Disclosure of Diagnosis Increases Positivity of Social Responses to Autistic Individuals
Matthew J. Bolton and Lara K. Ault*
Saint Leo University

ABSTRACT. Individuals with disabilities, disorders, and neurological conditions continue to be ostracized by society. Recent work has indicated that autistic college students, concerned about their peers’ acceptance of and responses to their autism-related behavior, may fear disclosing their condition. The present study examined college student and nonstudent attitudes toward individuals with autism spectrum conditions (ASC), focusing on participants’ perceptions of these individuals based on their own knowledge of and interpersonal experiences with autism, and awareness of diagnosis when interacting with autistic individuals. Participants (n = 176) responding to an online survey read a vignette in which they worked on a project with someone exhibiting unusual behavior. They either knew or were unaware of the ASC diagnosis via random assignment. They then indicated positive and negative affective, behavioral, and cognitive responses to the vignette character. Overall, results revealed a pattern of familiarity, r(144) = .25, p = .002, and similarity, r(152) = .19, p = .017, correlating with positive cognitions about the autistic person. In addition, experience and diagnosis awareness interacted, F(1, 146) = 9.84, p = .002, η² = 0.06, power = .88, such that those with first-hand, interaction-based experience with ASC, who knew the diagnosis, showed fewer negative behavioral responses, F(1, 146) = 9.84, p = .002, η² = 0.06, power = .88. For those unfamiliar with ASCs, diagnosis awareness did not reduce negativity. Implications and future directions are discussed.

Neurodiverse individuals—those with mental illness and neurological conditions or disabilities—are typically viewed by wider society as inferior (Foerschner, 2010). Reports by journalistic outlets worldwide suggest that poor treatment of these populations often extends into instances of neglect and abuse (Brown, 2016; Jensen, 2016; Leid, 2016; Lohr, 2017; Manna, 2016; Milligan, 2016; Ryan, 2015; Weiss, 2017; Winsor & Jacobo, 2017). People are more likely to avoid socializing with those who are neurologically different from themselves than they are to avoid interacting with physically disabled individuals; this finding has persisted across time and not only affects adults but also children and adolescents (Borinstein, 1992; Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Gordon, Tantillo, Feldman, & Perrone, 2004; Karnilowicz, Sparrow, & Shinkfield, 1994; Nowicki, 2006; Thomas, 2000; Tringo, 1970).

Such blatant ostracism has implications for the...
social and mental well-being of individuals on the autism spectrum, because they may fear sharing knowledge of their condition with others and in turn feel the need to camouflage their true selves (Hull et al., 2017). Work on executive function and the failure of self-control due to energy depletion (Baumeister, 2002) suggests that adverse mental health effects could be one corresponding result of these individuals’ efforts to mask their autistic characteristics. Autism is a neurological condition typified by difficulties in social communication, unusually narrow interests and repetitive behaviors, and sensory sensitivities (American Psychiatric Association, 2013).

Edyvean (2009) reported that the desire for social separation occurs because people with mental illness and/or disability are generally seen as weak or odd, thought of as unworthy of equality and inclusion, and perceived with pity, scorn, and avoidance. These views lend themselves to the stigmatization of neurodiverse individuals. Stigma causes individuals to question their collective identities as human beings; it creates for them a sense of internalized shame, which “diminishes self-esteem and causes self-doubt regarding whether one can live independently, hold a job, earn a livelihood, and find a life mate” (Corrigan, 2002, p. 223).

Negative attitudes toward autism in society today result in people with the condition forming fewer friendships and maintaining smaller social support groups than their typically developed peers (Nevill & White, 2011). Recent years have seen individuals with autism spectrum conditions (ASC) combatting negative societal tendencies by engaging in self-advocacy and promoting the growth of the neurodiversity perspective (Autistic Self Advocacy Network, 2013). The neurodiversity perspective maintains that neurological conditions (e.g., autism, ADHD, dyslexia, dyspraxia, and synesthesia) are not necessarily disabling, but rather representative of individual differences along a continuous spectrum of being (Baron-Cohen, 2000, 2017; Beardon, 2007; Wing, 1988, 1997). Neurodiversity considers these conditions to be, collectively, manifestation of broad differences in human functioning (Baron-Cohen, 2017) “that should be tolerated and respected in the same way as other human differences” (Jaarsma & Welin, 2012, p. 24). Because the perspective inherently views neurodiverse individuals simply as different, as valuable members of society, and not as any less than their typically developed peers, neurodiversity has begun to change the way people talk about autism. Kenny et al. (2016) investigated the language U.K. residents use in reference to the condition. In surveying individuals with the condition, their parents and friends, and professionals working in autism, Kenny and colleagues found little consensus for any one term, whether it was rooted in “person-first” or “identity-first” language (e.g., “person with autism” or “autistic person/individual”). People with the condition generally preferred identity-first language, whereas friends and family used a mix of terms and professionals preferred person-first language. Hence, in an effort to respect this matter, the authors reporting here use a variety of autism reference terms in their work.

