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## Poor and unpopular: How verbal ability and theory of mind predict peer rejection in a socioeconomically diverse environment

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**Poor and unpopular: How verbal ability and theory of mind predict peer rejection in a  
socioeconomically diverse environment**

A Thesis

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and

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In Partial Fulfillment

of the Requirements of Graduation Honors

Ellen Rispoli

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### Abstract

This study compares associations between Peer Rejection (PR) and Verbal Ability (VA) and PR and Theory of Mind (ToM) within a socioeconomically diverse context. At the time the study was stopped, five participants, ages 6-9, were recruited from the Boys and Girls Club. Participating families completed socioeconomic status (SES) questionnaires written in either English or Spanish prior to an hour-long session with a team of Butler University undergraduate students. The undergraduates administered the Peabody Picture Vocabulary Test (PPVT) and Expressive Vocabulary Test (EVT) to assess VA; the Mind of the Eyes task, a series of three Faux Pas (FP) tasks, an emotion task, and a desire task to assess ToM skills; and a 20-question self-report peer rejection survey to assess PR. Results were compared between age, sex, race and socioeconomically matched participants as well as group norms from previous studies. No significant differences were observed within the sample set nor was correlational evidence found.

## Introduction

Peer Rejection (PR) refers to a child's negative interactions with other children. With each rejection a child faces, he or she has fewer opportunities to practice perspective-taking and build social competence (Hymel, Rubin, Rowden, & LeMare, 1990). As these experiences multiply, a child might develop a deficit in perspective-taking which heightens that child's risk of developing maladaptive social behaviors including social isolation and aggression. In turn, these behaviors correlate with higher rates of PR (Hymel et al., 1990). The more PR a child experiences, the more vulnerable he or she becomes to loneliness, depression, poor academic performance, drop out, and/or criminal activity in adolescence (Bukowski & Adams, 2005; Parker & Asher, 1987). Given the many social and emotional risks associated with high instances of PR, many researchers have explored factors which mediate this vicious cycle (Bukowski & Adams, 2005) including Socioeconomic Status (SES; Bolger, Patterson, Thompson, & Kupersmidt, 1995; Eamon 2001; Patterson, Vaden & Kupersmidt, 1991; Odgers, Donely, Caspi, Bates, & Moffit, 2015), Verbal Ability (VA; Gertner, Rice, & Hadley, 1994), and Theory of Mind (ToM; Cutting & Dunn 1999; Miller, Reavis, & Avila, 2018; Slaughter, Dennis, & Pritchard, 2002). The goal of this study is to compare the predictive nature of each of these variables so that parents, teachers, and researchers can design more appropriate interventions for children who will likely experience PR in different learning environments.

## Review of Literature

Research related to the association between SES and PR emerged in the early nineties. Using an assessment of family background and recent life events as well as a sociometric naming task, Patterson, Vaden, and Kupersmidt (1991) observed that children who experienced chronic stresses such as poverty, low-educational stimulation in the home, and parental absence were

twice as likely to be rejected by their peers than children who do not have these experiences. The results of the study indicate that the impact of various chronic stressors is cumulative across the four factors primarily used to determine socioeconomic status, i.e. sex, marital status, education, and occupation (Hollingshead 1975). In 1995, Bolger and Thompson joined Patterson and Kupersmidt to examine the ways chronic and intermittent economic hardships affected children's social relationships (Bolger et al., 1995). Their study produced evidence consistent with Patterson and Kupersmidt's earlier research and expanded upon these findings. The team compared social adjustment across gender and race. Conclusively, the results suggest that the duration of economic hardship and the chronicity of poverty have the strongest predictive power toward likelihood of a child's rejection. However, their study also generated evidence that parent involvement strongly mediates this effect.

Shortly after the mediating effects of parenting were discovered, researchers in the field of child language began exploring the relationships between Verbal Ability and poverty as well as between verbal ability and social acceptance (e.g. Gertner et al. 1994; Hart & Risley 1995). Hart and Risley (1995), in one of the most influential child language studies of the era, sampled children from various SES backgrounds and compared parent and child vocabularies across each socioeconomic class. Their results indicated lower SES corresponded with lower vocabulary scores, number of utterances, and frequency of speech produced. Hart and Risley (1995) suggested that children need verbal ability to integrate themselves into social groups; therefore children who possess low language ability might be at risk for greater rejection. This hypothesis was consistent with preceding research conducted by Gertner, Rice, and Hadley (1994). Gertner et al.'s (1994) team organized preschoolers into several language groups (i.e. typical, language impaired, and second language learners) and then asked participating children to make positive

and negative sociometric nominations of their peers. They found that limited language ability is associated with lower levels of social acceptance among peers. The authors proposed that children with greater language proficiency were the most popular among their peers because they understood the rules for cooperative play and how to interact with others within a larger context (Gertner et al. 1994). These spoken and unspoken rules accompany the development of another popular construct: Theory of Mind.

Theory of Mind describes the ability an individual has to recognize and understand another person's propensity to think, feel, or believe differently than he or she does. Like VA, ToM develops over time and appears to be intimately linked to aging, social interaction, parental input, and likely SES (Cutting & Dunn, 1999). Cutting and Dunn compared these variables to individual differences in ToM. Through their assessments, they observed that family background contributed to the development of ToM independently from the observed effects of VA and age. They also observed that VA impacted ToM independently of family background and age. To address how these elements impacted social status, Slaughter, Dennis, and Pritchard (2002) investigated ToM's relationship to peer acceptance. Assessing ToM through a variety of false belief, conflicting emotions, and conflicting desire tasks (*see* Slaughter et al., 2002), they discovered that ToM was partially correlated to social preference when they controlled for age among their eldest group of children. From these results, the team concluded that ToM could influence the sociometric status of elementary-aged children even when they controlled for VA. Most recently, Miller, Reavis, and Avila (2018) tested these relationships in middle childhood. Their findings suggest that as children age and their ToM becomes more sophisticated, ToM becomes a stronger predictive factor of PR than VA and SES, especially among school aged girls.

