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Contextual Influences on Peer Acceptance and the Social Behavior of Individuals with
Intellectual Disabilities

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Mississippi

Carly Gardner

May 2011

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ABSTRACT

Much attention has been paid to the social behavior of individuals with Intellectual Disability (IDs) due in part to its relevance to quality of life. Deficiencies in social skills are common among persons with IDs and may include problem behaviors such as withdrawal, aggression, and difficulty communicating with others and social skills training programs have been developed to improve social functioning. However, these programs have generally assumed that the social behavior of persons with IDs should be the same as that of individuals without IDs, yet, relatively little is known about the nature of the relationships among individuals with IDs and what behaviors are associated with having friends within this population. The lack of research may be attributable, at least in part, to difficulties with introspection and reporting that characterize ID. Nonetheless, social relationships between individuals with IDs may offer the individuals an opportunity for more egalitarian relationships and improved quality of life. The current study investigated the relationships between individuals with IDs and behavioral correlates of peer acceptance in participants' group home and sheltered workshop. Participants include 123 individuals with IDs who live and work in the same private residential facility. Participants completed sociometric interviews; symptom focused self-report measures, and ratings of the importance of different social relationships. Their social behavior was observed by trained observers in their home and their workplace as well. Direct support staff and work supervisors also completed similar self-report measures and sociometric interviews as a means of comparison. Results indicate that resident and staff responses to all measures were largely

consistent with each other. Specifically, sociometric ratings and ratings of social importance were consistent between staff and resident respondents in each setting. Different behaviors were associated with peer acceptance across settings. Peer acceptance was associated with rates of nominations for Like to live with, Not like to live with, and Mean in the home and Nice, Least Popular, and Best Friend at work. Social status groups differed on rates of positive nominations across settings with popular peers receiving nominations for other positive categories as would be predicted by the literature in the home but not at work. Interestingly, social preference and impact were not associated with the frequency or appropriateness of social behavior in either setting. These findings aid in understanding social networks and behavior of persons with IDs which may ultimately inform clinical treatment of social dysfunction.

DEDICATION

This dissertation is dedicated to my husband, my three daughters Taylor, Brooklyn, and Ella Grace. In particular, I thank my participants and my friends who helped me collect all of this data!!

LIST OF ABBREVIATIONS AND SYMBOLS

ID Intellectual Disability

ACKNOWLEDGEMENTS

I appreciate the support of my advisor, Karen Christoff and two of my supervisors, Shannon Hill and Kimberly Sallis who supported me and believed in my ideas and that I would complete graduate school!

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INTRODUCTION

Biopsychosocial Model of Behavior

The biopsychosocial model is widely accepted theory of behaviors and has been used to explain risk taking, psychological distress, resilience, and a host of other behaviors. This model posits that behavior arises from the dynamic interaction of biological, psychological, and social/environmental factors. Thus, a given behavior is the result of an individual's biological makeup and is mediated by personal and environmental factors. Internal factors may include cognitive and executive functioning, temperament, social problem-solving strategies, and communicative ability. According to this model, conditions such as Intellectual Disability and Autism would likely affect one's social behavior and deficiencies in endogenous factors and experience may explain social dysfunction commonly exhibited by these individuals. Two theories based on the biopsychosocial model of behavior were proposed by Beauchamp and Anderson (2010) and Guralnick (1999).

Endogenous Influences on Social Behavior

Both Beauchamp's and Guralnick's theories define the generally internal/psychological processes that allow for social interaction. Guralnick proposed four socio-cognitive processes essential for a successful social interaction: emotion regulation, shared understanding, social-cognitive processes, and higher-order processes (e.g. selective attention, persistence, responsivity), which underlie one's ability to identify and process relevant social cues and devise and enact an intentional social response (Dodge, 1986). These processes also allow the

individuals to evaluate the effectiveness of their social behavior in a given situation, adapt their approach when necessary, and learn from their experience. Guralnick therefore, defines social competence as one's "ability to successfully and appropriately select and carry out their interpersonal goals." His definition underscores the complexity of social interaction, which requires constant integration of perception and expression of intent.

This process is disrupted when there are deficiencies in one or all of the four governing socio-cognitive processes as is the case for individuals with IDs. Persons with IDs may have deficits at any or every level of the interaction. For example, these individuals commonly have difficulty sustaining attention, identifying relevant social cues, social problem-solving, emotion/behavioral regulation, and learning from experience.

Beauchamps and Anderson (2010) provide a biopsychosocial framework for social behavior in their SOCIAL (Socio-Cognitive Integration of Abilities) Model. They propose that behavior from innate capability, our experience, and social cues. Our innate is largely based on our neurological functioning, and our experience- as described by the authors- is based on our socioeconomic background and familial bonding but may include other factors not mentioned. Ability, experience, and social cues affect one's socio-cognitive processing, internal process very similar to those described by Guralnick (1999).

Dysfunction may occur as a result of endogenous factors such as deficits in executive functioning or as a result of external environmental factors. Interruption in the process at any stage will likely render the social interaction unsuccessful. For example, emotion regulation is essential in preventing emotional arousal from interfering with attention and the interpretation of social cues or the selection and implementation of a social strategy. Shared understanding entails

a mutual working knowledge and adherence to social roles, rules, and expectations, as well as the process of interaction- such as speaker and listener behavior and social scripts. A lack of shared understanding indicates a deviation from culturally agreed upon processes that underlie all social interaction.

Socio-cognitive deficits result in a variety of problematic social behaviors common to persons with IDs including: aggression, difficulty communicating effectively, decreased social overtures, and nonconforming to social convention (American Psychiatric Association [*DSM-IV-TR*], 2000). These deviant social behaviors are often associated with more restrictive residential placement, decreased opportunities for community employment, and peer rejection/social isolation for those with an ID (Migliore et al., 2008; Gardner & Heward, 1991). Social rejection is associated with poorer overall quality of life, poorer mental health- anxiety and depression, and decreased positive affect and happiness (Newton et al., 1995; Favell et al., 1996; Murray & Greenberg, 2006; Eronen & Nurmi, 2001).

While the theories of Guralnick (1999) and Beauchamps and Anderson (2010) theories are described as biopsychosocial in nature, they do not fully address environmental factors that affect social behavior. Guralnick refers to environmental cues disrupting the social process and Beauchamps and Anderson incorporate socioeconomic status and familial bonding into their SOCIAL model. However, there is not speculation about or description of the relationships that result from these deficient patterns of interacting or specific mention of whether social competence impacts one's social relationships at all. This is largely assumed; however, when all involved exhibit socially incompetent behaviors little is known about the relationships among these individuals or their expectations for others social behaviors. This is the case with persons

with IDs.

The Social Networks of Adults with IDs

Social networks of persons' with IDs are generally smaller than those of neurotypical adults, often limited to those with whom they reside and support staff at their treatment facilities (Guralnick, 1993). Forrester-Jones et.al. (2006) found the average social network of 540 British adults with IDs to consist of 22 members. Robertson et al. (2001) found the median number to be 5, which dropped to 2 when staff were excluded. Exceedingly small social networks likely affect their opportunities for social learning, interaction, and quality of life. Emerson and McVilly (2004) found socialization to be relatively infrequent among 1542 persons with IDs in Northern England despite meaningful social involvement being rated as important by individuals with ID, even more so than was acknowledged by their caregivers (McVilly, 2006). Consistent with this finding, Kampert & Goreczny (2007) found increased opportunities for socialization to be among the most frequently expressed desires for individuals with mild intellectual disability.

Despite small social networks consisting mostly of support staff, surprisingly, Emerson and McVilly (2004) found that most of the social interaction of individuals with IDs was with another person with IDs. Forrester-Jones (2006) found that persons with IDs serve as a significant source of companionship for each other despite their lack of confiding, social support, and assistance with decision-making relative to support staff.

Opportunities for social involvement generally consistent arise in two primary settings for persons with IDs, home and work. However, little is known about the friendships between and among persons with IDs in either of these settings. Most of the extant research has focused on the relationships between with IDs and the staff who provide support or typical coworkers.

Socialization in Group Homes

The vast majority of research involving the home life of individuals' with IDs focuses on opportunities for societal integration and the quality of life of individuals living in their familial home, single resident or group homes, and institutional settings. Robertson et al. (2001) summarized some key findings in the area of residence type and socialization: 1) people living in community based residences had larger social networks than those residing in large residential facilities, 2) residents living in community based settings had more individual with IDs as part of their social network than did those residing in large residential settings, 3) people residing in small community based residences had social networks that included a greater number of individuals who were not support staff, other residents with IDs, or family member as compared to those who resided in village style, larger community based residences, or large residential facilities, 4) individuals who had a greater proportion of individuals with IDs in their social networks reported greater satisfaction with their relationships and friendships. Similarly, Emerson (2004) has suggested that reduced contact between individuals with IDs negatively impacts opportunities for socialization.

Other research has focused on increasing the individual's likely success in community based living environments by developing social skills to be used in their homes (Gardner & Heward, 1991; Duan & O'Brien, 1998). Most have employed behavioral therapies to teach discrete skills and have resulted in varying levels of success (Duan & O'Brien, 1998; Gardner & Heward, 1991).

A third line of research, which has received little attention to date, examines the social relationships among those living in group settings. One study by Wiltz and Kalnins (2008)

examined the relationships between roommates with intellectual disabilities. They tested the Similarity Theory which posits that similar individuals are more compatible. Results supported the theory inasmuch as individuals preferred roommates matched on their desire for sociability. Findings were consistent in institutional and community based samples. No relationship was found between roommate compatibility and their need for order or independence. Inverse relationships were found between the individuals' reported vengeance and aggression and roommate friendship behavior.

Socialization in the Workplace

For those who are able to secure employment, the workplace also provides opportunities for social involvement. More is known about the social networks and behavior of persons with IDs in the workplace. However, most of the research has focused on the relationships between neurotypical coworkers and those with IDs. Henderson and Argyle (1985) identified three types of social relationships in the workplace based on the co-workers' level of intimacy and on the contexts in which the social interaction takes place: work acquaintances, work friends, and social friends. Work friends have greater intimacy than work acquaintances; however, interaction for both is limited to work. Social friends are typically more intimate and interact outside of the workplace. While some research suggests that social friendships between typical employees and their coworkers with IDs do exist, employees with IDs typically fail to achieve that level of intimacy in their relationships in or outside of work and instead more frequently develop work acquaintances and some work friends (Chadsey & Byer, 2001).

Despite the lack of social intimacy between coworkers with and without IDs, Lignugaris/Kraft et al. (1986) found that coworkers with IDs who interact do interact with their

coworkers show rates of interaction similar to those of typical coworkers (during approximately half of the possible intervals sampled during breaks and one-quarter of the intervals sampled during work).

Less research has focused on relationships between coworkers with IDs. It is therefore unclear whether relationships between employees with IDs are similarly characterized by a lack of intimacy and interaction outside of the workplace. Some research describing “high status” employees among sheltered workshop employees found that coworkers desired affiliation with these “high status” employees and that there were positive social consequences for affiliating with them (Padln-Rivera et al., 1986).

Padln-Rivera et al. (1986) identified a group of “high status” employees with IDs that were seen by staff as being leaders and popular among other disabled workshop employees and found that “high status” employees appeared to be more social and active than other employees. Sociometric interview data indicated that “high status” employees were less concerned with staff approval and were observed arguing with staff more frequently than other employees. Non-“high status” employees frequently sought assistance and information from both staff and “high status” employees and valued affiliation with “high status” employees over task performance, physical strength, or other individual characteristics. These findings suggest the existence of an underlying social structure where certain individuals are seen as having higher social status, which is respected, and affiliation with them is sought by lower status individuals. However, little else is known about the social networks of persons with IDs, their structure, or the expectations of their members.

Summary

Social relationships affect quality of life and are subjectively important to individuals with IDs. However, little is known about social networks exclusively comprised of persons with IDs or their behavior and expectations. This may be due in part to the social isolation experienced by many with IDs, often a result of systemic factors and at times exacerbated by the behavior of the individual. In addition, methodological difficulties associated with using individuals with IDs as respondents and the inability to fully understand the intricacies of social relationships through observation hinder research (Oden & Asher, 1977; McVilly et al., 2006). Despite the difficulty, researchers and practitioners can devise methods to circumvent problems with introspection and responding and have found that individuals with IDs can be experts on themselves (McVilly et al., 2006).

The development of sustainable friendships is said to be one of the greatest challenges for service providers working with individuals with IDs (Forrester-Jones et al., 2006). This current study is a step towards understanding social relationships of individual with IDs and behavior associated with peer acceptance among these individuals. This information may allow us to make empirically supported decisions about treatment and to define living and work settings where that individual may likely be socially accepted.

Statement of Purpose

The current study will examine the social networks and behavior of individuals with intellectual disabilities in two contexts: their residence and their place of employment. Because there is a paucity of research in this area, hypotheses are largely exploratory. Hypotheses include:

1. Self-esteem (as measured by the Rosenberg Self-Esteem Scale) will be positively correlated with sociometric acceptance (according to sociometric nominations).
2. Different sociometric categories will be associated with sociometric acceptance across home and work settings.
3. Staff and resident responses will be correlated on both the measure of social importance and sociometric data.
4. Sociometric acceptance and ratings of social importance will be associated with behavioral observations of more frequent and more appropriate social behavior across home and work settings.

METHOD

Participants

Participants consisted of 123 individuals, age 18-75, currently residing and working at a private residential facility for persons with Intellectual Disabilities. A slightly higher percentage of participants were female (55%). All residents are ambulatory and few exhibit significant behavioral problems consistent with facility standards. Residents were considered for participation in the current study if they demonstrated a minimal level of verbal communication and were deemed by staff to have the ability to evaluate their own and other's behavior. Overall, 93% of the 133 residents who were identified as capable of participation consented to participate.

Measures

Sociometric Interview Data- Sociometric measures rely upon peer nominations to determine the social status of a group's members and the characteristics associated with that status. This method is commonly used to examine social networks of school children in as young as preschool (Lindsey, 2002). Fewer studies have used individuals with Intellectual Disabilities as informants. One such study by Padln-Rivera et al. (1986) found sociometric nominations made by sheltered workshop employees with mild intellectual disability to be consistent with staff nominations.

In the current study, participants completed two separate sociometric interviews one requiring them to nominate residents from their group home and another requiring them to nominate residents from their work group for a variety of categories including: "Like most", "Like least", "Works hard", "Helps others", "Is happy", "Is mean", and "Gets into Trouble".

Filler items such as “What is your favorite TV show” and “What do you like to do for fun” were interspersed throughout the interview to minimize any potential distress associated with the peer nomination procedure and minimize reporting their responses to others.