Rationale for the Present Study
Seeking to destigmatize autism in society, this study uses the aforementioned multiple terms of reference (that is, person-first and identity-first language) and additionally follows other researchers (Aylott, 2009; Baron-Cohen, Golan, Chakrabarti, & Belmonte, 2008; Bölte & Hallmayer, 2011; Clare & Woodbury-Smith, 2009; Lai, Lombardo, Chakrabarti, & Baron-Cohen, 2013) in adopting ASC terminology to refer to the myriad labels historically associated with autism (e.g., autism spectrum disorder, classic autism, Asperger’s Syndrome, and pervasive developmental disorder among others; American Psychiatric Association, 1994, 2013; ICD-10, 2017). Although condition is in some respects a medical term, it also reflects a natural state of being (in this case, an autistic “being”) and promotes the idea of normative and positive difference rather than negative abnormality (Baron-Cohen, 2017; TheResearchAutism, 2012). Whereas the implication of widely accepted disorder-based terminology and further, the concept of “being disordered,” is that an individual is flawed, “having a condition” may be less stigmatizing while still leaving appropriate room for the idea of disability in instances where interventions could meaningfully improve quality of life (Baron-Cohen, 2017). In sum, ASC terminology supports the idea of autism as a normative difference in human functioning, and therefore aligns with the concepts of neurodiversity.

One potentially problematic matter that may be of concern for individuals on the autism spectrum involves those who are newly enrolled in college: these students may fear disclosing their diagnosis to others (Huws & Jones, 2008). This fear works to counteract the increases in self-esteem and sense of belonging that researchers have reported typically arise when an individual is part of a college
community (Hart, Grigal, & Weir, 2010), and can potentially negatively impact the individual student’s self-perception and feelings of intrinsic worth (Nevill & White, 2011). The result is that the individual’s concealable stigma—that is, in this case, their “autisticness”—becomes a point of shame and social humiliation, which they feel must remain hidden from others. This, in turn, subsequently negates their academic success (Howlin, Mawhood, & Rutter, 2000). In an effort to assess whether the aforementioned potential fear of diagnosis disclosure is warranted, the present study sought to examine the social perceptions of college students toward their student peers and others diagnosed with ASC.

Aims of the Present Study
Two previous studies on autism and peer acceptance, by Nevill and White (2011) and by Matthews, Ly, and Goldberg (2015), inspired this work. Nevill and White found that interaction with autism-diagnosed family members (in their study, first-degree relatives) was related to a higher degree of openness and less cognitive negativity to the idea of interaction with individuals on the autism spectrum. Matthews et al. found that students who were given diagnosis information when reading about a vignette character were more cognitively and behaviorally positive toward individuals on the spectrum than those not given diagnosis information. The present study combined the concepts from these two studies and aimed for a generalized replication of their results.

First, in examining the effect of awareness of diagnosis vs. nonawareness on attitude scale scores, it was predicted that a diagnostic label of autism would influence participants’ attitudes (their affective, behavioral, and cognitive responses) toward a person exhibiting symptoms of the condition. Next, in examining the effect of having experience (vs. no experience with autistic individuals) on attitude scale scores, a positive correlation was predicted between a person having first-hand experience with autism and exhibiting acceptance of autistic behavior. Possible differences in perceptions across the student and nonstudent participant groups were expected, but no particular direction was specified.

Method
Participants
Participants \((N = 176)\) were college student \((n = 100)\) and nonstudent \((n = 76)\) adults (the nonstudents were recruited for comparison purposes). They were predominantly women \((n = 124, 70.5\%)\), mean age 29.4 \((SD = 13.6)\). The sample was primarily European American \((n = 149, 84.7\%)\). The remaining participants included 10 or fewer each of Asians \((n = 10, 5.7\%)\), Hispanics \((n = 10, 5.7\%)\), African Americans \((n = 2, 1.1\%)\), Latino/a \((n = 1, 0.6\%)\), or another group \((n = 4\) unknown ethnicities, 2.3\%). Students included first-year students \((n = 18, 10.2\%)\), sophomores \((n = 13, 7.4\%)\), juniors \((n = 20, 11.4\%)\), seniors \((n = 21, 11.9\%)\), master’s degree students \((n = 22, 12.5\%)\), and PhD candidates \((n = 6, 3.4\%)\). Participants were recruited by way of in-class announcements, peer-to-peer interpersonal interaction, e-mail, and social media distribution for an anonymous, online survey. The chosen sampling methodology was one of convenience, with a snowball design.

Procedure
Participants volunteered by following an online link to complete a survey via Qualtrics. After consenting, participants were randomly assigned to one of two conditions. In both conditions, participants read a vignette about a classmate who demonstrated seemingly odd behavior, with whom they were instructed to imagine working on a project. In one condition, an autism diagnosis was revealed; in the other, diagnosis was not revealed. Participants completed a variety of individual difference measures and answered questions directly related to how they would respond to the person in the vignette. Potential gender biases were controlled for by giving the vignette character a gender-neutral name (i.e., Jordan). All procedures and survey measures were approved by the Institutional Review Board at Saint Leo University.

Measures included the following, consistently presented in the following order: Demographics, a short version of the Autism-Spectrum Quotient (AQ-S; Hoekstra et al., 2011, adapted from the Autism-Spectrum Quotient, AQ; Baron-Cohen, Wheelwright, Skinner, Martin, & Clubley, 2001), Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS; Findler, Vilchinsky, & Werner, 2007), and a modified version of the Autism Knowledge Questionnaire (AKQ; Kuhn & Carter, 2006). The only manipulation of materials was the random assignment of the vignette character’s diagnosis. Data were excluded when participants had more than 10% missing data. In addition to the formal measures detailed below, participants
were asked demographic questions including age, sex, whether they were a college student or not and, if so, what their major was, and whether they had experience with autistic individuals (this question had a yes/no response which was used as a grouping variable). Participants were not explicitly asked if they were diagnosed with autism.

