to siblings and friends compared to strangers (but did not show a preference between siblings and friends). Additionally, children preferentially shared with direct givers compared to indirect givers and were more likely to share with indirect givers compared to non-givers. Together these findings suggest that from an early age (by age the age of 5, if not earlier) children are already prioritizing family members over other people, with mixed evidence for children between 3- and 5-years-old. However, as neither study reports sample demographics (such as participant

race/ethnicity), it is unknown whether these patterns may differ by children's cultural experiences.

The Present Study

The current study takes a direct approach to understanding familism in the context of the development of social cognition. The sharing task examines whether familism plays a role in with whom 3- to 13-year-old children expect others to share resources. There are two components of attitudinal familism relevant to this study: sacrifice and familial interconnectedness. The sacrifice component entails that individuals are willing to give up on their needs and desires when they interfere with those of their family. Further, familial interconnectedness refers to the belief that a strong emotional and physical bond should be kept with family, even though an individual may be independent of their personal life (Steidel & Contreras, 2003). Considering the research on early childhood cultural socialization, I expect children to display behaviors consistent with familism (reported by their parents) in the form of sharing resources. Olson and Spelke (2008) conducted a similar study without the focus of culture, familism, or other parent beliefs. Furthermore, their study consisted of trials that only crossed friends, strangers, and siblings. The sharing task in the current study uses a similar design with the addition of other family members. In the sharing task, children were presented with stories about a protagonist who has one cookie and can pick between one of two people of varying relationships to the protagonist (either a family member or a non-family member). The 12 trials consist of a cross of four family members (parents, siblings, grandparents, and cousins) and three alternatives (friends, strangers, and self); children were subsequently asked who they think the protagonist should give the cookie to. Concurrently, parents will be asked to fill out the

Short Attitudinal Familism Scale (Christophe & Stein, 2022) to test whether parent familism beliefs are associated with children's family selections.

Hypotheses

Given past research, I hypothesized that overall, children would guide the protagonist to share resources with family members compared to non-family members regardless of parent familism scores. However, I expected that children being raised in a household that emphasizes the importance of loyalty, obligation, and support towards the family (Stein et al., 2014) would especially guide the protagonist to share with family members over the alternative. Therefore, I anticipated that children whose parents scored higher on the familism scale would have a significantly greater tendency to guide the protagonist to share resources with family members compared to children whose parents scored lower on familism.

Familism values are prevalent in Hispanic culture and are considered an important cultural concept for Hispanics (Moore, 1970; Sabogal et al., 1987). Latinx mothers have expressed the importance of transmitting cultural values to their children, values which include the importance of family (Calzada et al., 2010; Stein et al., 2014). Thus, Hispanic children may have a stronger inclination for guiding the protagonist to share with family members due to the cultural socialization that takes place in the home compared to non-Hispanic children, whose parents might not engage in as much cultural socialization of familism even if they highly endorse the statements on the familism questionnaire. Furthermore, immigrant families might emphasize the importance of family due to the lack of community in their new host country, which might increase the need for familial support and interconnectedness. These values might then be modeled by parents and subsequently imitated or transmitted to children. Lastly, past research has indicated that children do prioritize in-group members when making decisions about

sharing (DeJesus et al., 2014). Thus, it is possible that Hispanic children more strongly identify or feel comfortable with their Hispanic identity and thus might exhibit these behaviors when sharing resources with family members. It is due to the extensive research on and prevalence on the socialization of familism regarding the prioritization of family among Hispanics families that I predicted Hispanic children would have a stronger expectation for sharing resources with family members compared to non-Hispanic children.

Lastly, I anticipated age to play a role in these processes, however, it is unclear in which direction it could move. Research suggests that children's sharing expectations may vary by age. Existing research has suggested a potential age-related developmental trajectory, though further research is required (Stein et al., 2014). Studies on familism have focused on older children and have revealed that attitudes consistent with familism are protective factors against substance and cigarette use (German et al., 2009). However, the Olson and Spelke (2008) paper suggests that by age 3, children are already demonstrating behaviors consistent with familism. Therefore, children's sharing expectations may be stable across childhood. Currently, a measure of familism in childhood does not exist and the resource distribution task might function as an early indicator of familism in childhood. Thus, additional research is necessary to understand the directionality of the results. It is plausible that with age, children develop attitudes and behaviors consistent with familism. Lastly, there is also the possibility of observing similar patterns of familism across ages.

CHAPTER II: TABLES, FIGURES, AND CAPTIONS

In the sharing task, children were presented with a protagonist character who has one cookie. In each trial, children were introduced to two characters of varying relationships to the protagonist: one family member and one non-family alternative. Four family members (parents, siblings, grandparents, and cousins) were crossed with three alternatives (friends, strangers, and self), resulting in 12 trials. Children were then asked with whom they think the protagonist should share the only cookie. One of familism's attributes revolves around the idea of providing for the family, whether it be financially or through emotional support. I opted for this design to highlight manifestations of familism through children's sharing preferences, as there are no formal measures of familism for children. Parents were also asked to complete the Short Attitudinal Familism Scale (Christophe & Stein, 2022) to provide a measure of familism to compare to children's sharing expectations.

Participants

The final sample for analysis includes 130 children from a local children's museum in North Carolina and other community locations in North Carolina. Of the 130 participants, 50% were Hispanic children (Mage = 7.34, SD = 2.99) and 50% were non-Hispanic children (Mage = 7.23, SD = 3.22). To be included in the Hispanic group, parents had to check the "Hispanic/Latinx" box on the form (regardless of checking other boxes). All families who did not check the "Hispanic/Latinx" box were analyzed in the "non-Hispanic" group (see Table 1 for full demographic information). Participants who checked "Prefer not to Respond" were also automatically analyzed in the "non-Hispanic" group. This was done because participants who did not respond are not readily identifying as Hispanic and thus may not engage or embrace Hispanic culture to the same extent as people who identify as Hispanic/Latinx. There was no significant

difference in children's ages among the Hispanic and non-Hispanic samples, $t(128) = 0.19$, $p = 0.845$ (see Table 2 for a breakdown of participants by age group and race/ethnicity).

Table 1. Participant Demographic Information

Participant Characteristics	Percentage or Mean (SD)
Child Gender	
% Male	45.4%
% Female	51.5%
% Something Else	2.31%
% Prefer not to respond	0.77%
Child Race/Ethnicity	
% Hispanic/Latinx	43.1%
% Hispanic/Latinx, Multiracial	6.92%
% Caucasian or White	33.8%
% Black/African American	5.38%
% Asian/Asian American	1.53%
% Multiracial (Not Hispanic/Latinx)	0.77%
% Prefer not to respond	7.69%
Child's number of siblings, Mean (SD)	1.74 (1.23)
Languages Spoken at Home	
% Spanish	34.6%
% English	83.8%
% Russian	1.54%
% Vietnamese	0.77%
% Thai	0.77%

% Portuguese	0.77%
% French	1.54%
% Prefer not to respond	8.46%
Adult's Race/Ethnicity	
% Hispanic/Latinx	45.4%
% Caucasian or White	36.2%
% Black/African American	6.15%
% Asian/Asian American	1.54%
% Multiracial	2.31%
% Prefer not to respond	8.46%
Adult's number of siblings, Mean (SD)	3.36 (2.50)
Relationship to child	
% Mother	68.5%
% Father	16.9%
% Grandparent	4.61%
% Legal guardian	2.31%
% Other	7.69%

Note. 40.8% (*n* = 53) of the 130 participants spoke more than one language at home.