Despite what is known about PR, and the factors that might increase its likelihood, the majority of school-based intervention programs are either focused on resilience training for victims or anti-peer rejection programs (Mulvey, Boswell, & Zheng, 2017). These interventions produce controversial results. Mulvey et al. (2017) suggest the reason these programs are not effective is that they do not address social norms, biases, stereotypes, and prejudices which motivate initial PR. As intervention programs have shifted their attention from social skills training to targeting social hierarchies, vulnerable populations have been neglected. Not only are children of lower SES at risk in general, a recent study by Odgers and colleagues (2015) revealed that in mixed socioeconomic environments the adverse effects of PR intensify for children of all socioeconomic classes.

To date, research on PR has explored the link between PR and ToM (Miller et al. 2018; Slaughter et al. 2002); however, no research team has investigated the implications of this relationship in a socioeconomically diverse environment. Considering that many American public schools and afterschool programs are socioeconomically diverse, these programs need to equip their vulnerable children with strategies that will reduce PR. Could training in false beliefs, conflicting desires and emotions, and/or perspective-taking help victims understand why they have been rejected, and how to avoid future rejection, thereby minimizing its long-term effects? Before this question can be answered, research must be done to better understand the ToM skills elementary aged children possess, and the predictive power ToM has on PR compared to other mediating factors.

The primary goal of the present study was to examine the relationships between VA, ToM and PR and to compare the predictive powers VA and ToM have on PR in a socioeconomically diverse environment. The study aims to sample children from a

socioeconomically diverse environment, i.e., a Boys and Girls Club of Indianapolis, and compare their levels of VA, ToM, and PR as a function of SES background, controlling for age using age-matched peers across social strata. It is hypothesized that ToM will negatively predict PR to the same if not greater extent as VA's predictive power on PR.

## Method

### Design

Initially conceived as a nomothetic cross-sectional design, the study required upwards of thirty participants to generate statistical significance. Data collection, however, was disrupted by the COVID-19 international health crisis. All research with human participants was halted. As a result, the current study is limited to a set of five descriptive idiographic cases.

### Participants

Seven participants (2 boys, 5 girls) were recruited to participate in this study. Due to the COVID-19 international health crisis, 1 boy and 1 girl were unable to complete most measures and therefore excluded from the following results. The five remaining participants (1 boy, 4 girls), ages 6-9 years, were recruited from and tested at a local Boys and Girls Club. The club qualified as socioeconomically diverse because 54% of the families served at the location reported incomes beneath the poverty line and 81% of children were eligible for free or reduced lunch (*see* Boys and Girls Clubs of Indianapolis, 2020). Written informed consent was obtained from each child's parent before assessments were conducted, and all assessments were approved by the Butler University Institutional Review Board.

**M01:** was a 6-year-old (6;4) African American male. M01 was eligible for free or reduced lunch at school. M01 lived primarily with his single mother but spent occasional weekends with his father. M01's mother held a bachelor's degree and was employed as a

teacher. No information could be obtained about his father. M01 formed strong attachments to his mother and his female teachers. M01 was also observed to be talkative and social but did not have a consistent playmate. M01 had trouble with emotion regulation and would often act out aggressively when provoked by another student.

**F01:** was a 9-year-old (9;5) White-Caucasian female. F01 was not eligible for free or reduced lunch at school. F01 lived with two working parents, a working grandmother, and a retired grandfather. F01's parents both had completed some college, and her mother was in the process of completing her bachelor's degree. F01's mother was employed as a lab technician and her father was employed as a mechanic. F01 was reserved and agreeable. She spent most of her time with a small group of girls and rarely experienced conflict.

**F02:** was a 7-year-old (7;11) African American female. F02 was eligible for free or reduced lunch at school. F02 lived with her single mother who had completed high school and was employed as a customer service representative. F02 was upbeat and talkative. F02 played most often with two other boys her age and an older female (F04). F02 fought occasionally with her favorite playmates but demonstrated a variety of emotional regulation strategies which allowed for her to reconcile disagreements with her playmates quickly.

**F03:** was an 8-year-old (8;1) White-Caucasian female. F03 was eligible for free or reduced lunch at school. F03 lived with her mother, her mother's boyfriend, and another adult relative. Her mother had completed some college or specialized training and was employed as a medical office manager. No information could be obtained about the boyfriend and relative living in F03's home. F03 was talkative and assertive. She often organized games to play with other students. F03 lacked emotional regulation strategies for when she came into conflict.

**F04:** was a 9-year old (9;6) Hispanic-Latina. F04 was eligible for free or reduced lunch at school. F04 lived with her single mother. Her mother had completed her bachelor's degree and was employed as a financial advocate. F04 was agreeable and upbeat. She most often played with two younger girls and M01 as well as one-on-one with different staff members. When she experienced conflict, she isolated herself.

### Measures

Participants were assessed using eight measures before and during the data collection session. Included with the informed consent form, parents completed an assessment of socioeconomic status (SES). During the data collection session, participants completed two measures of verbal ability (VA; PPVT and EVT), four measures of theory of mind (ToM; conflicting desire, conflicting emotion, Faux Pas, and Reading the Mind of the Eyes), and one peer rejection measure (PR; the Social Peer Rejection Measure).

**SES:** SES estimates were made using the Hollingshead four factor index of social status (Hollingshead 1975) and a parent survey asking for the number of adults within a participant's home, their level of education completed and occupation maintained, and the participant's eligibility for free and reduced lunch (Cutting & Dunn 1999; Patterson et al. 1991).

**VA:** Form A of the fourth edition of the Peabody Picture Vocabulary Test (PPVT-4; Dunn & Dunn, 2007) was used to assess expressive vocabulary. Expressive vocabulary was measured using the second edition of the Expressive Vocabulary Test (EVT-2; Williams, 2007). F03 did not complete either assessment and was excluded from data analysis along this dimension.

**ToM:** Age appropriate conflicting desire and emotion tasks were adapted from previous research (Slaughter et al. 2002) as were three Faux Pas scenarios (Baron-Cohen, O'Riordan,

Jones, Stone, & Plaisted, 1999; Miller et al. 2018) to assess ToM. In addition to this battery, the Mind of the Eyes task was incorporated as a nonverbal assessment strategy (Baron-Cohen, Wheelwright, Scahill, Lawson, & Spong, 2001). F03 completed two of the three Faux Pas scenarios and therefore was excluded from data analysis along this dimension.

*PR*: A 20 question age appropriate PR measure was derived from the Social Peer Rejection Measure (Lev-Wiesel et al. 2013).

