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## Social Appraisal of Adult ADHD: Stigma and Influences of the Beholder's Big Five Personality Traits

Will H. Canu, Matthew L. Newman, Tara L. Morrow, and Daniel L. W. Pope

### ABSTRACT

**Objective:** This study investigates social stigma associated with a diagnosis of ADHD in adulthood and whether Big Five personality traits predict appraisals of affected individuals.

**Method:** A sample of 257 undergraduates rate the desirability of targets with ADHD, minor medical problems, and with no appreciable weakness, across several social engagement contexts.

**Results:** Participants exhibit significantly less desire to engage with those with ADHD (as compared to both controls). Agreeableness, Extraversion, and Conscientiousness are found to predict appraisals of targets with and without ADHD, moderated by sex of the target and the beholder. **Conclusion:** It is suggested that fairly subtle, negative bias toward ADHD contributes to rejection of individuals with the disorder, particularly in academic and work settings. Findings also suggest peers' personalities do have some effect on appraisals of targets with ADHD (*J. of Att. Dis.* 2008; 11(6) 700-710).

ADHD is among the most common psychiatric conditions, with prevalence estimates ranging from 3% (American Psychiatric Association, 2000) to 12% (Faraone, Sergeant, Gillberg, & Biederman, 2003) in child populations and 2% to 6% in adulthood (Wender, 1995). Although its primary symptoms of behavioral and cognitive disinhibition are associated with “work” maladjustment across the lifespan—such as the academic problems documented by Mannuzza, Klein, Bessler, Malloy, and Hynes (1997) and Mannuzza, Klein, Bessler, Malloy, and LaPadula (1993) and the vocational instability noted by Murphy and Barkley (1996)—another primary area of maladjustment for those affected is social relationships. This maladjustment can have far-reaching, negative consequences for personal happiness, degree of support, and success in academic, work, and other settings. Although the behaviors associated with ADHD have been consistently linked to negative social outcomes, the cognitive mediators of social acceptance, such as negative stigma that is specific to the ADHD diagnosis, have received less attention in the literature. The purpose of the current study is to examine the popular stigma attached to adults labeled with ADHD and to examine whether the personality of the beholder could influence acceptance of affected individuals.

### **Rejection Caused by ADHD**

Prior research strongly suggests that rejection experienced by children with ADHD can be pervasive, occurring in both peer (Hoza et al., 2005) and family (Seipp & Johnston, 2005) contexts. In fact, less than 30 minutes with a child with ADHD is sufficient for others to start disengaging in play settings (e.g., Pelham & Bender, 1982). Work by Sandler et al. (1993) indicates that both hyperactive-impulsive (HI) and inattentive (IA) behaviors predict peer relations problems. The cognitive tendencies associated with ADHD—such as deficient empathic (Braaten & Rosén, 2000) and emotional regulatory abilities (Walcott & Landau, 2004), poor social problem-solving ability (Zentall, Cassady, & Javorsky, 2001), and a positive illusory bias that can interfere with social learning from rejection experiences (Hoza, Waschbusch, Pelham, Molina, & Milich, 2000)—further exacerbate the negative social performance of affected children.

Existent findings regarding adults with ADHD suggest that social maladjustment does not necessarily remit with age. Weiss and Hechtman (1993) have shown young adults with ADHD to report having fewer friends, have

heterosocial skill deficits, and complain of interpersonal and sexual problems. Those who marry report elevated levels of marital dissatisfaction and dissolution (Biederman et al., 1993; Murphy & Barkley, 1996). Even before relationships begin, those observed emitting ADHD-like behaviors are negatively evaluated; undergraduates who were exposed to a 20-minute video of an actress depicting ADHD symptoms indicated lower levels of liking, less desire to interact, and more hostile affect, relative to ratings following a nonsymptomatic segment played by the same woman (Paulson, Buermeyer, & Nelson-Gray, 2005). In another study by Canu and Carlson (2003), after a 1-minute interaction, females blind to participants' diagnostic status judged male undergraduates with predominantly IA traits less favorably than nondiagnosed controls as well as those with combined HI and IA symptoms.

The impulsivity (Ratey, Hallowell, & Miller, 1995; Wender, 1995), inattention (Canu & Carlson, 2003; Robin & Payson, 2002), and antisociality (Mannuzza, Klein, Bessler, Malloy, & LaPadula, 1998) often associated with ADHD in adulthood generate aversion in many peers through a common mechanism: Actual behaviors of ADHD targets are observed or otherwise experienced by others, who then draw away. An alternate, cognitive route to rejection that has not been adequately explored is stigma directed at the ADHD label itself.