Table 2. Number of Child Participants in Each Age Group for the Hispanic and Non-Hispanic Sample

| Participant Characteristics	Number of Participants	Percentage of Sample by Ethnicity
Hispanic Participants (*n* = 65)		
3- to 6-year-olds	27	41.5%
7- to 10-year-olds	23	35.4%
11-to 13-year-olds	15	23.1%
Non-Hispanic Participants (*n* = 65)		
3- to 6-year-olds	27	41.5%
7- to 10-year-olds	23	35.4%
11-to 13-year-olds	15	23.1%

Note. (*N* = 130)

Children between the ages of 3 and 13 years were recruited for this study. This age range was selected based on prior research on familism and children's resource distribution behaviors. Specifically, qualitative studies on familism in children suggest that in early childhood (2 to 6 years of age), familism is manifested through behaviors, as parents begin to socialize their children about beliefs, cultural values, and expectations (Stein et al., 2014). In addition, at around 3.5 to 4 years of age, children begin to show some understanding of family or social groups and resource allocation (DeJesus et al., 2014; Olson & Spelke, 2008). By middle childhood (7 to 11 years of age), children begin experiencing stage salient issues that may relate to familism (such as helping parents care for siblings and helping family financially), and it is around this age that they may develop an understanding of needing or feeling the need to provide support for the family (Stein et al., 2014). The sample size is based on previous research that examined similar

topics. Blake et al. (2015) focused on aspects of fairness when distributing resources in children across different countries including Mexico, this sample from Mexico consisted of 58 participants between the ages of 4- and 12-years. Additionally, the Olson and Spelke (2008) study focused on children's sharing preferences with close others, their sample consisted of 28 participants in total.

Exclusions

In total, 158 children completed the study. Twelve participants were excluded because children did not complete both pages of the task. An additional 15 non-Hispanic children were excluded to age-match the sample to the Hispanic sample. Exclusions were made based on missing data and recruitment date, in which participants who had missing data or did not complete the task were excluded. Next, to further age-match the sample exclusions were made based on recruitment date, in which participants who were recruited earlier were kept while participants recruited last were excluded. One additional child was excluded as an outlier, as identified by a boxplot to initially visualize the data of all participants (see Figure 1). The overall standard deviation of children's family selections was 2.37, this participant was 3.5 standard deviations below the mean with the next participant being only 2.68 deviations below the mean. Thus, this participant was excluded from any further analysis.

Figure 1. Boxplot and Scatterplot Displaying the Outlier Among the Sample
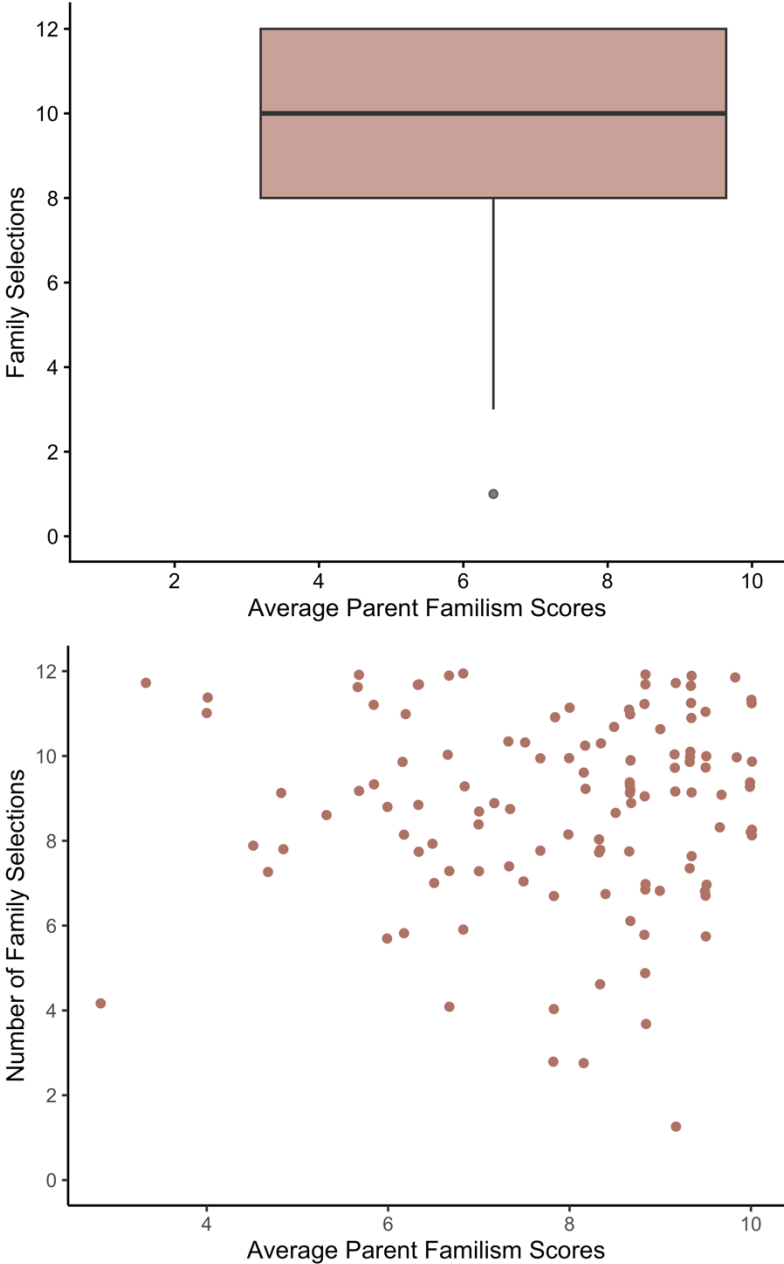
Measures

Child Resource Distribution Task

Children were presented with 12 examples of characters who have one cookie and can share with either a family member (parents, siblings, grandparents, cousins) or a non-family alternative (friends, strangers, self). The 12 examples were presented in the form of a worksheet in which participants were instructed to choose with whom they think the protagonist should share the only cookie. The task was offered in both Spanish and English. For all participants, the questions were read to them by a trained research assistant.

The design of this study was adapted from the Olson and Spelke (2008) study in two ways. First, the design was reduced to a worksheet (see Figure 2 for an example worksheet). A pilot study (n = 85) was conducted throughout the coronavirus pandemic using a similar worksheet format to minimize contact between children, parents, and experimenters. This format produced results consistent with past research on children's resource distribution behaviors; the pilot study replicated the finding from the Olson and Spelke (2008) study that children were more likely to share with siblings and friends compared to strangers. The pilot study also found that the addition of parents resulted in a slight preference for sharing with parents compared to siblings. Thus, I opted to retain the worksheet format when researchers started working directly with children again and coronavirus infections have depreciated. Secondly, the Olson and Spelke (2008) study consisted of a cross between siblings, friends, and strangers. Due to the emphasis of familism in the present study, I included additional family members to the design as it is common in Hispanic cultures to live in the same household as, not only parents, but grandparents. This type of living condition may allow for children to form closer relationships to grandparents. Cousins were added due to the close relationship that often forms between children

and cousins; these relationships tend to be similar to that of a close friendship. Furthermore, past research on familism has included close friends as part of the extended family, therefore, I specified friends as a "friend from school" to avoid confusion (although I refer to this as "friend" for brevity throughout).

Figure 2. Child Worksheet Adaptation Used for the Resource Distribution Task

It is important to note that the Olson and Spelke (2008) study used dolls as the characters of the resource distribution storyline. However, due to the addition of family members in the present study, the utilization of dolls to represent all the characters would have been complicated, as one would need a considerable number of dolls to represent all the characters. Additionally,

the present study examined children from a variety of backgrounds, therefore, the use of abstract figures may overcome any limitations that may occur due to the character's gender, race, and ethnicity.

The design of the worksheet took into consideration potential order effects by creating two versions of the worksheet. To account for any effects related to gender, two versions of the task were offered that changed the gender of each character. Furthermore, when designing the worksheet, I took into consideration the fact that some children might not understand the words "sibling," "parent," and "grandparent," and thus characters were specified as "mom," "dad," etc. For instance, a character in one version might be specified as a female (mom, sister, grandma) and in the second might be specified as a male (dad, brother, grandpa). Research assistants were able to start the task on either side of the worksheet to combat order effects. Thus, each side consisted of different trials.