#### Procedure

Participants arrived for testing and were met by a team of undergraduates at the Boys and Girls Club. Due to time constraints from the Boys and Girls Club, up to three participants were tested at once. Testing responsibilities were divided between the undergraduates across three stations and would be completed after six rotations. See Appendix A for administration scripts. These stations were divided up in order to reduce participant fatigue related to answering questions and looking at pictures. In addition to using stations, another strategy to reduce fatigue and attrition was to build in time for participants to engage in filler activities between stations. The Boys and Girls Club provided crayons and paper for children to color as a filler activity. Some participants opted to color; others conversed with the undergraduates. The filler activity allowed for the rotations to run seamlessly despite the differing lengths of time required for each assessment.

Participants were randomly paired with an undergraduate located at one of the three stations to begin testing and the sequence in which testing was completed varied across participants. At station one, participants completed the PR questionnaire and could choose to either rotate or continue at the station to complete the EVT. If participants desired to rotate, they would complete a filler task until another station was available. At station two, participants

completed the Mind of the Eyes task and could choose to either rotate to another station or complete the conflicting emotion and desire tasks. At station three, participants completed the PPVT-4 and could choose to either rotate or complete the Faux Pas tasks. After six rotations, all testing was completed.

### Results

Table 2 presents the individual scores and overall means for various modes of peer rejection included on the Social Peer Rejection Measure. The data suggests that compared to one another, participants do not differ significantly in terms of insult ( $M = 3.4$ ,  $SD = 1.82$ ), exclusion/being ignored ( $M = 2.4$ ,  $SD = 1.52$ ), accusation ( $M = 2.4$ ,  $SD = 1.67$ ), or physical attack ( $M = 2.42$ ,  $SD = 2.05$ ). Table 3 reflects the individual scores and overall means for the four ToM subtests: Conflicting Desire, Conflicting Emotion, Faux Pas, and Reading the Mind of the Eyes. As Table 3 indicates, participants do not differ significantly from one another in their completion of ToM assessments such as the Faux Pas task ( $M = .78$ ,  $SD = 0.08$ ), and the Reading the Mind of the Eyes task ( $M = 18.80$ ,  $SD = 1.92$ ). The Faux Pas task score was calculated from the proportion of answers each participant answered correctly across all three Faux Pas scenarios. Means were not reported for the Conflicting Desire and Conflicting Emotion tasks because they were scored dichotomously. F03 was excluded from the calculation of sample mean and standard deviation because she did not complete all three Faux Pas scenarios. Table 4 displays the standard scores and percentile rankings of all participants, except F03 who did not complete the assessments, on the PPVT-4 and the EVT-2.

**M01:** was the only male, and the youngest, participant, in the study. Therefore, his scores had to be compared to an existing sample mean for boys his age. Compared to 144 other boys, M01 was insulted more often (*see* Lev- Wiesel, 2013). On average, the other boys self-reported

between 1 and 3 instances of being insulted ( $M = 2.37, SD = 1.00$ ), however, M01 self-reported 4 instances out of the total 5 possible (*see* Table 2). M01 also self-reported higher incidences of exclusion/being ignored ( $M = 1.91, SD = 0.78$ ), and physical attacks ( $M = 1.85, SD = 0.88$ ) than the boys from the sample reported by Lev-Wiesel and colleagues though his results did not differ significantly from them. M01 successfully completed the conflicting desire task written for 5-7-year-olds (*see* Appendix). He had more difficulty with the conflicting emotion task. M01 performed appropriately for his age on the other ToM measures (*see* Table 3), scoring 0.60 on his Faux Pas ( $M = 0.59, SD = 0.33$ ; Miller et al. 2018), 19 on his Mind of the Eyes assessment ( $M = 14.6, SD = 2.60$ ; Baron-Cohen et al., 2001). M01 scored a 122 on Form A of the PPVT-4, which put him in the 81<sup>st</sup> percentile among peers for his receptive verbal ability (*see* Dunn & Dunn, 2007), and an 89 on the EVT-2, putting him in the 68<sup>th</sup> percentile among peers for his expressive verbal ability (*see* Williams, 2007; Table 4).

**F01:** compared to her peers within the study, F01 experienced much less PR than all other participants. Compared directly to her age matched peer (F04) and her race and SES matched peer (F03), her levels of reduced PR remain pronounced (*see* Table 2). Beyond the context of this study, F01's self-report indicates that compared to the age-matched, sex-matched norms (*see* Lev-Wiesel et al., 2013) F01 generally experienced fewer instances of exclusion/being ignored ( $M = 1.81, SD = 0.76$ ), accusations ( $M = 1.60, SD = 0.70$ ), and physical attacks ( $M = 1.28, SD = 0.51$ ). Contrastingly, compared to her age-matched, sex-matched norms recorded by Miller and colleagues in 2018 (*see* Miller et al., 2018), F01 performed normally across her ToM measures (*see* Table 3). F01 successfully completed the conflicting desire task written for 8-10-year-olds (*see* Appendix) though she had more difficulty with the conflicting emotion task. F01 performed appropriately for her age on the other ToM measures (*see* Table 3), scoring .69 on her Faux Pas

( $M = 0.59$ ,  $SD = 0.33$ ; Miller et al. 2018), and 18 on her Mind of the Eyes assessment ( $M = 17.7$ ,  $SD = 1.79$ ; Baron-Cohen et al., 2001). F01 scored a 153 on Form A of the PPVT-4, which put her in the 66<sup>th</sup> percentile among peers for her receptive verbal ability (see Dunn & Dunn 2007), and a 121 on the EVT-2, putting her in the 75<sup>th</sup> percentile among peers for her expressive verbal ability (see Williams, 2007; Table 4).

**F02:** reported average levels of insult ( $M = 2.00$ ,  $SD = 0.96$ ) and accusation ( $M = 1.60$ ,  $SD = 0.70$ ) as compared to her peers and the sample of 390 sex-matched peers (see Lev-Wiesel et al., 2013; Table 2). Comparatively, F02 reported heightened levels of exclusion/being ignored ( $M = 1.81$ ,  $SD = 0.76$ ), and reduced levels of physical attack ( $M = 1.28$ ,  $SD = 0.51$ ) than her age matched (F03) and race matched (M01) peers (see Table 2). F02 performed at standard levels on her ToM battery (see Table 3), successfully completing both the conflicting desire and conflicting emotion tasks and scoring 0.83 on her Faux Pas assessment ( $M = 0.59$ ,  $SD = 0.33$ ; Miller et al. 2018). On her Mind of the Eyes assessment F02 scored 21, ( $M = 12.5$ ,  $SD = 2.60$ ; Baron-Cohen et al., 2001), which does not exceed the levels of accuracy displayed by her same age, same sex peer group (see Baron-Cohen et al., 2001) but is noteworthy. Most notable among F02's scores were her language capabilities, scoring a 162 on form A of the PPVT-4 and a 125 on the EVT-2 placing her solidly among the 98<sup>th</sup> and 96<sup>th</sup> percentiles in receptive and expressive vocabulary among her peers, respectively (see Dunn & Dunn, 2007; Williams, 2007).

