STIGMATIZATION OF ADULTS WITH ASPERGER'S DISORDER

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Robert Clark Butler

Certificate of Approval:

| | |
|---|---|
| Steven K. Shapiro<br>Associate Professor<br>Psychology | Jennifer M. Gillis, Chair<br>Assistant Professor<br>Psychology |
| Bryan D. Edwards<br>Assistant Professor<br>Psychology | George Flowers<br>Dean<br>Graduate School |

# STIGMATIZATION OF ADULTS WITH ASPERGER'S DISORDER

Robert Clark Butler

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Robert Clark Butler

Signature of Author

Date of Graduation

# THESIS ABSTRACT

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Robert Clark Butler

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Stigmatization is among the many possible challenges that impact the lives of adults with Asperger's Disorder (AD). There is currently a paucity of literature on stigmatization of adults with AD. This study evaluated if adults hold stigmatizing views towards an individual with AD, and if that stigmatization is elicited by social behaviors or labels associated with AD. Participants were 195 college students who read one of six vignettes in which levels of social behaviors and labels were manipulated. A modified version of the Social Distance Scale (Bogardus, 1933; Link, Cullen, Frank, & Wozniak, 1987) was used to assess amounts of stigmatization held. A 2 x 3 analysis of variance revealed that the social behaviors commonly observed in AD significantly impacted stigmatization scores while the label of "Asperger's Disorder" did not. These findings have important implications for educating the public, providing support services, and treatment recommendations for individuals with AD.

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# INTRODUCTION

Autism spectrum disorders (ASD) include three pervasive developmental disorders that significantly impact many areas of development. These disorders are Autistic Disorder, Asperger's Disorder (AD), and Pervasive Developmental Disorder-not Otherwise Specified (PDD-NOS; Klin, McPartland, & Volkmar, 2005). The prevalence of ASD has increased over the past decade, such that the current estimated rates are 1 in 150 individuals (Centers for Disease Control and Prevention [CDC], 2007). As the prevalence of ASD has increased there has also been an increase in the amount of research in this area. This research has largely focused on children with ASD, while relatively few studies have examined the negative impact of ASD on the lives of adults. Stigmatization is among the many issues that might negatively impact the lives of individuals with AD across the lifespan. Due to the increase in prevalence rates and paucity of research on the impact of stigmatization of adults with AD, further research is warranted. This research could improve understanding of the nature of stigmatization of individuals with AD and lead to the development of effective preventative measures and interventions focused on decreasing stigmatization.

A review of the common areas of impairment in AD can provide a better understanding of AD and why stigmatization is likely to impact the lives of individuals with AD. Impairments commonly observed in individuals with AD can be categorized into three general areas: (a) social interactions, (b) repetitive, restricted, stereotyped patterns of behaviors, interests, and activities, and (c) other common characteristics in AD (i.e. communication; APA, 2000). The diagnosis of AD requires significant impairment in social interactions and the presence of at least one repetitive, restricted, stereotyped pattern of behaviors, interests and activities (APA, 2000). The DSM-IV-TR diagnostic criteria for AD are presented in Table 1.

### *Social Interactions*

Impairments in social interactions may include poor use and understanding of eye contact, facial expressions, and body posture (APA, 2000). Social impairments associated with AD are often less noticeable during infancy, and become increasingly apparent as children enter preschool or elementary school, life events marked by increased expectations of one's social behavior and competency. Therefore, it is common for children with AD to be diagnosed upon reaching preschool or elementary school (Portway & Johnson, 2003). Although there is no unique or defining social interaction impairment for AD, some social impairments are more frequently observed than others. These include: not understanding concepts such as personal space, speaking too loudly, or not understanding body language. These deficits can make it difficult to develop friendships and lead to social isolation, which can further exacerbate social deficits by decreasing opportunities to socially interact with others (Attwood, 1998).

Deficits in social interactions become increasingly problematic as individuals with AD enter adolescence due to the rapid increase in social expectations. These social expectations come from various sources including: family, peers, teachers, and personal expectations. The social isolation begun during childhood usually persists throughout adolescence, but becomes increasingly stressful as adolescents with AD notice an increasing disparity between themselves and peers (Müller, Schuler, & Yates, 2008). This social isolation may have numerous negative consequences including depression and anxiety, which occur at higher rates in individuals with AD in comparison to the general population (Ghaziuddin, Weidmer-Mikhail, & Ghaziuddin, 1998; Mundy, Henderson, Inge, & Coman, 2007, Shtayermman, 2007). In addition to social isolation, adolescents with AD report experiencing more intense bullying than children and young adults with AD (Klin, Volkmar, & Sparrow, 2000).

Transitioning into adulthood can be stressful for individuals with AD, as individuals are expected to form close relationships that are either sexual or platonic in nature (Barnhill, 2007; Jennes-Coussens, Magill-Evans, & Koning, 2006). Renty and Roeyers (2006) found that only 28 percent of adults with AD were currently in a close relationship. A study of adults with AD found that social isolation was the most commonly reported difficulty during adulthood (Müller et al., 2008).

### *Restricted, Repetitive, Stereotyped Behavior, Interests, and Activities*

Restricted, repetitive, and stereotyped behaviors are demonstrated by individuals with AD in a variety of ways including rigidity in routine, becoming overly focused on one topic of interest, or engaging in stereotyped behaviors such as hand flapping (APA, 2000). Children with AD often have difficulty with change in routine, which can make it difficult for families to engage in many activities. Rigidity in routine can also make the transition to school difficult for children with AD. This rigidity can be demonstrated in play activities in which the child with AD expects other children to play according to their rules and interests (Klin et al., 2005). This can further add to the social isolation previously discussed.

Restricted, repetitive, and stereotyped behavior can continue to impact individuals with AD throughout adolescence and adulthood. Adolescents are expected to be able to cope with changing routines, changing teachers, changing schedules, and changing expectations from one situation to another. All this change can be distressing for individuals who are rigid in their routine (Portway & Johnson, 2003). Individuals with AD might also have restricted interests. This tendency can limit individuals with AD in multiple ways including: making it difficult to engage in reciprocal communication (i.e., turn taking in conversations) and focusing excessive time and effort on one topic to the exclusion of other activities.

### *Other Common Characteristics in AD*

Individuals with AD often have deficits in language and communication skills required for appropriate social interactions. These deficits might include failure to engage others in socially appropriate play or conversation (APA, 2000). Similar to impairments in social interactions, impairments in communication become increasingly noticeable with age. Individuals with AD meet age-appropriate language development milestones for at least the first three years of life. Occasionally, oddities in speech are noticeable in individuals with AD. For example, it is not uncommon for individuals with AD to learn highly specialized words or acquire an above-average vocabulary related to a specific area of interest. Individuals with AD might also lack prosody, which gives their speech a pedantic quality (Klin et al., 2005). Individuals with AD might also misinterpret facial expressions, intonation, and figurative language, which can lead to awkward social interactions and communication (Rubin, 2004). Furthermore, social communication difficulties can negatively impact performance in academic/educational and employment settings, because these venues may require high levels of socially appropriate communication. Difficulties in education and employment can have a negative impact on self-esteem, access to health care, and the ability to live independently (Hurlbutt & Chalmers, 2004; Klin et al., 2000; Renty & Roeyers, 2006).

In order to help conceptualize the social behaviors of adults with AD, and explain possible causes for the above-mentioned difficulties in relationships, employment, etc., Table 2 lists common social behaviors in adults with AD and possible real life examples. This table was composed using numerous descriptions of adults with AD from multiple sources (APA, 2000; Gaus, 2007; Klin et al., 2000; White, 2005). It is important to note that the social behaviors listed in Table 2 are examples, and are not manifested across all individuals with AD.

### *Stigmatization*

When considering the implications of the behavioral deficits associated with AD, it logically follows that these social behaviors might lead to stigmatization. Stigmatization is a multifaceted construct that is best defined by three components: stereotypes, prejudice, and discrimination (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). Stereotypes are efficient ways to categorize information about social groups (Corrigan, 2005; Corrigan et al., 2003). Stereotypes help people quickly assign attributes to a person based on group membership. For example, when an individual is labeled with a mental illness, it is often assumed that they are dangerous, incompetent, and in need of help (Corrigan, 2005; Corrigan, et al., 2003). Prejudice occurs when individuals believe stereotypes are true (Corrigan, et al., 2003). Prejudice is a cognitive event that can lead to negative emotions and behavior. Negative behavior that results from prejudice is defined as discrimination (Corrigan, 2005). Discrimination can include harmful acts such as physical abuse, social avoidance, and not employing individuals with a mental illness (Weiner, 1995). Therefore, stigmatization can be defined as believing and acting upon preconceived notions about a social group that result in negative consequences for the individual being stigmatized.

Much of the research on stigma associated with mental illness has focused on depression, schizophrenia, and the general concept of mental illness, while largely neglecting the study of other specific disorders, including AD (Angermeyer & Dietrich, 2006). It is important to understand the impact of stigmatization on a range of disorders, because each disorder is different, and interventions that are beneficial for decreasing stigmatization in one disorder may or may not generalize to another disorder. Furthermore, social behaviors that might cause stigmatization towards individuals with one disorder may not be present in another disorder. The study of stigmatization of individuals with AD is limited. Therefore, it is beneficial to review the literature on stigmatization of individuals with ASD and individuals with other mental illnesses in order to hypothesize what factors might lead to stigmatization in adults with AD.