Materials  
**Autism-Spectrum Quotient-Short (AQ-S).** This measure was used to compare participants’ trait similarity to those with ASCs. The AQ-S is a 28-item questionnaire on which participants indicate their levels of agreement with different statements relating to individual difference on a 4-point Likert-type scale from 1 (strongly agree) to 4 (strongly disagree). The AQ was originally developed as an adult-oriented, nondiagnostic, self-report measure of autistic characteristics across five dimensions (social skill, attention-switching, attention to detail, communication, and imagination). Higher scores indicate an individual possesses more characteristics of autism. This study used the abridged version, shortened by Hoekstra et al. (2011), as a measure of participants’ cognitive similarity to individuals with ASCs (it was presumed that participants with higher trait levels would be able to cognitively empathize with autistic individuals more so than participants with lower levels). Participants’ average AQ-S score was 65.42 (n = 176; SD = 6.17). The AQ-S scores had poor reliability in this study, with a Cronbach’s alpha of .33. This is likely a result of the short length of some of the AQ-S subscales (Hoekstra et al, 2011, S. Baron-Cohen, personal communication, 2017). Concerns with attrition guided the decision to use the abridged version.

**Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS).** Measuring three of the study’s primary dependent variables, the MAS measures attitudes across the psychological dimensions of affect, behavior, and cognition. Participants were asked to imagine how likely they would be to respond with certain thoughts, feelings, and acts during and/or after the interaction depicted in the vignette. Sixteen affect-oriented questions include such feelings as tension, helplessness, serenity, and shyness. The behavior-oriented questions ask how likely respondents would be to engage in each of seven behaviors such as “Get up and leave” and “Start a conversation.” Finally, the 10-item cognition-oriented subscale asks respondents the likelihood they would experience each of 10 thoughts surrounding the interaction. Sample cognitions include “We may get along really well” and “Why not get to know him/her better?” All items are scored on a scale ranging from 1 (not at all) to 5 (very much). Negative items are reverse-coded, and items for each subscale averaged, resulting in three subscale scores that range from 1 to 5; these are averaged across all items in each subscale to create three primary outcome variables: (a) affective responses, (b) behavioral responses, and (c) cognitive responses. Lower scores indicate more positive acceptance of the vignette character. Average MAS scores were 2.63 (affect; SD = 0.57), 2.08 (behavior; SD = 0.66), and 2.88 (cognition; SD = 0.69). In the diagnosis condition (n = 77), Cronbach’s alpha reliabilities across the three subscales were .57 (affect), .49 (behavior), and .85 (cognition). In the no-diagnosis condition (n = 78), these were .68, .49, and .88, respectively.

**Autism Knowledge Questionnaire (AKQ).** This was a measure of familiarity with, or accurate knowledge about, autism. The AKQ was shortened for this study, from 41 to 20 items, to remove open-ended questions with subjective answers. Items, then, are objectively scored, based on accurate responses to questions with known answers. Participants were asked to respond “true,” “false,” or “don’t know.” Sample statements include “There is currently no medical test to diagnose autism” and “Over half of the number of children with autism have been found to be the result of bad parenting.” Each correct response is worth 1 point, whereas incorrect and “don’t know” responses are worth 0 points. Points were summed, divided by 20, and multiplied by 100 to yield a percentage score. Average score on the AKQ was 12.33 (SD = 3.61). Scores on the AKQ were adequately reliable in this study, with a Cronbach’s alpha of .74.

Results  
Analyses showed a positive correlation between time spent with autistic individuals and fewer negative cognitions, r(144) = .25, p = .002, regardless of diagnosis disclosure in the vignette. Further, those who reported more autistic traits in themselves (via the AQ-S) responded with fewer negative cognitions to individuals on the autism spectrum, r(152) = .19, p = .017. Table 1 shows the correlations between autism knowledge, traits, and MAS scores.

Testing with a 2 (diagnosis awareness: yes or no) x 2 (experience with autism: yes or no) between-groups Multivariate Analysis of Variance (MANOVA; Tables 2 and 3), there was no main effect of diagnosis awareness on any of the three
with ASCs significantly interacted with diagnostic label for behavioral responses, $F(1, 146) = 5.52$, $p = .02$, $\eta^2 = .04$, power = .65. Specifically, experience correlated with less behavioral negativity in the diagnosis ($M = 1.84, SE = 0.09$; 95% CI [1.66, 2.02]) than in the no-diagnosis condition ($M = 2.19, SE = 0.09$; CI [2.01, 2.37]), but responses across conditions did not differ for those without autism interaction experience ($p = .44$).  

**Discussion**

Participants in this study who had real-life interaction experience with autistic individuals, and who indicated having familiarity with autism and awareness of the condition in their social interactions, were less cognitively negative compared to participants who lacked such experience. Moreover, this study’s findings are similar to those reported by Nevill and White (2011) and Matthews et al. (2015). First, like Nevill and White, the present study found that time spent with people on the autism spectrum (defined in this study as experience with autism) correlated with fewer negative cognitive reactions to the vignette character. Next, like Matthews et al., the present study found that participants given a diagnostic label of autism were more positive in their responses to the vignette character.

Intriguingly, in contrast to Matthews et al., who found a relationship between positive social responses and lower participant-expressed autistic trait scores on the Broad Autism Phenotype Questionnaire (BAPQ; Hurley, Losh, Parlier, Reznick, & Piven, 2007), this study found that participants reporting more autistic traits in themselves (via the AQS) responded to a vignette character with fewer negative cognitions than those with lower AQS scores. The differing results between the two measures are likely due to subtle differences in the ways they were designed, including in the creators’ definition of the exact construct they respectively measure. Whereas the AQ variants are often administered in clinical populations (Woodbury-Smith, Robinson, & Baron-Cohen, 2005) and were designed to measure autistic traits which typically manifest in autistic individuals (Kanne, Wang, & Christ, 2012; Lundqvist & Lindner, 2017), the BAPQ was designed to measure traits that are qualitatively similar but nonetheless more mild, that may occur in nonautistic relatives of autistic individuals (Hurley et al., 2007).