**F03:** experienced, qualitatively, the greatest amount of PR (see Table 2). Reporting all 5 instances of insult possible, all 4 instances of accusation possible, and all 4 instances of physical attack possible. It is evident that F03 experienced greater PR than her age matched peer (F02), and certainly her race and SES matched peer (F01). Along her ToM measures F03 successfully completed the conflicting emotion task, however, her responses to the control questions on the

conflicting desires task matched the desires reflected in the story and were therefore considered a failure (*see* Table 3). F03 did not complete all Faux Pas measures necessary to render a score so her data was excluded along this dimension. On her Mind of the Eyes task, F03 performed normally compared to her age matched, sex matched, peers ( $M = 12.5$ ,  $SD = 2.60$ ; Baron-Cohen et al., 2001; *see* Table 3). F03 did not complete measures of VA.

**F04:** experienced high levels of PR among her peers within this study (*see* Table 2), reporting all 5 instances of insult possible, all 4 instances of accusation possible, and all 4 instances of physical attack possible. It is evident that F04 experienced greater PR than her age matched peer (F01). F04 did not have a race matched peer in this sample. F04 did not successfully complete either conflicting desire or conflicting emotion task (*see* Table 3). F03's Faux Pas scores were standard compared to her peers within the study, and the age matched, sex matched peer group ( $M = 0.59$ ,  $SD = 0.33$ ; *see* Miller et al. 2018). F03 demonstrated age appropriate accuracy on the Mind of the Eyes task ( $M = 17.7$ ,  $SD = 1.79$ ; Baron-Cohen et al., 2001; *see* Table 3). Similarly, F03 scored a 154 on Form A of the PPVT-4, which put her in the 66<sup>th</sup> percentile among peers for her receptive verbal ability (*see* Dunn & Dunn 2007), and a 125 on the EVT-2, putting her in the 81<sup>st</sup> percentile among peers for her expressive verbal ability (*see* Williams, 2007; Table 4).

## Discussion

At the onset of this research project, the primary objective was to examine the relationships between VA, ToM, and PR and to compare the predictive powers VA and ToM on PR in a socioeconomically diverse environment. It was initially hypothesized that advanced ToM skills would negatively predict PR to the same if not greater extent that VA predicted PR because greater interpersonal understanding should yield greater peer acceptance. The results of this

study did not provide any evidence to support this hypothesis. One interpretation of these results may relate to the higher instances of PR recorded among the sample set. Four out of five cases within this study demonstrated greater PR than the sample collected by Lev-Wiesel and colleagues (*see* Lev-Wiesel et al., 2013) despite their normal levels of ToM and VA (*see* Table 3; Table 4). What this elevated instance of PR demonstrates is congruous with the belief that PR is elevated in mixed SES environments.

The degree to which evidence from the study supports this belief is limited by the sample size. Recruitment of participants was limited by several factors. The most obvious of these factors was the interruption of data collection due to COVID-19. Even after participants had been recruited, their data was unable to be collected due to the prohibition of research with human subjects issued in response to the global health crisis. Other considerable factors include an inability to partner with local schools, and lack of funding to incentivize participation in the research.

Despite the lack of conclusive evidence, this research can be used as a pilot test to inspire future research and be replicated with larger samples. The study could also be modified into a 5 x 3 cross-sectional quasi-experiment comparing levels of PR as a function of ToM and VA among 6, 7, 8, 9, and 10-year-olds across different socioeconomic environments reflecting low poverty, high poverty, and mixed socioeconomic peer groups to discern whether the results in this study reflect the effects of age or diverse socioeconomic environment on PR. Researchers might also adapt this work to investigate not only PR against other socioeconomic backdrops, but other contexts such as their classrooms, summer camps, or other community based programs in which they may participate. Another way to extend this study is to run it longitudinally in order to identify if PR scores, instances of isolation, and instances of aggression increase in the absence

of intervention in order to detect the degree by which diverse socioeconomic environments are related to PR. This type of extension might shed some light on the gender differences between externalizing and internalizing behavior. In particular, research on externalizing behaviors such as social and physical aggression may help scientists, educators, and families better understand how rejected children learn to reject, bully, and intimidate others.

A final direction for future research might be to follow up with two interesting cases displayed within this data. F01 reported overwhelmingly normal scores on all measures except PR. She was age (F04), race (F03), and SES (F03) matched with other participants in the study and still showed a marked decrease in PR compared to these other participants. What qualitatively differentiates her from all other participants is that she comes from a two-parent home. F02 demonstrated contrasting results. Although F02 displayed advanced levels of VA and ToM, her sociometric status was still controversial and she experienced notable PR. One might be inclined to use these two cases to support the theory that parental involvement is more essential than VA or ToM in reducing PR within a mixed socioeconomic context (Bolger, Patterson, Thompson, & Kupersmidt, 1995) and therefore continue to explore its implications for intervention in mixed socioeconomic settings.

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**Tables**

**Table 1.** Participant Demographics.

<i>Participant<sup>a</sup></i>	<i>Age<sup>b</sup></i>	<i>Race</i>	<i># of Adults at Home</i>	<i>SES Estimate<sup>f</sup></i>	<i>Free and Reduced Lunch Eligibility</i>
M01	6;4	AA <sup>c</sup>	1	53	Yes
F01	9;5	WC <sup>d</sup>	2	45	No
F02	7;11	AA	1	37	Yes
F03	8;1	WC	3	45	Yes
F04	9;6	HL <sup>e</sup>	1	58	Yes
$\bar{x}$	8; 3	—	1.60	47.60	—
$\sigma_{\bar{x}}$	1; 3.60	—	0.89	8.11	—

*Note.* a) participant gender is recorded as M(male) F (female); b) age is reported as (years; months); c) African American; d) White-Caucasian; e) Hispanic-Latin(o)(a); f) SES Estimates were appraised using the Hollingshead four factor index of socioeconomic status (Hollingshead, 1975).