Shtayermman (2007) conducted one study related to the stigmatization of adults with AD. This study utilized self-report measures of depression, anxiety, suicidal ideation, and level of victimization to describe the experience of adolescents and adults with AD. Participants responded to the Social Experience Questionnaire (SEQ) (Crick & Grotpeter, 1996), that is designed to assess three areas of victimization including: overt victimization (i.e., being hit by others), relational victimization (i.e., being excluded from social activities), and prosocial behaviors (i.e., the presence or absence of helping behaviors). Participants reported statistically greater amounts of victimization in comparison to the standardized sample of the SEQ. Victimization and stigmatization are closely related constructs since victimization is frequently the result of stigmatization. Though this study supported the presence of victimization towards adolescents and adults with AD, there are several limitations. The validity of the SEQ for individuals with AD is questionable because one of the common deficits associated with AD is misinterpreting social interactions. Therefore, individuals with AD might be unable to respond accurately to questions on the SEQ. Additional limitations of the study included the use of a mixed sample of adolescents and adults, a sample of only 10 participants, and failure to substantiate the validity of individual diagnoses of AD. Though this study had some limitations, it is reasonable to consider that victimization of individuals with AD does occur, as other studies verify that bullying, a similar construct, occurs during childhood and adolescence (for a review see Klin et al., 2000).

Few studies have examined stigmatization of children with an ASD. Parental reports indicate that children with an ASD experience stigma (Gray, 1993). In a separate study (Swaim & Morgan, 2001) and a subsequent replication (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2004) school age children demonstrated negative attitudes towards a video of a peer with autism in comparison to a control. The child in the video demonstrated behaviors including gaze aversion, echolalia, body rocking, and stereotypic hand movements. These studies suggest that the behaviors of children with autism can lead to negative attitudes, and therefore it is likely that they can lead to stigmatization. Additional studies, though not directly assessing stigmatization of children with an ASD, have supported the presence of stigmatizing views towards children with an ASD (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2005; Campbell, 2006; Campbell, 2007). The presence of stigmatizing views towards children with an ASD suggests that individuals with AD might also experience stigmatization in a similar manner based on commonalities between the disorders.

The articles reviewed support the likelihood that stigmatization of individuals with AD exists, but it is unclear why this stigmatization exists. Several theories are used to explain stigmatization (i.e., just world hypothesis, classical conditioning, kernel of truth, evolutionary theory, in group/out group, cognitive appraisal). Though interesting, it is beyond the scope of this thesis to review each theory. Based on a review of the literature, theories on stigmatization generally contain one or both of the following components: stigmatization as a result of preconceived stereotypes (labeling effects) and/or stigmatization as a result of observed social behaviors (behavioral effects). It is therefore beneficial to determine if stigmatization is activated by (a) knowledge of an individual’s group membership, (b) observation of an individual’s actual social behaviors, or (c) a combination of both.

*Labeling Effects.* Labeling theory states that people tend to judge individuals based on labels (such as having a mental illness) rather than personal characteristics or social behaviors (Fink & Tasman, 1992). Numerous studies have supported that a label of mental illness leads to stigmatization (Falk, 2001; Farina & Felner, 1973; Jones, et al., 1984; Link, 1987; Link et al., 1987; Link, Struening, Cullen, Shrout, & Dohrenbend, 1989; Scheff, 1984). When Scheff (1966) introduced labeling theory, he proposed that individuals utilize stereotypes to make inferences upon hearing a label. In other words, stigmatization appears to be the result of preconceived ideas, attitudes or beliefs about a group. A limitation of this theory is that it fails to address which stereotypes are activated by a label.

*Behavioral Effects.* Several studies have found that individuals are stigmatized as a result of their social behaviors (Bord, 1971; Farina, Felner, & Boudreau, 1973; Farina & Hagelauer, 1975; Farina, Murray, & Groh, 1978; Kirk, 1974; Lehman, Joy, Kreisman, & Simmens, 1976; Link & Cullen, 1983; Loman & Larkin, 1976; Phillips, 1963; Phillips, 1964; Schroder & Ehrlich, 1968). Social rank theory, an evolutionary theory that explains beneficial characteristics in animals, suggests that there is a relationship between stigmatization and specific social behaviors (Gilbert, 1989; Gilbert, 1992; Price & Sloman, 1987). Gilbert (2000) identifies several characteristics that are likely related to stigmatization. These include: lack of eye contact, failure to be assertive, lack of confidence, and avoidance of social situations. These characteristics are frequently observed in individuals with AD (See Table 2). Based on social rank theory, it could be hypothesized that several of the common social behaviors observed in individuals with AD lead to stigmatization. In addition to characteristics described in social rank theory, individuals with AD also engage in social behaviors that are socially awkward that could lead to stigmatization, such as poor impulse control (Ozonoff, Pennington, & Rogers, 1991). It is unclear to what degree different social behaviors impact stigmatization, but it is likely that many of the social behaviors listed in Table 2 would contribute to stigmatization.

Numerous studies have found that social behaviors lead to stigmatization and frequently account for more stigmatization than the label of mental illness (Bord, 1971; Farina et al., 1989; Farina & Hagelauer, 1975; Kirk, 1974; Farina et al., 1978; Leham et al., 1976; Link & Cullen, 1983; Loman & Larkin, 1976; Phillips, 1963; Phillips, 1964; Schroder & Ehrlich, 1968). These studies assessed a myriad of disorders including depression, schizophrenia, anxiety, etc., and though these studies did not assess AD, it is likely that both social behaviors and label impact the level of stigmatization of individuals with AD, with social behaviors accounting for more stigmatization than the label.

*Impact of Stigmatization.* Stigmatization can negatively impact many areas of an individual's life. For example, stigmatization as a result of mental illness was reported as one of the most common barriers to gaining employment among individuals with psychological disorders (Baron & Salzer, 2002; Fink & Tasman, 1992; Presidential Task Force on Employment of Adults with Disabilities, 2000). Stigmatization can also lead to housing difficulties, such as denial of loans to buy homes despite financial stability and denial of access to renting apartments or other housing situations (Carling, 1990; Levine & Rog, 1990; Link, Struening, Rahav, Phelan, & Nuttbock, 1997). People with mental illness appear to have restricted access to medical care when compared to people without mental illness (Druss, Allen, & Bruce, 1998; Stefan, 2001; Wahl, 1999). Furthermore, stigmatization of individuals with mental illness can lead to problems with close relationships both sexual and platonic (Read & Harre, 2001; Wahl, 1999), and can decrease self-esteem (Baumeister & Leary, 1995; Link, Streuning, Neese-Todd, Asmussen, & Phelan, 2001).

Stigmatization has many negative impacts on life, so it is important to determine if and to what extent individuals with AD are stigmatized. In order to determine the level of stigmatization of individuals with AD, it is necessary to have a measure of stigmatization. Several methods have been used in studies that assessed stigmatization of individuals with an ASD: self-report of the individual with ASD, report of parents, or approach/avoidance behavior in elementary school children when viewing a child with an ASD. As stated earlier, individuals with AD may not accurately report social interactions. Additionally, it may be difficult to obtain parental reports for adults. Therefore, it can be beneficial to assess social interactions from the perspective of the individual without AD when interacting with someone diagnosed with AD. Measures that assess if individuals hold stigmatizing views of another individual include the Implicit Associations Task (Greenwald, McGhee, & Schwartz, 1998)**,** Community Attitudes Toward the Mentally Ill, (Taylor & Dear, 1981), the Emotional Reaction to Mental Illness Scale (Angermeyer & Matschinger, 1996), and the Social Distance Scale (Bogardus, 1933). A review of the literature suggests that the Social Distance Scale is most often used to assess stigmatization. Social distance is a measure of how much social contact someone would like to have with an individual. The Social Distance Scale presents several social situations and participants rate to what degree they would like the situations to occur (Bogardus, 1933). Since the publication of the Social Distance Scale, numerous researchers have made modifications in order to use it with various populations (Adewuya & Makanjuola, 2005; Bethlehem & Kingsley, 1972; Corrigan, Edwards, Green, Diwan, & Penn, 2001; Feldman & Crandall, 2007; Stuart & Arboleda-Florez, 2001). Several modified scales have been found to have good internal consistency based on split half reliability and coefficient alpha (Adewuya & Makanjuola, 2005; Gureje, et al., 2005; Johnson, Mullick, & Mulford 2002).

### *Purpose*

The prevalence of individuals with AD is increasing (CDC, 2007). Previous research suggests that having a mental illness increases the likelihood of stigmatization (Stefan, 2001). Therefore, it is important to determine if the public holds stigmatizing attitudes towards adults with AD. There are several theories that attempt to explain specific factors that result in increased stigmatization of individuals with mental illness. Two of the major factors that appear to increase stigmatization include: (1) the label that identifies an individual with a mental illness, and (2) the behavioral characteristics of an individual with a mental illness (Paul, et al., 2005; Riskind & Wahl, 1992; Scheff, 1984; Weiner, 1995). Given the paucity of research on the potentially negative impact of stigmatization of adults with AD, it is important to examine how the presence of the label of “Asperger's Disorder,” the behavioral characteristics common to AD, or both impact stigmatization of these individuals.

The purpose of the present study was to assess how much stigmatization is directed towards young adults with AD. In addition, this study attempted to determine how much stigmatization was due to labeling effects and how much was a result of social behaviors typically associated with AD. The results of this study might help to direct future research and interventions in order to better understand stigmatization and to decrease any negative effects of stigmatization of adults with AD.

*Hypothesis 1: Effect of Labels.* It was hypothesized that participants would show higher rates of stigmatization when an individual was labeled with Asperger's Disorder in comparison to when no label was present.