### **Stigma Related to Mental Illness**

The first goal of the present study was to examine the stigma associated with the diagnostic label of ADHD. Several recent studies have examined the consequences of stigma directed against those with mental illness. The perception of stigma against one's diagnosis has been associated with reluctance to seek treatment (Corrigan, 2004), reduced adherence to medication (Sirey et al., 2001), and a decreased sense of empowerment (Rusch, Lieb, Bohus, & Corrigan, 2006). Perceptions of being stigmatized can also lead to social isolation, even if these perceptions are incorrect (Norvilitis, Scime, & Lee, 2002). Corrigan (2004) has argued that the common mechanism behind all of these consequences is that perceived stigmas lower self-esteem and lead to decreased social opportunities.

According to Goffman (1963) and others (e.g., Crocker, Major, & Steele, 1998), the characteristics associated with the greatest degree of stigma have

three features in common, all of which apply to the label of ADHD: They are highly visible, they are perceived as controllable, and they are misunderstood by the public. First, and most obvious, disorders must be visible and difficult to conceal to be stigmatized (Crocker et al., 1998). For example, depression is somewhat easier to conceal than a psychotic disorder and is therefore associated with a lower degree of stigma (e.g., Dinos, Stevens, Serfaty, Weich, & King, 2004). As discussed previously, ADHD is often detected quickly in social interaction, suggesting that it is difficult to conceal and therefore likely to be associated with outward discrimination.

Second, the literature suggests that perceivers have less sympathy, and feel more justified in their prejudices, toward stigma that are perceived as “controllable” (Crocker et al., 1998). For instance, Ben-Porath (2002) reported that people who seek help for depression are seen as more unstable, and less interpersonally interesting, than those who are similarly depressed but do not seek help. This may be because seeking help reinforces the perception that the disorder is controllable. This aspect of stigma-related prejudice is particularly applicable to ADHD; it is a popular belief that ADHD reflects “bad parenting” and could be easily controlled via some old-fashioned discipline (e.g., McKinstry, 2005). Third, disorders that are misunderstood are more likely to be stigmatized (e.g., Herek, 1999; Van Dorn, Swanson, Elbogen, & Swartz, 2005). Even brief exposure to inaccurate media portrayals of mental disorders facilitates public misperceptions; for instance, a study conducted by Domino (1983) showed that viewing the movie *One Flew Over the Cuckoo's Nest* led to durable, negative beliefs regarding mental illness (for a comprehensive review, see Wahl, 1992).

In the specific case of ADHD, Canu, Morrow, Pope, Bartnicki, and Schatz (2006) recently noted that although a majority (61%) of college students recognized ADHD as “real,” this rate of affirmation was significantly lower when compared to major depression and schizophrenia (80% and 81%, respectively), suggesting that public perceptions of ADHD are tainted by inaccuracy.

In sum, ADHD meets all the criteria for a disorder that is likely to be stigmatized. Furthermore, there is compelling evidence that priming a category label (such as “alcoholic”) is sufficient to activate negative stereotypes (e.g., Banaji & Hardin, 1996). We hypothesized that attaching the mere label of ADHD to a target individual

would lead to negative appraisals of the individual across a number of domains as compared to targets with other sorts of weaknesses.

### **Personality and Acceptance of Others**

A second goal of the present study was to examine the role of personality in judgments of individuals with ADHD. A handful of studies have linked Big Five traits directly to the use of stereotypes and prejudice. For instance, people high in openness and agreeableness score lower on prejudice scales (Ekehammar & Akrami, 2003). There is evidence that such effects may be behaviorally mediated, such that people high in Openness and Agreeableness are more likely to seek out intergroup contact and to interpret this contact positively (J. W. Jackson & Poulsen, 2005). However, to our knowledge, the extent to which personality traits might specifically influence perceptions of those with mental illness has not yet been investigated. Because this is a unique application of the Big Five, we based our predictions on general behavioral tendencies associated with four of the Big Five traits (review in John & Srivastava, 1999), as follows.