Sociometric interviews were conducted individually by graduate students trained in the procedure by the researcher. Initially participants were provided pictures of the individuals in their home or work group and asked if they knew the pictured individuals. Individual photographs were provided by the residential facility and each photograph was individually laminated. Pictures were approximately 3 inches by 4 inches in size and were presented to respondents in a random order. In addition, to prevent order effects, the pictures were randomly re-ordered several times throughout the interview. It did not appear that the respondents, however, were influenced by the order of the pictures as evidenced by their visual inspection of all photos before responding and their stating the names of the individuals prior to locating their photo.

Participants were asked for example, “Who disrupts others” and were allowed to provide up to three residents from the set provided by pointing to the corresponding photographs, stating the participant number written on the corresponding photo, or stating the name of the relevant resident. Participants’ responses were recorded verbatim. Respondents were allowed to provide fewer than three residents if they believed that fewer than three residents fit the category and more than three if they felt that more than three residents fit the category. They were typically asked to prioritize who most fit the category if they attempted to name more than four residents. A similar procedure was proposed by Terry (2000) that improved the reliability and validity of sociometric data.

If it was clear that the participant did not understand the task (e.g. did not respond, responded randomly before items were read, nominated the same peer(s) for all categories, nominated only themselves, etc.) the interview was stopped and the individual was excluded from the self-report portion of the study. Five individuals were excluded for unreliable/invalid responding during the home sociometric interviews and eight during the work sociometric interviews. One individual was excluded from the self-report portion due to severe hearing impairment when it was determined that no suitable translator was available.

Residents from 11 homes and 6 work groups completed sociometric interviews. Four work groups were excluded from the study because they employed fewer than three residents or they worked fewer than three hours per day. Two homes were excluded for insufficient introspection or communication skills as discussed above. Two individuals were excluded from their respective homes because they had transferred into the home/work group less than two weeks prior to the start of data collection. All resident/work groups exceeded the 50% minimum rate of participation proposed for inclusion in the study. The lowest rate of participation for any home/work group was 75% (1 house). Nine of the 17 groups had 100% participation of group members. Rates of participation should be adequate given that reliable sociometric ratings may be obtained with as little as 40% of a sample's participation (Maassen, van der Linden, Goossens, & Bokhorst, 2000; Terry, 1999; Terry, 2000). Participants' direct care staff and work supervisors also completed similar sociometric interviews so that the consistency of their responses could be assessed. APPENDICES E, F, & G

Rosenberg Self Esteem Scale (RSES; Rosenberg, 1964) The Rosenberg is the most widely used measure of self-esteem and has been used reliably to assess many clinical populations including residential psychiatric patients and persons with physical handicaps including the deaf (Marsh, 1996; Rosenberg, 1964; Bat-Chava, 1994). Beil and Warden (1996) demonstrated the utility of this instrument with persons with intellectual disabilities. They found that the instrument, when administered orally, was responsive to changes in self-esteem due to treatment effects in a sample of 10 adults with moderate to severe IDs and limited verbal communication. In this study, the Rosenberg was administered orally to 104 participants and a visual aid depicting the response set was used to facilitate comprehension and responding.

APPENDIX H

Assessment of the Importance of Social Relationships - 104 participants rated the importance of their social relationships with direct support staff, friends, family, and significant others on a 4-point Likert-type scale (1-not at all important, 2- a little important, 3-some(what) important, and 4- very important). A visual aid depicting response options was provided respondents to facilitate comprehension and responding. The respondents were also asked to rate how important it is that others like them and to indicate whether they have more, less, or the same number of friends as others at the facility. Direct support staff also completed the measure based on their perceptions of the individual and having observed their behavior for 86 of the participants. APPENDICES A & B

Behavioral Observation Event Sampling procedures were employed in this study.

Typically, researchers have found social/peer acceptance to be a reasonably good predictor of friendship behavior for neurotypical children. For example, Rizzo (1988) found play behavior in children to be related to their sociometric status. Specifically, socially accepted children were observed engaging in play behavior more frequently than socially rejected children. The relationship between the frequency of social behavior and social acceptance, however, may not be so simple. Oden and Asher (1977), for example, failed to replicate previous findings that increases in positive social interaction are related to gains in peer acceptance. Therefore, the current study examined both the frequency and appropriateness of participants' social behavior across three contexts, home, work and work break, to attain a broader sample of the participants' behavior.

81 participants were observed in their home and 79 participants were observed at work. Participants not present during the observation phase were excluded from this portion of the study. Participants' social behavior was observed ten times, five in their home and five at work. Since there is some data to suggest that the social interaction patterns of adults with IDs is different during breaks at work than during actual work activities (Lignugaris/Kraft et.al., 1986), two events will be sampled during break time and three during work. If the participant was found to be engaging in social interaction during the sampled event, additional information about who they are interacting with, the nature and appropriateness of the interaction and the presence of activities was recorded. Events were sampled according to convenience but no more than one event in a setting was sampled for an individual per day.

Observations were conducted by the researcher or trained graduate student having achieved at least 80% coding reliability during live coding or on 10 videos of naturally occurring behavior that was developed for training purposes. Both observers obtained 100% coding reliability. APPENDIX D

Social interaction with a confederate Six individuals who were never observed engaging in social behavior during the events sampled participated in an impromptu short interaction with the researcher to assess their social skills. Their behavior during the interaction was observed and rated using a coding paradigm similar to that used during the event recording. APPENDIX C

Procedure

Employees of the residential facility who were familiar with the residents' abilities identified residential housing units comprised of individuals capable of participating in the current study based on criterion that at least 50% of the individuals in the home/work group had to demonstrate the ability to evaluate and report on their own and other's behavior in the format required by the current study as well as demonstrate a minimal level of verbal communication. Based on staff recommendations, two cottages were excluded from the potential subject pool. The home for elderly residents was also excluded because the structure and programming for their home differed significantly from the other homes.

Consent forms were mailed to the legal guardians of all residents who lived in homes identified as capable of participation (n=133). The researchers and two trained graduate students attempted to contact the guardians who did not return the consent form by telephone. Once their

guardian consented to their participation, the study was explained to the resident and their assent was also obtained. Consent was obtained for 124 residents and 100% of these provided assent to participate.

Once consent and assent was obtained, self-report measures were administered individually to residents and staff by the researcher or a trained graduate student working at the facility and familiar with the residents. Administration of the sociometric interviews was split across two separate occasions to avoid resident fatigue. Additional verbal prompts and/or visual aids were used as specified above to facilitate participants' understanding and responding. Structured observations began in April of 2010 and were completed in July of 2010. Confederate interactions were conducted following the completion of individual participants structured observations and were conducted during the same general time frame.

RESULTS

Sociometric Interview Data- A ratio of earned to possible nominations (number of informants) was calculated for each participant, for each category, in home and work settings separately. Social preference and social impact scores were calculated for each participant based on the nominations received in the liked most and liked least categories in each setting. Social preference is the difference in ratio of nominations for most liked and least liked categories. Social impact is the sum of the ratio of nominations for most liked and least liked categories. Social impact and social preference scores for each participant were compared to the mean for the group in each setting to determine their sociometric status in the specified setting according to the method proposed by Coie et al. (1982).

Participants with social preference scores at least one standard deviation below the mean whose nominations for liked least exceeded the mean and liked most were less than the mean were classified as rejected (work n=10, home n=21). Participants with social impact scores at least one standard deviation below the mean whose nominations for like most and liked least were less than the mean for the group were classified as neglected (work n=13, home n=17). Participants whose social impact scores exceeded the mean for the group by at least one standard deviation whose nominations for liked most and liked least both exceeded the mean were classified as controversial (work n=4, home n=7). Participants with social preference and social impact scored within 1 standard deviation of the mean for the group were classified as average (work n=68, home n=49). Participants with social preference scores that exceed the mean by at

least one standard deviation whose nominations for liked most also exceed the mean and liked least are less than the mean were classified as popular (work n=12, home n=21) CHARTS 1 & 2. Thirty-three participants were assigned a sociometric status in both settings. Thirty-six percent of the participants' sociometric status was consistent across settings.

CHART 1

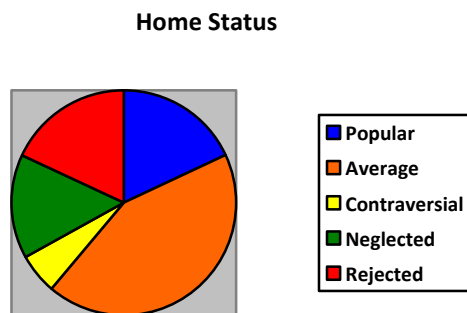
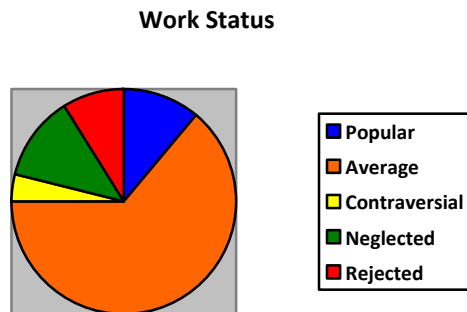


CHART 2



A Kappa analysis was conducted to determine whether social status in the home is predictive of social status at work. While the Kappa value was significant, .145, $p=.008$, only rejected status was much above chance prediction. TABLE 3

TABLE 3

Percent Overlap					
<i>Work Status</i>	<i>Home Status</i>				
	Popular	Average	Controversial	Neglected	Rejected
Popular	33.3%	58.3%	8.3%	0%	0%
Average	22.1%	44.1%	4.4%	13.2%	16.2%
Controversial	0%	50%	25%	0%	25%
Neglected	0%	40%	0%	40%	20%
Rejected	0%	20%	10%	0%	70%

	<i>Value</i>	<i>Significance</i>
Kappa	.145	.008

A one-tailed Pearson Product Moment Correlation was conducted to assess the relationship between social preference scores in the work and home settings and other sociometric categories. Several categories were found to be correlated with social preference.

TABLE4

TABLE4

<u>Sociometric Category</u>	<i>Social Preference</i>			
	HOME (n=115)		WORK (n=107)	
	<u>r values</u>	<u>p values</u>	<u>r values</u>	<u>p values</u>
Teased	-.111	.119	.076	.220
Fights	-.553**	.000	-.435**	.000
Most Popular	.447**	.000	.501**	.000
Gets in trouble	-.608**	.000	-.391**	.000
Leaders	.553**	.000	.497**	.000
Least Popular	-.433**	.000	-.599**	.000
Disruptive	-.656**	.000	-.395**	.000
Helps Residents	.467**	.000	.364**	.000
Helps Staff	.444**	.000	.423**	.000
Needs Help	-.158*	.046	-.102	.148
Like to Date	.226**	.008	.365**	.000
Keeps Secrets	.129	.085	.462**	.000

Cooperative	.522**	.000	.366**	.000
Nice	.557**	.000	.634**	.000
Mean	-.678**	.000	-.579**	.000
Smart	.411**	.000	.358**	.000
Unattractive	-.453**	.000	-.380**	.000
Wins	.282**	.001	.120	.110
Shy	.113	.114	.140	.075
Helps Out	.485**	.000	.501**	.000
Athletic	.299**	.001	.226**	.010
Snob	-.455**	.000	-.302**	.001
Loses	-.119	.103	-.233**	.008
Good Behavior	.504**	.000	.335**	.000
Bad Behavior	-.594**	.000	-.508**	.000
Independent	.344**	.000	.362	.000
Happy	.549**	.000	.357**	.000
Sad	-.071	.225	-.023	.406
Angry	-.433**	.000	-.214*	.013
Best Dressed	.380**	.000	.272**	.002
Spreads Rumors	-.562**	.000		
Attractive	.481**	.000	.440**	.000
Works Hard	.449**	.000	.471**	.000
Doesn't Work Hard	-.439**	.000	-.366**	.000
Teases	-.534**	.000	-.041	.339
Few Friends	-.405**	.000	-.553**	.000
Not Around Others	-.248**	.004	-.129	.093
Like To Live/Work With	.630**	.000	.591**	.000
Best Friend	.642**	.000	.588**	.000
Doesn't Like Live/Work With	-.727**	.000	-.606**	.000
Lots of Friends	.251**	.003	.383**	.000
Bad Hygiene			-.219*	.012
Messy			-.131	.089
Funny			.360**	.000
Quiet			.150	.061

A one-tailed Pearson Product Moment Correlation was conducted to assess the consistency of sociometric ratings in the home and at work. Ratings were consistent in many categories summarized below. TABLE 5

TABLE 5

<u>Sociometric Category</u>	<i>Correlation between Resident Ratings at Home & Work (n=79)</i>	
	<u>r values</u>	<u>p values</u>
Works Hard	.529	.000
Independent	.455	.000
Mean	.417	.000
Athlete	.414	.000
Shy	.380	.000
Gets in Trouble	.378	.000
Attractive	.377	.000
Helps Residents	.371	.000
Leaders	.362	.001
Fights	.348	.001
Bad Behavior	.343	.001
Helps Staff	.342	.001
Wins	.336	.001
Don't Like to Live/Work With	.327	.002
Like to Live/Work With	.321	.002
Keeps Secrets	.318	.002
Liked Least	.316	.002
Angry	.312	.003
Happy	.306	.003
Like to Date	.304	.003
Disruptive	.298	.004
Cooperates	.297	.004
Helps Out	.293	.004
Few Friends	.287	.005
Most Popular	.281	.006
Liked Most	.249	.013
Snob	.235	.019
Best Dressed	.227	.022
Nice	.219	.026
Teases Others	.218	.027
Unattractive	.202	.037
Lots of Friends	.145	.102
Teased	.138	.113
Smart	.087	.223
Loses	.083	.233
Good Behavior	.050	.331
Don't Work Hard	-.003	.489
Least Popular	-.013	.454
Not Around Others	-.022	.425

Sad	-.034	.384
Needs Help	-.078	.247

SOCIOMETRICS IN THE HOME

A one-way multivariate analysis of variance was conducted to determine the relationship between group status and rates of nominations for sociometric categories in the residents' homes. The significance value was adjusted to minimize type I error by dividing .05 by the number of MANOVAs run (.05/2, $p=.025$). Significant differences in nomination rates were found among status groups (Wilks's $\Lambda = .056$, $F(4, 110) = 1.890$, $p < .001$, $\eta^2 = .513$). One-way analyses of variance (ANOVAs) on dependent variables were conducted as follow-up tests to the MANOVA. The ANOVAs for 33 of the 38 sociometric categories were significant. TABLE 6