*Hypothesis 2: Effect of Social Behaviors.* It was hypothesized that participants would show higher rates of stigmatization towards conditions in which individuals had social behaviors indicative of Asperger's Disorder in comparison to conditions in which individuals had milder social deficits or did not demonstrate social deficits. Specifically, the condition in which the social behaviors describe an individual with more mild social deficits than is typical for individuals with AD would be stigmatized more than the condition that described a “normal individual” and less than the condition that described an individual with AD.

*Hypothesis 3: Effect of Labels and Social behaviors*. It was hypothesized that the social behaviors associated with AD would have a greater effect size than the label of AD.

## METHOD

### *Design*

A 2 x 3 between-subjects design was utilized. Participants were assigned to one of six conditions. A randomized block design was used separately for male and female participants in order to ensure similar ratios of male and female participants across groups and to make groups of comparable size. Additionally, a regression analysis was conducted to rule out possible effects of gender, race, age, level of education, and response time on stigmatization scores.

### *Procedures*

Participants were undergraduate students enrolled in psychology courses at Auburn University who were at least 18 years old. Participants were recruited in three ways: (a) flyers were posted on the Auburn University campus, (b) announcements were made in introductory psychology courses, and (c) the study was advertised on SONA-system, an on-line server used by Auburn University for participant recruitment. Data collection sessions were conducted in a campus classroom (24 X 27 feet) containing 22 desktop computers with 17-inch monitors. Computers were separated by dividers in order to decrease possible distractions from other participants completing the survey. Participants read an information letter (See Appendix D). Participants younger than 19 years of age brought a consent form signed by their legal guardian. A computer program used a randomized block design to assign participants to one of six conditions based on gender. A total of 195 participants completed the study. Of the 195 participants, 80.4%

were female, with an average age of 20 years, 6 months (range 18 to 51, *SD* = 3 years, 4 months). Demographic information is summarized in Table 3.

The researcher instructed participants to read an assigned vignette. Vignettes and questionnaires were displayed on the computer monitors. Participants used the keyboard or mouse to respond to the questions displayed on the monitor. The program did not allow participants to proceed past the vignette until two minutes elapsed to increase the likelihood that participants read the vignettes thoroughly. After participants read the vignette, they completed the modified Social Distance Scale (Bogardus, 1933; Link et al., 1987) and a demographic questionnaire (See Appendix B).

Each participant was offered a half-hour of extra credit, assigned through SONA-system. Actual awarding of extra credit was dependent upon participants' course instructors. The Auburn University Institutional Review Board approved the study.

### *Independent Variables*

There were two independent variables: label and behavioral description. The label variable had two levels, either the presence or absence of the label, "Asperger's Disorder." There were three levels of behavioral descriptions: (a) social behaviors indicative of AD, (b) milder social deficits than is typical for individuals with AD (i.e., similar to a "shy" individual), and (c) a control condition without characteristics of AD. Vignettes were utilized with a modified version of the Social Distance Scale (Bogardus, 1933; Link et al., 1987) to assess stigmatization of adults with AD (see Appendices B and C). The author developed vignettes based on a review of the literature. Two doctoral students with experience and knowledge about AD read the vignettes. These individuals confirmed that the vignette describing an individual with AD was consistent with their experience and education. The social behaviors included in the vignette indicative of AD were based on the behaviors in Table 2. Examples of how behaviors were represented in the three vignettes are given in Table 4. The three vignettes were paired with either the presence or absence of the label, “Asperger's Disorder,” resulting in six conditions (see Table 3).

### *Measures*

*Social Distance Scale.* Questions from a modified Social Distance Scale (Bogardus, 1933; Link et al., 1987) were used to measure the amount of stigma participants held towards the individual described in each vignette (see Appendix B). The Social Distance Scale is a self-report questionnaire utilizing a four-point likert-type scale. Participants rated to what degree they would be willing to have certain events occur after reading one of the above described vignettes. For example, one question was, “How would you feel about being a co-worker on the same job as someone like Frank?” Items on the Social Distance Scale were not necessarily applicable to the target sample of college students. Therefore, modifications were made to improve ecological validity for college students. For example, one of the original questions asked, “How would you feel having your children marry someone like Frank?” This question was modified to, “How would you feel having your sibling marry someone like Frank?” Though the modifications made to the scale should increase their applicability to college students, it is recognized that college students have various experiences. Therefore, a “not applicable” option was included as a possible response. Modification of questions is standard practice in the use of the Social Distance Scale and does not appear to effect the psychometric properties (Adewuya & Makanjuola, 2005; Gureje, et al., 2005; Johnson et al., 2001).

The Social Distance Scale was scored by assigning the following point values to participants' responses: 0- definitely willing, 1- probably willing, 2- probably unwilling, and 3- definitely unwilling. Participants could also respond "not applicable." The total score for the participant was calculated by adding the scores from their different responses and then dividing by the total number of questions to which a participant responded. Responses of "not applicable" were not used to compute stigmatization scores. The "not applicable" response was used by participants less than 1 percent of the time.

*Demographic Questionnaire.* A demographic questionnaire was included to describe the study sample and to examine several variables that may impact level of stigmatization. Variables included participants' age, gender, race/ethnicity, and level of education (See Appendix B).

### *Completed Data Set*

Participants were asked to respond to a true/false question in order to evaluate retention and understanding of the information presented in the vignettes. Participants' data were excluded from the data set if they answered false ($n$ = 5). Participants were removed from the data set if they endorsed having a diagnosis of AD ($n$ = 1). The data set was also evaluated for outliers based on response times and stigmatization scores within each of the six conditions. Response times were calculated by adding the amount of screen time participants took to respond to each question on the computer and then dividing by the total number of questions answered. Participants data were removed from the data set if there response time (*n* = 5) or stigmatization score (*n* = 3) was two or more standard deviations away from the mean for their condition. The final data set used for analysis included 181 participants.

## RESULTS

### *Cronbach's Alpha*

The internal consistency estimate for scores on the modified Social Distance Scale was $\alpha = 0.91$, indicating that the modified Social Distance Scale had high internal consistency. A review of the data set revealed that all participants responded to at least 15 of the 20 items. Removing the five items that had the most impact on Cronbach's alpha resulted in $\alpha = 0.86$. Therefore, no participants' data were removed due to missing data (See Table 5 for an item analysis).

### *2 X 3 Analysis of Variance*

A 2 x 3 analysis of variance (ANOVA) was conducted to assess whether the label of "Asperger's Disorder," social behaviors associated with AD, or an interaction between the two accounted for stigmatization scores in participants. The main effect of the label was not found to be statistically significant [$F$ (1,175) = .34, $p = .56$, $\eta^2 < .01$]. The main effect was statistically significant for social behaviors [$F$ (2,175) = 77.78, $p < .01$, $\eta^2 = .46$]. The interaction between social behaviors and label was not found to be statistically significant [$F$ (2,175) = 2.90, $p = .06$, $\eta^2 = .02$] (See Figure 1 for a graphical representation of this data).

### *Fisher's Protected Least Significant Difference Test*

A Fisher's protected least significant difference (LSD) test was conducted to determine differences between the three levels of social behaviors. All three levels of behavior descriptions were significantly different from each other ($p < .01$). The vignettes describing an individual with Asperger's Disorder elicited the highest stigmatization scores, followed by the milder social impairment conditions and the no social impairment conditions. Based on the results of the ANOVA and Fisher's LSD, hypothesis 1 was not supported, but hypotheses 2 and 3 were.

### *Regression Analysis*

A linear regression was used to assess the impact of demographic variables and response times on stigmatization scores. These variables were evaluated to rule out possible confounds to the study. For example, if response times were found to significantly predict stigma scores this could be indicative of careless responding. The independent variables included age, gender, ethnicity, level of education, and average response time. The dependent variable was stigmatization scores. The linear regression was not significant [$F$ (5, 175) = 1.18, $p$ = 0.32]. None of these variables significantly predicted stigmatization scores (See Table 6 for a summary of the regression analysis).

# DISCUSSION

The negative impact of stigmatization is well documented, and typically has harmful effects on many areas of an individual's life (Stefan, 2001). The prevalence of stigmatization has been studied for many different variables including: race, gender, schizophrenia, depression, etc. (Angermeyer & Dietrich, 2006; Link et al., 1987). One area that has not been studied is the stigmatization of adults with AD. Asperger's Disorder is part of a spectrum of disorders known as ASD. Recent research conducted by the CDC suggests that current rates of ASD have increased to 1 in 150 individuals (CDC, 2007). The harmful effects of stigmatization coupled with the rates of AD illustrate the importance of research examining the stigmatization of adults with AD. The present study used a modified Social Distance Scale with good internal consistency to assess how much stigmatization is directed towards adults with AD. Specifically, two variables were examined (i.e., labels and social behaviors) which have been identified as effecting stigmatization in other studies (Leham et al., 1976; Link & Cullen, 1983; Loman & Larkin, 1976).

## *Labels*

It was found that the label of Asperger's Disorder did not significantly impact stigmatization scores. This finding is contrary to much of the research previously published about labels of mental illness (Farina & Felner, 1973; Jones, et al., 1984; Link, 1987; Link et al., 1987; Link et al., 1989; Scheff, 1984). There are several possible explanations for this finding.

