



## Autism stigma in communication classrooms: exploring peer attitudes and motivations toward interacting with atypical students

Jill Cornelius Underhill, Victoria Ledford & Hillary Adams

To cite this article: Jill Cornelius Underhill, Victoria Ledford & Hillary Adams (2019) Autism stigma in communication classrooms: exploring peer attitudes and motivations toward interacting with atypical students, *Communication Education*, 68:2, 175-192, DOI: [10.1080/03634523.2019.1569247](https://doi.org/10.1080/03634523.2019.1569247)

To link to this article: <https://doi.org/10.1080/03634523.2019.1569247>



Published online: 28 Jan 2019.



Submit your article to this journal [↗](#)



Article views: 527



View Crossmark data [↗](#)



## Autism stigma in communication classrooms: exploring peer attitudes and motivations toward interacting with atypical students

Jill Cornelius Underhill<sup>a</sup>, Victoria Ledford<sup>b</sup> and Hillary Adams<sup>c</sup>

<sup>a</sup>Communication Studies Department, Marshall University, Huntington, WV, U.S.A.; <sup>b</sup>Department of Communication, University of Maryland, College Park, MD, U.S.A.; <sup>c</sup>College Program for Students with ASD, Marshall University, Huntington, WV, U.S.A.

### ABSTRACT

College students with autism spectrum disorder (ASD) face unique social barriers and are often stigmatized by their peers. Communication and instruction researchers are uniquely positioned to foster an inclusive communication climate in the classroom that minimizes stigma and promotes peer acceptance. To do so, instructors must understand how stigma operates in the classroom—including the features, reactions, and effects of peer stigma communication. The present study utilizes the model of stigma communication (MSC; Smith, [2007]. Language of the lost: An explication of stigma communication. *Communication Theory*, 17, 462–485. doi: 10.1111/j.1468-2885.2007.00307.x) to explore those three facets of the stigma communication process using a mixed methods design. Results showed that attitudes significantly predicted both social distance and openness toward interaction with atypical students. Though participants expressed generally positive attitudes toward classroom inclusion, open-ended feedback revealed stigmatized beliefs and desired social distance from peers with ASD. Based on these results, we provide implications for and strategies to promote an inclusive classroom climate for students with ASD.

### ARTICLE HISTORY

Received 17 August 2018  
Accepted 6 January 2019

### KEYWORDS

autism spectrum disorder;  
stigma communication;  
inclusion

Each year, an increasing number of students on the autism spectrum pursue higher education. Autism spectrum disorder (ASD) is a group of developmental disorders that manifest on a continuum of symptoms and abilities, often marked by difficulties with communication and social interaction (American Psychiatric Association, 2013). Early diagnoses and interventions have enabled many children to be successfully mainstreamed into general education classrooms. As such, more students with ASD have become eligible to enroll in postsecondary education (Cai & Richdale, 2016). Currently, an estimated 44% of students with ASD enroll in postsecondary education, and this number is expected to increase significantly in the coming decade (Jackson, Hart, Brown, & Volkmar, 2018; Newman et al., 2011). However, most postsecondary institutions are not prepared for an influx of students with ASD. Moreover, presence is not the same as inclusion, and

**CONTACT** Jill Cornelius Underhill  [underhillj@marshall.edu](mailto:underhillj@marshall.edu)  Communication Studies Department, Marshall University, Huntington, WV, U.S.A.

© 2019 National Communication Association

approximately 60% of students with ASD who enter higher education do not persist to degree (Newman et al., 2011).

In a 2016 *Communication Education* forum, scholars were invited to interrogate how examining diversity and difference could further enrich communication and research (Hendrix, Mazer, & Hess, 2016). In response, Rudick and Golsan (2016) asked researchers to examine how “teachers and students communicatively create classroom climates that are alienating or threatening to students from traditionally underrepresented groups” (p. 111). Advancing this call, the 2018 *Communication Education* forum on mental health stigma challenged researchers to closely examine how to facilitate the wellbeing and success of our stigmatized students, advocating for scholarship that interrogates such complex social issues (Rudick & Dannels, 2018). Goldman (2018) specifically called on researchers to “study influences of classroom interactions on the creation, maintenance, or deconstruction of stigmas, stereotypes, and other social perceptions associated with mental health issues” (p. 402). As we look to our future, communication and instruction researchers must begin to probe the differences that will spark transformative changes in how we organize and understand our classrooms. Particularly in relation to stigmatized conditions like ASD, instructors must be prepared to observe, evaluate, and respond to the stigma communication processes that manifest in our classrooms. This study provides an initial step toward this end.