First, individuals high on the trait of Extraversion tend to enjoy being with others and are often enthusiastic and action oriented. We expected that this tendency would carry over to all social interactions, such that people high in extraversion would even be more willing to spend time with a peer who has ADHD. Second, individuals high on the trait of Agreeableness tend to value getting along with others and are often generous, considerate, and willing to compromise their own interests. We expected that this tendency would also be associated with positive appraisals of ADHD-labeled targets. Third, individuals high on the trait of Openness tend to be imaginative, creative, and intellectually curious. Openness also correlates highly with emotional intelligence, a measure of one's ability to perceive and manage emotional states (Schulte, Ree, & Carretta, 2004). We expected that this tendency might lead to greater empathy for those with ADHD and might therefore be associated with more positive appraisals. Finally, individuals high on the trait of Conscientiousness tend to be careful planners and perfectionists. We expected that this tendency might lead to anticipated frustration when contemplating interaction with a peer with ADHD and to related unwillingness to spend time with such targets.

## METHOD

### Sample

Undergraduates enrolled in general psychology at a midsized, Midwestern public university during 2005 participated in the study, receiving credit toward a research requirement. Ten participants' data were excluded from analyses for reasons related to response biases, procedural violations (e.g., repeatedly talking to others during data collection), or affective disturbance (e.g., hostility about survey content) that would likely skew responses. The majority of the remaining 257 participants were male Caucasians (73%,  $n = 189$ , and 86%,  $n = 222$ , respectively, characteristic of the university's general demographic) whose families lived in a large, metropolitan city (54%,  $n = 138$ ). Only 33% ( $n = 86$ ) were in their freshman year of college. The mean ACT score for this sample was 27.14 ( $SD = 3.71$ ). Participants' socioeconomic status (i.e., highest parent ranking; Stevens & Featherman, 1981) tended to be middle-to-upper class ( $M = 56.26$ ,  $SD = 18.66$ ).

### Measures

*Social desirability appraisals.* This measure assessed participant perceptions regarding the social desirability of young adult targets with and without ADHD. Each participant completed a total of six appraisals, reading about a male and a female target described as having one of three "weaknesses": ADHD, a medical problem, or an ambiguous weakness (e.g., perfectionist). Each fictional description comprised 10 bullet point statements (see the appendix for format and example) and a full-figure black and white photo (Vazire, Rentfrow, & Gosling, 2005). The photos were selected via pilot testing that established statistical similarity in physical attractiveness, were all Caucasian (to control for possible racial biases of participants), and were systematically balanced across conditions. On a scale of 1 (*very unlikely*) to 6 (*very likely*), participants reported the likelihood of wanting to work with the target individuals on a group project, to get to know him or her better, and to become friends. Furthermore, for targets of the same sex, participants rated the likelihood that they would get along as roommates and interact well at a job; for targets of the opposite sex, participants rated the likelihood of initiating a date and having a serious dating relationship. Across the set of forms, the mean coefficient alpha was good ( $\alpha = .83$ ); the mean 2-week test-retest reliability, calculated

using a subsample ( $n = 25$ ), was also adequate (Pearson  $r = .78$ ). Responses were coded for analysis at both a composite (sum) and item level.

**Table 1**  
**Composite Ratings of Social Desirability for Targets Described in Personal Vignettes**

Target, Weakness	Male Participants			Female Participants		
	<i>M</i> ( <i>SD</i> )	<i>t</i> (185)	<i>d</i>	<i>M</i> ( <i>SD</i> )	<i>t</i> (68)	<i>d</i>
F, ADHD	17.03 (4.60)	—	—	20.87 (3.62)	—	—
F, medical issue	18.28 (4.77)	3.37**	.27	22.36 (3.67)	3.23**	.41
F, ambiguous	18.02 (4.33)	2.65**	.24	21.84 (4.06)	1.87 <sup>†</sup>	.25
M, ADHD	20.12 (3.77)	—	—	17.14 (3.77)	—	—
M, medical issue	21.34 (3.72)	4.08***	.33	18.13 (3.62)	2.30*	.27
M, ambiguous	21.17 (3.69)	3.70***	.28	19.16 (4.03)	3.79***	.52

Note: F = female; M = male. Values for Cohen's *d* and paired-sample, two-tailed *t* tests are in comparison to the ADHD target of the same sex. <sup>†</sup> $p = .07$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

*Big Five Inventory (BFI)*. This widely used 44-item questionnaire (John & Srivastava, 1999) derives scores for the Five Factor model personality traits. The mean coefficient alpha of the five scales is high ( $\alpha = .83$ ), as is the 3-month test-retest reliability ( $r = .85$ ); convergent validity has been well established in comparisons to other Five Factor measures, and the self-reported BFI has been shown to predict peer ratings of personality as well (John & Srivastava, 1999).