One of the most plausible explanations is that the participants in this study did not know what AD was, and therefore were unable to make attributions based on label alone. A review of the literature found little information on the general public's level of knowledge about AD. One article assessed speech and language pathologists' level of knowledge about ASD (Cascella & Colella, 2004). This study found that, despite a career that would likely bring an individual into contact with multiple individuals with ASD, speech and language pathologists had inadequate knowledge of ASD despite their training and possible or likely experience with individuals with ASD (Cascella & Colella, 2004). Though this study did not assess the public's level of knowledge of AD, it is reasonable to assume that undergraduates, most of who were in their first or second semester of college, would not be more knowledgeable about ASD than speech and language specialists, and therefore not know enough about AD to react positively or negatively to a label.

An alternative explanation for the lack of impact of the label AD is that individuals do not hold as many stigmatizing views towards individuals with AD as they do towards individuals with other mental illnesses. This finding is supported by research conducted by Feldman and Crandall (2007), which suggests that individuals with an ASD are stigmatized less than other disorders, including personality disorders, schizophrenia, depression, etc.

A final possible explanation is that as the public has become increasingly educated about mental illness, stigmatization has decreased. Recent studies on stigmatization have resulted in no impact from labels when assessing schizophrenia and depression (Chung & Chan, 2004; Jorm & Griffiths, 2008; Penn & Nowlin-Drummond, 2001), while earlier research on the same disorders suggested that labels did elicit stigmatization (Corrigan et al., 2001; Gilbert, 1992). It is possible that the current trend in the literature on stigmatization is a result of efforts to educate the public about the nature of mental illness. Further research is needed to evaluate this supposition.

### *Social Behaviors*

Social behaviors were the other major determinant of stigmatization assessed in this study. Social behaviors accounted for a significant amount of the variance in stigmatization. The variable of behavior had a large effect size, indicating that behavior accounts for a large percentage of the variance in stigmatization scores. This suggests that the population sampled was not influenced by the label of AD, but was influenced by behavioral descriptions about the individual. This finding suggests that individuals that exhibit behaviors indicative of AD are stigmatized and likely experience many of the negative impacts of stigmatization. Therefore, it is important for researchers and therapists to find ways to decrease stigmatization held towards adults with AD. Decreasing the amount of socially awkward behaviors individuals with AD display is one possible way to decrease the amount of stigmatization shown towards adults with AD.

It is also necessary to address the behaviors of the individual who stigmatizes others and to offer services that help the individual with AD cope with the stigmatization. Several methods of decreasing stigmatization towards individuals with a mental illness have been utilized and may be beneficial in decreasing stigmatization towards individuals with AD. These methods include: enacting laws to protect individuals with mental illness (Stefan, 2001), education of the general population about behaviors associated with AD(Hayward & Bright, 1997; Swaim & Morgan, 2001), offering support services for individuals with AD (Stefan, 2001), and teaching coping skills to individuals with AD (Shtayermman, 2007). Though these interventions may not eliminate stigma, they might decrease the negative impact of stigmatization on the lives of individuals with AD.

### *Limitations and Future Directions*

Application of these results is restricted based on the population used for this study. Participants were college students who were predominately 20 to 21-year-old Caucasian females. The demographics of this sample are similar to those of Auburn University in regards to ethnicity but underrepresented males (Office of Institutional Research and Assessment, 2009). In comparison to the 2000 U.S. census, Asian Americans, Hispanics, and males were underrepresented in this sample (U.S. Department of Commerce, U.S. Bureau of the Census, 2000). Other studies that have assessed stigmatization have found that females show lower rates of stigmatization than males (i.e. Bhugra & Cutter, 2001). The current study controlled for gender effects across groups by using a randomized block design separately for male and female participants in order to create similar ratios of gender in the different conditions, therefore it is not likely that the results of the ANOVA were impacted by gender. However, the overall means of stigmatization reported may be lower than would be seen in the general population due to the over-representation of females. Additionally, the gender of the participants may have interacted with the gender of the individual presented in the vignette. However, the regression analysis conducted did not find a significant impact of gender. Due to the limitations of the sample population, caution should be used when generalizing findings to other populations.

These results are also restricted by the limitations of self-report measurement, such as the risk of the participants engaging in positive impression management. Positive impression management was partially addressed by reiterating to participants that their individual responses were anonymous and that there were no right or wrong answers to the items of the Social Distance Scale. Despite assurances, it is possible that participants engaged in positive impression management in order to avoid cognitive dissonance. Careless responding is also a possible problem in self-report measures, especially when participants are likely motivated to participate in a study in order to receive extra credit for a college course. The study attempted to minimize the effects of careless responding by not letting participants continue to the Social Distance Scale until the vignette had been displayed on the screen for at least two minutes.

Another possible limitation of this study is found in the use of vignettes with the Social Distance Scale. The vignettes were developed to be similar across conditions (see Table 4). However, it is difficult to ensure that only details pertinent to the disorder are manipulated when working with vignettes. The differences across vignettes not attributable to AD could account for some of the differences between groups. Furthermore, it is possible that these differences could interact with the characteristics of the Social Distance Scale causing participants to view the Social Distance Scale differently across conditions. Although it was expected that participants would respond differently across conditions, it is important for the validity of a measure that each question has a similar factor loading on the overall result across conditions. A common way to evaluate the individual questions of a measure is factor analysis. A review of the literature found no studies that utilized factor analytic strategies to assess the validity of the Social Distance Scale. Additionally, this study made modifications to the Social Distance Scale, which necessitates the validation of the scale. Therefore, factor analytic strategies were utilized to assess the modified Social Distance Scale.

The original model tested purports that all the questions on the modified Social Distance Scale load onto one factor, stigmatization. Model fit was assessed using a confirmatory factor analysis. The results of the fit statistics for this model were poor; therefore specification searches were used to determine if questions on the modified Social Distance Scale were loading onto multiple factors. An exploratory factor analysis suggested that the questions might be loading onto three separate factors; therefore a specification search was conducted using a three factor model. Model fit was assessed using a confirmatory factor analysis for the three factor model. The results of the fit statistics were also poor for the three factor model. Therefore, the results of the factor analyses did not support the validity of the modified Social Distance Scale. These findings should not be generalized to other versions of the Social Distance Scale. Additionally, these results do not indicate if the lack of measurement invariance is due to limitations of the modified Social Distance Scale or limitations of the vignettes. Therefore, these findings do not invalidate the use of the Social Distance Scale, but suggest that further research and possibly further refinement of the Social Distance Scale are needed.

This study did not assess the impact of individual social behaviors observed in AD on stigmatization. It is important for future research to assess which specific social behaviors (i.e. lack of eye contact, perseveration, lack of social reciprocity) lead to stigmatization. Information on specific social behaviors could be used to better inform treatment goals for adults with AD. Additionally, the current study did not assess the impact of education or experience with AD on stigmatization. Information on education and exposure would be beneficial in understanding how to decrease stigmatization. It would also be beneficial for future studies to examine stigmatization of adults with AD using diverse procedures such as presenting video clips of individuals with AD, observations of individuals with AD, clinical interviews with individuals with AD, and ratings collected from friends, family members, and close associates of individuals with AD.

Overall, the clear finding of this study was that stigmatization is elicited by social behaviors associated with AD and not by the label of “Asperger’s Disorder.” Therefore, interventions are needed to decrease stigmatization resulting from social behaviors associated with AD. These interventions can focus on helping the public adopt less stigmatizing views of social behaviors associated with AD and helping individuals with AD minimize social behaviors that lead to stigmatization. In addition, professionals that work with individuals who have AD need to be aware that their clients are likely experiencing negative consequences of stigmatization.

# REFERENCES

Adewuya, A. O., & Makanjuola, R. A. (2005). Social distance towards people with mental illness amongst Nigerian university students. *Social Psychiatry and Psychiatric Epidemiology, 40,* 865-868.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders (4th ed.), Text Revision.* Washington, DC: Author.

Angermeyer, M. C., & Dietrich, S. (2006). Public beliefs about and attitudes towards people with mental illness: A review of population studies. *Acta Psychiatrica Scandinavica, 113,* 163-179.

Angermeyer, M. C., & Matschinger, H. (1996). Public attitude towards psychiatric treatment. *Acta Psychiatrica Scandinavica, 94,* 326–336.

Attwood, T. (1998). *Asperger's Syndrome: A Guide for Parents and Professionals.* London: Jessica Kingsley Publishers.

Barnhill, G. P. (2007). Outcomes in adults with Asperger syndrome. *Focus on Autism and Other Developmental Disabilities, 22*, 116-126.

Baron, R. C., & Salzer, M. S. (2002). Accounting for unemployment among people with mental illness. *Behavioral Sciences and the Law*, *20*, 585-599.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 17*, 497-530.

Bethlehem, D. W., & Kingsley, P. R. (1972). Zambian student attitudes towards others based on tribe, class, and rural/urban dwelling. *Journal of Social Psychology, 100,* 188-198.

Bhugra, D. and Cutter, W. (2001) Mentally ill: Public attitudes. *International Encyclopedia of the Social & Behavioral Sciences,* 9665-9669.

Birenbaum, A. (1970). On managing a courtesy stigma. *Journal of Health and Social Behavior, 11*, 196-206.

Blane, K. K., & Borden, M. C. (2008). The importance of early intervention for autism. *Brown University Child and Adolescent Behavior Letter, 24,* 1-7.

Bogardus, E. M. (1933). A Social Distance Scale. *Journal of Sociology and Social Research, 17,* 265-271.

Bord, R. (1971). Rejection of the mentally ill: Continuities and further developments. *Social Problems, 18,* 496-509.