The worksheets were arranged in alternating order by side and version. A research assistant then shuffled them to encourage the random selection of worksheets during recruitment sessions. Overall, there were four possible combinations depending on the version of the worksheet they completed and the side in which they started the worksheet (i.e., Side 1, Version 1; Side 2, Version 1, etc.). An analysis of variance (ANOVA) was conducted to examine the effects of the version and side of the worksheet on family selections. The results indicate that there was not a significant effect of version and side, $F(3, 126) = 0.06$, $p = .980$.

Parent Familism Questionnaire

While children completed the resource distribution task, parents were asked to fill out the Short Attitudinal Familism Scale (Christophe & Stein, 2022). This questionnaire was adapted from the Steidel and Contreras (2003) Attitudinal Familism Scale, which had an overall

Cronbach's alpha of .83 and consisted of four subscales: familial honor (α = .68), familial support (α = .72), familial interconnectedness (α = .69), and subjugation of the self (α = .56). Each subscale consists of 5 to 6 items, amounting to a total of 18 items. The original Attitudinal Familism Scale was validated by conducting correlations between all the familism scores, acculturation scores, generational status, and exposure to other U.S. variables such as economic status, confirming that the scale was a valid measure of familism.

Due to the task being adapted into a worksheet, a shorter questionnaire was needed to fit on one page along with other measures (see Figure 3). The Short Attitudinal Familism Scale is a shorter version of the Attitudinal Familism Scale which was validated and was shown to have adequate reliability among several ethnic groups (α_{Latinx} = .82, α_{Black} = .83, α_{Asian} = .87, $\alpha_{Multiracial}$ = .84). Overall, the scale had a Cronbach's alpha of .84. The Short Attitudinal Familism Scale consists of 6 items in total and contains items from all four of the subscales from the original measure. The shortened scale contains items like "A person should help his or her elderly parents in times of need, for example, helping financially or sharing a house" (a direct reference to sharing resources) and "A person should often do activities with his or her immediate and extended families, for example, eat meals, play games, or go somewhere together." As in prior studies, participants respond to the scale using a 10-point Likert scale from 1 (Strongly Disagree) to 10 (Strongly Agree). The average score from all items indicates the parent's overall familism score.

Figure 3. Parent Measures and Demographic Questionnaire

The following questions are for the adult accompanying the child. These will help us understand a little more about the child participating in this activity.

For each statement, circle a number from 1 (strongly disagree) to 10 (strongly agree).

Children should always help their parents with the support of younger brothers and sisters, for example, help them with homework, help the parents take care of the children, and so forth.

1   2   3   4   5   6   7   8   9   10

A person should always support members of thee extended family, for example, aunts, uncles, and in-laws, if they are in need even if it is a big sacrifice.

1   2   3   4   5   6   7   8   9   10

Parents and grandparents should be treated with great respect regardless of their differences in views.

1   2   3   4   5   6   7   8   9   10

A person should often do activities with his or her immediate and extended families, for example, eat meals, play games, or go somewhere together.

1   2   3   4   5   6   7   8   9   10

A person should help his or her elderly parents in time of need, for example, helping financially or sharing a house.

1   2   3   4   5   6   7   8   9   10

A person should be a good person for the sake of his or her family.

1   2   3   4   5   6   7   8   9   10

People in my life (e.g., close family and friends) share my views on these questions.

1   2   3   4   5   6   7   8   9   10

Language Spoken at home?

Primary Language: _____

Second Language: _____

Other: _____

Child Demographics

Race/Ethnicity (Check all that apply):
- [ ] Hispanic/Latinx
- [ ] Black or African American
- [ ] American Indian or Alaska Native
- [ ] Asian or Asian American
- [ ] Native Hawaiian or Pacific Islander
- [ ] Caucasian or White
- [ ] Prefer not to respond

Child Gender:
- [ ] Male
- [ ] Female
- [ ] Something Else: _____
- [ ] Prefer not to respond

How many siblings does the child have: _____

Child's zip code of residence: _____

Adult Demographics

Relationship to child:
- [ ] Mother
- [ ] Father
- [ ] Guardian
- [ ] Grandparent
- [ ] Other: _____
- [ ] Prefer not to respond

Race/Ethnicity (Check all that apply):
- [ ] Hispanic/Latinx
- [ ] Black or African American
- [ ] American Indian or Alaska Native
- [ ] Asian or Asian American
- [ ] Native Hawaiian or Pacific Islander
- [ ] Caucasian or White
- [ ] Prefer not to respond

How many siblings do you have? _____

In addition to the parent familism questionnaire, a question was added to measure whether the people in the adult's life share the views they reported on the Short Attitudinal Familism Scale. The question states "People in my life (e.g., close family and friends) share my views on these questions." This question might clarify whether the people surrounding the child are also endorsing familism values. If so, this may indicate that the child is more likely to manifest behaviors consistent with familism values (even among children whose parents

provided high familism scores). Similar to the familism scale, participants responded to the question using a 10-point Likert scale from 1 (Strongly Disagree) to 10 (Strongly Agree).

Parent Demographic Questionnaire

The parent page of the worksheet also asks parents to report the child 's race/ethnicity, gender, and the languages spoken at home. Additionally, parents were asked to report the number of siblings the child has. Similarly, parents were asked to provide their own race/ethnicity and their relationship to the child (e.g., mother, father, guardian, grandparent, other).

Procedure

A research team set up a table in a designated area at the museum or community event/location; the study did not utilize and was not related to any exhibits at the museum or event. This arrangement allowed parents to approach the table to ask questions and were subsequently invited to participate. When possible, researchers also took the initiative in approaching visitors with children to ask if they would be interested in having their child participate. This study was approved by the University of North Carolina at Greensboro's Institutional Review Board with a waiver for written consent; nonetheless, children were not recruited directly. In all instances, parents approached or were approached to ask if they were interested in having their child participate. Furthermore, children were asked to verbally assent to participating in the study. All participants received a prize pack of their choice for completing the study. Researchers then recorded children's responses into a Qualtrics form after the recruiting session.

CHAPTER III: RESULTS

Differences in Sharing Expectations

To test whether the present study replicates and extends the Olson and Spelke (2008) findings with additional family members in the design, I compared all trials to chance to determine whether children expect others to share with family members. The present study crossed four family members (parents, siblings, grandparents, and cousins) with alternatives (friends, strangers, and self). I tested for differences in sharing expectations for each trial type (e.g., sibling vs friend) by conducting binomial tests to examine whether children were more likely to select one person over another for each contrast type (e.g., grandparent > friend). This was the statistical approach used in the Olson and Spelke (2008) study, with the modification that I used binomial tests (vs. one-sample t-tests) given that children in this study were presented with one of each trial type. Binomial tests were conducted in RStudio using the stats package.

The results suggest that children were significantly more likely to guide the protagonist to share with family members compared to alternative options for all trials (see Table 3). Similar to the Olson and Spelke (2008) study, I found that children were significantly more likely to guide the protagonist to share with siblings compared to strangers. However, Olson and Spelke did not find a significant difference in sharing with siblings compared to friends. The present results differ in that I found that children were significantly more likely to guide the protagonist to share with siblings compared to friends.

Further, the percent difference between Hispanic and non-Hispanic children's family selections for each trial was calculated (See Table 3). These calculations ranged from 0% to 14% of a difference in family selections between the two ethnic samples and indicated that Hispanic children had more family selections than non-Hispanic children. Upon careful examination of

each trial, the largest percent differences in family selections are in the family vs. self trials (in which children had the option to guide the protagonist to keep the cookie to themselves). The family vs. self trials had percent differences ranging from 3-14%. The smallest percent differences were in family vs. friend-trials, in which the percent differences ranged from 0-7%.

Table 3. Results of Binomial Tests Comparing All Trials to Chance

Trial Type	Number of Family Selections	Percentage of Family Selections	Hispanic Participants	Non-Hispanic Participants	Difference by Ethnicity
Parent vs. Self	99	76%	83%	69%	14%
Parent vs. Friend	94	72%	72%	72%	0%
Parent vs. Stranger	116	89%	91%	88%	3%
Sibling vs. Self	99	76%	77%	74%	3%
Sibling vs. Friend	91	70%	72%	68%	4%
Sibling vs. Stranger	111	85%	86%	85%	1%
Grandparent vs. Self	104	80%	86%	74%	12%
Grandparent vs. Friend	95	73%	74%	72%	2%
Grandparent vs. Stranger	108	83%	89%	77%	12%
Cousin vs. Self	97	75%	80%	69%	11%
Cousin vs. Friend	89	68%	72%	65%	7%
Cousin vs. Stranger	106	82%	85%	78%	7%

Note. All binomials were statistically significant ($p < .001$).