The two-way MANOVA revealed that participants with previous autism experience who received diagnostic information in the vignette behaved,
by self-report of their own imagined behavior in a hypothetical social scenario, more positively toward the vignette character than those who did not have experience. Knowledge of diagnosis had no effect on behavior for participants who had no first-hand experience with autism. This suggests that the positivity observed in the diagnosis condition could be the result of societal norms and expectations, but that it could also be due to a deeper understanding of the characteristics of the vignette character as a result of previous real-life interaction experience.

The implication of this is that, when an individual lacks experience with, and thus understanding of, ASCs, the person may be influenced by social expectations and by misconceptions and stereotypes surrounding ASCs (e.g., that individuals with the condition are dangerous, that autism is a disease that may be somehow transmitted to others) which override the sense of obligation to social niceties.

People are influenced by those with whom they associate (Monahan, Steinberg, & Cauffman, 2009; Tomé, Matos, Simões, Diniz, & Camacho, 2012). Thus, given enough time, interaction experience may lend itself to some internalized, inherent understanding of autistic peers that helps nonautistic individuals to better imagine for themselves the difficulties and potential challenges faced by those with the condition. In so empathizing with autistic people, the interacting individuals become more accepting on a cognitive level. Those without experience may be unable, or at least less readily able, to imagine what it would be like if they themselves had an ASC, just as those who can see cannot accurately imagine what it is like to be blind or to have low vision, and autistic individuals may have difficulties cognitively empathizing with those not on the spectrum (Baron-Cohen, 1995). This inability to relate to autistic individuals, something Milton (2012) and Chown (2014) call the “double empathy problem,” warrants additional investigation into implicit prejudice and the perhaps unintentional stereotyping of individuals on the autism spectrum.

It would be interesting to investigate whether changing the condition disclosed in the vignette would change the outcome in exhibited attitude, as suggested in other work (Feldman & Crandall, 2007). The overall implication of the finding for behavioral, but not affective or cognitive, positivity is that, when people learn that a person has a particular diagnosis, they likely feel obligated to show at least some (outward) positivity toward the person, while still, perhaps, thinking negatively.

One particularly devastating aspect of the internalized stigma this negativity brings about is that it

| TABLE 3 |
|------------------|------------------|------------------|------------------|
|                  | df   | SS     | MS   | F    | p     | Power | $\eta^2$ |
| Disclosure       |      |        |      |      |       |       |         |
| Affect           | 1    | 0.174  | 0.174| 0.56 | .46   | .12   | .04     |
| Behavior         | 1    | 0.242  | 0.242| 0.60 | .44   | .12   | .04     |
| Cognition        | 1    | 0.07   | 0.07 | 0.14 | .71   | .07   | .01     |
| Experience       |      |        |      |      |       |       |         |
| Affect           | 1    | 0.710  | 0.710| 2.3  | .13   | .32   | .02     |
| Behavior         | 1    | 1.24   | 1.24 | 3.1  | .08   | .41   | .02     |
| Cognition        | 1    | 4.6    | 4.6  | 8.84 | .002**| .88   | .07     |
| Disclosure x Experience |      |        |      |      |       |       |         |
| Affect           | 1    | 1.13   | 1.13 | 3.61 | .06   | .47   | .03     |
| Behavior         | 1    | 2.24   | 2.24 | 5.52 | .02   | .65   | .04     |
| Cognition        | 1    | 0.585  | 0.585| 1.26 | .26   | .20   | .009    |
| Error            |      |        |      |      |       |       |         |
| Affect           | 142  | 44.27  | 0.312|      |       |       |         |
| Behavior         | 142  | 57.72  | 0.406|      |       |       |         |
| Cognition        | 142  | 65.65  | 0.462|      |       |       |         |
| Total            | 146  | 1,056.23| 0.629|      |       |       |         |
| Affect           | 146  | 695.04 |      |      |       |       |         |
| Behavior         | 146  | 1,277.22|      |      |       |       |         |