*Demographic questionnaire*. Participants reported descriptive information on this brief survey, including their age, ethnicity, mother's and father's profession, level of education, and academic record (e.g., GPA,ACT/SAT).

## Procedure

Undergraduates elected to participate by signing up on a bulletin board advertising various studies giving credit toward their research requirement. Data collection sessions occurred in a laboratory setting in small groups (one to five participants) that were seated for maximal privacy. Participants first gave written informed consent and then completed the questionnaires (in order: social appraisals [randomly arranged], demographics, and BFI). A research assistant was available at all times to answer individual questions in an adjacent room. Participants were debriefed following the completion of the forms and thanked for their participation. Most participants completed the procedure in approximately 30 minutes. These research parameters were approved by the institutional review board at the university where the data were collected.

## RESULTS

### Stigma Toward ADHD

Our hypotheses regarding stigma toward targets with ADHD were tested by conducting within-subject analyses of variance (ANOVAs). Because the appraisal items differed depending on the sex of the participant and the sex of the target, there were four distinct cells within the data, each of which was evaluated separately. ANOVAs were initially used to examine differences on composite social appraisal ratings between target conditions (ADHD, medical weakness, ambiguous weakness) as follows: male ratings of female targets, male ratings of male targets, female ratings of female targets, and female ratings of male targets. Results from these omnibus ANOVAs were all statistically significant, for males rating females  $F(2, 370) = 6.62, p < .01$ ; males rating males,  $F(2, 370) = 10.85, p < .001$ ; females rating females,  $F(2, 136) = 4.48, p < .05$ ; females rating males,  $F(2, 136) = 9.64, p < .001$ . Two-tailed, paired-sample  $t$  tests showed the ADHD targets were rated less favorably than the two control groups in all instances but one: Differences between females' ratings of women with ADHD and those with an ambiguous weakness were not statistically significant ( $p = .07$ ). Table 1 provides further details regarding these analyses as well as the small-to-medium effect sizes (Cohen's  $d$ ) for pairwise comparisons between the ADHD and control conditions.

To better specify the nature of participants' appraisals, follow-up within-subjects ANOVAs—and when indicated, two-tailed paired-sample  $t$  tests—were conducted at the item response level to examine acceptance depending on the type of social interaction. Statistically significant differences across targets were noted in many instances (see Table 2). As with the composite scores,  $t$  tests showed the ADHD group was appraised more negatively than both comparison groups, with very few exceptions (also see Table 2). Effect sizes for differences on select item (i.e., situational) ratings again ranged from small to medium in strength.



**Table 2**  
**Mean (SD), *t* Test, and ANOVA Comparisons on Item-Level Social Appraisal Ratings**

Appraisal Context	Target Weakness			<i>F</i>
	ADHD	Medical <sup>a</sup>	Ambiguous <sup>a</sup>	
<b>Males rating females<sup>b</sup></b>				
Group project	4.19 (1.02)	4.62 (0.81)***	4.62 (0.88)***	20.85***
Get to know	4.00 (1.04)	4.27 (1.10)**	4.17 (1.01)‡	5.10**
Be friends	3.91 (1.11)	4.07 (1.05)	3.97 (1.01)	<i>ns</i>
Go on a date	2.70 (1.29)	2.90 (1.46)	2.89 (1.29)	<i>ns</i>
Serious dating partner	2.23 (1.20)	2.42 (1.35)	2.37 (1.27)	<i>ns</i>
<b>Males rating males<sup>b</sup></b>				
Group project	4.15 (0.97)	4.53 (0.87)***	4.57 (0.86)***	20.30***
Get to know	3.85 (0.96)	4.09 (0.98)**	4.02 (0.95)‡	4.84*
Be friends	3.76 (1.02)	3.91 (1.03)	3.86 (1.05)	<i>ns</i>
Be roommates	4.04 (1.04)	4.25 (1.01)**	4.21 (1.00)*	4.13*
Be work colleagues	4.32 (0.94)	4.55 (0.86)**	4.52 (0.91)**	6.55**
<b>Females rating females<sup>c</sup></b>				
Group project	4.42 (0.99)	4.83 (0.82)**	4.71 (0.93)*	5.21**
Get to know	4.20 (0.96)	4.35 (0.97)	4.38 (0.97)	<i>ns</i>
Be friends	4.00 (1.00)	4.22 (0.87)	4.15 (1.06)	<i>ns</i>
Be roommates	3.93 (1.02)	4.30 (1.03)	4.04 (1.02)	<i>ns</i>
Be work colleagues	4.31 (0.95)	4.67 (0.80)**	4.57 (0.88)*	5.15**
<b>Females rating males<sup>c</sup></b>				
Group project	4.30 (0.88)	4.59 (0.71)**	4.75 (0.76)***	11.92***
Get to know	4.04 (0.86)	4.28 (0.95)*	4.48 (0.95)**	7.15**
Be friends	3.97 (0.95)	4.06 (0.92)	4.33 (0.89)**	5.06**
Go on a date	2.54 (1.31)	2.84 (1.24)*	2.99 (1.42)**	5.87**
Serious dating partner	2.29 (1.06)	2.36 (1.10)	2.61 (1.27)*	3.12*