Multilevel Regression Model

To examine the potential effects of familism (i.e., the extent to which children who are being raised in a household that emphasizes the importance of loyalty, obligation, and support towards the family), ethnicity, child age, on sharing expectations, I conducted a multilevel regression model. By employing a multilevel regression model, I was able to examine each

predictor's (familism scores, ethnicity, and age) individual contribution to predicting the extent to which children guide the protagonist to share with family members in each trial and examine whether familism and ethnicity interact to predict family selections. This analysis was performed using the lme4 package in R (Bates et al., 2015). All assumptions (linearity, normality, homoscedasticity, multicollinearity, and independence) required for this form of model were met prior to conducting the analyses. Prior to deciding to perform a multilevel regression model, I considered other models, such as a hierarchical linear model. However, when running linear assumptions, the normality assumption was not met due to the data's bimodal structure (when considering the sum of children's family selections, a score from 0-12). Thus, I decided a multilevel regression model that models children's responses on each trial would be the best fit for the data (see Table 4 for a breakdown of results). With the given sample size, a simulated power analysis was conducted using a multilevel model on a dataset that is consistent with my hypotheses. These hypotheses prioritize the importance of family overall, anticipate a moderate impact of familism, a small-to-moderate influence of ethnicity, and should it be observed, a small positive effect of age. The analysis revealed that the power to detect an effect of familism is estimated at 85.60% (CI = 83.27, 87.72). However, the power slightly decreased for the effect of ethnicity, 65.80% (CI = 62.77, 68.74).

Table 4. A Multilevel Regression Model of what Predicts Family Selections Accounting for Between-Subject Factors (parent familism, child ethnicity, and child age). The Data Included 1560 Observations from 130 Participants

Variable	Estimate	SE	z - value	p - value
Intercept	1.51	0.11	13.29	$< .001$
Parent familism scores	0.06	0.07	0.83	.409
Child ethnicity (Hispanic vs. Non-Hispanic)	0.25	0.11	2.32	.020
Child age	0.13	0.04	3.64	$< .001$
Familism scores x Child ethnicity	0.02	0.07	0.33	.743

Note. $R^2_M = 0.056$, $R^2_C = 0.249$

Results revealed that there was not a significant association between parent familism scores and children's family selections ($\beta = 0.06$, SE $= 0.07$, z $= 0.83$, $p = .409$). In contrast, there was a statistically significant association between ethnicity and family selections ($\beta = 0.25$, SE $= 0.11$, z $= 2.32$, $p = .020$). These results imply that compared to the non-Hispanic children in the sample ($M_{Selections} = 8.91$, SD $= 2.1$), the Hispanic children had a higher likelihood of guiding the protagonist to share with family members compared to the non-family member alternative in each trial ($M_{Selections} = 9.68$, SD $= 2.44$; see Figure 4). The results also found a significant positive association between the child's age and their family selections ($\beta = 0.13$, SE $= 0.04$, z $= 3.64$, $p < .001$). These results suggest that with age, children are more likely to guide the protagonist to share with family members compared to the non-family member alternative (see Figure 5). Lastly, the study examined the possibility of an interaction between parent familism scores and the child's ethnicity. The results suggest that the interaction between parent familism and

ethnicity (Hispanic vs. non-Hispanic) on family selections was not significant (β = 0.02, SE = 0.07, z = 0.33, *p* = .743).

Figure 4. Plot of Child Family Selections by Parent Familism Scores and Child Ethnicity. The Plot was Created by Setting Both Parent Familism and the Child's Ethnicity as Focal Predictors of the Multilevel Model Using the lme4 Package in R
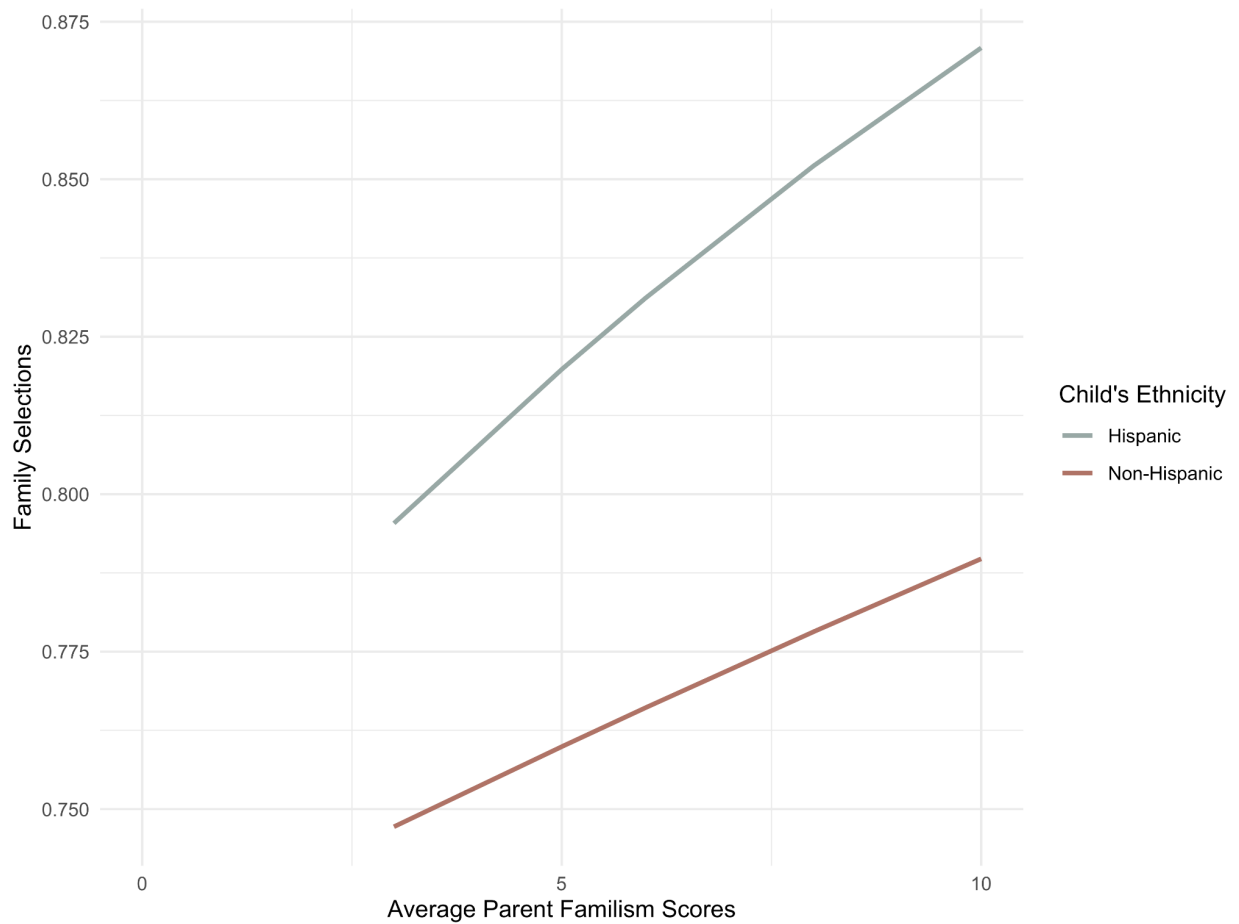
Figure 5. Plot Displaying Child Age as a Predictor of Family Selections. The Plot was Created by Setting Child Participant Age as a Focal Predictor of the Multilevel Model sing the lme4 Package in R
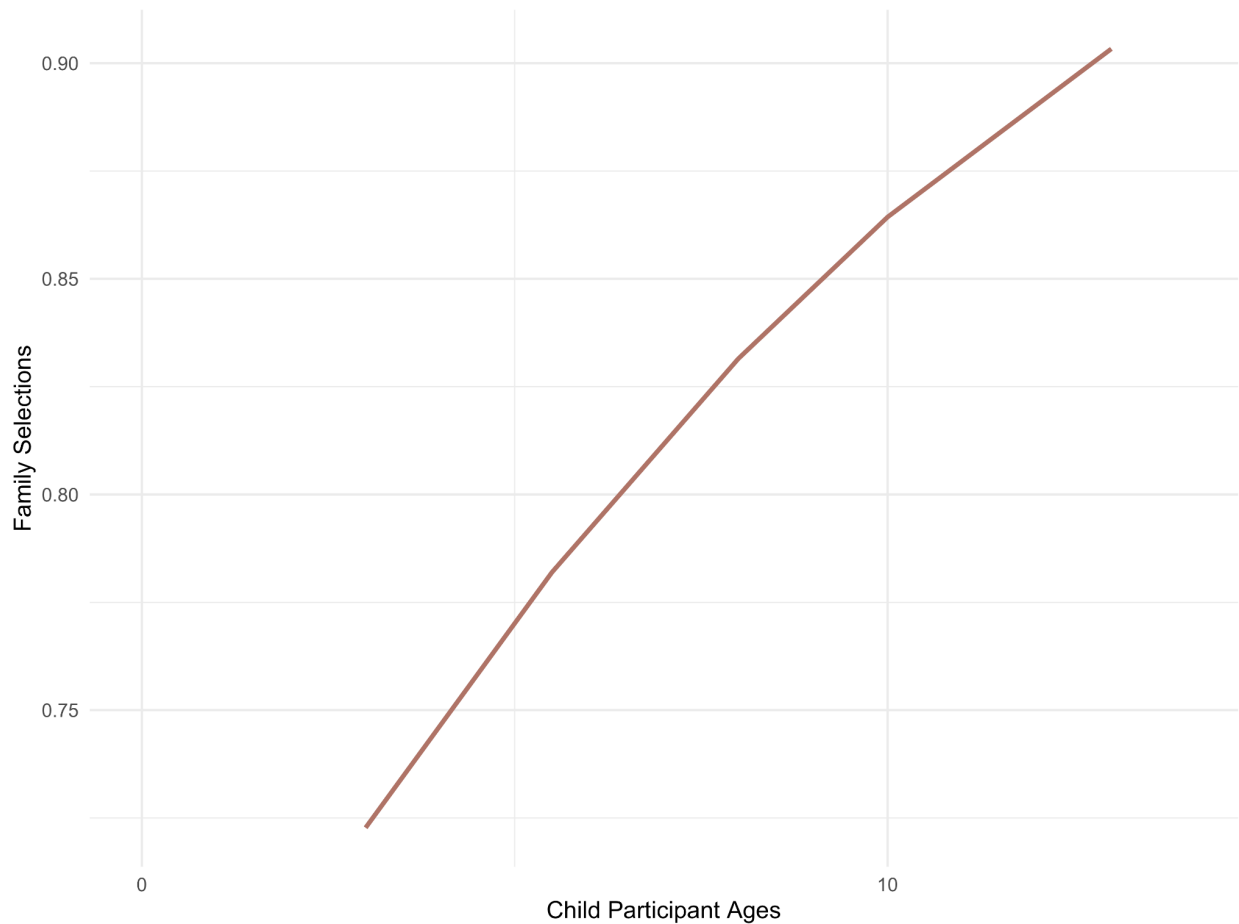
Differences in Parent Familism Scores by Ethnicity