Campbell, J. M. (2006). Changing children's attitudes toward autism: A process of persuasive communication. *Journal of Developmental and Physical Disabilities, 18*, 251-272.

Campbell, J. M. (2007). Middle school student's response to the self-introduction of a student with autism. *Remedial and Special Education, 28,* 163-173.

Campbell, J. M., Ferguson, J. E., Herzinger, C. V., Jackson, J. N., & Marino, C. A. (2004). Combined descriptive and explanatory information improves peers' perceptions of autism. *Research in Developmental Disabilities, 25,* 321-339.

Campbell, J. M., Ferguson, J. E., Herzinger, C. V., Jackson, J. N., & Marino, C. A. (2005). Peers' attitudes toward autism differ across sociometric groups: An explanatory investigation. *Journal of Developmental and Physical Disabilities, 17*, 281-298.

Carling, P. J. (1990). Major mental illness, housing and supports. *American Psychologist, 45*, 969-976.

Cascella, P. W., & Colella, C. S. (2004). Knowledge of Asperger's disorder among Connecticut school speech-language pathologists. *Focus on Autism and Other Developmental Disabilities, 19*, 245-252.

Centers for Disease Control and Prevention (2007). Prevalence of autism spectrum disorders, Autism and developmental disabilities monitoring network, 14 sites, United States, 2002. MWWR Surveillance Summaries, 56 (SS01), 12-28

Chung, K. F., & Chan, J. F. (2004). Can a less pejorative Chinese translation for schizophrenia reduce stigma? A study of adolescents' attitudes towards people with schizophrenia. *Psychiatry Clinical Neuroscience, 58*, 245-252.

Corrigan, P. W. (Ed.) (2005). *On the stigma of mental illness: Practical strategies for research and social change.* Washington, DC: American Psychological Association.

Corrigan, P. W., Edwards, A. B., Green, A., Diwan, S. L., & Penn, D. L. (2001). Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin, 27*, 219-225.

Corrigan, P. W., Green, A., Lundin, R., Kubiak, M. A., & Penn, D. L. (2001). Familiarity with and social distance from people who have serious mental illness. *Psychiatric Services, 52,* 953-958.

Corrigan, P. W., Markowitz, F. E., Watson, A., Rowan, D., & Kubiak, M. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health & Social Behavior, 44*, 162-179.

Crick, N. R., & Grotpeter, J. (1996). Children's treatment by peers. *Development and Psychopathology, 8,* 367-380.

Druss, B. G., Allen, H. M. Jr., & Bruce, M. L. (1998). Physical health, depressive symptoms, and managed care enrollment. *American Journal of Psychiatry, 155,* 878-883.

Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavioral Research Methods, Instruments, & Computers, 28,* 1-11.

Falk, G. (2001). *Stigma: How we treat outsiders.* Amherst, NY: Prometheus Books.

Farina, A., & Felner, R. D. (1973). Employment interviewer reactions to former mental patients. *Journal of Abnormal Psychology, 82*, 268-272.

Farina, A., Felner, R. D., & Boudreau, L. (1973). Reactions of workers to male and female mental patient job applicants. *Journal of Consulting and Clinical Psychology, 41,* 363-372.

Farina, A., & Hagelauer, H. (1975). Sex and mental illness: The generosity of females. *Journal of Consulting and Clinical Psychology, 43,* 122.

Farina, A., Murray, P., & Groh, T. (1978). Sex and worker acceptance of a former mental patient. *Journal of Consulting and Clinical Psychology, 46,* 887-891.

Feldman, D. B., & Crandall, C. S. (2007). Dimensions of mental illness stigma: What about mental illness causes social rejection? *Journal of Social and Clinical Psychology, 26,* 137-154.

Fink, P. J., & Tasman, A. (Eds.) (1992). *Stigma and mental illness.* Washington, DC: American Psychiatric Press.

Gaus, V. L. (2007). *Cognitive behavioral therapy for adult Asperger Syndrome.* New York: Guilford.

Geddes, L. (2008). Early intervention could change the autistic brain. *New Scientist, 198,* 6-7.

Ghaziuddin, M., Weidmer-Mikhail, E., & Ghaziuddin, N. (1998). Comorbidity of Asperger syndrome: A preliminary report. *Journal of Intellectual Disability Research, 42*, 279-283.

Gilbert, P. (1989) *Human Nature and Suffering.* New York: Lawrence Erlbaum Associates.

Gilbert, P. (1992). *Depression: The evolution of powerlessness.* New York: Guilford.

Gilbert, P. (2000). The relationship of shame, social anxiety, and depression: The role of the evaluation of social rank. *Clinical Psychology and Psychotherapy, 7,* 174-189.

Gray, D. E. (1993). Perceptions of stigma: The parents of autistic children. *Sociology of Health & Illness, 15,* 102-120.

Gray, D. E. (2002a). Ten years on: A longitudinal study of families of children with autism. *Journal of Intellectual & Developmental Disability, 27*, 215-222.

Gray, D. E. (2002b). 'Everybody just freezes. Everybody is just embarrassed': Felt and enacted stigma among parents of children with high functioning autism. *Sociology of Health and Illness, 24*, 734-749.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74*, 1464-1480.

Gureje, O., Lasebikan, V. O., Ephraim-Oluwanuga, O., Olley, B. O., & Kola, L. (2005). Community study of knowledge of and attitude to mental illness in Nigeria. *British journal of Psychiatry, 186,* 436-441.

Hayward, P., & Bright, J. A. (1997). Stigma and mental illness: A review and critique. *Journal of Mental Health, 6,* 345.

Howlin, P. (2000). Outcome in adult life for more able individuals with autism or Asperger syndrome. *Autism, 4,* 63-83.

Hurlbutt, K., & Chalmers, L. (2004). Employment and adults with Asperger Syndrome. *Focus on Autism and Other Developmental Disabilities, 19*, 215-222.

Jennes-Coussens, M., Magill-Evans, J., & Koning, C. (2006). The quality of life of young men with Asperger syndrome. *Autism, 10*, 403-414.

Johnson, L. M., Mullick, R., & Mulford, C. L. (2002). General versus specific victim blaming. *The Journal of Social Psychology, 142*, 249-263.

Jones, E. E., Farina, A., Hastorf, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships.* Freeman: New York.

Jorm, A. F., & Griffiths, K. M. (2008). The public's stigmatizing attitudes towards people with mental disorders: how important are biomedical conceptualizations? *Acta Psychiatrica Scandinavica, 118,* 315-321.

Kirk, S. (1974). The impact of labeling on the rejection of the mentally ill: An experimental study. *Journal of Health and Social Behavior, 15,* 108-117.

Kleg, M., & Yamamoto, K. (1998). As the world turns: Ethno-racial distances after 70 years. *Social Science Journal,* 35, 183-191.

Klin, A., McPartland, J., & Volkmar F. R. (2005). Asperger syndrome. In F. R. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders: Vol. 1. Diagnosis, development, neurobiology, and behavior* (3rd ed., pp. 88-125). Hoboken, NJ: John Wiley & Sons.

Klin, A., Volkmar, F. R., & Sparrow, S. S. (2000). *Asperger Syndrome.* New York: Guilford Press.

Lauritsen, M., & Ewald, H. (2001). The genetics of autism. *Acta Psychiatrica Scandinavica, 103,* 411-428.

Lefley, H. P. (1989). Family burden and family stigma in major mental illness. *American Psychologist, 44,* 556-560.

Lehman, S., Joy, V., Kreisman, D., & Simmens, S. (1976). Responses to viewing symptomatic behaviors and labeling of prior mental illness. *Journal of Community Psychology, 4,* 327-334.

Levine, I. S., & Rog, D. J. (1990). Mental health services for homeless mentally ill persons. *American Psychologist, 45,* 963-969.

Link, B. G. (1987). Understanding labeling effects in the area of mental disorders: An assessment of the effects of expectations of rejection. *American Sociological Review, 52*, 96-112.

Link, B. G., & Cullen, F. T. (1983). Reconsidering the social rejection of ex-mental patients: Levels of attitudinal response. *American Journal of Community Psychology, 11,* 261-273.

Link, B. G., Cullen, F. T., Frank, J., & Wozniak, J. F. (1987). The social rejection of former mental patients: Understanding why labels matter. *The American Journal of Sociology, 92,* 1461-1500.

Link, B. G., Struening, E. L., Cullen, F. T., Shrout, P. E., Dohrenbend, P. E., (1989). A modified labeling theory approach to mental disorders and empirical assessment. *American Sociological Review, 54,* 400-423.

Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2001). The consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services, 52,* 1621-1626.

Link, B. G., Struening, E. L., Rahav, M., Phelan, J. C., & Nuttbock, L. (1997). On stigma and its consequences: Evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. *Journal of Health and Social Behavior, 38,* 177-190.

Loman, L. A., & Larkin, W. E. (1976). Rejection of the mentally ill: An experiment in labeling. *Sociological Quarterly, 17,* 555-560.

Müller, E., Schuler, A., & Yates, G. B. (2008). Social challenges and supports from the perspective of individuals with Asperger syndrome and other autism spectrum disabilities. *Autism, 12,* 173-190.

Office of Institutional Research and Assessment (2009). *Distribution of enrollment by class level sex and ethnicity.* Auburn University. http://www.auburn.edu /academic/provost/odma/planning-assessment.html.

Ozonoff, S., Pennington, B. F., & Rogers, S. J. (1991). Executive function deficits in high-functioning autistic individuals—relationship to theory of mind. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 32, 1081-1105.