TABLE 6

<i>Sociometric Category</i>	<i>F (4, 110)</i>	<i>Significance Level</i>	<i>Effect Size</i>
Don't Like to Live With	21.485	$p < .001$	$\eta^2 = .439$
Mean	20.348	$p < .001$	$\eta^2 = .425$
Gets in Trouble	19.815	$p < .001$	$\eta^2 = .419$
Fights	18.594	$p < .001$	$\eta^2 = .403$
Bad Behavior	11.802	$p < .001$	$\eta^2 = .300$
Cooperates	11.540	$p < .001$	$\eta^2 = .296$
Nice	8.918	$p < .001$	$\eta^2 = .245$
Helps Out	8.801	$p < .001$	$\eta^2 = .242$
Unattractive	7.955	$p < .001$	$\eta^2 = .224$
Angry	7.814	$p < .001$	$\eta^2 = .221$
Leaders	7.767	$p < .001$	$\eta^2 = .220$
Disruptive	7.767	$p < .001$	$\eta^2 = .220$
Teases Others	7.444	$p < .001$	$\eta^2 = .213$
Snob	7.387	$p < .001$	$\eta^2 = .212$
Few Friends	7.310	$p < .001$	$\eta^2 = .210$
Most Popular	6.975	$p < .001$	$\eta^2 = .202$
Happy	6.553	$p < .001$	$\eta^2 = .192$
Attractive	6.468	$p < .001$	$\eta^2 = .190$
Independent	6.274	$p < .001$	$\eta^2 = .186$
Good Behavior	6.217	$p < .001$	$\eta^2 = .184$
Smart	6.127	$p < .001$	$\eta^2 = .182$

Athlete	5.770	p<.001	$\eta^2=.173$
Like to Date	5.481	p<.001	$\eta^2=.166$
Least Popular	5.263	p=.001	$\eta^2=.161$
Helps Staff	4.984	p=.001	$\eta^2=.153$
Helps Residents	4.660	p=.002	$\eta^2=.145$
Don't Work Hard	4.654	p=.002	$\eta^2=.145$
Works Hard	4.139	p=.004	$\eta^2=.131$
Best Dressed	3.724	p=.007	$\eta^2=.119$
Lots of Friends	3.114	p=.018	$\eta^2=.102$
Wins	2.885	p=.026	$\eta^2=.095$
Not Around Others	2.881	p=.029	$\eta^2=.093$
Keeps Secrets	2.609	p=.039	$\eta^2=.087$
Teased	1.658	p=.165	$\eta^2=.057$
Sad	1.530	p=.198	$\eta^2=.053$
Shy	1.159	p=.333	$\eta^2=.040$
Needs Help	1.004	p=.409	$\eta^2=.035$
Loses	0.712	p=.586	$\eta^2=.025$

Post hoc analyses for the ANOVAs were examined using Dunnett's C to identify which groups differ on the dependent behaviors. Not surprisingly, Popular and Average participants were nominated more frequently than Rejected peers for positive sociometric categories. Popular participants were nominated significantly more often than rejected peers for best dressed, harder workers, and attractive categories. Popular and Average participants were nominated significantly more often than Rejected peers for helping residents and staff, having good behavior, cooperative, leaders, nice, happy, smart, best friends, most popular, and likes to live with categories.

Conversely, Rejected peers were more likely to be nominated for negative categories. Rejected peers were more frequently nominated for fights, gets in trouble, mean, and bad behavior categories than Popular, Average, and Neglected Peers. Rejected peers were more likely than Popular peers to be nominated for having few friends, least popular, and disruptive.

CHARTS 7-12

CHART 7

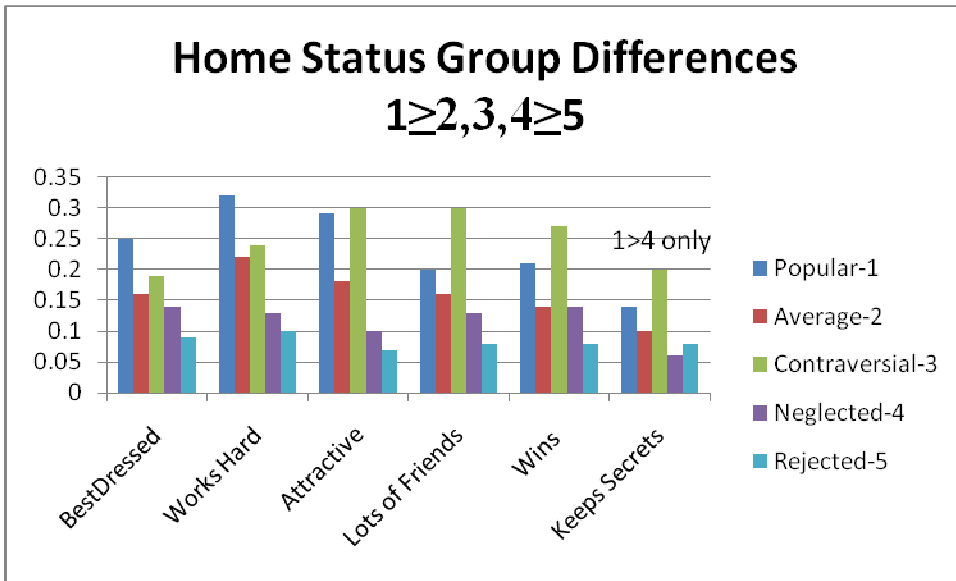


CHART 8

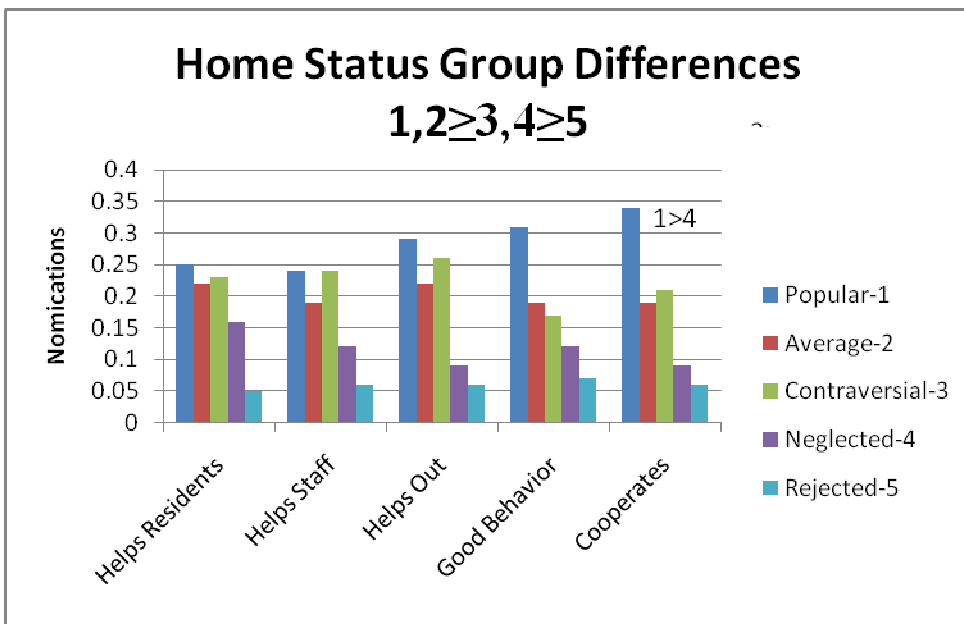


CHART 9

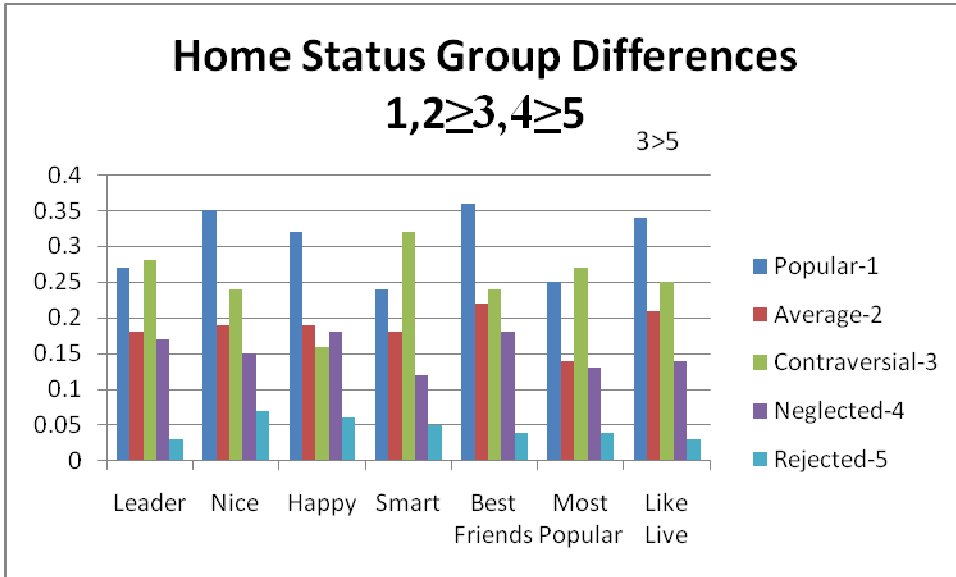


CHART 10

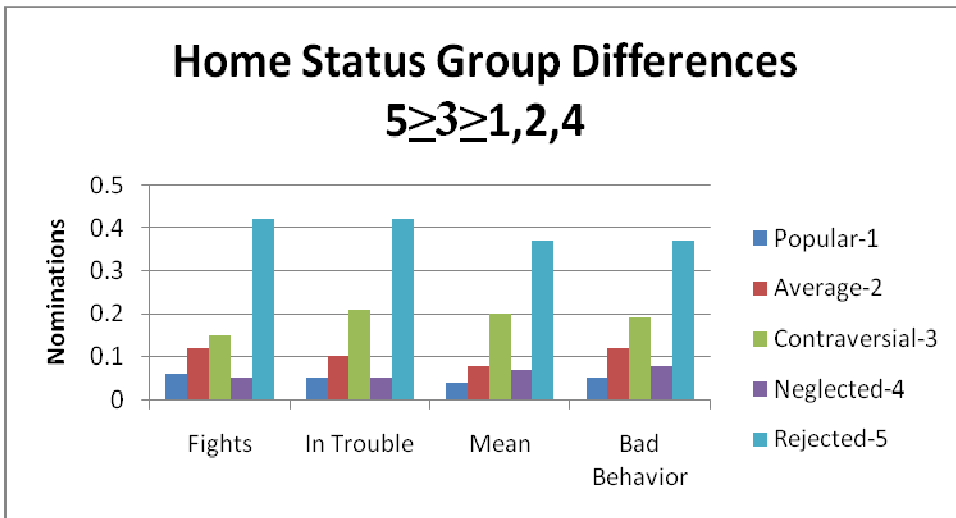


CHART 11

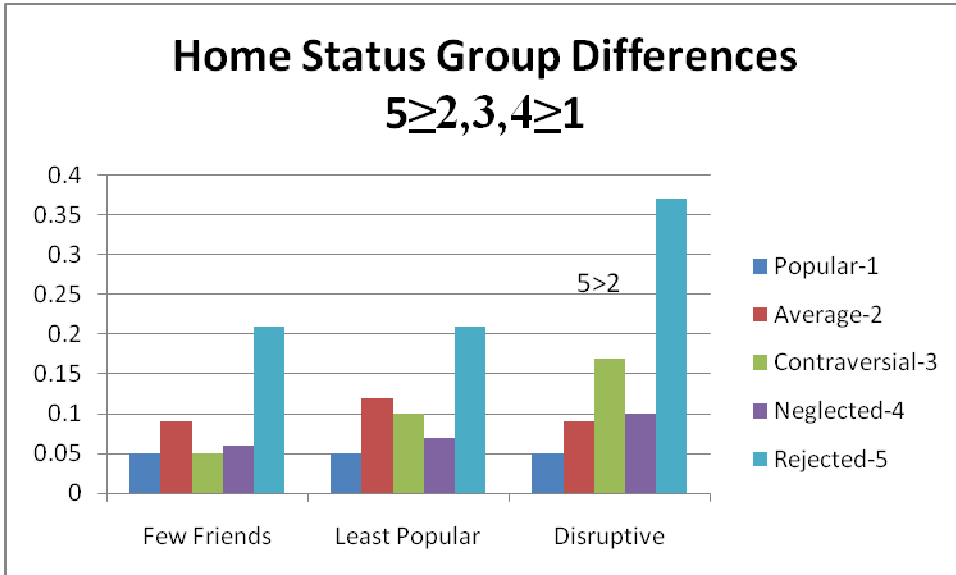
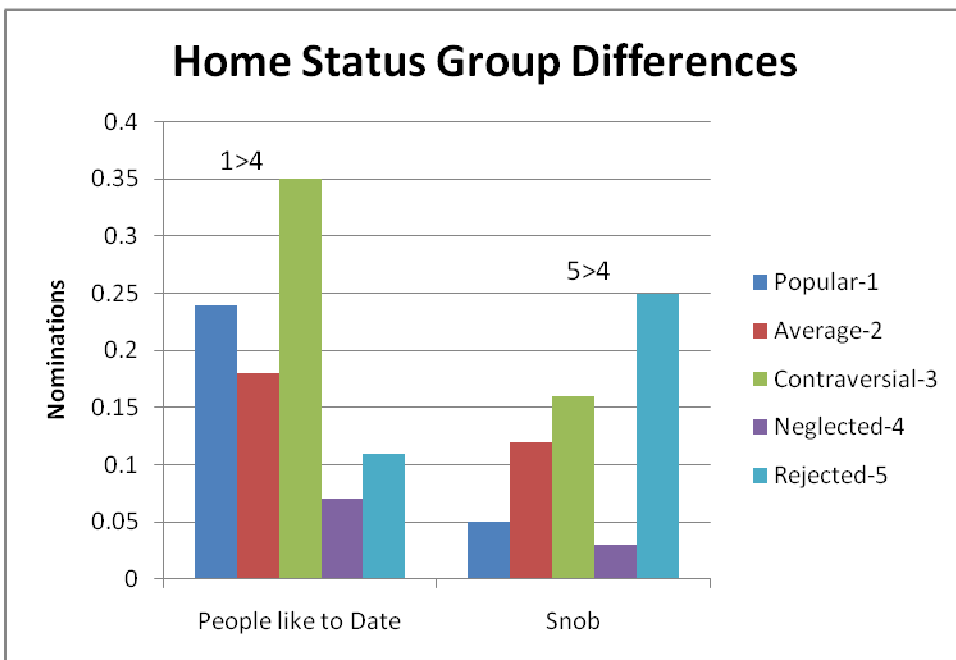


CHART 12



A one-way multivariate analysis of variance (MANOVA) was conducted to determine the relationship between gender and sociometric nominations in the home. Fifty men and 63 women were included in the analysis. No significant differences were detected, Wilks's $\Lambda = .691$, $F(1, 111) = .744$, $p = .848$.