Compared with early childhood and secondary education scholarship, substantially less research has examined ASD in postsecondary contexts (Jackson et al., 2018). As Grandin and Duffy (2008) note, challenges that college students with ASD face largely concern difficulties in social interactions, interpersonal communication, behavioral tendencies, and understanding their peers. Although much can be done to help students on the spectrum learn to navigate social and communicative interactions, research is needed on how to effectively extend the sphere of intervention to peers (Gerhardt & Holmes, 2005). College students with ASD report wanting friendships with their peers, but too often end up experiencing loneliness (Ashbaugh, Koegel, & Koegel, 2017). The present study serves as an exploratory investigation into peer stigma communication processes that can occur in communication classrooms.

### ***Model of stigma communication***

Smith (2007) defines stigma as “a socialized, simplified, standardized image of the disgrace of a particular social group” (p. 455). Stigmas are communicated to identify and isolate individuals who are perceived as threatening to the group’s survival (Goffman, 1963). Peer stigma toward students with ASD can be explored using Smith’s (2007) model of stigma communication (MSC). This communication-focused model theorizes about the features of stigma messages, the reactions those messages elicit, and the effects of those messages on behavior. Because it explains the antecedents to social rejection and isolation experienced by many students with ASD, this model offers an ideal framework to examine the communication processes that create and reify stigma in our classrooms.

The MSC claims that four attributes characterize stigma messages: *marks*, *labels*, *responsibility*, and *peril* (Smith, 2007). Stigma markers are cues that signify an otherizing condition. For ASD, marks might become apparent through atypical classroom behaviors and communication. These marks enable individuals to quickly recognize an atypical

individual, a process further enabled through stigma labels. Groups create labels for stigmatized others to facilitate social separation. By assigning a label, typical individuals provide a way to distinguish ingroup versus outgroup members (Goffman, 1963). Labels can manifest in a communication classroom when an ASD diagnosis is explicitly disclosed or when peers informally diagnose a student as autistic.

The MSC's third message component, responsibility, assumes stigmatized individuals are responsible for and control their condition. Peers in a communication classroom can perceive the atypical behavior demonstrated by students with ASD as either something beyond the individual's control or a choice they are making to behave abnormally (Grandin & Duffy, 2008). Finally, peril messages associate stigmatized individuals with threats to the community at large. In communication classrooms, this may be related to the perceived danger an individual with ASD poses to the classroom environment. Overall, these four features of stigma communication have the potential of encouraging stereotypes and motivating negative emotional reactions that facilitate dehumanization and discrimination (Smith, 2014).

Other outcomes resulting from stigma communication include stigma information sharing, stigma beliefs and attitudes, increased social distance, and behavioral regulation (Smith, 2007, 2014; Smith, Zhu, & Fink, 2017). Research has also explored the various mechanisms through which these outcomes are realized, including emotional reactions (e.g., fear, disgust, anger), stereotyping, and danger appraisal (Smith, 2007; Smith et al., 2017). While most MSC tests have been conducted in the context of infectious diseases within hypothetical groups of affected individuals (Smith, 2014; Smith et al., 2017), an interpersonal investigation of the MSC in that same hypothetical context found significant effects for experiencing sympathy toward a stigmatized individual (Smith, 2014). Specifically, when participants were given a stigma label related to a hypothetical acquaintance, they felt more sympathy toward them, but still sought to regulate their behavior. In sum, the MSC has demonstrated strong predictability for stigma outcomes.

The communication classroom is a space well-suited for the exploration of stigma, considering the deleterious consequences it can have on social interactions and the communication climate. Moreover, the cycle of stigma communication, including its message features, affective reactions, and behavioral components, is bound to take place in a space where oral communication with peers is often a requirement for academic success. This is especially important when considering stigma toward students with ASD, given the growth of this population in higher education.