Note. *p < .05. **p < .01.
leaves people feeling inherently and intrinsically separate, as though they are not worthy of others’ time, or are not full members of society. Regardless of the amount of discrimination levied, the self-perception of being devalued and marginalized impacts one’s feelings of self-esteem and distress (Boyd, Otingam, & Grajales, 2003). Stigma and associated emotions can contribute to a host of psychosocial issues such as problems in relationships with one’s family (Lefley, 1989), employment discrimination (Farina, Felner, & Boudreau, 1973), and general social rejection (Corrigan, Edwards, Green, Diwan, & Penn, 2001). Our results, however, as well as those of Nevill and White (2011), Matthews et al. (2015), and others, suggest a shift in attitude toward people with ASCs. This has been encouraged recently by the growth of the neurodiversity perspective (Baron-Cohen, 2017; Jaarsma & Welin, 2012), which puts forth two ideas: (a) that neurological conditions represent manifestations of individual difference along a normative bell curve, and (b) that neurodiverse individuals are different but not less than their typically developed peers. Although it is agreed by these authors that ASCs represent natural variation in human functioning and brain development, the fact remains that autism affects many individuals in ways that may significantly inhibit them in their inherent ability to function day-to-day. When the well-being of autistic individuals is meaningfully impacted, viewing their ASC as disabling may be helpful, appropriate, and even necessary, so that they may receive wanted and/or needed support (this is in agreement with the thinking of other neurodiversity-supporting researchers, e.g., Baron-Cohen, 2017, who endorsed the term disability for use “when the person falls below an average level of functioning in one or more psychological or physical functions, and where the individual needs support or intervention” p. 3). Individuals whose manifestations of autism suppress their ability to function often need substantial living assistance and support; appropriate services are typically rendered only if the person in need possesses a medical diagnosis/label. It would be unethical if the ideas of neurodiversity went so far as to take away the inalienable rights of others to better lives, as may be bestowed by appropriate intervention services. The diagnosis disclosure and responses to autism leaves people feeling inherently and intrinsically separate, as though they are not worthy of others’ time, or are not full members of society. Regardless of the amount of discrimination levied, the self-perception of being devalued and marginalized impacts one’s feelings of self-esteem and distress (Boyd, Otingam, & Grajales, 2003). Stigma and associated emotions can contribute to a host of psychosocial issues such as problems in relationships with one’s family (Lefley, 1989), employment discrimination (Farina, Felner, & Boudreau, 1973), and general social rejection (Corrigan, Edwards, Green, Diwan, & Penn, 2001). Our results, however, as well as those of Nevill and White (2011), Matthews et al. (2015), and others, suggest a shift in attitude toward people with ASCs. This has been encouraged recently by the growth of the neurodiversity perspective (Baron-Cohen, 2017; Jaarsma & Welin, 2012), which puts forth two ideas: (a) that neurological conditions represent manifestations of individual difference along a normative bell curve, and (b) that neurodiverse individuals are different but not less than their typically developed peers. Although it is agreed by these authors that ASCs represent natural variation in human functioning and brain development, the fact remains that autism affects many individuals in ways that may significantly inhibit them in their inherent ability to function day-to-day. When the well-being of autistic individuals is meaningfully impacted, viewing their ASC as disabling may be helpful, appropriate, and even necessary, so that they may receive wanted and/or needed support (this is in agreement with the thinking of other neurodiversity-supporting researchers, e.g., Baron-Cohen, 2017, who endorsed the term disability for use “when the person falls below an average level of functioning in one or more psychological or physical functions, and where the individual needs support or intervention” p. 3). Individuals whose manifestations of autism suppress their ability to function often need substantial living assistance and support; appropriate services are typically rendered only if the person in need possesses a medical diagnosis/label. It would be unethical if the ideas of neurodiversity went so far as to take away the inalienable rights of others to better lives, as may be bestowed by appropriate intervention services.

Conclusions

Overall, it appears that college students and general population adults are accepting of individuals with ASCs when they are similar to them and when they understand them. Negative societal labeling may be negated and social treatment of individuals on the spectrum may be improved when an autistic person’s condition is known by the individuals interacting with them. In cases where the condition is disclosed and the typically developed person with whom the interaction is taking place has interaction experience, people on the autism spectrum should be met with more positive social responses and attitudes. Although these results suggest those with ASC may indeed feel comfortable telling others of their condition, they may still need to exercise caution. Only people who have other regular interaction experience with ASCs respond positively to such information. Guessing the extent of experience that others have with autistic individuals will likely be a difficult task.

Although some people may be made uncomfortable by them, diagnostic labels can clarify uncertainty for those who exhibit features characteristic of autism and the people who interact with them, and also allow for care services as needed. People whose cognitive tendencies lean toward those which could be considered qualitatively autistic, and people who have regular interactions with those with the condition, are more positive toward autistic behavior in their cognitive and behavioral responses, especially if they know that the person they are interacting with is on the autism spectrum. This information may serve as a useful social heuristic (that is, a set of simple rules which may inform decision-making; Hertwig, Hoffrage, & ABC Research Group, 2012) to those with ASCs, in deciding whether or not to disclose their condition.

Limitations

There were a number of limitations to this study, which did not assess participants’ empathy traits, and had a relatively small sample that did not allow for full hypothesis testing without risking type I errors. Effect sizes were small, but nonetheless detected by the study’s statistical power. Although this is a potential limitation for replication, our confidence that these results are reliable and representative of real effects is high, considering that these results generally reproduce findings from past research. Further, although participants were randomly assigned to either the diagnosis awareness or no-awareness condition, the study utilized an online self-report survey. It is therefore subject to all the limitations of self-report (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and online survey methodology (Aust, Diedenhofen, Ulrich & Musch, 2013).
Future Directions
Future directions for this work include a follow-up replication study, which would take participants’ capacities for empathy into account, perhaps allowing us to investigate affective responses more aptly. Other work may more closely examine aspects of prosocial behavior (e.g., the roles of altruism or religiosity) stereotypes, and implicit prejudice in autistic peer perceptions and relations.