SOCIOMETRICS AT WORK

A one-way multivariate analysis of variance was conducted to determine the relationship between group status and rates of nominations for sociometric categories at work. Significance value was adjusted to minimize Type I errors by dividing .05 by the number of MANOVAs run (.05/2, $p = .025$). Significant differences in nomination rates were found among different status groups (Wilks's $\Lambda = .036$, $F(4, 102) = 1.756$, $p < .001$, $\eta^2 = .564$).

One-way analyses of variances (ANOVAs) on dependent variables were conducted as follow-up tests to the MANOVA. The ANOVAs for 19 of the 44 sociometric categories were significant. TABLE 13

TABLE 13

<i>Sociometric Category</i>	<i>F (4, 102)</i>	<i>Significance Level</i>	<i>Effect Size</i>
Don't Like to Work With	30.590	$p < .001$	$\eta^2 = .545$
Mean	27.896	$p < .001$	$\eta^2 = .522$
Few Friends	17.765	$p < .001$	$\eta^2 = .411$
Least Popular	15.206	$p < .001$	$\eta^2 = .374$
Bad Behavior	13.622	$p < .001$	$\eta^2 = .348$
Gets in Trouble	12.555	$p < .001$	$\eta^2 = .330$
Fights	12.5	$p < .001$	$\eta^2 = .329$
Unattractive	7.297	$p < .001$	$\eta^2 = .222$
Don't Work Hard	6.246	$p < .001$	$\eta^2 = .197$
Disruptive	6.023	$p < .001$	$\eta^2 = .191$
Loses	4.956	$p = .001$	$\eta^2 = .163$
Angry	4.620	$p = .002$	$\eta^2 = .153$
Bad Hygiene	4.442	$p = .002$	$\eta^2 = .148$
Snob	4.365	$p = .003$	$\eta^2 = .146$

Nice	4.044	p=.004	$\eta^2=.137$
Like to Work With	3.875	p=.006	$\eta^2=.132$
Most Popular	3.356	p=.013	$\eta^2=.116$
Best Friends	2.951	p=.024	$\eta^2=.104$
Attractive	2.635	p=.038	$\eta^2=.094$
Teases	2.643	p=.038	$\eta^2=.094$
Happy	2.629	p=.039	$\eta^2=.093$
Funny	2.487	p=.048	$\eta^2=.089$
Helps Out	2.439	p=.052	$\eta^2=.087$
Leader	2.412	p=.054	$\eta^2=.086$
Good Behavior	2.242	p=.070	$\eta^2=.081$
Lots of Friends	2.108	p=.085	$\eta^2=.076$
Not Around Others	2.025	p=.097	$\eta^2=.074$
Gets Teased	1.986	p=.102	$\eta^2=.072$
Works Hard	1.991	p=.102	$\eta^2=.072$
Keeps Secrets	1.777	p=.139	$\eta^2=.065$
Shy	1.753	p=.144	$\eta^2=.064$
Cooperates	1.745	p=.146	$\eta^2=.064$
Quiet	1.684	p=.160	$\eta^2=.062$
Helps Staff	1.580	p=.185	$\eta^2=.058$
Sad	1.531	p=.199	$\eta^2=.057$
Independent	1.469	p=.217	$\eta^2=.054$
Best Dressed	1.435	p=.228	$\eta^2=.053$
Helps Residents	1.395	p=.241	$\eta^2=.052$
Like to Date	1.298	p=.276	$\eta^2=.048$
Needs Help	1.159	p=.334	$\eta^2=.043$
Messy	1.012	p=.405	$\eta^2=.038$
Athletic	0.679	p=.608	$\eta^2=.026$
Wins	0.678	p=.609	$\eta^2=.026$
Smart	0.625	p=.646	$\eta^2=.024$

Post hoc analyses for the ANOVAs were examined to identify which groups differ on the dependent behaviors. Generally, data indicate that individuals in the rejected sociometric status group were more often nominated for negative categories. Rejected participants were more likely to be nominated for fights, gets in trouble, least popular, mean, bad behavior, doesn't work hard, has few friends, and don't like to work with than participants in all other status categories.

Rejected peers were more likely than Popular, Average, and Neglected peers to be nominated for unattractive, snob, angry, and bad hygiene categories. Rejected peers were nominated as disruptive more often than Popular, Average, and Controversial peers and losing more than Average and Neglected peers. At work, Popular peers were nominated as nice more frequently than Neglected and Rejected peers. CHARTS 14-17

CHART 14

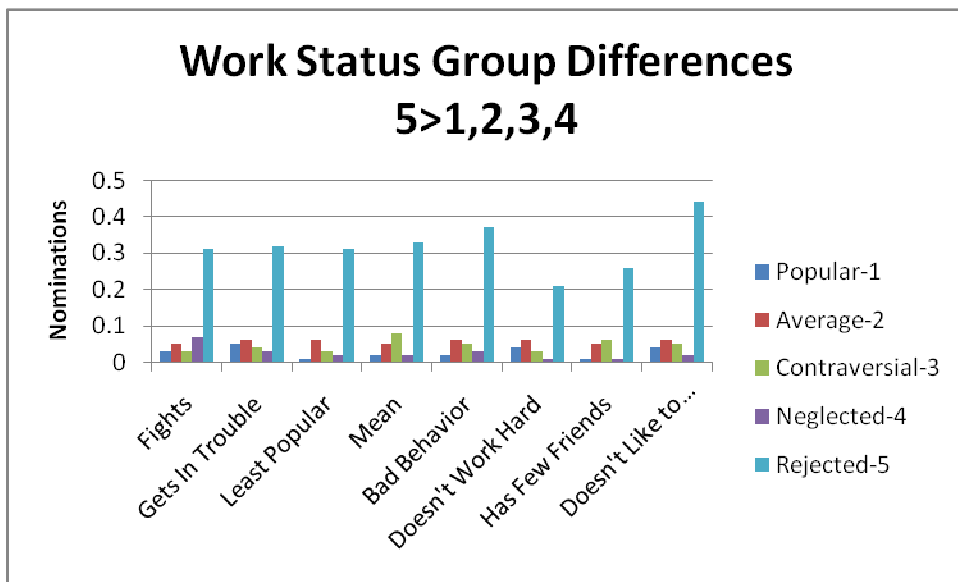


CHART 15

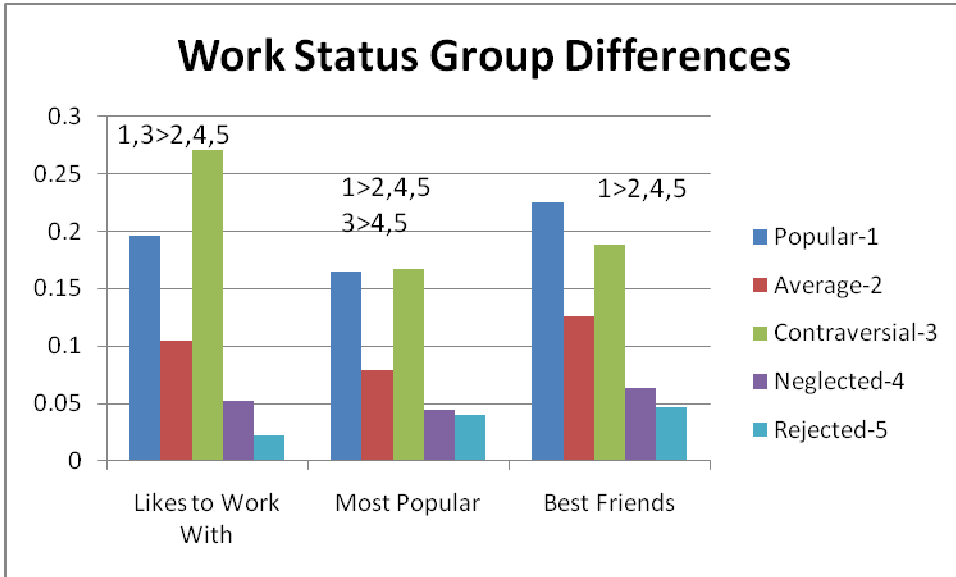


CHART 16

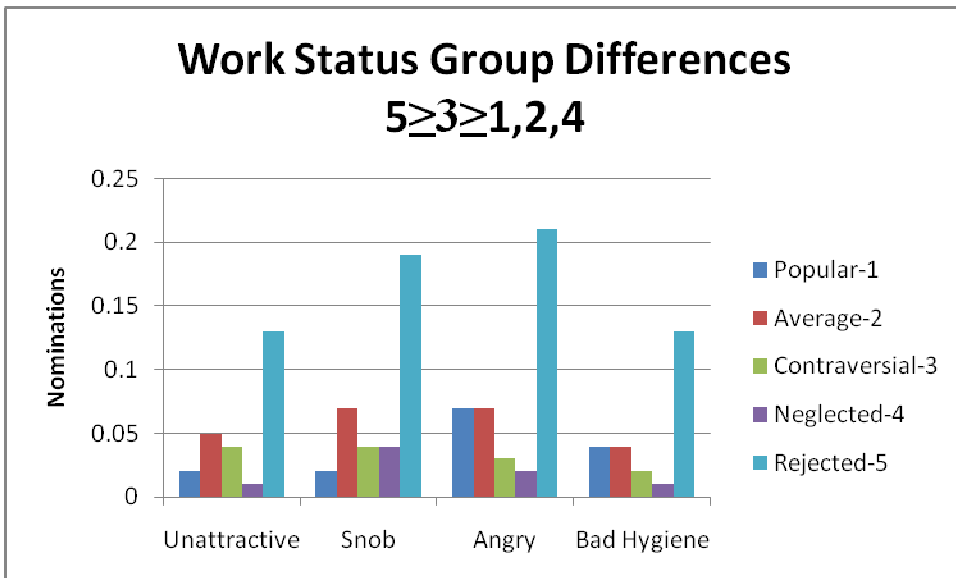
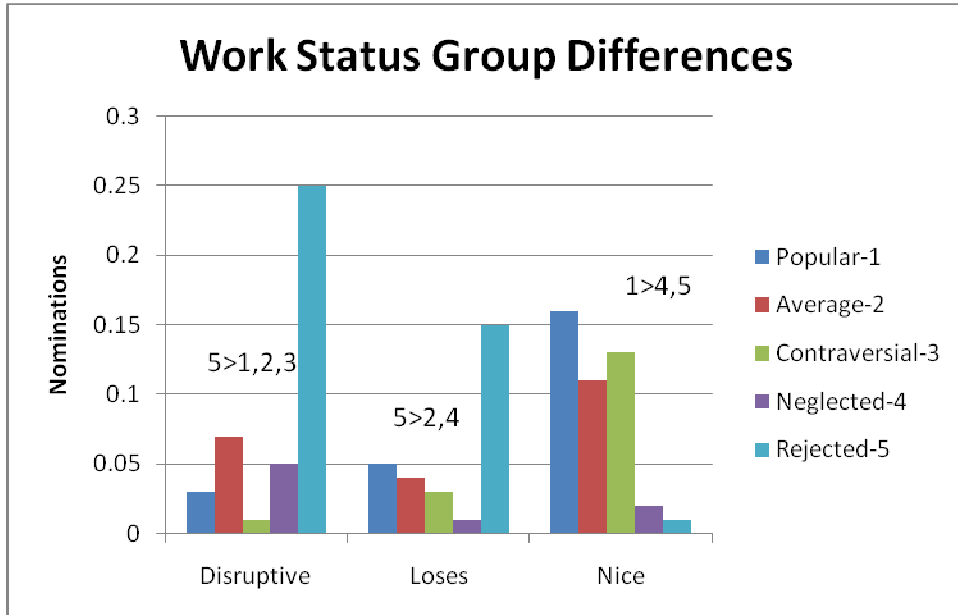


CHART 17



A one-way multivariate analysis of variance was conducted to determine the relationship between gender and sociometric nominations at work. Forty-four men and 56 women were included in the sample. No significant differences in rates of nomination were found for males and females (Wilks's $\Lambda = .470$, $F(1, 98) = 1.302$, $p = .176$, $\eta^2 = .530$).

Hypothesis 2

A stepwise linear regression was conducted for each setting to identify sociometric categories associated with social preference in both home and work settings. Different sociometric categories were found to be associated with peer acceptance in each setting. The rates of nomination for the following categories were most predictive of social preference in the participants' home: don't like to live with, like to live with, mean, hard working, and best friends. Nominations for nice, least popular, best friends, not like to work with, keeps secrets,

helps residents, willing to help others out, fights, teases, quiet, best dressed, independent, and helps staff were most predictive of social preference at work. TABLE 18 & 19

TABLE 18

SOCIAL PREFERENCE- HOME

<i>STEP</i>	<i>R</i>	<i>R²</i>	<i>R² Change</i>	<i>Significance</i>
1 Not Like to Live With	.737	.529	.529	.000
2 Not Like to Live With Like to Live With	.838	.703	.174	.000
3 Not Like to Live With Like to Live With Mean	.862	.743	.040	.000
4 Not Like to Live With Like to Live With Mean Hard worker	.879	.773	.031	.000
5 Not Like to Live With Like to Live With Mean Hard worker Best Friend	.885	.783	.009	.032
6 Not Like to Live With Like to Live With Mean Hard worker Best Friend Rumors	.889	.791	.008	.040
7 Not Like to Live With Like to Live With Mean Hard worker Best Friend Rumors Helps Staff	.894	.799	.008	.045

TABLE 19

SOCIAL PREFERENCE- WORK

<i>STEP</i>	<i>R</i>	<i>R²</i>	<i>R² Change</i>	<i>Significance</i>
1 Nice	.634	.402	.402	.000
2 Nice	.819	.671	.296	.000
3 Least Popular Nice	.856	.733	.063	.000
4 Least Popular Best Friend Nice	.881	.776	.043	.000

5	Least Popular Best Friend Not Like to Work With Nice	.892	.796	.020	.002
6	Least Popular Best Friend Not Like to Work With Keeps Secrets Nice	.898	.807	.011	.019
7	Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Nice	.908	.824	.170	.003
8	Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Willing to Help Nice	.916	.839	.160	.003
9	Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Willing to Help Fights Nice	.925	.856	.170	.001
10	Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Willing to Help Fights Teases Nice	.934	.872	.016	.001
11	Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Willing to Help Fights Teases Quiet Nice	.939	.881	.009	.008

12	Helps Residents Willing to Help Fights Teases Quiet Best Dressed Nice Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Willing to Help Fights Teases Quiet Best Dressed Independent	.943	.889	.007	.014
13	Nice Least Popular Best Friend Not Like to Work With Keeps Secrets Helps Residents Willing to Help Fights Teases Quiet Best Dressed Independent Helps Staff	.947	.896	.008	.010

Hypothesis 3

A one-tailed Pearson Product Moment Correlation was conducted to assess the consistency between staff and resident sociometric ratings at home and work. Many ratings were consistent as summarized below. TABLE 20