a. Statistically significant paired-sample, two-tailed *t* tests with the corresponding ADHD target mean ratings are depicted using superscript symbols.

b. *df* for *t* tests in the male subsample is 185; for *F* tests, *dfs* are 2, 370.

c. *df* for *t* tests in the female subsample is 68; for *F* tests, *dfs* are 2, 136.

‡*p* = .05. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

## **Influence of Personality on Appraisals**

Stepwise multiple regression procedures were employed to examine the predictive value of BFI personality traits (Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness) on composite social acceptance ratings. Twelve such analyses were conducted, one per sex of participant for each of the six appraisal targets. Overall, results indicate that personality had an influence on participants' composite social appraisal ratings. Significant Big Five trait predictors are noted in Table 3 with the corresponding regression model statistics. For male participants, Agreeableness positively predicted social acceptance, across all target conditions ( $\beta$  from .19 to .29). Agreeableness was also a positive predictor of female participants' appraisals of the young woman with ADHD ( $\beta = .29$ ).

**Table 3**  
**Influence ( $\beta$ ) of Extraversion, Agreeableness, and Conscientiousness on**  
**Social Appraisal Ratings by Male and Female Participants**

Target, Weakness	Male Participants			Female Participants			
	A	E	<i>R</i> ( <i>R</i> <sup>2</sup> )	A	E	C	<i>R</i> ( <i>R</i> <sup>2</sup> )
F, ADHD	.19*	-.17*	.25 (.06)**	.27*	0.38**	<i>ns</i>	0.46 (0.21)***
F, Medical	.19**	<i>ns</i>	.19 (.04)**	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>
F, Ambiguous	.23**	<i>ns</i>	.23 (.05)**	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>
M, ADHD	.20**	<i>ns</i>	.20 (.04)**	<i>ns</i>	<i>ns</i>	-0.26*	0.26 (0.07)*
M, Medical	.25**	<i>ns</i>	.25 (.06)**	<i>ns</i>	0.36**	<i>ns</i>	0.36 (0.13)**
M, Ambiguous	.29***	<i>ns</i>	.29 (.09)***	<i>ns</i>	0.22 <sup>‡</sup>	<i>ns</i>	0.22 (0.05) <sup>‡</sup>

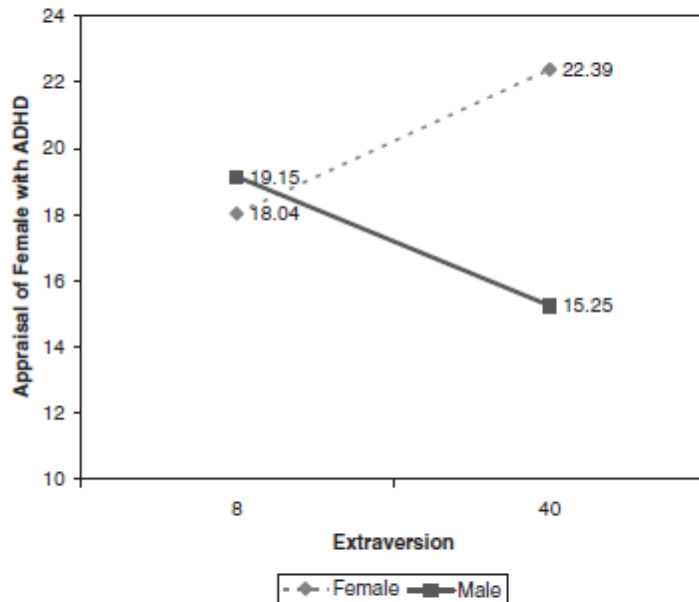
Note: A = Agreeableness; E = Extraversion; C = Conscientiousness; F = female; M = male. Degrees of freedom for regressions examining male participant responses = 1, 184 (2,183 for female ADHD target); *df* for regressions on female responses = 1, 67 (2, 66 for the female ADHD target).