References
American Psychiatric Association. (1994). DSM-IV diagnostic and statistical manual of mental disorders, 4th edition. Washington, DC: American Psychiatric Association.
American Psychiatric Association. (2013). Autism spectrum disorder. In Diagnostic and Statistical Manual of Mental Disorders: DSM-5. Washington, DC: American Psychiatric Association.
Aust, F., Diedenhofen, B., Ullrich, S., & Musch, J. (2013). Serioussness checks are useful to improve data validity in online research. Behavior Research Methods, 45, 527–535. https://doi.org/10.3758/sbrn.45.3.527
Baron-Cohen, S. (1995). Mindblindness: An essay on autism and theory of mind. Boston: MIT Press/Bradford Books.
Baron-Cohen, S. (2000). Is Asperger Syndrome/high-functioning autism necessarily a disability? Development and Psychopathology, 12, 489–500. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/11074794
Baron-Cohen, S. (2001). Editorial: Neurodiversity—A revolutionary concept for autism and psychiatry. Journal of Child Psychology and Psychiatry, 42, 744–747. https://doi.org/10.1111/j.1469-7610.2001.00720.x
Baron-Cohen, S., Golan, O., Chakrabarti, B., & Belmonte, M. (2008). Social cognition and autism spectrum conditions. In C. Sharp, P.Fonagy & I. Goodyer (Eds.), Social cognition and developmental psychopathology. Oxford, United Kingdom: Oxford University Press.
Baron-Cohen, S., Wheelwright, S., Skinner, R., Martin, J., & Clubley, E. (2001). The autism spectrum quotient (AQ): Evidence from Asperger Syndrome/high-functioning autism, males and females, scientists and mathematicians. Journal of Autism and Developmental Disorders, 31, 5–17. Retrieved from https://link.springer.com/article/10.1023/A:1005653411471
Baumeister, R. F. (2002). Ego depletion and self-control failure: An energy model of the self’s executive function. Self and Identity, 1, 129–136. https://doi.org/10.1080/152988602317319302
Beardon, L. (2009). Is autism a disorder? Retrieved from http://autisticadvocacy.org/about-asan/identity-first-language/
Boyd Ritsher, J., Otilingam, P. G., & Grajales, M. (2003). Internalized stigma of mental illness: Psychometric properties of a new measure. Psychiatry Research, 121, 31–49. https://doi.org/10.1016/j.psychres.2003.08.008
Brown, G. S. (2016, September 23). New Jersey dad’s heartbreaking school photo highlights son’s loneliness. Retrieved from https://abcnews.go.com/Lifestyle/jersey-dads-heartbreaking-school-photo-highlights-sons-loneliness/story?id=42287177
Chen, C. (2014). More on the ontological status of autism and double empathy. Disability and Society, 29, 1672–1676. https://doi.org/10.1080/09687599.2014.946925
Clare, I., & Woodbury-Smith, M. (2009). Autism spectrum conditions. In S. Young, M. Kapelman, & G. Gudjonsson (Eds.), Forensic neuropsychology in practice: A guide to assessment and legal processes. Oxford, United Kingdom: Oxford University Press.
Corrigan, P. W. (2002). Empowerment and serious mental illness: Treatment partnerships and community opportunities. Psychiatric Quarterly, 73, 217–228. https://doi.org/10.1002/pq.6805432
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. https://doi.org/10.1093/schbul/al008688
Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, R. I., & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. The British Journal of Psychiatry, 177, 1–7. https://doi.org/10.1192/bjp.177.1.1
Edye, C. (2009). Attitudes toward autism: Reducing discrimination with contact (Unpublished undergraduate honor’s thesis). Ball State University, Muncie, Indiana. Retrieved from http://cardinalscholar.bsu.edu/bitstream/handle/123456789/194217/2008-09_PSyc_DePartmental_Hono?sequence=1
Farina, A., Feltner, R. D., & Boudreau, L. A. (1973). Reactions of workers to male and female mental patient job applicants. Journal of Consulting and Clinical Psychology, 41, 363–372. https://doi.org/10.1037/h0053299
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. https://doi.org/10.1521/jscp.2007.26.2.137
Fidler, L., Vilchinsky, N., & Werner, S. (2007). The Multidimensional Attitudes Scale Toward Persons With Disabilities (MAs): Construction and validation. Rehabilitation Counseling Bulletin, 50, 164–176. https://doi.org/10.1080/01973930701435520
Foerschner, A. M. (2010). The history of mental illness: From skull drills to happy pills. Inquiries Journal/Social Psychology, 2(9). Retrieved from http://www.inquiriesjournal.com/a/283
Gordon, P. A., Tantillo, J. C., Feldman, D., & Perrone, K. M. (2004). Attitudes regarding interpersonal relationships with persons with mental illness and mental retardation. Journal of Rehabilitation, 70, 50–56. Retrieved from https://www.researchgate.net/publication/279657933_Attitudes_Regarding_Interpersonal_Relationships_with_Persons_with_Mental_Illness_and_Mental_Retardation
Hart, D., Grigal, M., & Weir, C. (2010). Expanding the paradigm: Postsecondary education options for individuals with autism spectrum disorder and intellectual disabilities. Focus on Autism and Other Developmental Disabilities, 25, 134–150. https://doi.org/10.1177/1080372010377359
Hertwig, R., Hoffrage, U., & ABC Research Group. (Eds.). (2012). Simple heuristics in a social world. Oxford, England: Oxford University Press.
Hoekstra, R. A., Vinkhuyzen, A. A. E., Wheelwright, S., Bartels, M., Boomsma, D. I., Baron-Cohen, S., ... van der Sluis, S. (2011). The construction and validation of an abridged version of the autism-spectrum quotient (AQ-Short). Journal of Autism and Developmental Disorders, 41, 589–596. https://doi.org/10.1007/s10803-010-1873-0
Howlin, P., Mawhood, L., & Rutter, M. (2000). Autism and developmental receptive language disability—A follow-up comparison in early adult life. II: Social, behavioural, and psychiatric outcomes. Journal of Child Psychology and Psychiatry, 41, 561–578. https://doi.org/10.1111/1469-7610.00643
Hull, L., Petrides, K. V., Allison, C., Smith, P., Baron-Cohen, S., Lai, M. C., ... & van der Sluis, S. (2011). The construction and validation of an abridged version of the autism-spectrum quotient (AQ-Short). Journal of Autism and Developmental Disorders, 41, 589–596. https://doi.org/10.1007/s10803-010-1873-0
Hurley, R. E. S., Losh, M., Parlier, M., Reznick, J. S., & Piven, J. (2007). The Broad Autism Phenotype Questionnaire. Journal of Autism and Developmental Disorders, 37, 1679–1690. https://doi.org/10.1007/s10803-006-0299-3
Huws, J. C., & Jones, R. S. P. (2008). Diagnosis, disclosure, and having autism: An interpretative phenomenological analysis of the perceptions of young people with autism. Journal of Intellectual and Developmental Disability, 33, 99–102. https://doi.org/10.1023/a:1083625802010394
ICD-10 Data. (2017). 2017 ICD-10-CM diagnosis code F84.0: Autistic disorder. Retrieved from http://www.icd10data.com/ICD10CM/Codes/F01-F99/F80-F89/F84/F84.0
Jaarsma, P., & Welin, S. (2012). Autism as a natural human variation: Reflections on the claims of the neurodiversity movement. Health Care Analysis, 20, 20–30. https://doi.org/10.1007/s10728-011-1965-9
Jensen, H. (2016, March 24). Mother accused of severely abusing daughter with cerebral palsy. Retrieved from http://www.wsvbtv.com/news/local/mother-accused-of-abusing-disabled-daughter/16323198
Kanne, S. M., Wang, J., & Christ, S. E. (2012). The Subthreshold Autism Trait Scale Toward Persons With Disabilities (MAS): Construction and validation. Research, 121, 507–524. Retrieved from https://doi.org/10.1080/152988602317319302
Kingdom: Oxford University Press.