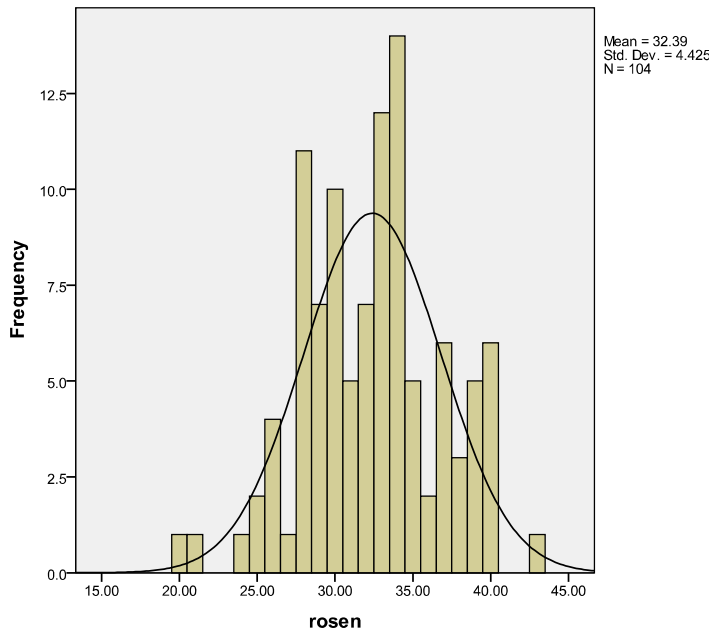
TABLE 20

<u>Sociometric Category</u>	<i>Correlation between Resident and Staff Ratings (n=79)</i>			
	HOME		WORK	
	<u>r values</u>	<u>p values</u>	<u>r values</u>	<u>p values</u>
Fights	.556	.000	.405	.000
Liked Least	.551	.000	.450	.000

Gets in trouble	.520	.000	.457	.000
Athletic	.479	.000	.595	.000
Bad Behavior	.429	.000	.346	.001
Don't Work Hard	.400	.000	.387	.000
Wins	.363	.001	.259	.011
Disruptive	.357	.001	.204	.036
Lots of Friends	.347	.001	.263	.010
Works Hard	.338	.001	.314	.002
Teases	.324	.002	.123	.140
Attractive	.320	.002	.207	.033
Liked Most	.311	.003	.181	.055
Helps Staff	.308	.003	.453	.000
Shy	.307	.003	.403	.000
Mean	.304	.003	.265	.009
Not Around Others	.301	.003	.207	.034
Least Popular	.291	.005	.314	.002
Gets Teased	.243	.015	.367	.000
Angry	.237	.018	.448	.000
Most Popular	.219	.026	.365	.000
Snob	.199	.039	.234	.019
Like to Date	.196	.041	.232	.020
Independent	.188	.049	.217	.027
Cooperates	.180	.056	.181	.056
Helps Out	.179	.057	.291	.005
Leaders	.168	.069	.295	.004
Sad	.162	.077	.070	.270
Unattractive	.150	.094	.008	.473
Smart	.113	.161	.057	.309
Needs Help	.112	.162	-.002	.492
Few Friends	.108	.171	.361	.001
Good Behavior	.099	.192	.171	.066
Helps Residents	.097	.197	.478	.000
Best Dressed	.094	.205	.253	.012
Loses	.0778	.246	.093	.207
Happy	.065	.284	.327	.002
Nice	-.036	.357	.299	.004
Keeps Secrets	-.043	.353	.152	.091
Like to Work With			.074	.259
Don't Like to Work With			.086	.225

Rosenberg Self Esteem Scale (RSES; Rosenberg, 1964) – Individual’s scores were calculated according to procedures outlined in the manual. The average score for the group was 32.29 with a Standard Deviation of 4.43. PLOT 21

PLOT 21



Hypothesis 1

A series of one-way analyses of variance (ANOVAs) were conducted to determine the relationship between sociometric status and self-esteem. The Bonferroni correction was used to minimize Type I error ($p=.025$). No significant differences were detected between home sociometric status groups, $F(4, 98) = .710, p=.587$ or work sociometric status groups, $F(4, 88) = .885, p=.476$.

An independent samples t-test was conducted to examine the effect of gender on self-esteem. No significant difference in self-esteem were detected, $t(101) = 1.157, p=.250$.

Assessment of the Importance of Social Relationships- Participants' responses to individual items were summed to get an overall rating of the importance they attribute to their social relationships. Average overall importance was between Some and A Lot of Importance (mean=3.58, SD= .35, range= 2.22 to 4.00). Staff ratings were similar, between Some and A Lot of Importance (mean= 3.41, SD= .44, range= 2.20 to 4.00).

Residents identified familial relationships as most important (mean=3.86, A lot of importance) followed by relationship with friends (mean= 3.66, A lot of importance), their boss (mean= 3.63, A lot of importance), direct support staff (mean- 3.60, A lot of Importance), and their significant other (mean= 3.19, Some Importance). Staff also indicated that the residents familial relationships were most important (mean= 3.87, A lot of importance) followed by their relationships with direct support staff (mean= 3.55, A lot of importance), their boss (mean=3.52, A lot of importance), their significant others (mean=3.08, Some importance), and their friends (mean=3.05, Some Importance). TABLE 22

TABLE 22

Social Importance

<i>Residents</i>	<i>Direct Support Staff</i>
Family (3.86)	Family (3.87)
Friends (3.66)	Direct Support Staff (3.55)
Boss at Work (3.63)	Boss at Work (3.52)
Direct Support Staff (3.60)	Significant Others (3.08)
Significant Others (3.19)	Friends (3.05)

*Group Means reported in ()

In addition to the importance of their social relationships, participants rated how important it is that others like them. Residents and staff indicated that residents ascribe Some importance to their being liked by others (means of 3.4 and 3.14 respectively). Finally,

participants were asked whether they had fewer, more, or the same number of friends as others residing at the facility. Overall, Residents and staff estimated that the residents had about the same number of friends as other residents at the facility (means of 2.28 and 1.76 respectively.) Two-tailed Pearson's Product Moment Correlations were calculated to further assess the consistency between staff and residents' ratings. Residents' and staff's ratings of overall social importance ($r=.296$, $p=.007$) were positively correlated as well as their ratings of family ($r=.357$, $p=.001$) and significant other ($r=.577$, $p=.000$). Other staff and resident ratings including the importance of friends, direct support staff, boss, that others like you, as well as how many friends that the residents have were not significantly correlated. TABLE 23

TABLE 23

Correlation between Resident and Staff Ratings of Social Importance

	Resident/Staff Correlation (p value)	
Overall	.296**	(.007)
Family	.357**	(.001)
Friends	.046	(.079)
Significant Others	.577**	(.000)
Direct Support Staff	.231*	(.037)
Boss	-.002	(.988)
Like You	.133	(.232)
Number of Friends	.170	(.126)

Two one-way Analyses of Variance with a Boneferroni alpha correction ($p=.025$) to determine whether resident and staff ratings of social importance differed by sociometric status groups. No significant differences in resident or staff ratings were found among status groups in the home, Resident $F(4, 87)=1.398$, $p=.241$ and Staff $F(4, 68)=.371$, $p=.829$, or work settings, Resident $F(4, 87)=.387$, $p=.817$ and Staff $F(4, 68)=.621$, $p=.649$.

Two-tailed Pearson's Product Moment Correlations were calculated for the items on the social importance scale and the Rosenberg composite scores. Higher scores on the Rosenberg were positively correlated with reporting more friends than other residents ($r=.324$, $p=.001$) and ascribing a lot of importance to social relationships ($r=.233$, $p=.017$). Ascribing a lot of importance to others liking you was positively correlated with rating social relationships as important, specifically, all social relationships ($r=.356$, $p=.001$), significant others ($.301$, $.001$), and one's boss ($r=.333$, $p=.001$). Ratings of the importance of family and direct support staff were also modestly correlated with scores on the Rosenberg ($r=.218$, $p=.026$). CHART 24

Rosenberg and Social Importance (Resident Report)

	Rosenberg	Social Importance	Family	Friends	Sig Other	Support Staff	Boss	Like You	# Friends
Rosenberg	1	.233* (.017)		.324** (.001)					.260** .008
Social Importance	.233* (.017)	1	--	--	--	--	--	.356** (.001)	
Family		--	1			.218* (.026)			
Friends	.324** (.001)	--		1					
Sig Other		--			1			.301** (.001)	
Support Staff		--	.218* (.026)			1			
Boss		--					1	.333** (.001)	
Like You		.365** (.000)			.301** (.001)		.333** (.001)	1	
# Friends	.260** (.008)								1

*Significant Correlations (p values)

Observed Social Behavior and Analog

The frequency of observed social behavior was tallied for home and work settings. On average, participants were observed engaging in social interactions during 35% of events

sampled in their home and 37% of events sampled at work. Seventy-seven percent (n=62 of 81) of participants were observed interacting during structured observations in their home and 87% (n=79 of 91) of participants were observed engaging in social behavior at work. More residents were observed interacting with other residents than staff in the home (44 and 11 respectively) and at work (125 and 42 respectively).

Pearson product moment correlations were calculated to assess the relationship between the frequency and appropriateness of observed social behavior across home and work settings. Both frequency and appropriateness of social behavior were correlated between home ($r = .214$, $p = .029$, $n = 79$) and work ($r = .288$, $p = .017$, $n = 54$) settings.

With respect to gender, more females than males were observed interacting with others in their home; eighty-two percent of female participants were observed interacting with someone compared to 69% of male participants. At work, however, those observed engaging with others was similar; 88% of females and 85% of males were observed interacting with others. T-tests were conducted with gender as the grouping variable and appropriateness and frequency of social interactions as test variables. No significant differences in the frequency (home, $t(60) = -2.039$, $p = .053$, $n = 62$; work, $t(77) = .631$, $p = .096$, $n = 79$) or appropriateness of the interactions (home, $t(60) = -.504$, $p = .083$, $n = 62$; work, $t(77) = .258$, $p = .524$, $n = 79$), were detected in either setting.

More females were observed engaging in at least one interaction during the events sampled, specifically 60% of female participants in the home and 57% at work. Similarly, more females were observed interacting with participants than males. One hundred sixteen of the observed interactions were with a female in the home while 48 were with a male. A similar

pattern was seen in the observations at work. One hundred eight observed interactions occurred with a female and 84 with a male in the work place

A one-way univariate analysis of variance was conducted to examine the effect of social status on the frequency of interaction. The alpha rate was adjusted using the Bonferroni method ($p = .0125$) No significant differences were found between status groups and the number of observed interactions in the home, $F(4, 76) = .647, p = .631, n = 81$, or at work, $F(4, 86) = .516, p = .724, n = 91$. Pearson product moment correlations were calculated to further assess the relationship between the frequency of social interaction and social acceptance. No significant relationship was detected for social preference, $r = .089, p = .399, n = 91$ or social impact, $r = -.016, p = .883, n = 91$ at work or at home (social preference, $r = -.062, p = .585, n = 81$; social impact, $r = .222, p = .047, n = 81$).

Ratings of appropriateness (volume, position, eye contact, etc.) were averaged across interactions to get an overall rating of appropriateness for individuals in each setting. Pearson product moment correlations were conducted. No relationships were found between the appropriateness of the participants social behavior and social preference in the home, $r = .036, p = .779, n = 62$, or at work, $r = -.208, p = .066, n = 79$. There was also no relationship between participants' social appropriateness and social impact in the home, $r = -.071, p = .586, n = 62$; but there was a significant relationship between social appropriateness and social impact at work, $r = .322, p = .004, n = 79$.

Hypothesis 4a

A one-way univariate analysis of variance (ANOVA) was calculated to assess the relationship between social status and the frequency and appropriateness of social interactions

across settings. The Bonferroni method was used to minimize type I errors ($p = .0125$). No significant differences between sociometric groups were detected for the frequency, $F(4, 57) = 1.746$, $p = .153$, $n = 62$, or appropriateness, $F(4, 57) = .121$, $p = .974$, $n = 62$, of social interactions in the home. A Pearson product moment correlation was also conducted to assess the relationship between the frequency and appropriateness of social interactions and social preference and impact. Similarly, no significant relationships were detected for interactions in the home.

Hypothesis 4b

A two-tailed Pearson Product Moment Correlation was conducted to assess the relationship between the importance ascribed to social relationships and the frequency and the appropriateness of social behavior. There was not a significant relationship between ratings of social importance and the frequency or appropriateness of social behavior. TABLE 25

TABLE 25

<i>Social Importance</i>	<i>Frequency of Social Behavior (n=74)</i>	<i>Appropriateness of Social Behavior (n=71)</i>
Overall	$r = .201$, $p = .085$	$r = -.131$, $p = .275$
Friends	$r = .113$, $p = .339$	$r = -.137$, $p = .255$
DSP	$r = .154$, $p = .159$	$r = -.146$, $p = .244$
Boss	$r = .105$, $p = .375$	$r = -.036$, $p = .763$
Significant Other	$r = .057$, $p = .629$	$r = .019$, $p = .873$

Six participants were not observed engaging in social behavior during the events sampled. Five of the six participants in the confederate interaction were male. These individuals participated in a staged interaction with the researcher and the appropriateness of their behavior was observed and coded according to a paradigm similar to the one used for the event sampling data. Likert ratings of appropriateness were collapsed across items to yield an overall

appropriateness score for the interaction. Participants' appropriateness scores were averaged for the group (mean=5.26, standard deviation=1.21).

DISCUSSION

As predicted, preferred social behaviors differed by context; hence, different social behaviors were associated with peer acceptance in work and home settings. Specifically, peer acceptance was associated with rates of nominations for Like to live with, Not like to live with, and Mean in the home and Nice, Least Popular, and Best Friend at work. Thus, the data indicate that persons with IDs may change their behavior or expectations for others behavior based on the context. It may therefore be inferred that they have some awareness of social roles and evaluate other's behavior in context. These data, however, are not consistent with some previous research involving children. For example, sociometric status, as determined by a roster-and-rating method, was found to be consistent across settings (school and activity group-dance, scouts, sports team, etc.) for a group of 20 typical fourth grade students, $r=.68$, $p<.002$ (Durrant & Henggeler, 2001). This may be attributable, in part, to differences in the socialization of adults and children. While participants appeared to prefer different social behaviors across contexts, their behavior was observed to be relatively consistent, with respect to frequency and appropriateness, at home and work.

It is not suspected, however, that the current findings are the result of invalid or unreliable data due to the problems associated with the respondents having IDs. In fact, the sociometric data provided by respondents with IDs was generally consistent with staff ratings. This is likely due to the amount of time the staff spend with the residents and their opportunities to observe the residents social behavior in a variety of contexts.