### ***Autism stigma in the classroom***

Research has yet to fully identify the “subtle and overt ways that teachers and students stigmatize each other” (Smith & Applegate, 2018, p. 385) as related to autism, in general, and autistic students in the classroom, specifically. A small body of research has examined the influence of knowledge and attitudes on autism stigma reduction at the primary and secondary levels (Ranson & Byrne, 2014; Staniland & Byrne, 2013; Swaim & Morgan, 2001). In the majority of these studies, knowledge of ASD was increased through intervention. Still, stigma reduction results have been mixed, with some studies showing no increase in positive attitudes or in stigma reduction (Swaim & Morgan, 2001) and other studies

demonstrating small effects for stigma reduction (Ranson & Byrne, 2014; Staniland & Byrne, 2013).

Increasing knowledge has been viewed as crucial for reducing ASD stigma in college-aged populations (Gillespie-Lynch et al., 2015; Obeid et al., 2015; Someki, Torii, Brooks, Koeda, & Gillespie-Lynch, 2018). A series of three studies examined the use of educational interventions via a brief online training for college students. Two of these studies compared outcomes in Lebanon (Obeid et al., 2015) and Japan (Someki et al., 2018) with college students in the United States. The trainings increased participant knowledge in all three countries and created smaller, but significant, reductions in stigma and desired social distance. Based on the results of the comparative studies, the researchers argued for more contextual understandings of stigma that consider the social norms and perceptions that may influence attitudes and desired social distance (Obeid et al., 2015; Someki et al., 2018). Overall, the small body of research on ASD stigma in the classroom demonstrates that while it is generally not difficult to increase knowledge, knowledge is often not sufficient for decreasing stigma. Attitudes, and the behaviors they sanction, also play a foundational role in the communication of stigma.

Peers have generally reported positive attitudes toward students with disabilities being on campus (Jackson et al., 2018). Attitudes became slightly less positive when queried about having students with disabilities in their own courses (Nevill & White, 2011). Both faculty and peers have reported believing that students with ASD require more attention than their peers (Gibbons, Cihak, Mynatt, & Wilhoit, 2015). Research has also demonstrated that college students have more negative attitudes toward inclusion when students with disabilities have fewer social skills (Nevill & White, 2011). These negative attitudes toward social deficits are key for students with ASD, as they have been directly associated with peer rejection (de Boer & Pijl, 2016). Research is just beginning to investigate why peers often have negative attitudes toward those with ASD. Sasson et al. (2017) found that atypical verbal and nonverbal communication behaviors often associated with ASD resulted in negative first impressions and lower interpersonal evaluations by college peers. The researchers also discovered that negative peer attitudes toward individuals with ASD were positively associated with increased desire for social distance (Sasson et al., 2017). These results suggest that peers almost instantaneously stigmatize individuals who exhibit atypical verbal and nonverbal communication behaviors.

In the classroom, such stigma can manifest in a variety of forms. Peers may desire to avoid communicating or working with atypical students because they perceive negative differences and devalue interaction with them (Sasson et al., 2017). That said, peers might not explicitly avoid interaction with atypical students in classroom contexts, but instead simply desire social distance from them whenever possible. Although research has shown that peers support having students with ASD on campus, their feelings have been mixed about having these students in their classes and even more ambiguous when considering a student with ASD as a potential friend or romantic partner (Ashbaugh et al., 2017). It is, therefore, important to explore how peer knowledge and attitudes influence both openness toward social interaction and desired social distance from students with ASD. Exploring peer knowledge and attitudes can foster more tailored interventions that address these communicative hesitations. Therefore, we ask the following research questions:

RQ1: How do peer attitudes and knowledge influence openness toward students with ASD in college communication classrooms?

RQ2: How do peer attitudes and knowledge influence desired social distance toward students with ASD in college communication classrooms?

RQ3: What attitudes do peers express about interacting with students who exhibit atypical verbal and nonverbal behaviors in college communication classrooms?

To fully understand how stigma communication functions in our classrooms, we must also explore peer perceptions about stigma labels through the disclosure of ASD.