SPECIAL ISSUE 2018

PSI CHI JOURNAL OF PSYCHOLOGICAL RESEARCH
Diagnosis Disclosure and Responses to Autism

Bolton and Ault

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommendations for analyses. Journal of Applied Psychology, 88, 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Ryan, F. (2015, May 18). The abuse of disabled people is a hidden crime we must face up to. Retrieved from https://www.theguardian.com/commentisfree/2015/may/18/abuse-disabled-people-sexually-abused

Author Note. Matthew J. Bolton, School of Arts and Sciences, Saint Leo University; Lara K. Ault, School of Arts and Sciences, Saint Leo University.

This article was written in fulfillment of the requirements for the lead author’s undergraduate senior thesis. He thanks his family, and mentors Mike Mogil and Greg Blumberg, for their unfailing support through the course of this challenging project. In addition, he is particularly grateful to Ashton Harris, Alyssa Bates, and Christel Cruz for inspirational and thoughtful, spirited, and empathetic discussion on autism, the nature of neurodiversity, and a multitude of disability-related topics. On an academic note, he is grateful to Steven Meigs for inspiring an interest in the academic study of morality; to Jenette Flow and Jodi Savell, whose early academic mentorship informed worldviews; to Simon Baron-Cohen, for correspondence regarding one of the psychological tests used in the study and inspiring an interest in the study of both empathy and autism; and finally, to his advisor, for patient and enthusiastic support of this and other research. The authors, collectively, are grateful to three anonymous reviewers whose comments greatly strengthened the final article. Author contributions: MJB proposed and designed the study, with minimal guidance from LKA. MJB was the primary author of the manuscript; LKA provided proofreading support. Both authors approved the final draft.

This manuscript qualifies for an Open Materials badge and an Open Data badge; the materials and data are available at https://osf.io/wmg6i. Correspondence concerning this article should be addressed to Matthew J. Bolton, School of Arts and Sciences, Saint Leo University; Lara K. Ault, Saint Leo, FL 33574. E-mail: Matthew.Bolton@email.saintleo.edu
"MY JOB IS NOT JUST TO TEACH, BUT ALSO TO HELP STUDENTS SEE THEIR INNER STRENGTHS."

At the College of Clinical Psychology at Argosy University, we believe in a practitioner-scholar model of training. Our programs offer a rigorous curriculum grounded in theory and research, while also offering real-world experience. What’s more, all our PsyD programs have received accreditation from the American Psychological Association (APA), certifying that they meet the industry’s standards.

Learn more at clinical.argosy.edu/psichi

Arizona School of Professional Psychology at Argosy University
American School of Professional Psychology at Argosy University | Southern California
American School of Professional Psychology at Argosy University | San Francisco Bay Area
Florida School of Professional Psychology at Argosy University
Georgia School of Professional Psychology at Argosy University
Hawaii School of Professional Psychology at Argosy University
Illinois School of Professional Psychology at Argosy University | Chicago
Illinois School of Professional Psychology at Argosy University | Schaumburg
Minnesota School of Professional Psychology at Argosy University
American School of Professional Psychology at Argosy University | Northern Virginia

DR. NAHID AZIZ
Associate Professor at the American School of Professional Psychology at Argosy University | Northern Virginia

Dr. Aziz is committed to mentorship, training, and addressing issues relevant to the ethnic and racial diversity.

*The Doctor of Psychology in Clinical Psychology Program at Argosy University, Atlanta, Chicago, Hawaii, Orange County, Phoenix, Salt Lake City, San Francisco Bay Area, and Washington, D.C., is accredited by the Commission on Accreditation of the American Psychological Association (APA). Questions related to the program’s accredited status should be directed to the Commission on Accreditation, Office of Program Consultation and Accreditation, American Psychological Association, 750 First Street NE, Washington DC 20002, Phone: (202) 336-5979 / E-mail: apacommission@apa.org / Web: www.apa.org/ed/accreditation

Argosy University is a non-profit institution.

Argosy University is accredited by the WASC Senior College and University Commission (888 Atlantic Ave., Suite 100, Alameda, CA 94501, wscuc.org). Programs, credential levels, technology, and scheduling options are subject to change. Not all online programs are available to residents of all U.S. states. Administrative office: Argosy University, 601 South Lewis Street, Orange, CA 92868 ©2018 Argosy University. All rights reserved. Our email address is materialsreview@argosy.edu
Find your career.