**Table 2.** The Social Peer Rejection Measure (Lev-Wiesel, et al., 2013).

<i>Participant</i>	<i>Insult<sup>a</sup></i>	<i>Exculsion/ Being ignored<sup>b</sup></i>	<i>Accusation<sup>c</sup></i>	<i>Physical Attack<sup>d</sup></i>
M01	4	3	2	3
F01	1	0	0	0
F02	2	4	2	0
F03	5	3	4	4
F04	5	2	4	4

$\bar{x}$	3.4	2.4	2.4	2.2
$\sigma_{\bar{x}}$	1.82	1.52	1.67	2.05

*Note.* a) there were 5 possible rejections which qualified as insults; b) there were 7 possible rejections which qualified as exclusion (ignore); c) there were 4 possible rejections which qualified as accusation; d) there were 4 possible rejections which qualified as physical attacks

**Table 3.** ToM Subtests (Baron-Cohen et al., 1999; Baron-Cohen et al., 2001).

<i>Participant</i>	<i>Conflicting Desire<sup>a</sup></i>	<i>Conflicting Emotion<sup>b</sup></i>	<i>Faux Pas</i>	<i>Reading the Mind in the Eyes<sup>d</sup></i>
M01	1	0	.60	19
F01	1	0	.69	18
F02	1	1	.83	21
F03	0	1	<i>n/a<sup>c</sup></i>	16
F04	0	0	.83	20
$\bar{x}$	—	—	.78	18.80
$\sigma_{\bar{x}}$	—	—	.08	1.92

*Note.* a) The Conflicting Desire task was evaluated pass fail in accordance with (Slaughter et al. 2002); b) The Conflicting Emotion task was evaluated pass fail in accordance with (Slaughter et al. 2002); c) F03 only completed 2 of the 3 Faux Pas measures and so her data was excluded from the calculation of the sample mean and standard deviation; d) Reading the Mind in the Eyes task reports correct answers out of a total possible 28 images viewed

**Table 4.** VA Subtests (Dunn &Dunn, 2007; Williams 2007).

<i>Participant</i>	<i>PPVT-4<sup>a</sup></i>	<i>EVT-2</i>
	<i>Standard Score (Percentile Rank)</i>	<i>Standard Score (Percentile Rank)</i>

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M01	113 (81)	107(68)
F01	106 (66)	110 (75)
F02	130 (98)	127 (96)
F04	106 (66)	113 (81)

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*Note. a)* The standard score and percentile rank reported reflect values provided for Form A of the PPVT-4

**Appendix A: Testing Packet of adapted measures**

## Conflicting Desire: 5-7-year-old

I'm going to read you a story about a boy named Jackson, his sister, and his friend Leon. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Once upon a time, there was a boy named Jackson. Jackson loved playing basketball, braiding his sister's hair, and eating carrots from his mama's garden. One day Jackson and his sister were playing basketball at the park when a gust of wind carried the ball away. Jackson's sister ran after the ball. Jackson chased after his sister. They ran past their friend Leon's house. Leon's dog, Travis, saw Jackson and his sister running. Travis began to bark. Jackson's sister stopped running so that she could pet Travis. Leon saw his friends. He opened the window and yelled, "What are you doing here?"

Jackson said, "We're looking for our basketball."

"I don't see your basketball," Leon said. Jackson and his sister looked around. The basketball was gone. "Would you like to come in for a snack?" Leon asked. "My mama has some carrots and ice cream."

**Memory Q1:** Can you remember what Jackson's favorite food is?

**Test Q:** What snack do you think Jackson would want to eat?

**Control Q1:** Which is your favorite of these two foods: (mark with a check mark which order you presented options and circle the participant's choice)

carrots or ice cream

ice cream or carrots

**Control Q2:** Which snack would you want to eat?

## Conflicting Desire: 8-10-year-old story

I'm going to read you a story about a boy named Jackson and his sister, Lori. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Jackson Brown lived with his mother and sister in a small brick building on Steinway street. His little sister, Loretta, or Lori for short, loved to watch basketball games on T.V. with Jackson while he braided her hair. Lori would eat popcorn and Jackson always ate his favorite food: carrots. Any time their favorite team, the Pacers, lost, Lori would bounce up and down on their purple couch and scream, "I can play better than Myles Turner!" Each time she sprung up in the air, the popcorn scattered across the floor. Lori was so angry she would hardly notice her mess until Jackson got down on his knees and started to pick up the kernels.

As he cleaned, Jackson would often raise an eyebrow at Lori and one by one he'd toss the popcorn into the garbage. "Nothing but net" he smirked.

One day, Jackson and Lori decided to go to the park and play basketball together. They played for over an hour until Jackson said, "Wow I'm getting hungry," Jackson groaned. He rubbed his stomach in a circle and licked his lips. He was thinking about his favorite food.

"Let's go home and see what kind of snacks mom has waiting for us," Lori suggested. Jackson and Lori trotted home. Lori rushed to the pantry and took a peek inside. "We have popcorn and carrots" she said, "what do you want to eat?"

**Memory Q1:** Can you remember what Jackson's favorite food is?

**Test Q:** What snack do you think Jackson would want to eat?

**Control Q1:** Which is your favorite of these two foods: (mark with a check mark which order you presented options and circle the participant's choice)

carrots or popcorn

popcorn or carrots

**Control Q2:** Which snack would you want to eat?

## Conflicting Emotion: Boy

I'm going to read you the story about a boy named Matthew. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Once upon a time there was a little boy named Matthew. Matthew knew that for his 8<sup>th</sup> birthday he wanted a pair of black socks so that he could wear them to school and show all of his friends and teachers. The next morning was Matthew's birthday and there was a present waiting for him at the breakfast table.

"Go ahead, open it." Matthew's dad said. Matthew's grandma pulled out her phone to take a picture of his face when he opened his gift.

"You're going to love it!" Matthew's big sister, Tonya, said.

Matthew untied the ribbon. Next, he peeled off the tape. Then he tore off the paper. Underneath was a brand-new Nintendo switch.

**Memory Q1:** What did Matthew want for his birthday?

**Test Q:** Do you think Matthew would be: (mark with a check mark which order you presented options and circle the participant's choice)

happy or sad about his present?

sad or happy about his present?