Sociometric status groups were similar with respect to rates of nomination for negative categories across setting. Popular residents were generally received few nominations for negative categories such as: Fights, Mean, and Bad Behavior, while rejected residents followed the opposite pattern. Average residents generally received a similar proportion of nominations for negative categories as neglected and controversial residents.

With respect to nominations for positive categories, there were differences across settings. At work, there were few differences in rates of nominations for positive categories across sociometric status groups. However, in the home, rates of positive nominations (e.g. Happy, Willing to Help Out, and Like to Live With) were largely predictable, given previous research, with popular residents receiving high rates of positive nominations and rejected residents receiving relatively few nominations. Controversial residents also received high rates of positive nominations; however, there were relatively few residents in this category in both settings. The low number may be due to the residents having a more definitively positive or negative view of the other residents given the amount of time that the residents have spent with each other (in some cases many years). Average residents typically received more nominations than neglected peers.

Interestingly, when residents were observed in their home and at work there were no significant differences in the frequency or appropriateness of their social interaction based on their social status. These findings did not support the hypothesis that popular and average residents would engage in more frequent and appropriate social interaction and is not consistent with previous research findings involving adolescents indicating a relationship between the number of friendships and prosocial skills (Gest et al., 2001).

The findings of the current study may be affected in part by the small number of events sampled per resident or the relative infrequency of significant inappropriate social behavior displayed by residents given the admission standards of the facility. However, these findings are consistent with research by Burleson and Samter (1996) who found that typical adults also preferred to interact with those who have socio-communicative skills similar to their own and that poorer communication skills did not negatively impact satisfaction with their friendships. If in fact these results are a valid and reliable summary of the residents' behavior, this is a very interesting finding. It would imply that social skills and opportunities for interaction are not the key to an individual establishing and maintaining a social network. This may explain the inconsistent success of social skills training interventions. Or is it that individuals with IDs have their own standard for what behaviors are appropriate or expected that is not consistent with neurotypical standards and therefore not likely the focus of interventions.

Many neurotypical individuals may recall moments when they failed to recognize social cues or handled a situation ineffectively. While these moments are generally awkward and uncomfortable, occasional social missteps do not typically preclude individuals from developing or maintaining relationships. For more than 50 years, however, much of the research on IDs, from a treatment perspective, has focused on social skills training, teaching social behaviors deemed appropriate (by neurotypical standards) in an indirect effort to improve the relationships and quality of life of individuals with IDs with only moderate success. Research continues to show, however, that persons with IDs do not typically develop egalitarian friendships with neurotypical peers and that while other behaviors such as aberrant behavior and communication deficits ameliorate for some individuals with IDs, social skills deficits, and their consequences,

persist into adulthood.

The current study does provide clinicians some insight into the social world of persons with IDs, their social preferences and expectations. Understanding the social culture of these groups of individuals may be as essential as understanding culture is to addressing issues of acculturation.

Limitations

Limitations of the current study include factors related to the sample. Participants were recruited from a single, private residential facility. It is unclear whether the social behavior of the participants is consistent with the social behavior of persons with IDs living and working in other settings, including the community, and whether the results are generalizable. The current results provide information about the social networks and behavior of individuals residing in that facility as well as a method for understanding the social culture of other environments where persons with IDs interact. These methods, however, in particular sociometric interviews and behavioral observations, require an incredible amount of time and staff resources. However, the data do indicate that staff responses are relatively consistent with those of the residents, and may be used to determine social status.

Behavioral sampling procedures are similarly labor intensive and it is unclear as to whether the number of events sampled (5 per setting) was sufficient to accurately characterize the participants' behavior. In addition, it is unclear as to whether being observed affected participants' behavior despite the best efforts of the experimenters to avoid detection while observing participants. Participants' behavior may also have been affected by who (residents or

staff) was present at the time of the observation. Times were varied to prevent any systematic effects, and observations were not conducted when several residents or staff were absent from their work group or home, however, the absence of a single disruptive resident, for example, may affect the social behavior of their coworkers or housemates.

At times, respecting residents' privacy in their homes, may have affected the accuracy of the data. For example, if a participant was in their room with the door closed, the data point was coded as "no interaction" despite the possibility that they may have been interacting with their roommate or on the telephone. Similarly, in this situation, the activity was also coded as none. However, the data would not have been more accurate if the residents had been observed at times when they were outside of their room as the interaction may not be optional as in the case of mealtimes when they may have to assist another resident with preparation.

In addition, individuals' psychological diagnostic information was not included in the analyses because much of the available information was based on results of outdated assessments and criteria from outdated versions of the DSM. Therefore, it was believed to be generally invalid and unreliable.

The use of self-report measures with persons with IDs may also be problematic. While respondents' data on the Rosenberg were largely normally distributed, they were not related to other dependent measures as predicted. It is unclear during many administrations whether the individuals were responding accurately especially to negatively worded items and independent of the influence of social desirability. On other measures, the sociometric interview and the social importance measure, their responses were generally correlated with staff responses.

Future Research

More research on the relationships among persons with IDs is needed. It is important to understand these relationships as they are an important source of social involvement and support for persons with IDs. Further research would inform clinical practice by defining behaviors considered desirable and associated with peer acceptance among persons with IDs. It should not be assumed that all work groups or group homes have similar social networks or behavior. In addition, Research on socio-cognitive processes or deficits exhibited by persons with IDs, specifically, will also aid clinicians in treatment planning. Additional research examining specific contextual factors related to social behavior may inform program design to improve quality of life through the development of relationships and opportunities for social environment.

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APPENDICES

Assessment of the Importance of Social Relationships – Resident Form

Participant-
Interviewer-

4-point likert- inverted cone will be used for visual assistance

1	2	3	4
NOT AT ALL	A Little	Some	A LOT

How important is having friends?

1 2 3 4

How important is it to get along with or have a relationship with your bosses at work?

1 2 3 4

How important is it to have a boyfriend/girlfriend?

1 2 3 4

How important is it for people to like you?

1 2 3 4

How important is it for you to have a relationship with your family?

1 2 3 4

How important is it for you to have a relationship with your DSP's?

1 2 3 4

Do you have more, less, or about the same number of friends as other people at The Baddour Center?

LESS SAME MORE

Appendix B

Assessment of the Importance of Social Relationships – Staff Form

Participant-
Interviewer-

Staff should complete the form based on their knowledge and observation of the above mentioned client.
The 4-point likert scale below should be used to answer the questions.

1	2	3	4
NOT AT ALL	A Little	Some	A LOT

How important is having friends to this resident?
1 2 3 4

How important is it for this resident to get along with or have a relationship with his/her bosses at work?
1 2 3 4

How important is it to this resident to have a boyfriend/girlfriend?
1 2 3 4

How important is it to this resident for people to like him/her?
1 2 3 4

How important is it for this resident to have a relationship with his/her family?
1 2 3 4

How important is it to this resident to have a relationship with his/her DSP's?
1 2 3 4

Does this resident have more, less, or about the same number of friends as other people at The Baddour Center?
LESS SAME MORE

Behavioral Analog

Participant-
Confederate-

Rater-

Script- Confederate should approach individual during otherwise unoccupied time and initiate social contact. The confederate should walk up to the participant, attain their attention (e.g. verbally or physically), and introduce themselves if appropriate. They should then provide an initial question appropriate to the situation (e.g. How are you today? Or What are you up to?, etc.) The confederate should then wait for the participant to respond. The confederate should interact with the participant between 1 and 3 minutes. The confederate may discontinue the interaction after 30 seconds of silence (allow for processing time). As long as the participant continues the interaction the confederate should continue to converse with the participant for the entire 3 minutes. After the three minutes (or after 30 seconds of silence), the confederate should politely excuse themselves with an appropriate final gesture. This scenario will be role-played with confederate prior to their interacting with participants. In addition, raters (2) will observe role-played interactions and practice scoring prior to their scoring participant-confederate interactions. Raters will be deemed reliable if their ratings are within 7 points of the other rater.

Appropriateness of Response to Social Initiation by Confederate

1	2	3	4	5	6	7
Completely Inappropriate			Completely Appropriate			
Or Element Absent from Interaction			Element Delivered- No Abnormalities Detected			

Appropriateness of Posture/Position Relative to other Individual

1	2	3	4	5	6	7
Completely Inappropriate			Completely Appropriate			
Or Element Absent from Interaction			Element Delivered- No Abnormalities Detected			

Appropriateness of Eye Contact

1	2	3	4	5	6	7
Completely Inappropriate			Completely Appropriate			
Or Element Absent from Interaction			Element Delivered- No Abnormalities Detected			

Appropriateness of Voice Volume/Rate/Rhythm

1	2	3	4	5	6	7
Completely Inappropriate			Completely Appropriate			
Or Element Absent from Interaction			Element Delivered- No Abnormalities Detected			

Appropriateness of Topics

1	2	3	4	5	6	7
Completely Inappropriate			Completely Appropriate			
Or Element Absent from Interaction			Element Delivered- No Abnormalities Detected			

Appropriateness of Affect throughout Interaction

1	2	3	4	5	6	7
Completely Inappropriate			Completely Appropriate			
Or Element Absent from Interaction			Element Delivered- No Abnormalities Detected			

Overall Appropriateness of Interaction
1 2 3 4 5 6 7
Completely Inappropriate Completely Appropriate
Or Element Absent from Interaction Element Delivered- No Abnormalities Detected

Comments-

Debriefing Script for Interactions with Confederates

(Participant), I really enjoyed talking to you just now. (*Point out observers*) They were watching our conversation as a part of the research study we are doing to help us learn more about friendship. (*Remind participant about the interview portion of the research if s/he seems confused*) We hope that we can learn more about the friendships between residents here at Baddour. Do you have any questions for me?

Appendix D

Event recording

Participant-

Residence-
Work Group-

Event 1- Residence Workshop
Interaction Yes No
 IF YES...
Interacting with Staff Resident Other
Interaction Positive Negative Neutral
Appropriate Posture/Position Relative to other Individual Yes No
Eye Contact Appropriate Yes No
Voice Volume/Rate/Rhythm Yes No Can't Discern
Appropriate Topic Yes No Can't Discern
Appropriate Affect Yes No Can't Discern
Activity Present Yes No

Event 2- Residence Workshop
Interaction Yes No
 IF YES...
Interacting with Staff Resident Other
Interaction Positive Negative Neutral
Appropriate Posture/Position Relative to other Individual Yes No
Eye Contact Appropriate Yes No
Voice Volume/Rate/Rhythm Yes No Can't Discern
Appropriate Topic Yes No Can't Discern
Appropriate Affect Yes No Can't Discern
Activity Present Yes No

Event 3- Residence Workshop
Interaction Yes No
 IF YES...
Interacting with Staff Resident Other
Interaction Positive Negative Neutral
Appropriate Posture/Position Relative to other Individual Yes No
Eye Contact Appropriate Yes No
Voice Volume/Rate/Rhythm Yes No Can't Discern
Appropriate Topic Yes No Can't Discern
Appropriate Affect Yes No Can't Discern
Activity Present Yes No

Event 4- Residence Workshop
Interaction Yes No
 IF YES...
Interacting with Staff Resident Other
Interaction Positive Negative Neutral
Appropriate Posture/Position Relative to other Individual Yes No
Eye Contact Appropriate Yes No
Voice Volume/Rate/Rhythm Yes No Can't Discern
Appropriate Topic Yes No Can't Discern
Appropriate Affect Yes No Can't Discern

Activity Present	Yes	No		
<u>Event 5-</u>	Residence		Workshop	
Interaction	Yes	No		
IF YES...				
Interacting with Interaction	Staff Positive		Resident Negative	Other Neutral
Appropriate Posture/Position Relative to other Individual			Yes	No
Eye Contact Appropriate			Yes	No
Voice Volume/Rate/Rhythm	Yes		No	Can't Discern
Appropriate Topic	Yes	No	Can't Discern	
Appropriate Affect	Yes	No	Can't Discern	
Activity Present	Yes	No		
<u>Event 6-</u>	Residence		Workshop	
Interaction	Yes	No		
IF YES...				
Interacting with Interaction	Staff Positive		Resident Negative	Other Neutral
Appropriate Posture/Position Relative to other Individual			Yes	No
Eye Contact Appropriate			Yes	No
Voice Volume/Rate/Rhythm	Yes		No	Can't Discern
Appropriate Topic	Yes	No	Can't Discern	
Appropriate Affect	Yes	No	Can't Discern	
Activity Present	Yes	No		
<u>Event 7-</u>	Residence		Workshop	
Interaction	Yes	No		
IF YES...				
Interacting with Interaction	Staff Positive		Resident Negative	Other Neutral
Appropriate Posture/Position Relative to other Individual			Yes	No
Eye Contact Appropriate			Yes	No
Voice Volume/Rate/Rhythm	Yes		No	Can't Discern
Appropriate Topic	Yes	No	Can't Discern	
Appropriate Affect	Yes	No	Can't Discern	
Activity Present	Yes	No		
<u>Event 8-</u>	Residence		Workshop	
Interaction	Yes	No		
IF YES...				
Interacting with Interaction	Staff Positive		Resident Negative	Other Neutral
Appropriate Posture/Position Relative to other Individual			Yes	No
Eye Contact Appropriate			Yes	No
Voice Volume/Rate/Rhythm	Yes		No	Can't Discern
Appropriate Topic	Yes	No	Can't Discern	
Appropriate Affect	Yes	No	Can't Discern	
Activity Present	Yes	No		
<u>Event 9-</u>	Residence		Workshop	
Interaction	Yes	No		

IF YES...

Interacting with Interaction	Staff Positive	Resident Negative	Other Neutral		
Appropriate Posture/Position Relative to other Individual				Yes	No
Eye Contact Appropriate			Yes	No	
Voice Volume/Rate/Rhythm	Yes	No	Can't Discern		
Appropriate Topic	Yes	No	Can't Discern		
Appropriate Affect	Yes	No	Can't Discern		
Activity Present	Yes	No			

Event 10-

	Residence		Workshop
Interaction	Yes	No	

IF YES...

Interacting with Interaction	Staff Positive	Resident Negative	Other Neutral		
Appropriate Posture/Position Relative to other Individual				Yes	No
Eye Contact Appropriate			Yes	No	
Voice Volume/Rate/Rhythm	Yes	No	Can't Discern		
Appropriate Topic	Yes	No	Can't Discern		
Appropriate Affect	Yes	No	Can't Discern		
Activity Present	Yes	No			

Sociometric Interview Work Form

**Interviewer-
Participant-**

**Work Group-
Date-**

Who is your favorite cartoon character?

Who are three people who you work with who get teased a lot?

Who is your favorite man on television?

Who are three people who you work with that fight the most?

Who are three people who you work with that you like the most?

Who are three people who you work with that are the most popular?

Who are three people who you work with that get in trouble the most?

Who are three people who you work with that are good leaders?

What is your favorite movie?