<sup>‡</sup>*p* = .08. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Extraversion influenced male participants' ratings of the female with ADHD ( $\beta = -.17$ ); it is interesting that Extraversion was a strong predictor of females' ratings for the same target yet in the opposite direction ( $\beta = .38$ ; see Figure 1 for illustration). Extraversion also predicted female participants' ratings of the male with a medical problem ( $\beta = .36$ ) and was a marginally significant predictor of female's appraisal of the male with an ambiguous weakness ( $\beta = .22$ ).

Conscientiousness only predicted of females' ratings of the male with ADHD ( $\beta = -.26$ ). Neither Neuroticism nor Openness was found to influence participants' composite appraisal ratings.

**Figure 1**  
**Regression Line Plots for Extraversion's Influence**  
**on Participant's Appraisal Ratings of the Female**  
**Target With ADHD**



Note: Lines depicted here correspond to the range of Big Five Inventory (John & Srivastava, 1999,) scores and were calculated using Extraversion-only regression analyses—male participants,  $R = .17$ ,  $F(1, 191) = 5.80$ ,  $p < .05$ ,  $\beta = -.12$ , constant = 20.13; females,  $R = .23$ ,  $F(1, 70) = 4.03$ ,  $p < .05$ ,  $\beta = .14$ , constant = 16.95.

### Appraisal of Peers With Medical Issues

Post hoc paired-sample  $t$  tests examining composite appraisal ratings generally suggested that the ratings of targets with ambiguous and medical weaknesses were equivalent—males rating females,  $t(186) = 0.78$ ; males rating males,  $t(186) = 0.64$ ,  $t(68) = 0.99$ , all *ns*. However, significant differences were noted between the female participants' ratings of males with ambiguous and medical weaknesses,  $t(68) = 2.52$ ,  $p < .05$ ,  $d = .27$ . Follow-up  $t$  tests at the item level showed that females rated males with a medical weakness only as less desirable friends than those with no substantial weakness,  $t(68) = 2.57$ ,  $p < .05$ ,  $d = .30$ .

## **DISCUSSION**

### **Stigma Toward ADHD**

These results indicate that college students appraise individuals with ADHD negatively, as compared to peers without ADHD (including those with relatively minor, chronic medical problems), even though this condition was described in our stimuli only by its diagnostic label. Given the lack of behavioral cues and the equivalent physical attractiveness across targets, this suggests that the mere association with ADHD in emerging adulthood is stigmatizing. Although the effect sizes were not large, this fact is not necessarily surprising. Implicit prejudice toward outgroup members has been amply documented in experimental settings (e.g., Banaji & Hardin, 1996; Hugenberg & Bodenhausen, 2003) and, often unconsciously, influences everyday behavior and decisions, such as who we choose as acceptable social and work partners. There is even compelling evidence that a label is more likely to lead to stereotyping, because it automatically categorizes the target person (e.g., Bargh, 1989; Macrae, Bodenhausen, Milne, Thorn, & Castelli, 1997).

Although participants expressed hesitance to engage with targets with ADHD across several situations, negative appraisal was most consistent in contexts that involved academic or professional teamwork. This corresponds with common social representations of ADHD noted by Schmitz, Filippone, and Edelman (2003), that of the uncontrollable and unsuccessful student, one with negligible organization skills and an inability to stay still. Taken as a whole, the findings also indicated greater hesitance in initiating social relationships with a peer with ADHD, as compared to both comparison groups. This was most clear at an entry level of relatedness: getting to know someone better. For this context, three out of four analyses showed lower ratings for the ADHD targets; only females' ratings of female peers with ADHD were equivalent to controls.

Male targets with ADHD were more harshly judged than female counterparts. In fact, only the male ADHD targets garnered significantly lower across-the-board appraisals from opposite sex raters, including the possibility of casual and steady dating, which were certainly many steps removed from the experimental situation. Again, this may relate to popular knowledge and beliefs about ADHD; participants may have an easier time imagining unpleasant interactions with a man than an equivalent

woman because of the more common focus on boys with the disorder (Schmitz et al., 2003). The comparison with earlier research from our lab is also interesting. Despite the fact that females have been shown to nominate ADHD as a bona fide psychological disorder (Canu et al., 2006), they do not appear to be much more charitable in their outlook toward others with this diagnosis.