Eight graduate degree programs and four certificates in Educational Psychology

PhD in Educational Psychology
Engage in the science of learning. Prepare for a career where you can use your knowledge of human learning and development to help shape the school environment and public policy. Core program areas include learning, motivation, and research design.

MS or MA in Educational Psychology
Broaden your ability to apply psychological principles to a variety of professional contexts or prepare for your future doctorate in social science.

MS in Quantitative Psychology
Do you like numbers, statistics, and social science? Prepare for a career in research, assessment, and data analysis. Develop proficiency in advanced statistical techniques, measurement theory, and data analytics.

PhD in School Psychology (five-year program)
Prepare for a career as a licensed psychologist. Gain competencies in health service psychology to work in schools, private practice, or hospital settings. Accredited by the American Psychological Association (APA)** and approved by the National Association of School Psychologists (NASP). Scientist-practitioner model with advocacy elements. Specializations available.

MA/EdS in School Psychology (three-year program)
Be immersed in community engaged, real-world field experiences and intervention opportunities in our scientist-practitioner-advocate program. Leads to licensure as a school psychologist. Approved by NASP and the National Council for Accreditation of Teacher Education (NCATE).

MA in School Counseling (two-year program)
Be a leader and advocate for educational equity for all students in PK–12 schools. Leads to licensure as a school counselor. Accredited by the Council for Accreditation of Educator Preparation (CAEP).

Accreditation of Counseling and Related Educational Programs (CACREP) and nationally recognized by The Education Trust as a Transforming School Counseling program.

Certificates
High Ability/Gifted Studies,* Human Development and Learning,* Identity and Leadership Development for Counselors,* Neuropsychology*

Graduate assistantships and tuition waivers are available.

bsu.edu/edpsy

*Online programs are available.
**Questions related to the PhD in school psychology’s accreditation status should be directed to the Office of Program Consultation and Accreditation, American Psychological Association, 750 First St. NE, Washington, D.C. 20002; (202) 336-5979; apaaccred@apa.org; or aparo.org/ed/accreditation.

Ball State University practices equal opportunity in education and employment and is strongly and actively committed to diversity within its community. Ball State wants its programs and services to be accessible to all people. For information about access and accommodations, please call the Office of Disability Services at 765-285-5293; go through Relay Indiana for deaf or hard-of-hearing individuals (relayindiana.com or 877-446-8772); or visit bsu.edu/disabilityservices. 582418-18 mc
Call for Submissions

This summer, consider submitting research to Psi Chi Journal that is related to help-seeking behavior. Psi Chi is launching a new 2018 initiative, which will establish a toolkit of resources that encourage people to feel comfortable seeking help concerning a mental illness, bullying, sexual harassment/abuse, tutoring, test taking, etc.

Will you support the #Help_HelpedMe Initiative by helping us expand Psi Chi’s collection of help-seeking articles? As always, student and faculty authors are welcome, and submissions will remain open for all other areas of psychological research.

Experience our rigorous, yet supportive and educational, peer-review process for yourself. Our high visibility across the field and dedication to transparent, replicable research practices makes our journal the place to submit your research today!

Learn more about the Help_HelpedMe Initiative at https://doi.org/10.24839/2325-7342.JN23.1.2

“What if we lived in a world where seeking help was considered as noble as offering help? . . . Let’s work together toward a future where seeking help is universally perceived as a psychological strength.”

R. Eric Landrum, PhD
Psi Chi President

Gain Valuable Research Experience With Psi Chi!

Students and faculty are invited to visit Psi Chi’s free Conducting Research online resource at www.psichi.org/?page=ConductingResearch. Here are three ways to get involved:

Join a Collaborative Research Project
https://www.psichi.org/?page=Res_Opps

With Psi Chi’s Network for International Collaborative Exchange (NICE), you can join the CROWD and answer a common research question with various researchers both internationally, and nationally. You can also CONNECT with a network of researchers open to collaboration.

Recruit Online Participants for Your Studies
www.psichi.org/?page=study_links

Psi Chi is dedicated to helping members find participants to their online research studies. Submit a title and a brief description of your online studies to our Post a Study Tool. We regularly encourage our members to participate in all listed studies.

Explore Our Research Measures Database
www.psichi.org/?page=researchlinksdesc

This database links to various websites featuring research measures, tools, and instruments. You can search for relevant materials by category or keyword. If you know of additional resources that could be added, please contact research.director@psichi.org
Publish Your Research in *Psi Chi Journal*

Undergraduate, graduate, and faculty submissions are welcome year round. Only the first author is required to be a Psi Chi member. All submissions are free. Reasons to submit include

- a unique, doctoral-level, peer-review process
- indexing in PsycINFO, EBSCO, and CrossRef databases
- free access of all articles at psichi.org
- our efficient online submissions portal

View Submission Guidelines and submit your research at www.psichi.org/?page=JN_Submissions

Become a Journal Reviewer

Doctoral-level faculty in psychology and related fields who are passionate about educating others on conducting and reporting quality empirical research are invited become reviewers for *Psi Chi Journal*. Our editorial team is uniquely dedicated to mentorship and promoting professional development of our authors—Please join us!

To become a reviewer, visit www.psichi.org/page/JN_BecomeAReviewer

Resources for Student Research

Looking for solid examples of student manuscripts and educational editorials about conducting psychological research? Download as many free articles to share in your classrooms as you would like.

Search past issues, or articles by subject area or author at www.psichi.org/?journal_past

Add Our Journal to Your Library

Ask your librarian to store *Psi Chi Journal* issues in a database at your local institution. Librarians may also e-mail to request notifications when new issues are released.

Contact PsiChiJournal@psichi.org for more information.