Who are three people at work that are the least popular?

Who are three people at work that are disruptive? _____

Who are three people at work that help other residents?

Who are three people at work that help staff? _____

Who are three people at work that ask for help or need a lot of help?

Who are three people at work that people like to date?

Who are three people at work the keep secrets? _____

What is your favorite color?

Who are three people at work who are nice to others?

Who are three people at work who mean to others?

Who are three people at work who are really smart? _____

Who are three people at work who are not very attractive/cute?

Who are three people that you like to work with? _____

Who are three people at work who usually win a lot?

Who is your favorite athlete?

Who are three people at work who are very shy? _____

Who are three people at work who are always willing to help someone out?

Who are three people at work that you like the least?

Who are three people at work that are the most athletic/best at sports?

Who is your favorite woman on television?

Who are your three best friends at work? _____

Who are three people at work that are the snobbiest?

Who are three people at work who lose a lot? _____

Who are three people at work who have really good behavior?

Who are three people at work who have really bad behavior?

Who are three people at work who are independent? _____

Who are three people at work who are cooperative? _____

Who are three people at work who are happy? _____

Who are three people at work who are sad? _____

Who are three people at work who are angry? _____

What is your favorite song?

Who are three people at work that are dressed the best?

Who are three people who you don't like to work with?

Who are three people at work that are the most attractive?

Who is your favorite singer?

Who are three people at work who are hard workers?

Who are three people at work who don't work hard? _____

Who are three people at work who tease others? _____

Who are three people who do not have many friends?

Who are three people who do not seem to like being with other people?

What is your favorite thing to do for fun?

Who is quiet? _____

Who is messy? _____

Who is funny? _____

Who has bad hygiene? _____

Sociometric Interview Residential Form

**Interviewer-
Participant-**

**Residence-
Date-**

Who is your favorite cartoon character?

Who are three people in your house that hit, kick, or punch others?

Who are three people who get teased a lot? _____

Who is your favorite man on television?

Who are three people in your house that fight the most?

Who are three people in your house that you like the most?

Who are three people in your house that push and shove others around?

Who are three people in your house that tell their friends they will stop liking them unless the friends do what they say? _____

Who are three people in your house that are the most popular?

Who are three people in your house that get in trouble the most?

Who are three people who are good leaders? _____

Who are three people you like to live with? _____

What is your favorite movie?

Who are three people in your house that are the least popular?

Who are three people in your house that are disruptive?

Who are three people in your house that help other residents?

Who are three people in your house that help staff?

Who are three people in your house that ask for help or need a lot of help?

Who are three people in your house that people like to date?

Who are three people in your house that keep secrets?

Who are three people in your house that say mean things to others to insult them or put them down?

Who is your favorite athlete?

Who are three people in your house who are cooperative?

Who are three people in your house who are happy?

Who are three people in your house who are sad?

Who are three people in your house who are angry?

Who are three people that you don't like to live with?

Who are three people in your house who are hard workers?

Who are three people in your house who don't work hard?

Who are three people in your house who tease others?

Who are three people who are very shy? _____

Who is your favorite singer?

Who are three people in your house that keep certain people from being in their group when it is time to do an activity? _____

Who are three people who are always willing to help someone out?

Who are three people in your house that you like the least?

Who are three people in your house that are the most athletic/best at sports?

Who is your favorite woman on television?

Who are three people in your house who are nice to others?

Who are three people in your house who are mean to others?

Who are three people in your house who are really smart?

Who are three people in your house who are not very attractive/cute?

Who are three people in your house who usually win a lot?

Who are three people in your house who lose a lot?

Who are three people in your house who have really good behavior?

Who are three people in your house who have really bad behavior?

Who are three people in your house who are independent?

Who are three people in your house that ignore others or stop talking to them?

Who are your three best friends? _____

Who are three people in your house that are the snobbiest?

What is your favorite color?

Who are three people in your house who are nice to others?

Who are three people in your house who are mean to others?

Who are three people in your house who are really smart?

What is your favorite song?

Who are three people in your house who are not very attractive/cute?

Who are three people in your house who usually win a lot?

Who are three people in your house who lose a lot?

Who are three people in your house who have really good behavior?

Who are three people in your house who have really bad behavior?

Who are three people in your house who are independent?

Who are three people in your house that call others mean names?

Who are three people in your house that are dressed the best?

Who are three people in your house that try to make another person not like others by spreading rumors about them or talking behind their backs?

Who are three people in your house that are the most attractive?

Who are three people in your house that get even by keeping a person from being in their group of friends?

What is your favorite thing to do for fun?

Who are three people in your house that tell others they will beat them up unless they do what they want?

Who are three people who do not have many friends?

Who are three people who do not seem to like being with other people?

Sociometric Interview Staff Form

**Interviewer-
Participant-**

**Work Group-
Date-**

Who are three residents who get teased a lot?

Who are three residents that fight the most?

Who are three residents that you like the most?

Who are three residents that are the most popular?

Who are three residents that get in trouble the most?

Who are three residents that are good leaders?

Who are three residents that are the least popular?

Who are three residents that are disruptive?

Who are three residents that help other residents?

Who are three residents that help staff?

Who are three residents that ask for help or need a lot of help?

Who are three residents that people like to date?

Who are three residents that keep secrets?

Who are three residents who are nice to others?

Who are three residents who are mean to others?

Who are three residents who are really smart?

Who are three residents who are not very attractive/cute?

Who are three residents who usually win a lot?

Who are three residents who are very shy?

Who are three residents who are always willing to help someone out?

Who are three residents that you like the least?

Who are three residents that are the most athletic/best at sports?

Who are three residents that are the snobbiest?

Who are three residents who lose a lot?

Who are three residents who have really good behavior?

Who are three residents at work who have really bad behavior?

Who are three residents who are independent?

Who are three residents who are cooperative?

Who are three residents who are happy?

Who are three residents who are sad?

Who are three residents who are angry?

Who are three residents that are dressed the best?

Who are three people that are the most attractive?

Who are three residents who are hard workers?

Who are three residents who don't work hard?

Who are three residents who tease others?

Who are three residents who do not have many friends?

Who are three residents who do not seem to like being with other residents?

Appendix H

Rosenberg Self-Esteem Scale

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree with the statement, circle SA. If you agree with the statement, circle A. If you disagree with the statement, circle D. If you strongly disagree with the statement, circle SD.

1. I have a positive attitude about myself.	SA	A	D	SD
2. I feel that I have many good qualities.	SA	A	D	SD
3. All in all, I feel that I am successful.	SA	A	D	SD
4. I am able to do things as well as most people.	SA	A	D	SD
5. I feel I do not have a lot to be proud of.	SA	A	D	SD
6. I feel that I am a person of worth, at least on an equal basis with others.	SA	A	D	SD
7. Overall, I am satisfied with myself.	SA	A	D	SD
8. I wish I could have more respect for myself.	SA	A	D	SD
9. I feel useful.	SA	A	D	SD
10. At times I think I am no good at all.	SA	A	D	SD

Dear Parent or Guardian:

We are writing to let you know of a new research study that we are excited to begin at The Baddour Center. We are interested in learning more about the characteristics of friendships between residents at The Baddour Center so that we may be able to come up with new ways to facilitate healthy, appropriate relationships between residents.

Please review the enclosed consent form. If you sign and return it, you will allow us to interview your loved one for our research. If you have any questions or concerns, please feel free to call Ashley Durkee (662-801-4929) or Carly Gardner (662-801-6076).

Thank you,

Ashley Durkee and Carly Gardner

CONSENT FORM

Consent to Participate in an Experimental Study

Title: The Social Behavior of People with Intellectual Disabilities

Investigator

Ashley O. Durkee
Department of Psychology
205 Peabody
The University of Mississippi
662-915-7383

Sponsor

Karen Christoff
Department of Psychology
205 Peabody
The University of Mississippi
662-915-5195

Description

We are interested in learning about the social behavior of the residents at the Baddour Center. Little research has focused on the social experiences and friendship patterns of individuals with intellectual disabilities. The current study will ask the participants to nominate other residents for categories such as: “Most Liked”, “Most Helpful”, and “Disruptive”. In order to assist in nominations, participants will be shown pictures of the other residents when making their choices. The participants will also be asked about the importance of different social relationships, such as those with their friends and staff. The participants’ social behavior will also be observed and the appropriateness and frequency of interactions recorded. Finally, they will be asked to complete some self-report measures of psychosocial well-being. Accommodations will be made such as visual aids and rewording phrases as necessary to assist participants in completing measures at their ability level. With your permission, we will also be asking staff members similar questions about each participant.

Risks and Benefits

By learning more about residents’ relationships we can better develop interventions and foster quality relationships. While participants typically enjoy talking about their social relationships, there is a possibility that some participants may be slightly upset by nominating others for certain categories such as “Teases Others”. However, we ask questions during the nomination process that typically distract the participants such as “Who is your favorite man on TV?” In addition, all participants are interviewed privately and all participants are encouraged to keep the interview information confidential. If any participant seems to be experiencing distress they will be given a break and their continued participation will be re-evaluated.

Cost and Payments

Interviews will take no more than 30 minutes and participants will be allowed breaks as needed. Participants will not be paid for their participation and every effort will be made to avoid conducting interviews during activity time.

Confidentiality

At the completion of data collection the names of all participants will be converted to numbers and the participants names discarded.

Right to Withdraw

You do not have to take part in this study. If you start the study and decide that you do not want to finish, all you

have to do is to tell Ashley Durkee, Carly Gardner, or Dr. Christoff in person, by letter, or by telephone at the Department of Education and Research, The Baddour Center, Senatobia MS 38668, or 662-562-0100, ext. 210. Whether or not you choose to participate or to withdraw will not affect your standing with The Baddour Center or with the University, and it will not cause you to lose any benefits to which you are entitled.

Protected Health Information

Protected health information is any personal health information which identifies you in some way. The data collected in this study includes: communication skills and residency status. A decision to participate in this research means that you agree to the use of your health information for the study described in this form. This information will not be released beyond the purposes of conducting this study. The information collected for this study will be kept until the study is complete. While this study is ongoing you may not have access to the research information, but you may request it after the research is completed.

IRB Approval

This study has been reviewed by The University of Mississippi’s Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482.

Statement of Consent

I have read the above information. I have been given a copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to participate in the study.

	Signature of Participant
	Date
Signature of Parent/Guardian	Date
	Signature of Investigator
	Date

**NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED.**

ASSENT FORM

Consent to Participate in an Experimental Study

Title: The Social Behavior of People with Intellectual Disabilities

Investigator

Ashley O. Durkee
Department of Psychology
205 Peabody
The University of Mississippi
662-915-7383

Sponsor

Karen Christoff
Department of Psychology
205 Peabody
The University of Mississippi
662-915-5195

Description

We are interested in the friendships of the residents at the Baddour Center. If you agree to participate we will ask you to choose other residents for categories such as: “Most Liked”, “Most Helpful”, and “Disruptive”. We will also ask you about the importance of different relationships you have, such as those with your friends and staff. You will be observed at work and at your house a few times. Finally, you will be asked about your happiness and other feelings. We will help you to answer questions during the interviews using pictures of the other residents. With your permission, we will also ask staff members about your relationships.

Risks and Benefits

By learning more about your relationships we can help you to develop good friendships. While people usually enjoy talking about their friends, there is a possibility that you may be slightly upset by choosing others for certain categories such as “Teases Others”. All interviews will be done in private and all participants are encouraged to keep the interview information a secret. If you get upset you will be given a break. You may choose to quit at any time.

Cost and Payments

Interviews will take no more than 30 minutes and you will be allowed breaks as needed. You will not be paid for your participation and we will try not to have interviews during activity time.

Confidentiality

All the information you give us will be kept confidential. That means that no one will be able to learn what you told us.

Right to Withdraw

You do not have to take part in this study. If you start the study and decide that you do not want to finish, all you have to do is to tell Ashley Durkee, Carly Gardner, or Dr. Christoff in person, by letter, or by telephone at the Department of Education and Research, The Baddour Center, Senatobia MS 38668, or 662-562-0100, ext. 210. Whether or not you choose to participate or to withdraw will not affect your standing with The Baddour Center or with the University, and it will not cause you to lose any benefits to which you are entitled.

Protected Health Information

Some of the things we look at in this study are protected health information. For example, the fact that you live at

The Baddour Center and how you talk to others is protected health information. By signing this form, you are saying that it is okay for us to know those things about you. We will not share this information with anyone else until we take your name off of it. If you would like to know what we learned from our project, you may ask us after it is finished.

IRB Approval

This study has been reviewed by The University of Mississippi’s Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482.

Statement of Consent

I have read the above information. I have been given a copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to participate in the study.

Signature of Participant	Date	Signature of Investigator	Date
--------------------------	------	---------------------------	------

**NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED.**

STAFF CONSENT FORM

Consent to Participate in an Experimental Study

Title: The Social Behavior of People with Intellectual Disabilities

Investigator

Ashley O. Durkee
Department of Psychology
205 Peabody
The University of Mississippi
662-915-7383

Sponsor

Karen Christoff
Department of Psychology
205 Peabody
The University of Mississippi
662-915-5195

Description

We are interested in the social behavior of the residents at the Baddour Center. Little research has focused on the social experiences and friendship patterns of individuals with intellectual disabilities. The current study will ask you to nominate residents for categories such as: “Most Liked”, “Most Helpful”, and “Disruptive”. You will also be asked about the importance of different social relationships such as those with their friends and staff for the residents with whom you work.

Risks and Benefits

By learning more about the social behavior of individuals with Intellectual Disabilities we can better develop interventions and foster more quality relationships. No risks are foreseen.

Cost and Payments

Interviews will take no more than 10 minutes and you will be allowed breaks as needed. You will not be paid for your participation, and interviews will be scheduled at your convenience.

Confidentiality

At the completion of data collection the names of all participants will be converted to numbers and the participants’ names discarded.

Right to Withdraw

You do not have to take part in this study. If you start the study and decide that you do not want to finish, all you have to do is to tell Ashley Durkee, Carly Gardner, or Dr. Christoff in person, by letter, or by telephone at the Department of Education and Research, The Baddour Center, Senatobia MS 38668, or 662-562-0100, ext. 210. Whether or not you choose to participate or to withdraw will not affect your standing with The Baddour Center or with the University, and it will not cause you to lose any benefits to which you are entitled.

IRB Approval

This study has been reviewed by The University of Mississippi’s Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482.

Statement of Consent

I have read the above information. I have been given a copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to participate in the study.