In order to better understand the results from the multilevel regression model, I conducted an independent sample t-test comparing the means of parent familism scores among the Hispanic and non-Hispanic samples. The independent samples t-tests indicated that there was not a significant difference between parent familism scores in the Hispanic ($M = 7.92$, SD = 1.81) and non-Hispanic ($M = 8.15$, SD = 1.42) samples, t(128) = -0.83, $p = .408$.

Differences in Beliefs Among Close Others by Ethnicity

Due to the prevalence of familism beliefs in Hispanic communities, children may not only be socialized by their parents but also by loved ones and close others. To gain insight into this, I examined the question added to the familism questionnaire asking whether the people in the adult's life also share their beliefs. I conducted an independent sample t-test to compare scores on this question among Hispanics and non-Hispanics. The results found a significant difference by race/ethnicity, in which the adult completing the questionnaire on behalf of Hispanic children had lower scores ($M = 7.14$, SD = 2.62) than for non-Hispanic children ($M = 8.15$, SD = 1.42) samples, t(128) = -2.59, $p = .011$.

Exploratory Analyses

Analysis Keeping Outlier

To confirm the presence of an outlier and assess its impact on the analysis, the multilevel model was performed again this time including the outlier. The results found that retaining the outlier resulted in reaching statistical significance for all the variables examined. Without the outlier, the only two significant variables were the child's ethnicity ($p < .05$) and the child's age ($p < .001$), whereas when the outlier is retained, all variables resulted in positively significant associations ($p < .001$). These findings demonstrated that when including the outlier, the variables all take the same directional path. Notably, the initial analysis did not find that familism was a significant predictor of children's family selections. In contrast, when including the outlier in the analysis, familism emerged as a positively significant predictor ($p < .001$).

Analysis Without Excluding Children

In order to prevent any effects that may come from having a different number of participants in each age group for both ethnic samples I excluded 15 participants. To examine the

implications of these exclusions I ran the same multilevel model including the 15 participants that I excluded for age matching. The sample for this analysis included 144 participants with 66 participants being Hispanic and 78 participants being non-Hispanic. An independent samples t-test did not find a significant difference in age among the two ethnic samples, $t(142) = -0.31$, $p = .76$.

Results from the multilevel analysis were different from the original analysis. Age remained a significant predictor of children's family selections, indicating that with age children are more likely to share with family ($\beta = 0.15$, SE $= 0.04$, z $= 3.99$, $p < .001$). The child's ethnicity was no longer significant ($\beta = 0.16$, SE $= 0.11$, z $= 1.45$, $p = .148$). This indicates that when including the 15 participants, the child's ethnicity no longer predicts children's family selections. Average parent familism scores remained insignificant ($\beta = -0.01$, SE $= 0.07$, z $= -0.16$, $p = .872$). Lastly, the multilevel mol examined a potential interaction between average parent familism scores and the child's ethnicity, the interaction remains insignificant ($\beta = 0.06$, SE $= 0.07$, z $= 0.81$, $p = .418$). Interestingly, although the interaction remained insignificant, plotting the effect results formed a plot that may have suggested an interaction. The plot shows two lines crossing, which is characteristic of an interaction, though the interaction was not statistically significant (See Figure 6). I compared the 65 included children and the 15 excluded children on several dimensions (See Table 5). T-tests (for continuous variables) and $\chi2$ tests (for categorical variables) were conducted to examine differences between the two groups. The results indicated significant differences among the groups across dimensions. Notably, the excluded participants who had significantly lower parent familism scores ($t(75) = -2.32$, $p = .023$) and perceived endorsement of familism values among close others ($t(75) = -2.76$, $p = .007$) compared to the included group. In addition, the excluded participants had higher child family

selections (t(75) = 2.77, *p* = .007). Furthermore, a χ2 test revealed a significant difference in race/ethnicity in that excluded participants were less likely to be Caucasian/White (χ2 (5) = 12.3, *p* = .031).