### **Peer attitudes toward disclosure**

Whereas some students with ASD will exhibit atypical behaviors that lead to them being marked and inferentially labeled by their peers, students cannot be aware of a formal diagnosis without disclosure. Filing documentation with campus disability services can garner needed instructional supports and accommodations for students with ASD, but the affordances and advantages of disclosing an autism diagnosis to peers are less straightforward. Given the role that norms play in a variety of cultures (Goffman, 1963), individuals could be discouraged from sharing stigmatizing information that creates uncomfortable interactions and disrupts norms. When this happens, it is conceivable that nonstigmatized individuals will attempt to be courteous in interactions with stigmatized individuals by acting as though the difference does not matter. Moreover, Goffman (1963) argues that keeping a stigmatized condition concealed can be the most preferable path for a group, allowing for what he calls *phantom normalcy*, wherein the group extends phantom acceptance to atypical individuals. Group members in effect extend this facade of politeness to stigmatized individuals by encouraging members of stigmatized groups to maintain their privacy.

Research on the effects of labels in college settings, however, demonstrates benefits to peers knowing a student has ASD. For example, Matthews, Ly, and Goldberg (2015) presented college students with vignettes about a student who demonstrated atypical behavior. Results indicated that participants had more positive behavioral and cognitive attitudes toward students with a high-functioning autism label than a typical college student label or a student with no label. Brosnan and Mills (2016) found similar results in an experimental study comparing vignettes of students with atypical behavior and a clinical diagnosis label (Asperger's Syndrome, autism, or schizophrenia) to a no label condition. Again, participants expressed more positive attitudes toward the student in the vignette when a diagnostic label was included. The researchers concluded that for students with ASD who exhibit atypical behavior, "within a university environment, disclosing their diagnosis to peers could be beneficial" (p. 393).

Although disclosure is a personal decision, it is also important to explore peers' receptiveness to disclosure in a classroom setting. Existing stigma research indicates that peers would not favor a student labeling themselves as autistic, but research on the effect of the label in college settings suggests that peers are more understanding when they know a student has a diagnosis (Brosnan & Mills, 2016; Matthews et al., 2015). When exploring ways to build inclusive communication climates in classrooms, then, it is important for

instructors to consider norms and values associated with information sharing and its implications. Therefore, we ask the following research question:

RQ4: What are peers' perceptions about disclosing an ASD diagnosis to classmates in college communication courses?

## Method

### Participants

The sample consisted of 216 basic communication course students, including 113 females (52.3%), 89 males (41%), and nine participants (4.2%) who chose not to identify their sex. The mean age of participants was approximately 20 years ( $M = 19.85$ ,  $SD = 3.30$ ), with ages ranging from 18 to 49. White/Caucasians constituted 78% of the sample ( $n = 169$ ), black/African Americans constituted 6.5% of the sample ( $n = 14$ ), Asian/Asian Americans constituted 2% of the sample ( $n = 5$ ), Native Americans constituted 0.9% of the sample ( $n = 2$ ), Pacific Islanders constituted 0.5% of the sample ( $n = 1$ ), and Other constituted 1% of the sample ( $n = 2$ ). The remaining 6% of participants identified as more than one race ( $n = 12$ ). College freshman composed 71% of the sample ( $n = 153$ ), sophomores 16% ( $n = 35$ ), juniors 7% ( $n = 14$ ), and seniors 3% ( $n = 6$ ). Eight students did not indicate their year in college.

### Procedures

The institutional review board at a university in Appalachia approved this study. Undergraduate students enrolled in a basic communication course were offered a small course credit incentive for study participation. Participants provided consent before beginning an online survey. First, they were asked to read a vignette about a college student named Taylor (see [Appendix](#)), who was described only in terms of common atypical behaviors and communication deficits in college students with ASD, without a label or diagnosis provided (Grandin & Duffy, 2008; Nevill & White, 2011). After reading the vignette, participants completed measures designed to assess their openness toward students like Taylor who enact atypical communication behaviors in the classroom. They were also asked to provide open-ended feedback explaining their responses. All measures after the openness questions then explicitly referenced ASD and asked participants about their knowledge of ASD, attitudes toward including students with ASD in higher education contexts, and desired social distance from students with ASD. Participants were then asked about disclosure of ASD by classroom peers via closed and open-ended questions. Finally, participants completed demographic questions. Overall, the survey took approximately 20 minutes to complete.