**Control Q1:** Which present, black socks or a Nintendo switch, would you have wanted for your birthday?

**Control Q2:** How would you feel if you got a Nintendo Switch for your birthday?

## Conflicting Emotion: Girl

I'm going to read you the story about a girl named Allie. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Once upon a time there was a little girl named Allie. Allie knew that for her 8<sup>th</sup> birthday she wanted a pair of black socks so that she could wear them to school and show all of her friends and teachers. The next morning was Allie's birthday and there was a present waiting for her at the breakfast table.

"Go ahead, open it." Allie's dad said. Allie's grandma pulled out her phone to take a picture of her face when she opened her gift.

"You're going to love it!" Allie's big sister, Tonya, said.

Allie untied the ribbon. Next, she peeled off the tape. Then she tore off the paper. Underneath was a brand-new Nintendo switch.

**Memory Q1:** What did Allie want for her birthday?

**Test Q:** Do you think Allie would be: (mark with a check mark which order you presented options and circle the participant's choice)

happy or sad about her present?

sad or happy about her present?

**Control Q1:** Which present, black socks or a Nintendo switch, would you have wanted for your birthday?

**Control Q2:** How would you feel if you got a Nintendo Switch for your birthday?

## Faux Pas: Playdate

I'm going to read you a story about a playdate. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Izzy was in her friend Ebony's backyard for a playdate. She was playing with Ebony when a girl approached them. She was one of Ebony's neighbors. The girl said, "Hello," then turned to Izzy and said, "I don't know you. I'm Annie, what's your name?"

"I'm Izzy," Izzy replied.

"Would anyone like a snack?" Ebony asked.

**Faux Pas Identification:** Did anyone say something they shouldn't have said or make something awkward? Who said something they shouldn't have said or something awkward? Why shouldn't she have said it or why was it awkward? Why do you think she said it?

**Faux Pas Detection:** Did Izzy and Annie know each other?

**Faux Pas Recipient Feelings:** How do you think Ebony felt?

**Comprehension Check:** Who was hosting the playdate?

## Faux Pas: Surprise Party

I'm going to read you a story about a playdate. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Dana's dad was throwing a surprise party for her birthday. He invited Sarah, a friend of Dana's, and said, "Don't tell anyone, especially Dana."

The day before the party, Dana and Sarah were tie-dying t-shirts at Sarah's house and Sarah spilled dye on a new dress that was hanging over her chair. "Oh!" said Sarah, "I was going to wear this to your party!"

"What party?" Dana asked.

"Come on," said Sarah, "Help me try to get the stain out."

**Faux Pas Detection:** Did anyone say something they shouldn't have said or something awkward? Who said something they shouldn't have said or something awkward? Why shouldn't she have said it or why was it awkward? Why do you think she said it?

**Faux Pas Identification:** Did Sarah remember that the party was a surprise party?

**Faux Pas Recipient Feelings:** How do you think Dana felt?

**Offender Ignorance Detection:** In the story, who was the surprise party for?

**Comprehension Check:** What got spilled on the dress?

Faux Pas: Bedroom

I'm going to read you a story about a playdate. When the story is over, I'll ask you some questions about what you just heard. If you are unsure, I will read the story over again one time.

Jessie was redecorating her bedroom. She and her mom went shopping and bought some new pillows. After putting the pillows on her bed, Jessie's best friend, Tyra, came over. Jessie asked Tyra, "How do you like my bedroom?"

"Those pillows are ugly," Tyra said, "I hope your mom gets you some new ones!"

**Faux Pas Detection:** Did anyone say something they shouldn't have said or something awkward? Who said something they shouldn't have said or something awkward? Why shouldn't he/she have said it or why was it awkward? Why do you think he/she said it?

**Faux Pas Recipient Feelings:** How do you think Jessie felt?

**Comprehension Check:** In the story, what had Jessie just bought?

Peer Rejection Measures

I'm going to ask you some questions about your friends. Please answer with a yes, "this has happened to me", or a no, "this has never happened to me." You don't need to tell me anything more, but you can ask me any questions if there's something you don't understand.

Question	Yes	No
Have you ever invited a friend to come play, and they said they would not come?		
Have any of your friends asked you to leave them alone while they are with other people?		
Have you ever felt ignored by your friends?		
Have any of your friends told you that you cannot play with them?		
Have any of your friends stopped you from playing with other friends?		
Have any of your friends made it hard for you to learn something important?		
Have any of your friends hurt you physically?		
Have any of your friends thrown things at you?		
Have any of your friends ruined something you own?		
. Have any of your friends said a bad word to you?		
. Have any of your friends made fun of you?		
. Have any of your friends called you a mean name?		
. Have any of your friends made a rude gesture at you?		
. Have any of your friends embarrassed you or hurt your feelings you?		
. Have any of your friends forced you to do something you didn't want to?		
. Have any of your friends blamed you for something bad that happened?		

- . Have any of your friends told you that if you do something, something bad will happen?
- . Have any of your friends “told” on you to a parent or a teacher?
- . Have any of your friends encouraged other people to be mean to you?
- . Have any of your friends spread mean and untrue stories about you to other people?

## **Appendix B: Informed Consent and Parent Survey**

### **VERBAL ABILITY AND THEORY OF MIND**

#### **INFORMED CONSENT**

##### **Purpose of the research**

This study will examine traits which are related to peer rejection and acceptance such as verbal ability, socioeconomic status, and theory of mind. Theory of Mind is a developmental characteristic that describes how one perceives the differing thoughts, feelings, and beliefs another may possess. This examination is directed towards establishing a basis for social-emotional and Theory of Mind intervention among children who attend school in a socioeconomically diverse environment.

##### **What will my child be doing?**

For my study I would like to meet with your child and engage them in a variety of activities. They will be shown pictures and be asked to name and describe them. They will hear scenarios involving children interacting with one another and be asked to describe what the people are thinking and feeling. A final activity will include a twenty-question questionnaire about the quality of your child's friendships.

These activities should take about an hour. Throughout the session your child will be free to take breaks or discontinue the activities at any time.

**What will I be doing?**

For my study I would like to gather demographic information on your child in order to organize my data. I will send home a survey for you to complete that outlines your child's age, race, gender, and a variety of questions about your family and home life. This survey is attached.