Signature of Participant

Date

Signature of Investigator

Date

**NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED.**

VITA

CARLY GARDNER

UNIVERSITY OF MISSISSIPPI

Peabody Building
University, MS 38677
662 915-7383
cbgreen@olemiss.edu

EDUCATION: University of Mississippi Oxford, MS
Ph.D. in Clinical Psychology, (Expected August 2011)
Major Professor- Karen Christoff, Ph.D.
Dissertation- "Contextual Influences on Peer Acceptance and the Social Behavior of Individuals with Intellectual Disabilities"

University of Mississippi Oxford, MS
Masters of Arts, (December 2007)
Major Professor- Karen Christoff, Ph.D.
Thesis- "ADHD Symptom Endorsement & its Relationship to the Social and Risk Behavior, Academic Performance, and Adjustment of College Students"

St. Louis University **St. Louis, MO**
Major- Psychology GPA-3.96
Bachelor of Arts, (December 2001)

University of the South- Sewanee Sewanee, TN
Major- Psychology GPA-3.2
August 1998-July 2000

CLINICAL EXPERIENCE:

APA Accredited Internship Program

University of Tennessee Health Science Center Internship Consortium

Memphis, TN August 2010-present

Full Year Rotations August 2010-August 2011

Boling Center for Developmental Disabilities

LEND Training Program

University Center for Excellence in Developmental Disabilities (UCEDD)

Association of University Centers on Disabilities (AUCD)

Parent-Child Interaction Training Clinic

Supervisor- Colby Reed, Ph.D.

Through this clinic I provide PCIT for children age 2 to 7 years with a behavior disorder, ADHD, an Autism Spectrum Disorders, or Intellectual Disabilities.

Applied Behavior Analysis Clinic

Supervisor- Jessica Myszak, Ph.D.

Through this clinic provides ABA services including discrete trial and pivotal response training and the Early Start Denver Model for children with Developmental Disabilities or Autism Spectrum Disorders.

Multidisciplinary Diagnostic & Evaluation Clinic

Supervisor- Cindy Klubnik, Ph.D.

I conduct psychological evaluations as part of a comprehensive evaluation conducted by an multidisciplinary team comprised of: Developmental Pediatrics, Speech/Language, and Psychology.

CANDLE Research Project- UT Preventative Medicine

Supervisor- Laura Murphy, Ph.D.

I serve as cognitive examiner as part of a comprehensive longitudinal assessment of development for a community sample of children 1 to 4-years of age.

Major Rotation December 20, 2010- April 15, 2011

Memphis Juvenile Justice System

Supervisor- Sidney Ornduff, Ph.D.

Through the Clinical Services Bureau, I conducted mental health screenings for detained youth and comprehensive evaluations of youth who were referred by the court.

Minor Rotations

Consult-Liaison Services- Regional Medical Center

August 16-December 19, 2010

Supervisor- Bob Kores, Ph.D.

As part of the C & L team (comprised of a Psychologist, Psychiatrist, a Psychology Intern, Medical Students, and Residents) team I completed mini-mental status exams, general mental health assessments, diagnoses psychological disorders and assists the general medical team with psychotropic medication management. We also teach therapeutic techniques such as relaxation to promote both mental health and augment medical interventions.

Center of Excellence April-August 2011

Supervisor- Janet Todd, Ph.D.

I complete comprehensive chart reviews, conduct psychological evaluations, and make recommendations to improve treatment effectiveness of children being served by the Department of Children's Services.

St. Jude April-August 2011

Supervisor- Valerie Crabtree, Ph.D.

I conduct psychological evaluations and provide consult liaison services for children diagnosed with cancer or sickle cell disease.

Previous Work Experience

Baddour Center, Senatobia, MS

July 2006- June 2007 and July 2009 to August 2010 20 hours per week

Supervisor- Shannon Hill, Ph.D.

I wrote behavioral programs and provided psychotherapy for adults with intellectual disabilities and concurrent psychiatric conditions. I developed a curriculum to address issues related to grief and loss in this population and led Grief groups based on this curriculum. I also conducted social skills groups and Integrative Behavior Therapy groups. I provided quarterly in-service training

for direct support staff. I conducted DISCUS assessments to monitor symptoms of Tardive Dyskinesia and Dyspraxia and Mini Mental Status Exams to assess the presence of dementia.

Behavior, Attention, and Developmental Disabilities Consultants, LLC July 2005- August 2010 Averaged 15 hours per month

Supervisor- Emily Thomas-Johnson, Ph.D.

I served as a Behavioral Consultant and as such I performed functional behavior assessments, conducted structured observations and made behavioral recommendations. I also provided didactic training for teachers on classroom management, using curriculum to minimize aberrant behavior and facilitate learning, individual instruction and natural environment teaching.

Clinical Practica

Communicare, Oxford, MS

July 2009 to June 2010 20 hours per Week

Supervisors- Dixie Church, M.A., M.F.T. & Anneal Dillon, Ph.D.

I provided out-patient treatment for adults and children with a variety of psychological disorders. I performed intake screenings, provided emergency assistance by telephone, completed state mandated paperwork, and conducted mental health evaluations at the local hospital.

University of Mississippi Psychological Services Clinic Oxford, MS

June 2003 to May 2010

Supervisors- Karen Christoff, Ph.D. (Behavioral),

Laura Johnson, Ph.D. (Multicultural/Eclectic/Stages of Change),

Kelly Wilson, Ph.D. (Acceptance and Commitment Therapy),

John Young, Ph.D. (CBT), and

Todd Smitherman, Ph.D. (CBT)

I provided psychological assessment and treatment for children and adults with problems ranging from mood disorders, relationship problems, family issues, and autism.

North Mississippi Regional Center, Oxford, MS

July 2003-February 2009 20 hours per week

Supervisor- Kimberly Sallis, Ph.D.

I wrote behavior programs for individuals with Mental Retardation. I worked as a cottage psychologist completing state mandated paperwork, providing emergency support, and conducting staff training on principles of Applied

Behavior Analysis. I served as a member of a multidisciplinary treatment team and the intensive behavioral treatment team. I also performed functional behavior assessments: including structured observations and analog behavior assessments, collected behavioral data, conducted Discus assessments, and completed intellectual and adaptive behavioral assessments.

Mississippi Youth Programs Around the Clock Grant

July 2008-June 2009 10 hours per week

Supervisor- John Young, Ph.D.

I worked as a research and training assistant. I assisted with data collection by helping to devise methods to make the process more efficient and increase compliance with completion of measures. I developed a training video to facilitate staff completion of data forms.

Head Start, North Mississippi

August 2005- May 2006 4 hours per week

Supervisor- Alan Gross, Ph.D.

I provided centers with behavioral programming, psychotherapy, and teacher support for referred children experiencing behavioral disturbance at school.

Desoto County School District, Oxford, MS

July 2004-June 2005 20 hours per week

Supervisor- Sheila Williamson, Ph.D.

I conducted intellectual and functional assessments for the Special Education Department. I also wrote behavior programs for children who were enrolled in the special education program. I also conducted staff training and assisted with the support group for parents of children with Autism.

RESEARCH:

Masters Thesis

Title- “ADHD Symptom Endorsement & its Relationship to the Social and Risk Behavior, Academic Performance, and Adjustment of College Students”

Chair- Karen Christoff, Ph.D.

This project assessed the relationship between the endorsement of ADHD

symptoms, social and risk behaviors, and academic performance of college students.

Dissertation

Title- “Contextual Influences on Peer Acceptance and the Social Behavior of Individuals with Intellectual Disabilities”

Chair- Karen Christoff, Ph.D.

The project identifies behaviors associated with peer acceptance among individuals with intellectual disabilities in their residence and at work. Data includes sociometric nominations and behavioral observations across contexts.

Research Assistant (8/2000-12/2001)

David Munz, Ph.D. Saint Louis University

Responsibilities- Data collection, work as a research confederate, and data entry and analysis

PROFESSIONAL PRESENTATIONS:

Durkee, A., Gardner, C., & Christoff, K. (Submitted). *Social Relationships Within an Intellectually Disabled Population*. Poster submitted for presentation at the 2009 annual meeting of the Association for Behavioral and Cognitive Therapies, New York, NY.

Gardner, C., Karl, K., & Christoff, K. (2008, November). *Birds of a feather v. opposites attract: Is body size related to friendship choice?* Poster session presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Orlando, FL.

Gardner, C., Durkee, A., Gadd, W., Nicholas, R., & Christoff, K. (2008, November). *Factors related to peer acceptance in individuals with intellectual disabilities*. Poster session presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Orlando, FL.

Hill, S., Gardner, C., Johnson, C., Surdock, A., Durkee, A. (2008, May). *Grief group therapy for adults with intellectual disabilities: Process and outcomes*. Poster session presented at the 132nd annual meeting of the American Association on Intellectual and Developmental Disabilities, Washington, DC.

Gardner, C., Gardner, M., Jayne, C., & Christoff, K. (2008, April). *Quality of life: An evaluation of related variables for persons with mental retardation*. Poster

presented at the annual meeting of Sigma Xi at the University of Mississippi. (this poster won the award for best social sciences poster and the AAUW award for best poster by a woman graduate student).

Gardner, C., Gardner, M., Jayne, C., Christoff, K. (2007, November) *Quality of life: An evaluation of related variables for persons with mental retardation*. Poster session presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Philadelphia, PA.

Gardner, C. & Sallis, K. (2007, November) *Measuring quality of life variables in persons with intellectual disabilities*. Paper presented at the annual Mental Health/Mental Retardation joint conference, Tunica, MS.

Sellers, K, Green, C., & Christoff, K. (2007, February). *An examination of the relationships among Greek status, social behavior, and alcohol/substance use and associated risk behavior*. Poster presented at the annual meeting of the Mississippi Academy of Sciences in Starkville, MS (An abstract of this poster appeared in the April, 2007 volume of the Journal of the Mississippi Academy of Sciences).

sellers, K, Green, C., & Christoff, K. (2007, March). *An examination of the relationships among Greek Status, social behavior, and alcohol/substance use and associated risk behavior*. Poster presented at the 2007 Sigma Xi poster session at the University of Mississippi. (This poster won the award for best poster in the Social Sciences Division)

Gardner, C. & Gardner, M. (2006, November) *Social skills for persons with developmental disabilities*. Paper presented at the annual Mental Health/Mental Retardation joint conference, Tunica, MS.

Jayne, C., Green, C., & Christoff, K. (2006, November) *Elmo eats broccoli: Helping kids make healthy food choices*. Poster presented at the 2006 Annual Meeting of the Association for Cognitive and Behavioral Therapies in Chicago, IL.

Green, C, Thomas-Johnson, E., Christoff, K. (2005, November) *Children's perceptions of helping and help-seeking*. Poster session presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, DC.

Green, C, Merwin, R., & Christoff, K. (2005, November). *Risk Behaviors in College Students: Relationship to Self-Perceived Social Competence and Support*. Poster presented at the annual meeting of the Association for Advancement of Behavior Therapy, Washington, DC.

Christoff, K. A., Chair. (2004, September). *Loneliness, Health, Social Behaviors, Risk-Taking, and Retention in College Students*. Symposium submitted for presentation at the 2004 meeting of the Mississippi Psychological Association in Philadelphia, MS.

Johnson, E, Murrell, A., & Christoff, K. *Loneliness and College Retention: Does Gender Make a Difference?*
Green, C., Merwin, R., & Christoff, K. *Risk Behaviors in College Students: Relationship to Self-Perceived Social Competence and Support*
Sheridan, K., & Christoff, K. *Bulimia and Muscle Dysmorphia: Do College Student Athletes Show Greater Risk?*
Jayne, C., Merwin, R., & Christoff, K. *Psychological Distress as Related to Weight and Body Size Satisfaction in a College Population*

Christoff, K. A., Chair and Albano, A.M., Discussant. (2003, November). *Behavior and Appearance Factors in Children's Social Relationships and Popularity*. Symposium presented at the annual meeting of the Association for Advancement of Behavior Therapy. Boston, MA.

Johnson, E.T., & Christoff, K.A., *Disruptive and Aggressive Behavior: What's the Social Response?*
Sheridan, K., Christoff, K., & Johnson, E.T., *The Importance of Attractiveness to the Social Relationships of Fifth Grade Children*.
Green, C., Johnson, E.T., Murrell, A., Merwin, R., & Christoff, K., *Relationships Among Depressive Symptoms, Perceptions of Social Acceptance, and Attractiveness*.
Merwin, R., Adams, C., Murrell, A., & Wilson, K. *Social Relationships and the Self: A Relational Frame Theory Analysis*

Christoff, K.A., Chair, And Leslie, L., Discussant. (2003, September). *Children's Popularity and Social Relationships*. Symposium presented at the annual meeting of the Mississippi Psychological Association. Biloxi, MS.

Johnson, E. T., & Christoff, K. *Social Responses to Disruptive and Aggressive Behavior*
Sheridan, K., Christoff, K., & Johnson, E.T., *Social Relationships and Attractiveness*
Green, C., Johnson, E., Murrell, A., Merwin, R., & Christoff, K., *Perceptions of Social Acceptance, Attractiveness, and Depressive Symptoms*
Merwin, R., Adams, C., Murrell, A., & Wilson, K., *Social Relationships and the Self: A Relational Frame Theory Analysis*.

PUBLICATIONS:

Hill S., Gardner, C., & Johnson, C.N. (2009). Pilot study of a grief group intervention for people with intellectual disabilities: Process and outcomes. *The NADD Bulletin*. 12(5), 85-92.

Sellers, K, Green, C., & Christoff, K. (2007). An Examination of the Relationships among Greek Status, Social Behavior, Alcohol/Substance Use, and Associated Risk Behavior. *Journal of the Mississippi Academy of Sciences*, 52(3), 189 (Published Abstract)

TEACHING EXPERIENCE: UNIVERSITY OF MISSISSIPPI

Psy 311 Abnormal Psychology Fall 2007-Spring 2008
Instructor of Record

Psy 201 General Psychology Fall 2008- Spring 2009
Instructor of Record

Psychology 505 Conditioning and Learning Fall 2005
Teaching Assistant
Professor of Record- Kelly Wilson, Ph.D.

Psychology 201 General Psychology Fall 2002- Spring 2003
Teaching Assistant for PSI sections of this course
Professor of Record- Karen Christoff, Ph.D.

PROFESSIONAL MEMBERSHIPS: Association for Behavioral and Cognitive Therapies, Sigma Xi,
Psi Chi

HONORS AND AWARDS:

2008 Sigma Xi Poster Contest- Winner of the best poster in the area of
Social Sciences and Best Poster by a Female Graduate Student.

VOLUNTEER EXPERIENCE:

Kamp Kaleidoscope Summer 2005
Summer camp for children diagnosed with Autism Spectrum Disorders

Red Cross Volunteer for First Baptist Church in Oxford Mississippi

Behavioral Consultant for First Baptist Church Weekday Program

REFERENCES:

Karen Christoff, Ph.D. **662-915-5195**
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Cindy Klubnik, Ph.D. **901-448-1000**