### Instrumentation

#### Openness

Nevill and White's (2011) openness scale, which featured a vignette about a college student living in the same apartment building as the reader, was modified to be about a male<sup>1</sup> college student in the same communication course as the reader (see [Appendix](#)). Openness

is used as the first measure of stigma in this study because it assesses the most relevant communication outcomes in a classroom context and because openness toward interaction will be present when stigma levels are low (Nevill & White, 2011). In the vignette, the hypothetical student named Taylor displayed stereotypical behaviors commonly associated with ASD, including: an obsessive interest, verbal and nonverbal communication deficits, emotional regulation challenges, and stimming (Grandin & Duffy, 2008). The openness scale assessed participants' perceptions with a 12-item Likert scale, where 1 indicated "Strongly Agree," and seven indicated "Strongly Disagree." Sample items from the scale included: "I would not be able to maintain focus with Taylor in the class;" "I would feel anxious working together to complete tasks with Taylor;" and "I would have conversations with Taylor in class." Higher scores indicated lower levels of openness, which were used to infer a higher degree of stigma. The openness scale was reliable ( $M = 3.39$ ,  $SD = 0.974$ ,  $\alpha = .877$ ).

### **Social distance**

Stigma was also assessed via a previously adapted version of the Social Distance Scale (Bogardus, 1933) that focuses on autism (Gillespie-Lynch et al., 2015; Obeid et al., 2015; Someki et al., 2018). Participants were asked to indicate their degree of willingness to interact with an individual with autism on six items, where 1 indicated "Definitely Willing," and five indicated "Definitely Unwilling." Sample items from the scale included: "How willing would you be to make friends with a person with autism?," and "How willing would you be to date a person with autism?" Higher scores indicated less willingness to interact. The social distance scale was reliable ( $M = 1.95$ ,  $SD = 0.738$ ,  $\alpha = .855$ ).

### **Knowledge**

Knowledge of ASD was measured with 18 items of the Autism Stigma and Knowledge Questionnaire (ASK-Q; Harrison, Bradshaw, Naqvi, Paff, & Campbell, 2017). Participants were asked to respond to each of the 18 items with True/False/Don't Know or Agree/Disagree/Not Sure. Correct answers were scored with one point each, while incorrect answers or indicating "don't know/not sure" were scored with zero points. This scale has demonstrated high internal consistency despite its categorical response method (Harrison et al., 2017). Sample items from the scale included: "People with autism often struggle with interpersonal communication;" "Most people with autism have low intelligence;" and "People with autism can attend college." Higher scores indicated greater knowledge of ASD. The knowledge scale was reliable ( $M = 11.72$ ,  $SD = 4.17$ ,  $\alpha = .831$ ).

### **Attitudes**

Attitudes toward individuals with ASD were measured using the Attitudes on Postsecondary Education for Students with Intellectual Disabilities and Autism Survey (APES; Dachez, Ndofo, & Ameline, 2015), specifically the items that examine attitudes toward individuals with ASD in higher education. Responses were measured with a 10-item Likert scale, where 1 indicated "Strongly Disagree," and seven indicated "Strongly Agree." Sample items from the scale included: "Students with ASD should be allowed to pursue postsecondary education at a college or university;" "Classroom and curricular modifications made on behalf of students with ASD will have a negative influence on other students in the classroom;" and "If students with ASD were to be integrated in regular

classes, other students would learn how to communicate with and interact with individuals with disabilities better.” Higher scores indicated more positive attitudes toward individuals with ASD in the classroom. The modified APES scale was reliable ( $M = 5.25$ ,  $SD = 0.937$ ,  $\alpha = .826$ ).

### Qualitative coding

Coding schemes for the open-ended responses were developed using emergent patterns in the data (Lindlof & Taylor, 2011). Responses to two open-ended prompts were analyzed separately because each question sought to understand a different part of the stigma process. The first prompt asked participants to: “Please provide any information or feedback that can help us understand how you answered the questions about Taylor.” Participants were also asked if students in their communication course should disclose to their classmates that they have ASD (yes, no, maybe) and to explain their opinion with the prompt: “Please explain your belief about whether or not students with autism should disclose their diagnosis to classmates in communication courses.” For each of the two open-ended response questions, all three authors first identified themes independently. Then, through a peer debriefing process, all three authors discussed, normed, and revised emergent themes to achieve parallel language in the labels (Lincoln & Guba, 1985). For each question, two authors established reliability by coding a random selection of 20% of the data (Gillespie-Lynch et al., 2015). Percent coder agreement for both response sets reached 95%. After establishing reliability, the first author coded the remaining data.