### **Influence of Personality on Appraisals**

Our findings suggest that in addition to behavioral cues and stigma related to ADHD, personality traits of prospective social partners can play a role in determining how desirable people with ADHD appear to be. Agreeableness and Extraversion seem to be the key personality factors related to these types of decisions, with Conscientiousness making a limited contribution. Sex (and, likely, sex role schemas and associated preferences; Rose & Rudolph, 2006) appeared to factor into appraisals of social desirability, as these three personality traits predicted different appraisal outcomes depending on the sex of both the rater and the target.

Agreeableness was a positive predictor of male participants' acceptance of all targets, which is not necessarily telling when it comes to understanding the outcomes of adults with ADHD, specifically, but is in line with expectations based on Ekehammar and Akrami's (2003) findings. Agreeableness was also influential in female's ratings of the female target with ADHD but uniquely so, suggesting that social contacts with same-sex peers with especially warm and welcoming personalities are most likely to be fulfilling for women with ADHD. Extraversion, on the other hand, was the strongest predictor of female participants' appraisals but only reached statistical significance for two targets with salient shortcomings: the female with ADHD and the male with a medical problem. Perhaps young women who are especially gregarious simply respond positively to the idea of getting to know all people, regardless of ability or disability, and as such may be more likely to become friends with a female peer with ADHD (or for that matter, with a man diagnosed with a chronic but manageable disease).

On the other hand, extraverted males indicated more ambivalence toward interaction with the female targets with ADHD, as compared to less extraverted peers, for which there are multiple possible explanations. Extraverted college males may be attracted to introverted females and may assume that a woman with ADHD

would be more talkative, energetic, and outgoing than desired. Alternatively, gregarious young men might believe that their overall chance of dating success is good enough that they discount interactions with less desirable partners, with whom their introverted counterparts might willingly engage. It is also plausible that introverted men could prefer women with ADHD simply to help spur them into being more outgoing, to add more excitement to their lives. Such explanations, however, contradict research suggesting that couples fare poorly when they are mismatched on levels of “blirtatiousness,” a personality construct that shares some features with extraversion (Swann, Rentfrow, & Gosling, 2003). It is often said that college is a period for exploration; perhaps this unexpected direction of influence indicates that these young men are still fully in romantic exploration mode, and with more experience (with partners who diverge on Extraversion), they will develop a better intuition to “match” on this important characteristic.

The influence of Conscientiousness was quite limited in our findings, but its specific effect, as a negative predictor of female’s appraisals of male targets with ADHD, is an interesting one. Women who themselves tend toward orderliness, organization, timeliness, and speedy follow-through would most likely, in fact, not get along with a man who behaves in opposite ways much of the time (Rosenbaum, 1986), and so this may be a mutually adaptive appraisal. This is also in line with the most frequent relational complaints of those married to individuals with ADHD, which overwhelmingly relate to IA behavior (Robin & Payson, 2002).

Contrary to our hypotheses, Openness was unrelated to appraisals of ADHD targets. We had expected the covariance between Openness and emotional intelligence (Schulte et al., 2004) to lead to greater understanding of the difficulties faced by those with ADHD. However, this result is consistent with the idea that target labels are strong triggers for stereotyping, more so than in vivo exposure to labeled individuals (e.g., Bargh, 1989). In the current study, the diagnosis of ADHD not only provides an automatic category but is presented with scant other information, leaving out individuating information that could distract one’s attention from the category and facilitate empathy with the target individual. One direction for future research, therefore, is to investigate whether individuals high in Openness are more positive in their appraisals of ADHD targets following either a behavioral observation or a social interaction.

## **Limitations and Future Directions**

The disparate representation of male and female participants limited the power to detect experimental effects in the female subsample, meaning those of small magnitude were likely missed. The study relied on an undergraduate sample, limiting generalizability to an extent, but the use of a college sample is appropriate here. The late teens and early 20s mark a period where social evaluation undergoes a transition from the standards of adolescence to those of adulthood; therefore, examination of the acceptance and rejection of specific groups by college students is merited. All of the appraised targets were Caucasian; whereas this was arranged to minimize bias in responding, follow-up studies could examine whether the pattern of findings derived here are consistent across ethnic groups. Finally, the social appraisal questionnaire assessed cognitive biases about those with ADHD, but we did not directly measure discriminatory behavior. An important question for future research is whether the mere label of ADHD leads people to shun stigmatized individuals, *in vivo*.