**Potential Risks and Benefits**

There are no known physical or psychological risks or discomforts associated with participation in this study beyond those encountered in everyday life. I believe your child will find the activities entertaining or at the very least engaging, and will enjoy one on one time with a researcher. I will remind your child that they are free to stop at any point if they wish to discontinue with the activities. No compensation is offered by Butler University for your child's participation in this study.

**Confidentiality**

If you choose to allow your child to participate in this study, any information we collect about them will be held in strict confidence. Only I, who will work with your child, and my supervising professor, will know who provided what information. A summary of the findings from this study may be published in scientific journals or presented at scientific meetings, but you and your child's identity will be kept strictly confidential. Results will only be presented in group form only so no information will ever be personally identifying.

**Voluntary Participation**

Your child's participation in the current study is completely voluntary and of your own choice. You are free to decide not to allow your child to participate in this study or to discontinue

participation at any point. If you choose to withdraw your child from the study once it has started, please inform the researcher. I will discontinue any procedures and you may request that any data collected to that point be destroyed. At the beginning of our session I will ask your child if they would like to participate and they too can decide to discontinue at any time. Every effort will be made to make sure your child is enjoying the activities and if they wish to continue. If I am ever uncertain that your child wants to continue, we will stop and remind them they can discontinue if they wish.

### **Agreement**

I have had the opportunity to ask questions concerning any and all aspects of this project and my questions have been answered to my satisfaction. I understand that my child's participation is voluntary and that I may withdraw my consent at any time without penalty. I acknowledge that confidentiality of records concerning my involvement in this project will be maintained appropriately. I understand that I may contact the investigator stated below or the supervising faculty member at Butler University with questions or concerns pertaining to this study.

I agree to allow my child to participate in the Verbal Ability and Theory of Mind study.

Please direct any questions and/or concerns to me at:

Ellen Rispoli

Butler Class of 2020

Email: [erispoli@butler.edu](mailto:erispoli@butler.edu)

Phone: (217) 255-3952

Child's Name: \_\_\_\_\_

Child's Date of Birth: \_\_\_\_\_

Parent / Guardian: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**AT-HOME SURVEY**

Circle the appropriate response or write an alternative response that best answers the information

1. Information about my child

a. My child identifies as

Male

Female

Prefers not to say

b. My child's race is best described as

Caucasian

African American

Hispanic

Other: \_\_\_\_\_

2. Information about my home

a. I identify as

Male

Female

Prefer not to say

b. I am currently

Working: (job title)\_\_\_\_\_

Retired: (previous job title)\_\_\_\_\_

Between jobs: (previous job title)\_\_\_\_\_

Unemployed: (previous job title)\_\_\_\_\_

c. My children are eligible for free or reduced lunch

Yes

No

d. There are \_\_\_\_\_ other adults living in my household

Please describe your or your child's relationship to each adult

---

---

e. I would best describe my educational experience as

Some high school

High school graduate from a private preparatory, parochial, trade, or public school

Some college or specialized training

Associate's Degree

Bachelor's Degree

Graduate Degree

## **Capacidad Verbal y Teoría de la Mente**

### **El Consentimiento Informado**

### **El objetivo de la Investigación**

Esta investigación examinará los rasgos relacionados con el rechazo y la aceptación de pares, como capacidad verbal, el nivel socioeconómico, y teoría de la mente. La Teoría de la Mente es un rasgo del desarrollo que describe como uno prescribe los diferentes pensamientos, sentimientos y creencias que otros pueden poseer. Esta investigación está dirigido a establecer una base para una intervención de social-emocional y Teoría de la Mente entre niños que asisten a la escuela en un ambiente socioeconómicamente diverso.

### **¿Qué hará mi hijo?**

Para mi investigación, me gustaría encontrarme con su hijo y participaren en una variedad de actividades. Se les Mostrarán imágenes y se les pedirá que las nombren y las describan.

Escucharán escenarios que involucren a niños interactuando entre sí y se les pedirá que describan lo que la gente está pensando y sintiendo. La última actividad incluirá un cuestionario de veinte preguntas sobre la calidad de las amistades de su hijo.

Estas actividades deben tardar aproximadamente una hora. A lo largo de la sesión, su hijo será libre de tomar descansos o suspender las actividades en cualquier momento.

**¿Qué voy a hacer?**

Para mi investigación, me gustaría coleccionar información demográfica sobre su hijo para organizar mis datos. Enviaré a casa una encuesta para completar que describe la edad, raza, género, y una variedad de preguntas sobre su familia y su vida en el hogar. Esta encuesta se adjunta.

**Riesgos y Beneficios Potenciales**

No hay riesgos o molestias físicos o psicológicos conocidos asociados con la participación en esta investigación más allá de los encontrados en la vida cotidiana. Creo que su hijo estará entretenido con las actividades, o al menos atractivas, y disfrutará de pasar tiempo con una investigadora. Le recordaré a su hijo que es libre de detenerse en cualquier momento si quiere suspender las actividades. La Universidad de Butler no ofrece ninguna compensación por la participación de su hijo en esta investigación.

**Confidencialidad**

Si decide permitir la participación de su niño en esta investigación, cualquier información que coleccionemos sobre su hijo se mantendrá en estricta confianza. Sólo yo, que trabajaré con su hijo, y mi profesor supervisor, sabremos quién proveyó qué información. Un resumen de las conclusiones de esta investigación puede ser publicado en revistas científicas o presentado en reuniones científicas, pero las identidades de usted y su hijo se mantendrán estrictamente confidenciales. Sólo las conclusiones se presentarán en forma de grupo, por lo que ninguna información será de identificación personal.

**Participación Voluntaria**

La participación de su hijo en esta investigación es totalmente voluntaria y de su propia elección. Usted es libre de decidir no permitir la participación de su hijo en esta investigación o suspender su participación en cualquier momento. Si decide sacar su hijo de la investigación cuando está empezado, por favor informe la investigadora. Suspenderé cualquier procedimiento y usted puede solicitar que todos los datos coleccionados sean destruidos. Al comienzo de nuestra sesión, le preguntaré a su hijo si le gustaría participar y ellos también pueden decidir suspender las actividades en cualquier momento. Cada esfuerzo será hecho para asegurarse de que su hijo está disfrutando las actividades y si quiere continuar. En cualquier punto, si no estoy seguro de que su hijo quiera continuar, pararemos y le recordaremos que no tienen que continuar si no lo quiere.