Paul, R., Shriberg, L. D., McSweeny, J., Cicchetti, D., Klin, A., & Volkmar, F. (2005). Brief report: Relations between prosodic performance and communication and socialization ratings in high functioning speakers with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 35,* 861-869.

Penn, D. L., & Nowlin-Drummond, A. (2001). Politically correct labels and schizophrenia: A rose by any other name. *Schizophrenia Bulletin, 27,* 197-203.

Phelan, J. C., & Link, B. G. (1998). The growing belief that people with mental illness are violent: The role of the dangerousness criterion for civil commitment. *Social Psychiatry and Psychiatric Epidemiology, 33,* S7-S12.

Phillips, D. (1963). Rejection: A possible consequence of seeking help for mental disorders. *American Sociological Review, 28,* 963-972.

Phillips, D. (1964). Rejection of the mentally ill: The influence of behavior and sex. *American Sociological Review, 29,* 679-687.

Portway, S. M., & Johnson, B. (2003). Asperger Syndrome and the children who 'don't quite fit in.' *Early Child Development and Care, 173*, 435-443.

Portway, S. M., & Johnson, B. (2005). Do you know I have Asperger's syndrome? Risks of a non-obvious disability. *Health, Risk, and Society, 7,* 73-83.

Presidential Task Force on Employment of Adults with Disabilities (2000). *Re-charting the course: Turning points.* Washington, DC: Author.

Price, J. S., & Sloman, L. (1987). Depression as yielding behaviour: An animal model based on Schjelderup-Ebb's pecking order. *Ethology and Sociobiology, 8*(Suppl.), 85-98.

Read, J., & Harre, N. (2001). The role of biological and genetic causal beliefs in the stigmatization of 'mental patients.' *Journal of Mental Health UK, 10,* 223-235.

Renty, J., & Roeyers, H. (2006). Quality of life in high-functioning adults with autism spectrum disorder: The predictive value of disability and support characteristics. *Autism, 10*, 511-524.

Riskind, J. H., & Wahl, O. (1992). Moving makes it worse: The role of rapid movement in fear of psychiatric patients. *Journal of Social and Clinical Psychology, 11,* 349-364.

Rubin, E. (2004). Challenges in social communication in Asperger’s Syndrome and high-functioning autism. *Topics in Language Disorders, 24*, 271-285.

Scheff, T. J. (1966), *Being mentally ill: A sociological theory.* Chicago: Aldine.

Scheff, T. J. (1984). *Being mentally ill: A sociological theory* (2nd ed.). Chicago: Aldine.

Schroder, D., & Ehrlich, D. (1968). Rejection by mental health professionals: A possible consequence of not seeking appropriate help for emotional disorders. *Journal of Health and Social Behavior, 9,* 222-232.

Shtayermman, O. (2007). Peer victimization in adolescents and young adults diagnosed with Asperger's syndrome: A link to depressive symptomology, anxiety symptomology and suicidal ideation. *Issues in Comprehensive Pediatric Nursing, 30*, 87-107.

Stefan, S. (2001). *Unequal rights: Discrimination against people with mental disabilities and the Americans with Disabilities Act.* Washington, DC: American Psychological Association.

Sturmey, P. & Fitzer, A. (Eds.), (2007). *Autism spectrum disorders: Applied behavioral analysis, evidence and practice.* Austin, TX: PRO-ED.

Stuart, H., & Arboleda-Florez, J. (2001). Community attitudes towards people with schizophrenia. *Canadian Journal of Psychiatry, 46*, 245-252.

Swaim, K. F., & Morgan, S. B. (2001). Children's attitudes and behavioral intentions toward a peer with autistic behaviors: Does a brief educational intervention have an effect? *Journal of Autism and Developmental Disorders, 31*, 195-205.

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin, 7,* 225-240.

U.S. Department of Commerce, U.S. Bureau of the Census (2000). *Census Population and Housing the United States, Summary File 1 (SF-1)*. Washington, DC: U.S. Government Printing Office.

Volkmar, F. R., & Klin, A. (2005). Issues in the classification of autism and related conditions. In F. R. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders: Vol. 1. Diagnosis, development, neurobiology, and behavior* (3rd ed., pp.5-41). Hoboken, NJ: John Wiley & Sons.

Voysey, M. (1972). Impression management by parents with disabled children. *Journal of Health and Social Behavior, 13*, 80-89.

Wahl, O. F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin, 25*, 467-478.

Weiner, B. (1995) *Judgments of responsibility: A foundation for a theory of social conduct.* New York: Guilford Press.

White, S. (2005). *An investigation of a model of social competence.* Unpublished doctoral dissertation, Binghamton University.

# APPENDICES

## Appendix A

Table 1

*DSM-IV TR Criteria for Asperger's Disorder*

A. Qualitative impairment in social interaction, as manifested by at least two of the following:

1. Marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
2. Failure to develop peer relationships appropriate to developmental level
3. A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest to other people)
4. Lack of social or emotional reciprocity.

B. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

1. Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
2. Apparently inflexible adherence to specific, nonfunctional routines or rituals

3. Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)
4. Persistent preoccupation with parts of objects.

C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.

D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years).

E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the environment in childhood.

F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.

*Note.* From The DSM-IV TR (p. 84), APA, 2000, Washington, DC: Author.

Table 2

*Possible Behaviors Indicative of Asperger's Disorder*

| Social Impairment<br>Specific Behaviors | Examples |
|---|---|
| Misread or misuse facial expression (Klin et al., 2000) | Hugging an individual while maintaining a flat facial expression (Gaus, 2007) |
| Misread and misuse of prosody (Klin et al., 2000) | Speaking in a monotone fashion even when experiencing different emotions (Gaus, 2007) |
| Failure to make eye contact (APA, 2000) | Can lead others to interpret the behavior of the individual with AD as an attempt to discontinue interactions (White, 2005) |
| Focus on just one topic (APA, 2000) | Dominating a conversation with irrelevant information (*i.e*. information about birds). |
| Lack of social reciprocity (APA, 2000) | Receiving a phone call on a weekly basis |

| | |
|---|---|
| | from a family member, but never calling them (Gaus, 2007) |
| Failure to understand personal space | Hugging someone who is not well known to the individual (Gaus, 2007) |
| Poor impulse control (Ozonoff et al., 1991) | Telling someone that they look like they have gained weight |

Restricted, repetitive, and stereotyped behaviors (APA, 2000)

| Specific Behaviors | Examples |
|---|---|
| Focus on just one topic (APA, 2000) | Spending all free time reading books and watching documentaries about wild birds (Gaus, 2007) |
| Stereotyped and repetitive motor mannerisms (APA, 2000) | Unusual hand movements when anxious (Gaus, 2007) |
| Inflexible adherence to routine (APA, 2000) | Failure to pay rent when management company changed, which disrupted |

| | |
|---|---|
| | routine (Gaus, 2007) |
| Mild motor clumsiness (APA, 2000) | Inability to play in group sports (APA, 2000) |

Table 3

*Information for Sample and Conditions*

| | Sample | Asperger's Disorder-with Label | Asperger's Disorder-No Label | Milder Impairment-with Label | Milder Impairment-No Label | No Impairment-with Label | No Impairment-No Label |
|---|---|---|---|---|---|---|---|
| | (*n* = 181) | (*n* = 29) | (*n* = 34) | (*n* = 32) | (*n* = 33) | (*n* = 26) | (*n* = 35) |
| | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) |
| Mean Stigma Score | 0.91 (0.49) | 1.23 (0.37) | 1.42 (0.23) | 0.96 (0.39) | 0.83 (0.42) | 0.49 (0.30) | 0.52 (0.37) |
| Age | 20.59 (3.38) | 20.36 (2.05) | 19.90 (1.91) | 19.93 (1.43) | 21.18 (4.27) | 20.36 (1.94) | 21.60 (5.61) |
| Years of college completed | 2.08 (1.69) | 1.82 (1.68) | 1.73 (1.43) | 2.00 (1.63) | 2.16 (1.90) | 2.08 (1.76) | 2.59 (1.67) |
| | Percentage | Percentage | Percentage | Percentage | Percentage | Percentage | Percentage |
| Female | 80.7 | 75.0 | 80.0 | 90.3 | 75.0 | 84.6 | 79.4 |
| Caucasian | 84.0 | 85.7 | 83.3 | 80.6 | 84.4 | 80.8 | 88.2 |
| African American | 13.3 | 14.3 | 6.7 | 16.1 | 15.6 | 15.4 | 11.8 |
| Asian American | 1.7 | 0 | 10.0 | 0 | 0 | 0 | 0 |
| Latino/Hispanic | .6 | 0 | 0 | 0 | 0 | 3.8 | 0 |
| Other | .6 | 0 | 0 | 3.1 | 0 | 0 | 0 |