Figure 6. Plot of Child Family Selections by Parent Familism Scores and Child Ethnicity Including the 15 Participants who were Initially Excluded in the Original Analysis
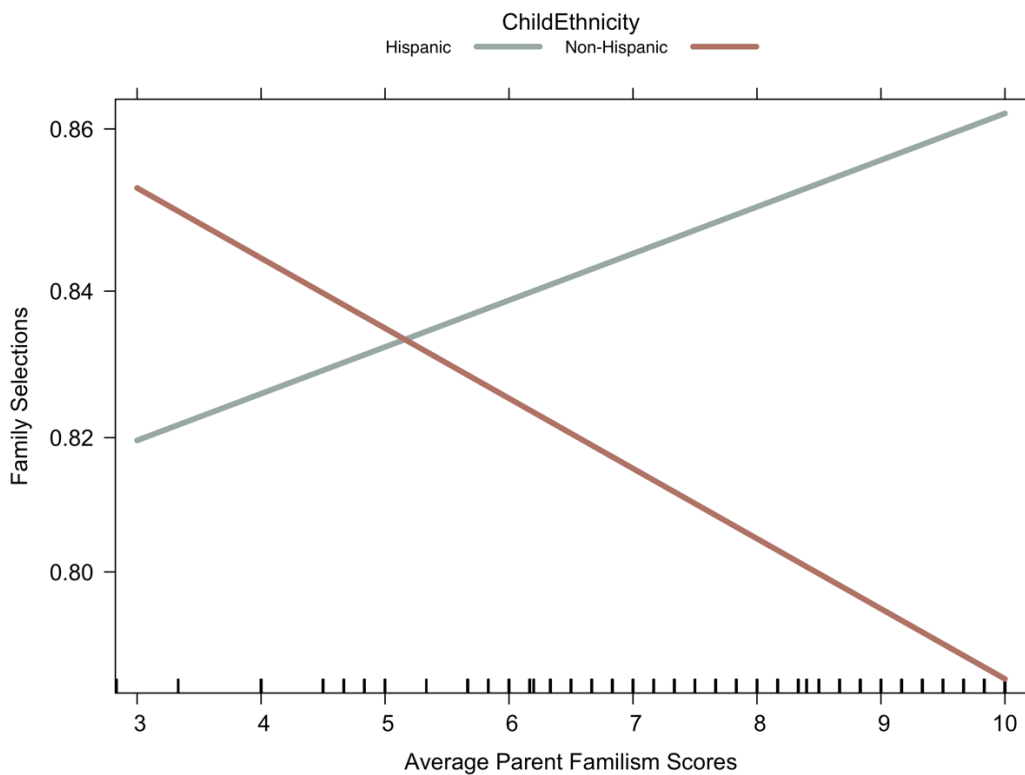
Note. (*N* = 144).

Table 5. Table Comparing the 65 Included and the 15 Excluded Participants on Several Dimensions

Participant Characteristics	Non-Hispanic Participants Included ($n = 65$)	Non-Hispanic Participants Excluded ($n = 15$)	Included vs Excluded participants
Average Parent Familism Scores	8.15	7.14	$t(75) = -2.32,\ p = .023$
Perceived endorsement of familism values among close others	8.14	6.75	$t(75) = -2.76, p = .007$
Average Family Selections	8.91	10.67	$t(75) = 2.77,\ p = .007$
Average Age	7.23	8.92	$t(75) = 1.76, p = .083$
Child Gender			$X^2(3) = 0.385, p = .943$
% Male	41.5%	41.7%	
% Female	55.4%	58.3%	
% Something Else	1.54%	0	
% Prefer not to respond	1.54%	0	
Child Race/Ethnicity			$X^2(5) = 12.3, p = .031$
% Caucasian or White	67.7%	58.3%	
% Black/African American	10.8%	16.7%	
% Asian/Asian American	3.08%	0	
% Multiracial	1.54%	16.7%	
% Prefer not to respond	16.9%	8.33%	
Child's number of siblings, Mean (SD)	1.77 (1.29)	1.92 (1.16)	$t(72) = 0.36, p = .908$
Language spoken a home			$X^2(6) = 2.12, p = .908$

% English	90.8%	100%
% Spanish	0	8.3%
% Russian	3.08%	0
% Thai	1.53%	0
% Vietnamese	1.53%	0
% Did not respond	3.08%	0

Exploring a Three-Way Interaction: Familism, Ethnicity, and Age

An additional question is whether age interacts with either familism or the child's ethnicity (or both) as a predictor of children's responses. To test this, I repeated the multilevel model with the addition of two-way interactions with the child's age and a three-way interaction with age. The initial model did not find an interaction between the child's ethnicity and familism scores. The results indicated that there were no two-way or three-way interactions between the child's ethnicity, the child's age, or familism scores (See Table 6). However, the simulated dataset was underpowered to detect a three-way interaction (32.90%, CI = 29,99, 35.91). Enlarging the simulated dataset to n = 300, there would still not be sufficient power to detect an interaction (43.00%, CI = 39.91, 46.14).

Table 6. Multilevel Model that Includes Two-Way and Three-Way Interaction Between Familism Scores, the Child's Ethnicity, and the Child's Age

Variable	Estimate	SE	z - value	p - value
Intercept	1.51	0.12	12.77	< .001
Parent familism scores	0.05	0.07	0.75	.455
Child ethnicity (Hispanic vs. Non-Hispanic)	0.25	0.11	2.24	.025
Child age	0.14	0.04	3.82	< .001
Familism scores x Child ethnicity	< 0.01	0.07	0.12	.902
Familism scores x Child age	-0.02	0.02	-0.63	.529
Child ethnicity x Child age	0.04	0.04	1.06	.290
Familism scores x Child ethnicity x Child age	0.02	0.02	0.87	.385

Note. $R^2_M = 0.065$, $R^2_C = 0.254$

CHAPTER IV: DISCUSSION

The present study sought to close the gap between clinical and developmental psychology by examining the impact of parent familism, child ethnicity, and child age on children's resource distribution behaviors. In particular, I tested whether these predictors were associated with children's decision-making when distributing resources to family members vs. non-family members. Further, the present study aimed to replicate past findings suggesting that children are more likely to guide the protagonist to share with family members and close others compared to non-family members (DeJesus et al., 2014; Olson & Spelke, 2008). Results from binomial tests for each trial not only replicate past findings, but also validate the worksheet format utilized in the present study, in contrast to the doll method used in past research. Furthermore, the results indicate that this could be an early measure of behavioral familism in childhood.

Furthermore, the percent difference between Hispanic and non-Hispanic family selections for each trial was calculated, the percent differences ranged from 0% to 14%. A core aspect of familism is the sacrifice component which emphasizes making personal sacrifices for the sake of the family (Nolle et al., 2012). Interestingly, the family vs. self trials had the largest percent difference in that Hispanic children had more family selections in this trial than non-Hispanic participants while non-Hispanics showed less of a tendency for guiding the protagonist to keep the cookie for themselves. This may be an early manifestation of familial sacrifice related to familism values.

Further, I examined age as a potential predictor of children's resource distribution behaviors. I anticipated age could be a factor in children's decisions, however, I did not have a strong directional prediction. The results indicated that with age, children are more likely to guide the protagonist to share with family members compared to the non-family member

alternative. This is consistent with past findings which indicated that at 3.5 and 4 years old, children begin gaining an understanding of kinship and resource allocation (Olson & Spelke, 2008) and starting at 7 years old children are beginning to develop an understanding of obligation and the need to support their family members (Stein et al., 2014).

The results supported my prediction that Hispanic children would have more family selections when compared to non-Hispanic children, above and beyond the effects of familism. There are several factors that may have contributed to these results. For instance, Latinx mothers tend to emphasize the transmission of cultural values, which include the importance of family (Calzada et al., 2010; Stein et al., 2014). This may have contributed to Hispanic children's inclination for guiding the protagonist to share with family members. Moreover, immigrant families may lack community in their new host country, which may further exacerbate the need for familial support and interconnectedness, resulting in children's behaviors through parental modeling and socialization. Lastly, previous research has indicated that children prioritize in-group members when making decisions about sharing (DeJesus et al., 2014). This suggests that Hispanic children's strong identification with their Hispanic identity may contribute to their sharing behaviors. These findings highlight the impact of cultural factors, like familism, on children's behaviors and attitudes towards family members from an early age.

Lastly, the aim of the present study was to examine the association between familism and children's resource distribution behaviors. I had anticipated that children who were raised in a household that emphasizes familism would have higher expectations for the protagonist to share with family members. The results did not show any significant association between the parent's familism scores and the child's resource distribution behaviors. This was an unexpected finding given the findings from past research on children's resource distribution behaviors and familism.