**El Acuerdo**

He tenido la oportunidad de hacer preguntas sobre todos y cada uno de los aspectos de este proyecto y mis preguntas han sido respondidas a mi satisfacción. Entiendo que la participación de mi hijo es voluntaria y que puedo sacar mi consentimiento en cualquier momento sin sanción. Reconozco que la confidencialidad de mis relativos a mi participación en este proyecto se mantendrá apropiadamente. Entiendo que puedo contactar con la investigadora que se indica a continuación o con el miembro de la facultad supervisora de la Universidad de Butler con preguntas o preocupaciones perteneciente a la investigación.

Estoy de acuerdo en permitir que mi hijo participe en la investigación de Capacidad Verbal y Teoría de la Mente.

Por favor dirija cualquier pregunta y / o preocupaciones a mí en:

Ellen Rispoli

Clase de la Universidad de Butler 2020

Correo electrónico: erispoli@butler.edu

Teléfono: (217) 255-3952

Nombre del Niño: \_\_\_\_\_

Fecha de Nacimiento del Niño: \_\_\_\_\_

Padre/Guardián: \_\_\_\_\_

Firma: \_\_\_\_\_ Date: \_\_\_\_\_

### **Encuesta en Casa**

Haga un círculo con la respuesta adecuada o escribe una respuesta alternativa que responda mejor a la información.

1. Información de mi hijo

a. Mi niño se identifica como

Masculino

Mujer

Prefiere no decir

b. La raza de mi niño se describe mejor como

Caucásico

Afroamericano

Hispano

Otro: \_\_\_\_\_

2. Información sobre mi casa

a. Se identifico como

Masculino

Mujer

Prefiere no decir

b. Actualmente soy

Trabajo: (Cargo) \_\_\_\_\_

Retirado: (título de trabajo anterior) \_\_\_\_\_

Entre trabajos: (título de trabajo anterior) \_\_\_\_\_

Desempleado: (título de trabajo anterior) \_\_\_\_\_

c. Mis hijos son elegibles para el almuerzo gratis o rebajado

Sí

No

d. Hay \_\_\_\_\_ otros adultos que viven en la casa

Por favor describe la relación entre usted o su hijo con cada adulto

---

---

e. Describiría mejor mi experiencia educativa como

Alguna escuela secundaria

Graduado de preparatoria privada, parroquial, vocacional, o escuela pública

Algunas universidades o capacitación especializada

Grado de Asociado

La Licenciatura

Postgrado

**Appendix C: Recruiting materials**

Email contact with schools, after school programs, and local nonprofits was carried out by undergraduate students who used the following this script:

Dear \_\_\_\_\_,

My name is \_\_\_\_\_ and I am a current student at Butler University working with a faculty member on a project that examines the influence of verbal ability, socioeconomic status, and perspective taking, on a child's friendships and peer acceptance.

I am writing to you to inquire if it would be possible for us to recruit participants from \_\_\_\_\_ for this project.

---

Based on what I've read about your site online, I feel like the kids you serve are a perfect fit for this research. With your consent, we would like to put up a few posters, and potentially distribute fliers to the families you serve for their consideration.

I would also love to set up an appointment to discuss the project in person with you after the Thanksgiving Holiday to share more specifics about the research.

If you would like more information before our meeting, I've included a formal description of measurements and data we intend to collect.

With regards,

---

If the organization did not follow up with a week, an undergraduate would send a follow-up email using the following script:

Dear \_\_\_\_\_

My name is \_\_\_\_\_ and I am a current student at Butler University working with a faculty member on a project that examines the influence of verbal ability, socioeconomic status, and perspective taking, on a child's friendships and peer acceptance.

You may have already heard from (Ellen Rispoli, Sara Taft, Jasmine Hobson, or Camille Weiss) but I just wanted to follow up and make sure you received our email. In its original contents we were seeking your help in recruitment for this study. We would like to speak with you in person and bring you copies of informed consent to distribute to the children and families you serve. Please let us know if we can schedule with you in the next two weeks, or if we can set up an appointment by phone.

If you would like more information before our meeting, I've included a formal description of measurements and data we intend to collect as well as the informed consent form.

With regards,

---

After two emails, organizations were contacted via phone and messages/conversations were conducted using the following script:

**A. Hello! My name is Ellen Rispoli and I was hoping to speak to \_\_\_\_\_.**

(if he/she is speaking, proceed to B. if you need to be connected, proceed to C.)

**B. Hello! I am a student at Butler University, and I am recruiting families in Indianapolis with children between the ages of six and ten to participate in research I am conducting for my senior thesis. Because \_\_, serves these families, I was wondering if you could take five minutes to learn a little bit about my project?**

(if he/she does proceed to D. if he/she does not, proceed to E.)

**C. Hello \_\_\_\_\_, my name is Ellen Rispoli and I am a student at Butler University. I am recruiting families in Indianapolis with children between the ages of six and ten to participate in research I am conducting for my senior thesis. Because \_\_\_\_\_, serves these families, I was wondering if you could take five minutes to learn a little bit about my project?**

(if he/she does proceed to D. if he/she does not, proceed to E.)

**D. Excellent! My thesis aims to support the types of social-emotional interventions programs such as yours and other community development programs use for children and youth in our community. My research explores traits related to peer rejection and acceptance such as verbal ability, socioeconomic status, and perspective taking. For the remainder of January and entirety of February I hope to gather information on these traits using several activities which assess the participant's ability to identify the feelings, beliefs, and desires of a character in a story, their ability to identify and describe various images related to their vocabulary knowledge, and their ability to detect positive and negative peer**

**interactions. Family participation in my study will be completely voluntary and all data I will collect will be recorded anonymously to protect the information of participating families. For these reasons, I was wondering if you would be willing to distribute information about my study to the families you serve. I'd like to email you our informed consent forms and study description or bring these materials to you in the next week.**

(if yes proceed to F. if no proceed to G.)

**E. Perhaps I can call back another time, or we can schedule an appointment this upcoming week?**

(if yes proceed to F. if no proceed to G.)

**F. Thank you so much!**

**G. I completely understand. Would you like any more information about the study?**

(if yes answer questions as best as you can, if no proceed to H.)

**H. In that case, may I ask you, if there are any other organizations in Indianapolis you would recommend, I contact? (allow them to answer) Thank you very much!**