Table 4

*Behavioral Descriptions for Vignettes*

| Behavioral Category | Examples of Behavior as Described in the Three Vignettes | |
|---|---|---|
| Poor Eye Contact | Asperger's Disorder | Frank tends to look down when he talks to other people. |
| | Mild Social Impairment | Frank sometimes appears quiet and shy around others. |
| | No Social Impairment | Frank is usually outgoing, but can be quiet in new situations. |
| Difficulty with Friendships | Asperger's Disorder | Frank does have a few friends. |
| | Mild Social Impairment | People enjoy Frank's company. Frank has a few close friends whom he sees often. |
| | No Social Impairment | People enjoy being around Frank. Frank has several close friends. |
| Perseveration | Asperger's Disorder | Frank knows the common and scientific name of every bird at the zoo. |
| | Mild Social Impairment | Frank knows all the players for the Atlanta Braves and the personal stats for each player. |
| | No Social Impairment | Frank likes going to sporting events and keeping up on his favorite teams. |
| Poor Impulse Control | Asperger's Disorder | While Frank was at a restaurant, a customer at a different table told her friend that she was done eating. Frank had finished his meal, and since he was still hungry he asked, "Can I have your left- |

|  |  |  |
|---|---|---|
|  |  | overs?” She gave Frank a nasty look and he didn’t understand why. |
|  | Mild Social Impairment | One time at a restaurant Frank said, “I can’t imagine anyone eating all the food they give you here.” A woman sitting at a nearby table who had just finished all of her food overheard Frank’s comment. As the woman left the restaurant she gave Frank a nasty look, and Frank immediately felt embarrassed. |
|  | No Social Impairment | Frank enjoys many social situations, and is as comfortable at a formal dinner as he is at a football game. Frank is polite, and always remembers to compliment others. |
| Inflexible Adherence to Routine | Asperger’s Disorder | Frank attends church weekly, but feels anxious when there is a change in the service (i.e. a holiday service). |
|  | Mild Social Impairment | Frank attends church weekly and feels badly when he is unable to attend a special holiday service. |
|  | No Social Impairment | Frank attends church on a regular basis. |
| Lack of Social Reciprocity | Asperger’s Disorder | He maintains employment at a local pharmacy doing inventory checks and entering purchase orders . . . he has difficulty handling customer complaints. |

| | |
|---|---|
| Mild Social Impairment | He maintains employment at a local pharmacy filling prescriptions, answering the telephone, and running the cash register . . . he handles customer complaints well. |
| No Social Impairment | He maintains employment at a local pharmacy filling prescriptions, answering the telephone, and running the cash register . . . he enjoys interacting with customers. |

Table 5

*Means and Standard Deviations for Social Distance Scale Items*

| Questions | Mean (SD) | | | |
|---|---|---|---|---|
| | Asperger's Disorder | Mild Social Impairment | No Social Impairment | α * |
| 1. How would you feel having a class with someone like Frank? | 0.51 (0.62) | 0.34 (0.51) | 0.16 (0.37) | 0.91 |
| 2. How would you feel having someone like Frank in your study group? | 0.98 (0.85) | 0.66 (0.62) | 0.38 (0.52) | 0.91 |
| 3. How would you feel doing a class project with someone like Frank? | 1.08 (0.85) | 0.69 (0.64) | 0.36 (0.48) | 0.91 |
| 4. How would you feel about going to a social event (i.e. a party, movie, or concert) with someone like Frank? | 1.78 (1.01) | 1.05 (0.67) | 0.41 (0.59) | 0.90 |
| 5. How would you feel about going to a sporting event with someone like Frank (i.e. football game)? | 1.60 (0.93) | 0.71 (0.77) | 0.41 (0.59) | 0.91 |
| 6. How would you feel having your sibling marry someone like Frank? | 1.95 (0.91) | 1.22 (0.88) | 0.75 (0.91) | 0.91 |
| 7. How would you feel about having someone like Frank take care of your pet? | 0.75 (0.76) | 0.78 (0.84) | 0.61 (0.82) | 0.91 |
| 8. How would you feel about going on a date with someone like Frank? (If you date females, think of a female with the same personality as Frank.) | 2.43(0.71) | 1.45 (0.71) | 0.66 (0.66) | 0.90 |

| | | | | |
|---|---|---|---|---|
| 9. How would you feel about being a co-worker on the same job as someone like Frank? | 1.10 (0.84) | 0.72 (0.63) | 0.30 (0.50) | 0.90 |
| 10. How would you feel about having someone like Frank as a neighbor? | 0.59 (0.64) | 0.42 (0.58) | 0.20 (0.40) | 0.91 |
| 11. How would you feel about living in the same apartment/house as someone like Frank? (If you are more comfortable living with a female, think of a female with the same characteristics as Frank.) | 1.89 (0.83) | 1.09 (0.72) | 0.61 (0.82) | 0.90 |
| 12. How would you feel having Frank teach one of your college courses? | 1.62 (0.85) | 1.18 (1.01) | 0.90 (.093) | 0.91 |
| 13. How would you feel about having someone like Frank being the mayor of your community? | 2.27 (0.83) | 1.65 (0.76) | 0.93 (0.79) | 0.90 |
| 14. How would you feel having someone like Frank serving in our Congress? | 2.27 (0.79) | 1.68 (0.94) | 1.13 (0.94) | 0.91 |
| 15. How willing would you be to be supervised by someone like Frank? | 1.75 (0.80) | 1.14 (0.77) | 0.90 (0.83) | 0.91 |
| 16. How willing would you be to carpool with someone like Frank on a daily basis? | 1.35 (0.90) | 0.75 (0.64) | 0.48 (0.70) | 0.91 |
| 17. How willing would you be to have someone like Frank date a close friend or relative? | 1.62 (0.79) | 1.08 (0.69) | 0.52 (0.72) | 0.90 |
| 18. How willing would you be to have someone like Frank participate in | 0.49 (0.62) | 0.37 (0.52) | 0.20 (0.40) | 0.91 |

|  |  |  |  |  |
|---|---|---|---|---|
| community functions? |  |  |  |  |
| 19. How willing would you be to have someone like Frank drive your bus? | 1.10 (0.93) | 0.85 (0.76) | 0.75 (0.96) | 0.91 |
| 20. How willing would you be to hold a conversation with someone like Frank? | 0.98 (0.85) | 0.51 (0.59) | 0.21 (0.41) | 0.91 |

*Note.* * This column represents what Cronbach's α would be if the item was removed from the Social Distance Scale. Removal of items did not improve Cronbach's α; therefore, no items were removed from the Social Distance Scale.

Figure 1

*Mean Stigmatization Scores by Label and Behaviors*

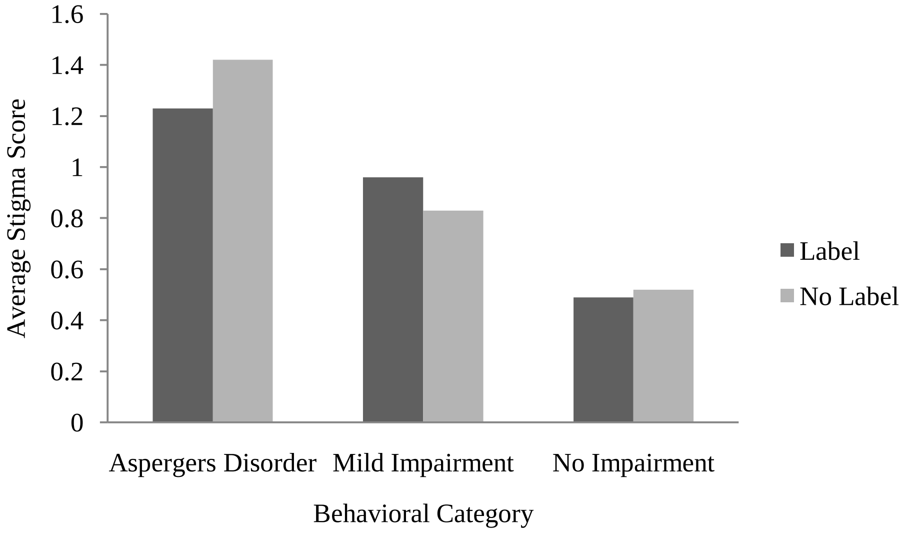

Table 6

*Summary of Regression Analysis for Demographic Variables Predicting Stigmatization*

| Variable | *B* | *SE* | β |
|---|---|---|---|
| Gender | > 0.01 | 0.09 | >0.01 |
| Age | -0.01 | 0.01 | -0.07 |
| Ethnicity | 0.06 | 0.07 | 0.06 |
| Education | >-0.01 | 0.03 | -0.02 |
| Response Time | >0.01 | >0.01 | 0.14 |

*Note*. No variables were found to be statistically significant.

# Appendix B

## Questionnaire

Answer the following questions by rating how much you would be willing for that event to occur on a scale from definitely willing to definitely unwilling. Please answer the questions as honestly as possible. (On the computer presentation each question will be accompanied by all 5 options with radial buttons).

Rating: Definitely Willing; Probably Willing; Probably Unwilling; Definitely Unwilling; Not Applicable*

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1. How would you feel having a class with someone like Frank?
2. How would you feel having someone like Frank in your study group?
3. How would you feel doing a class project with someone like Frank?
4. How would you feel about going to a social event (i.e. a party, movie, or concert) with someone like Frank?
5. How would you feel about going to a sporting event with someone like Frank (i.e. football game)?
6. How would you feel having your sibling marry someone like Frank?
7. How would you feel about having someone like Frank take care of your pet?
8. How would you feel about going on a date with someone like Frank? (If you date females, think of a female with the same personality as Frank.)
9. How would you feel about being a co-worker on the same job as someone like Frank?
10. How would you feel about having someone like Frank as a neighbor?
11. How would you feel about living in the same apartment/house as someone like Frank? (If you are more comfortable living with a female, think of a female with the same characteristics as Frank.)
12. How would you feel having Frank teach one of your college courses?
13. How would you feel about having someone like Frank being the mayor of your community?
14. How would you feel having someone like Frank serving in our Congress?
15. How willing would you be to be supervised by someone like Frank?

16. How willing would you be to carpool with someone like Frank on a daily basis?

17. How willing would you be to have someone like Frank date a close friend or relative?

18. How willing would you be to have someone like Frank participate in community functions?

19.How willing would you be to have someone like Frank drive your bus?