Although results suggest that familism was not associated with children's resource distribution behaviors, there remains the possibility that the effect might be moderated by an additional variable that was not measured in this study. For instance, past research has suggested that ethnic identity promotes the development of familism values over the course of time. Furthermore, the same study found that Latino participants who selected White demographic labels on measures of ethnic identification were less likely to endorse familism values than those who selected a national origin label (e.g., Mexican) when asked what group they "most felt part of" (Stein et al., 2016). Alternatively, the lack of a statistical association could be attributed to the limited variability of the data. Family selections and parent familism scores were both high among the sample, which may have resulted in insufficient variability for an effect to be detected.

The results uncover a few open questions related to the findings in terms of both familism and ethnicity. One unexpected finding was that parents completing the familism questionnaire on behalf of Hispanic children did not differ from parents of non-Hispanic children on the familism scale, and parents of Hispanic children actually scored lower than parents of non-Hispanic children when asked whether the people surrounding them endorsed these values. Despite these findings, I still found a significant difference of family selections by ethnicity. This raises the question of whether other factors besides familism are driving these ethnic differences. Alternatively, familism could still be an important factor to consider, but the items presented to parents may align with socially acceptable or desirable values which might have led to higher endorsement of these items across the sample. Additionally, it could also be argued that higher endorsement of the familism scale items could be transmitted differently to children of different cultural backgrounds. For example, the item, "A person should help his or her elderly parents in time of need, for example, helping financially or sharing a house," could be operationalized in

different ways. If parents help financially by sending money, their children might not be aware of this action. If parents share their home with their elderly parents, children will observe this action directly. These differences may reflect differences in the extent to which parents communicate cultural values, even if they endorse those values highly. While the exact cause of these results remains elusive, it is important to recognize the need for further research to better understand these findings.

To gain insights and explore nuances in the data, exploratory analyses were conducted. First, an analysis was performed to examine the impact of one outlier on the results of the study. These results lead to an achievement of positive significance for all variables when including the outlier. These results were distinct from the analysis that excluded the outlier, which found significance only for the child's age and the child's ethnicity. It is surprising that an outlier can have such a significant influence on the results of the analysis. Especially given the outlier's responses, they had 1 family selection for the entire task and a high parent familism score. Thus, retaining the outlier was expected to diminish significance and potentially lead to a more negative direction, whereas the results indicate positive directions. Further, it is important to highlight that careful consideration must be taken when exploring different approaches to visualize outliers as they could lead to different conclusions. Thus, considering the findings of the exploratory analysis, it may be reasonable to retain the outlier for the main analysis.

Furthermore, an analysis was conducted which included the 15 participants that were excluded to mitigate the effects of unequal age groups. The initial analysis concluded that the child's age and ethnicity were significant predictors of family selections. The results of this exploratory analysis were slightly different from the initial analysis in that the child's ethnicity was no longer a significant predictor of family selections. Interestingly, while the results of the

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interaction were still statistically insignificant, the lines on the plot were now crossed, which is characteristic of an interaction. Overall, these results suggest that including the 15 participants revealed notable changes to the results in that the child's race/ethnicity was no longer a predictor of children's family selections. In addition, a closer look at the differences between the included and excluded participants revealed that the excluded participants had significantly lower familism scores and perceived endorsement of familism values among close others and had more family selections. Furthermore, the excluded participants consisted of fewer Caucasian/White children. The ethnic composition of the samples may have played an important role in the observed associations in that having more Caucasian/White participants may have facilitated finding an effect of familism whereas having fewer Caucasian/White participants may have made it difficult to find an effect.

Lastly, the initial multilevel analysis examined a potential interaction between parent familism scores and the child's ethnicity. The results suggested that there was no interaction between the two variables. To further understand the data, a three-way interaction between parent familism scores, the child's ethnicity, and the child's age was examined. The results of this analysis were also insignificant suggesting that the three variables do not interact to predict family selections. Nevertheless, if a three-way interaction was present, the sample size is insufficient and is underpowered to detect the interaction.

Limitations

The present study indirectly examined children's behavioral familism by utilizing parent familism scores and relating them to children's family selections. However, there is currently no direct measure of child familism. The child resource distribution task measures a key aspect of familism, but it is still distinct from questions posed to parents on the Short Attitudinal Familism

Scale. Although researchers suggest that attitudinal parental familism might predict behaviors consistent with familism in children, this has not yet been examined (Stein et al., 2014). If attempts for replication occur in the future, researchers should consider posing questions from the Short Attitudinal Familism Scale to older children who may comprehend these questions to examine whether their responses are similar or dissimilar to parent responses. Alternatively, in addition to filling out the Short Attitudinal Familism Scale parents could participate in a task similar to the resource distribution task. Both suggestions may lead to a more comprehensive understanding of the relationship between parent familism and children's behavioral familism.

The overall goal of the present study was to examine the association between familism and children's social cognition across childhood. Moreover, the study intended to look at cultural differences among Hispanics and Non-Hispanics in the United States. Despite the significance of the results, it remains vital to acknowledge limitations that may have influenced the results of the present study. The present study utilized a similar resource distribution task as the one utilized in the Olson and Spelke (2008) study, with the difference being that the resource distribution task in the present study was in a worksheet format. Although the pilot study replicated overall results from the Olson and Spelke (2008) in terms of children prioritizing family members over strangers, there are some potential limitations.

To begin, children were able to see what trials come before and after each trial, thus children's responses may have reflected their responses from prior or subsequent trials. For instance, some participants may have guided the protagonist to share with a family member over the alternative because they observed that they would have another opportunity to guide the protagonist to share with the alternative option in a later trial. This does not seem to have occurred in the present data as children, overall, guided the protagonist to share with family

members. If alternating had transpired, I might expect the results to look closer to 50%. Nonetheless, I cannot completely rule this limitation out. Thus, future research should attempt to replicate these results using a design that prevents participants from seeing prior and subsequent trials over the course of the task.

Another limitation is that, despite the parent questionnaire containing a question that stated, "how many siblings does the child have?", the data entry process itself did not include a way to indicate which participants were siblings. Participant names were not collected to provide additional reassurance to families that results would be kept anonymous. This prevented us from performing any type of analysis that may have indicated any differences among siblings. For instance, an older child with younger siblings may have been more likely to guide the protagonist to share with family members compared to an older child who has no siblings or is the youngest sibling. Additionally, having siblings in the sample limits the variability in the parent questionnaire (i.e., I had 130 children but likely fewer than 130 parents), which could have made it even more difficult to detect an effect of familism.

In addition, participant recruitment took place in several different locations within the same state. This may have prompted different responses from Hispanics and Non-Hispanics alike. For instance, one recruitment session took place during a festival in a location that is heavily populated by Hispanic immigrant families. Some non-Hispanic families were recruited at these events as well, but far more were recruited at local children's museums. Similarly, some Hispanic families were recruited at museums, but far more were recruited at community festivals. Thus, participant responses from predominantly Hispanic locations might reflect more behavioral familism than responses from participants in other locations (e.g., Hispanic families who participated at children's museums) because they are not surrounded by as many co-ethnics.

There may also be sociodemographic differences between groups based on recruitment methods that I do not have further data to evaluate.

The present study examined sharing behaviors among Hispanic and non-Hispanic children. The non-Hispanic sample in this study consisted of participants from a variety of racial/ethnic backgrounds, although non-Hispanic Whites made up a majority of this sample. Research suggests that familism has been found to take similar forms across ethnicities including non-Hispanic Whites (Schwartz, 2007). In contrast, other studies have found that non-Hispanic Whites report significantly lower units of familism than Hispanics (Steidel & Contreras, 2003). The heterogeneity of the sample could be considered a potential limitation as it may have been difficult to detect an effect of familism due to the variety of race/ethnicities within the non-Hispanic sample. Utilizing a homogenous non-Hispanic White sample rather than a heterogenous non-Hispanic sample, may have facilitated the detection of an effect of familism. Relatedly, the parent questionnaire did not include a question regarding immigration status. Participants from a heterogenous non-Hispanic sample may be from immigrant families who also might endorse familism values. Thus, a completely non-Hispanic White and non-immigrant sample may have facilitated the detection of an effect of familism. In addition, having a mix of immigrant and non-immigrant families participate, in both samples, could have contributed to these results in important ways that were not measured in this study.