## **Implications**

We believe that the most important implication of these findings is that stigma is a factor in the social difficulties of adults with ADHD. This reinforces the idea that there are multiple, potentially interacting routes to rejection for individuals with ADHD. One of them, well documented in both observational (e.g., Hinshaw & Melnick, 1995) and experimental (Paulson et al., 2005) settings, is that behaviors associated with the disorder elicit negative reactions in others. Another route, as shown in this study, is the mere labeling as ADHD; even when presented simultaneous to other distracting information, this seems to be enough to substantially lower one's desire for interaction. Stereotypes of people with ADHD, mediated by the media's enduring spotlight on this disorder (Schmitz et al., 2003), are so prevalent in the general population that the behavior of a peer with ADHD might not only be experienced as aversive (e.g., when a conversation partner clearly is not attending to what you say) but also might activate stigma related to a negative stereotype that goes beyond observable behavior. This possibility is supported by recent studies that have shown both teachers (D. A. Jackson & King, 2004) and college students (Hartung, Van Pelt, Armendariz, & Knight, 2006) inflate the estimated impairment of children who are described with ADHD symptoms (e.g., when only inattention is described in a vignette, raters

also nominate hyperactivity as high; Hartung et al., 2006) or are directly labeled as having ADHD (Koonce et al., 2004).

This research reinforces the point that diagnostic confidentiality is important for positive adjustment in social and workplace adjustment of adults with ADHD, even for those who effectively manage their symptoms. Suggesting that the strictest diagnostic secrecy should be maintained by those with ADHD would be reactionary and, in itself, stigmatizing. However, these findings serve as a caution: Just as with other, more severe psychological disorders (e.g., as noted by Riordan, 2005, for schizophrenia), early disclosure of an ADHD diagnosis may, fairly or not, lead to undesired outcomes.

Researchers of childhood ADHD have realized that negative reputational biases within peer groups tend to follow children with ADHD (Henker & Whalen, 1999), contributing to the difficulty that many skills training interventions have at adequately addressing the related social rejection (Mrug, Hoza, & Gerdes, 2001). Recently, interventions for socially maladjusted children have emerged that enlist the aid of parents to literally change social venues and help their children start from scratch with new friendships (Frankel & Myatt, 2003). Although basic research has established that adjustment in the social domain can be problematic for adults with ADHD, there is no published treatment that specifically targets this problem. Researchers and clinicians developing such interventions may want to mimic Frankel and Myatt by including components to guide adult clients toward new peer contexts, perhaps starting with groups that may be most likely to accept others of varying strengths and weaknesses (e.g., adult church groups, Lions Club, other volunteer organizations).

A somewhat brighter note for those diagnosed with ADHD is implicit in these findings: Not everyone is anti-ADHD! Although that probably goes without saying, it seems that certain personality traits can serve as a counterbalance to prevailing stigma. In real life, it may be hard to arrange peer groups that have the specific characteristics that enhance appraisals—one would be unlikely to prescribe that a young man with ADHD, for instance, attend concerts by a Grateful Dead cover band to maximize his chances of meeting highly Agreeable men and minimally Conscientious females. However, we still hope to lend some encouragement to affected individuals: There are promising friends and romantic partners to be found.



**APPENDIX**  
**Appraisal Form Target Description Examples**  
**(Female, Minor Medical Weakness Condition)**

Age. 20 years old [all were described as 19 or 20 years old].

Job. Full-time college student [same across conditions].

Future interests. Focus on applied sciences and education (undecided major) [all had two interests but were undecided].  
Hobbies. Likes playing tennis, watching movies, listening to bands [all had three common interests].

A weakness. Has asthma and allergies [\*Independent Variable—see text for description of other conditions\*].

Social. Has considered joining a sorority, might do so in the future [all described as having some interest in/contact with Greek life, but none were members].

Family. Brother in Milwaukee, sister and parents in Springfield [all were described as having siblings and parents in Midwestern locations].

Travel. Would love to visit Indonesia, Greece [all were described as wanting to visit two “exotic” foreign countries].

Home. Has two apartment mates that she gets along with pretty well [all described with common college living situations].

Future. Wants a career in community development [all described in similarly broad career paths].

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