20. How willing would you be to hold a conversation with someone like Frank?

Please answer the following true false question: Frank works at a pharmacy. True/False

Date of Birth / / (mm/dd/yy) Gender M / F

Race/Ethnicity- Please circle the one that best describes you.

Caucasian
African American
Hispanic
Asian American
Other

Level of Education- Please put an X next to the highest level of education obtained

____ High School Diploma
____ 1-2 semesters of college
____ 3-4 semesters of college
____ 5-6 semesters of college
____ 7-8 semesters of college
____ 8 or more semesters of college
____ Bachelors degree

*Note.* *Responses were scored as follows: 0- definitely willing, 1- probably willing, 2- probably unwilling, and 3- definitely unwilling. Responses of Not Applicable were not used to calculate stigmatization scores.

# Appendix C

## Vignettes

Description for conditions 1, 3, and 5 had the sentence, “Frank was diagnosed with Asperger's Disorder as a child.” added as the second sentence of the vignette to create the six conditions.

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### Condition 1

Frank is a 21-year-old man. Frank is very likable and kind. He sometimes appears shy and quiet when he is around others. For example, Frank tends to look down when he talks to or is around other people. However, Frank does have a few friends and likes to participate in community activities such as planting in the community garden. He also likes visiting the zoo. The bird exhibit is Frank's favorite thing at the zoo, as he knows the common and scientific name of every bird at the zoo. Frank attends church weekly, but feels anxious when there is a change in the service (i.e. a holiday service).

When Frank meets new people, he enjoys talking about birds even when the other person is not necessarily interested. During any conversation Frank talks about the birds that are common to the area, even when it does not fit in the conversation. Sometimes Frank makes inappropriate comments. For example, while Frank was at a restaurant a customer at a different table told her friend that she was done eating. Frank had finished his meal, and since he was still hungry he asked, “Can I have your left-overs?” She gave Frank a nasty look and he didn’t understand why.

Frank was an A and B student during high school and excelled in science. He attended a local community college and is a certified pharmacy technician. He maintains employment at a local pharmacy doing inventory checks and entering in purchase orders. He prefers these jobs because he is good at them, and he has difficulty handling customer complaints.

When people describe Frank, they usually say that he is very caring and one of the nicest people they know.

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Condition 2

Frank is a 21-year-old man. Frank is very likable and kind. He sometimes appears shy and quiet when he is around others. Frank is not outgoing, but people enjoy Frank's company. Frank has a few close friends whom he sees often. Frank likes community activities like golfing. He also likes going to sporting events, especially baseball, as Frank knows all of the players for the Atlanta Braves and the personal stats for each player. Frank attends church weekly and feels badly when he is unable to attend a special holiday service.

When Frank meets new people he enjoys talking about baseball. When Frank has a conversation, he brings up sports whenever it fits in. Sometimes Frank catches himself accidentally making an inappropriate comment. For example, one time at a restaurant Frank said, “I can’t imagine anyone eating all the food they give you here.” A woman sitting at a nearby table who had just finished all of her food overheard Frank’s comment. As the woman left the restaurant she gave Frank a nasty look, and Frank immediately felt embarrassed.

Frank was an A and B student during high school and excelled in science. He attended a local community college and is a certified pharmacy technician. He maintains employment at a local pharmacy filling prescriptions, answering the telephone, and running the cash register. He prefers these jobs because he is good at them, and he handles customer complaints well.

When people describe Frank, they usually say that he is very caring and one of the nicest people they know.

---

Condition 3

Frank is a 21-year-old man. Frank is very likable and kind. He is usually outgoing, but can sometimes be quiet in new situations. People enjoy being around Frank. Frank has several close friends whom he like to go to social events with. He likes going to sporting events and keeping up on his favorite teams. Frank attends church on a regular basis.

When Frank meets new people he enjoys talking about a variety of topics. Frank enjoys many social situations, and is as comfortable at a formal dinner as he is at a football game. Frank is polite, and always remembers to compliment others. When Frank experiences a difficult situation he tries to work things out, but he is not afraid to stand up for himself.

Frank was an A and B student during high school and excelled in science. He attended a local community college and is a certified pharmacy technician. He maintains employment at a local pharmacy filling prescriptions, answering the telephone, and running the cash register. He prefers these jobs because he is good at them, and he enjoys interacting with customers.

When people describe Frank, they usually say that he is very caring and one of the nicest people they know.

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## Appendix D

## Consent Forms

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**(NOTE: DO NOT SIGN THIS DOCUMENT UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)**

### PARENTAL PERMISSION/CHILD ASSENT
### for a Research Study entitled
### “Do you like this person?”

**Your child is invited to participate in a research study** to examine people’s perceptions of a description of an individual who may or may not have symptoms of mental illness. The study is being conducted by Robert Butler, B.S., under the direction of Dr. Jennifer Gillis, Ph.D., in the Auburn University Department of Psychology. Your child was selected as a possible participant because he or she is an undergraduate student at Auburn University. Since your child is age 18 or younger we must have your permission to include him/her in the study.

**What will be involved if your child participates?** If you decide to allow your child to participate in this research study, your child will be asked to read a short description of an individual. They will then be asked to complete a survey about their perceptions of the individual, and to what extent they would like to have contact with that individual. Your child may participate in this project by scheduling a time on sona-systems and then coming to room 204 in Thach Hall at their scheduled time. Your child's total time commitment will be approximately 30 minutes.

**Are there any risks or discomforts?** The risks associated with participating in this study are minimal and may include distress due to study-related measures. For example, he/she may experience slight distress when deciding how to answer questions about the descriptions of the individual. To minimize these risks, we will allow your child to remove himself/herself from participating in the survey by simply discontinuing. Also, we assure you that your child's answers are confidential and that there are no "right or wrong" answers to the questions asked about each individual.

**Are there any benefits to your child or others?** If your child participates in this study, he/she may feel the positive effects of aiding the advancement of the field of psychology. We cannot promise that your child will receive the benefit described.

**Will you or your child receive compensation for participating?** To thank your child for participating, he/she will be offered ½ extra credit hour for participating.

**Are there any costs?** There are no direct costs associated with participating in this study.

**If you (or your child) change your mind about your child's participation,** your child can be withdrawn from the study at any time. Your child's participation is completely voluntary. If you choose to withdraw your child, your child's data can be withdrawn up until it is submitted. No identifying information will be retained, and it will be impossible to identify your child's specific information after submission. Your decision about whether or not to allow your child to participate or to stop participating will not jeopardize your or your child's future relations with Auburn University, the Department of Psychology, or Dr. Jennifer Gillis.

**Your child's privacy will be protected.** Any information obtained in connection with this study will remain anonymous. Information obtained through your child's participation may be used to fulfill an educational requirement, be published in a professional journal, and/or presented on a professional poster.

**If you (or your child) have questions about this study,** please contact Robert Butler at butlerc@auburn.edu, or Dr. Jennifer Gillis at jmg0001@auburn.edu. A copy of this document will be given to you to keep.

**If you have questions about your child's rights as a research participant,** you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

**HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH FOR YOUR CHILD TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO ALLOW YOUR CHILD TO PARTICIPATE. YOUR CHILD'S SIGNATURE INDICATES HIS/HER WILLINGNESS TO PARTICIPATE.**

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Information Letter

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**(NOTE: DO NOT CONSENT TO THIS STUDY UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)**

## Information Letter
## for a Research Study entitled
## "Do you like this person?"

**You are invited to participate in a research study** to examine people's perceptions of a description of an individual who may or may not have symptoms of mental illness. The study is being conducted by Robert Butler, B.S., under the direction of Dr. Jennifer Gillis, Ph.D., in the Auburn University Department of Psychology. You were selected as a possible participant because you are an undergraduate student at Auburn University and are age 19 or older.

**What will be involved if you participate?** If you decide to participate in this research study, you will be asked to read a short description of an individual. You will then be asked to complete a survey about your perceptions of the individual described, and to what extent you would like to have contact with that individual. You may participate in this project by scheduling a time on sona-systems and then coming to room 204 in Thach Hall at your scheduled time. Your total time commitment will be approximately 30 minutes.

**Are there any risks or discomforts?** The risks associated with participating in this study are minimal and may include distress due to study-related measures. For example, you may experience slight distress when deciding how to answer questions about the descriptions of the individual. To minimize these risks, we will allow you to remove yourself from participating in the survey by simply discontinuing. Also, we assure you that your answers are confidential and that there are no "right or wrong" answers to the questions asked about each individual.

**Are there any benefits to yourself or others?** If you participate in this study, you can expect to experience the positive psychological consequence of the knowledge that you are aiding in the advancement of the field of psychology. We cannot promise that you will receive the benefit described.

**Will you receive compensation for participating?** To thank you for your time, you will be offered ½ extra credit hour for participating.

**If you change your mind about participating,** you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. No identifying information will be retained after your information has been submitted. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Psychology, or Dr. Jennifer Gillis.

**Your privacy will be protected.** Any information obtained in connection with this study will remain anonymous. Information obtained through your participation may be used to fulfill an educational requirement, be published in a professional journal, and/or presented on a professional poster.

**If you have questions about this study,** please contact Robert Butler at butlerc@auburn.edu, or Dr. Jennifer Gillis at jmg0001@auburn.edu. A copy of this document will be given to you to keep.

**If you have questions about your rights as a research participant,** you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

**HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO PARTICIPATE.**

______________________________________________________________________