Lastly, the design of the study utilized a fictional cookie as a resource that the protagonist character had to share with either a family member or a non-family member. The data from binomials suggest that children were more likely to share with family members compared to non-family members. Further, on self trials in which the participant was given the option to guide the protagonist to keep the cookie for themselves, non-Hispanic children showed less of a tendency

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to guide the protagonist to keep the cookie than to share with a family member. This poses the question of whether these results would look similar if participants were given real cookies to share. It is a possibility that participants might be more inclined to guide the protagonist to keep the cookie for themselves if the cookie was real. This might lead to a change in the self trials, with an increase in selections to guide the protagonist to keep the cookie to themselves. While this limitation exists, it also brings forth opportunities for future directions.

Future Directions

Participant recruitment for this study started in late 2022 and was concluded in mid-2023, just after coronavirus regulations had begun to recede and prior to the World Health Organization declaring an end to the global health emergency. The global health emergency declaration in March 2020 triggered lockdowns and school closures across the United States, which forced parents and children to spend increased time with family members in their household. Although research on the influence of COVID-19 on social development is currently scarce, some studies have suggested that the school closures may have influenced children's social development across different ages. For instance, a longitudinal study by Hagihara et al. (2022) examined the influence of school closures in Japan on children's social relationships before and after the reopening of schools. Their results found that children's perceived closeness to parents decreased after the school reopened and increased for peers. Furthermore, this increased time spent with family may have influenced participant responses on the resource distribution task. I observed a strong tendency of guiding the protagonist to share with family (including in trials where prior studies did not find a family preference, such as sibling vs. friend), which may have been impacted by the increased time spent with family compared to other people. However, it is unclear whether increased time spent with family would impact

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some age groups more than others. The present study examined children between the ages of 3- and 13- year-olds. At the time of data collection, many of the 3- to 4-year-olds were born just before or during school and daycare closures, meaning that many of them started school and other activities for the first time when COVID regulations were just beginning to recede. This is a much different experience for the 6- to- 7-year-old participants, as many of them had been in school prior to the school closures but had not been in school for long. In contrast, children over the age of 8-years-old had all been in school for at least 2 years prior to the school closures. All of these factors may have contributed to the way that children responded to the resource distribution task. Thus, future research should attempt to replicate these findings to examine whether school closures and home confinement influenced children's behavioral familism.

The present study focused specifically on Hispanic children due to the extensive research on familism in Hispanic families in the United States (Schwartz, 2007). The non-Hispanic sample included a range of other race/ethnicities that did not identify as Hispanic. Past research suggests that familism might not be unique to Hispanics and other ethnic groups might value family similarly. For instance, Schwartz (2007) examines the applicability of familism to other non-Hispanic groups (non-Hispanic Whites, Caribbean Islanders, and Black/African Americans). The results suggested that familism might assume a similar form in Hispanic and non-Hispanic groups (Schwartz, 2007). Further, the Short Attitudinal Familism Scale used in the present study was validated for use with Black/African Americans, Hispanics, Asians, and Multicultural groups (Christophe & Stein, 2022). Similarly, results from an independent sample t-test (in which I did not observe differences in familism scores between Hispanic and non-Hispanic participants) align with this finding and highlight the potential role of familism's influence

across cultures. Thus, future research should attempt to examine familism's influence on social cognition across a variety of ethnic groups in the United States.

Conclusion

To conclude, this study has provided valuable insights into the influence of familism on children's social cognition. These findings did not yield an effect of familism, yet family selections were significantly higher in Hispanic children than non-Hispanic children. While these results are valuable, several open questions remain. One aspect that warrants further research is familism's contribution to these results. Understanding how familism may interact with other variables (e.g., ethnic identity) might shed light on potential moderators. Additionally, Hispanic families in this sample scored lower on the familism scale than other families. Further research is needed to clarify whether social desirability was involved or whether these familism values are transmitted differently to children of different cultural backgrounds. These results highlight the importance of researching cultural concepts, like familism, in children's social cognition processes.

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Sharing with Others

Age: _____
Date: _____

Side 1   **Version 1**   **Male | Female**

We want to know more about how kids think about sharing. For each story, circle the person who should get the cookie.

Taylor has one cookie. Who should Taylor give the only cookie to: Taylor's mom or Taylor keeps the cookie. Mom Self	Noah has one cookie. Who should Noah give the only cookie to: Noah's friend from school or Noah's Cousin. Friend from school Cousin
Kai has one cookie. Who should Kai give the only cookie to: A person they Kai doesn't know or Kai's sister. Person they don't know Sister	Charlie has one cookie. Who should Charlie give the only cookie to: A person Charlie doesn't know or Charlie's dad. Person they don't know Dad
Jessie has one cookie. Who should Jessie give the only cookie to: Jessie's grandpa or Jessie keeps the cookie. Grandpa Self	Logan has one cookie. Who should Logan give the only cookie to: Logan's friend from school or Logan's mom. Friend from school Mom

Sharing with Others

Side 2   **Version 1**   **Male | Female**

We want to know more about how kids think about sharing. For each story, circle the person who should get the cookie.

Jodie has one cookie. Who should Jodie give the only cookie to: Jodie's brother or Jodie keeps the cookie.

Brother   Self

Ash has one cookie. Who should Ash give the only cookie to: A person Ash doesn't know or Ash's Grandma

Person they don't know   Grandma

Alex has one cookie. Who should Alex give the only cookie to: Alex's cousin or Alex keeps the cookie.

Cousin   Self

Riley has one cookie. Who should Riley give the only cookie to: Riley's friend from school or Riley's Sister.

Friend from school   Sister

Jamie has one cookie. Who should Jamie give the only cookie to: Jamie's friend from school or Jamie's Grandpa.

Friend from school   Grandpa

Angel has one cookie. Who should Angel give the only cookie to: A person Angel doesn't know or Angel's cousin.

Person they don't know   Cousin

APPENDIX B: SHORT ATTITUDINAL FAMILISM SCALE

1. Children should always help their parents with the support of younger brothers and sisters, for example, help them with their homework, help the parents take care of the children, and so forth.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

2. A person should always support members of the extended family, for example, aunts, uncles, and in-laws, if they are in need even if it is a big sacrifice.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

3. Parents and grandparents should be treated with great respect regardless of their differences in views.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

4. A person should often do activities with his or her immediate and extended families, for example, eat meals, play games, or go somewhere together.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

5. A person should help his or her elderly parents in times of need, for example, helping financially or sharing a house.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

6. A person should be a good person for the sake of his or her family.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

1. People in my life (e.g., close family and friends) share my views on these questions.

   Circle a number from 1 (Strongly Disagree) to 10 (Strongly Agree)

   1   2   3   4   5   6   7   8   9   10

Child Participants   **Parent Participants**

Race/Ethnicity (Check all that apply):   Relationship to child:
  Hispanic/Latinx   Mother
  Black or African American   Father
  American Indian or Alaska Native   Guardian
  Asian or Asian American   Grandparent
  Native Hawaiian or Pacific Islander   Other: _____
  Caucasian or White   Prefer not to respond
  Prefer not to respond

Child Gender:
  Female   Race/Ethnicity (Check all that apply):
  Male   Hispanic/Latinx
  Something Else: _____   Black or African American
  Prefer not to respond   American Indian or Alaska Native
                                    Asian or Asian American
                                    Native Hawaiian or Pacific Islander
                                    Caucasian or White
How many siblings does the child have: Prefer not to respond
_____

Child's zip code of residence: _____   How many siblings do you have?
                                                _____

Languages spoken at home.

Primary Language: _____
Secondary Language: _____
Other: _____