### Results

The first research question examined the influence of knowledge and attitudes on peer openness toward college students with ASD. Openness was regressed on attitudes and knowledge, and the overall multiple regression model was statistically significant,  $R^2_{\text{adjusted}} = .13$ ,  $F(2, 196) = 15.744$ ,  $p < .001$ . Together, knowledge and attitudes accounted for approximately 13% of the variance in peer openness. When holding knowledge constant, attitudes significantly predicted openness in the multiple regression model,  $t(196) = -5.485$ ,  $p < .001$ ,  $B = -0.428$ ,  $SE = 0.078$ ,  $\beta = -.414$ . As attitudes toward students with ASD became more positive, peer openness toward interaction increased. However, when holding attitudes constant, knowledge was not independently predictive of openness,  $t(196) = 1.572$ ,  $p = .118$ ,  $B = 0.027$ ,  $SE = 0.017$ ,  $\beta = .119$ .

The second research question examined the influence of knowledge and attitudes on desired social distance from peers with ASD. Social distance was regressed on knowledge and attitudes, and the overall multiple regression model was statistically significant,  $R^2_{\text{adjusted}} = .189$ ,  $F(2, 199) = 24.395$ ,  $p < .001$ . Knowledge and attitudes accounted for approximately 19% of the variance in social distance. When holding knowledge constant, attitudes significantly predicted social distance,  $t(199) = -6.001$ ,  $p < .001$ ,  $B = -0.346$ ,  $SE = 0.058$ ,  $\beta = -.432$ . The more positive attitudes peers held toward students with ASD, the less social distance they desired from students with ASD. However, when holding attitudes constant in the equation, knowledge was not a significant predictor of social distance,  $t(199) = -0.329$ ,  $p = .743$ ,  $B = -0.004$ ,  $SE = 0.013$ ,  $\beta = -.024$ .

The third research question explored attitudes toward interacting with peers who exhibit atypical verbal and nonverbal behaviors in the classroom. Four themes were expressed in the peer responses ( $N = 77$ ): sympathy and empathy for atypical students, tolerance for classroom inclusion, external attributions about atypical communication and behavior, and hesitations about interaction (Table 1). These themes were not mutually exclusive.

The first theme illustrates students' awareness that Taylor, the student in the vignette, was not a typical peer. In light of this awareness, many participants expressed empathy or sympathy for Taylor. One participant noted: "I am willing to work with people that may have issues—because I can relate to Taylor on some levels." Other students suggested they could personally relate to Taylor's struggles, especially with issues of anxiety and attention deficit disorder: "I personally struggle with anxiety and would not feel good about myself if I was unwelcome from a group because of it," and "As someone with ADHD I would try my hardest to understand and be patient with him."

The second theme illustrated students' support for Taylor's presence in the course and the belief that he belonged in the classroom despite any differences he may exhibit. One student claimed: "Just because Taylor may have special needs does not mean he should be disregarded or separated from others in the class." Another participant argued that peers should accept Taylor's presence in the course: "No one is perfect and he is trying to do his best so other students should not think he bothers us." Another suggested that he/she would be unaffected by Taylor's atypical behaviors by saying: "I have had experience with people like this growing up in the school system so I believe that I could get work done properly regardless of Taylor's little ticks." One person even offered support: "Well even though he has had some issues going on, I have no problem helping classmates when needed and don't mind if I need to push someone a little bit to get them to do some work." These positive attitudes about inclusion, though, were fairly focused on the classroom context. Only a handful of participants mentioned possible friendship in their responses: "I believe Taylor may be misunderstood and could use a friend," and

I am also a sports fan, even baseball, and I also have speech anxiety so I understand. However, it may have been unnecessary for him to raise his voice, but it would not deter me from being a friend or not being able to work in class.

The third theme reflected students' external attributions about Taylor. They acknowledged he had issues with attention, anxiety, and behavior, and some speculated that he was diagnosed with ADHD, anxiety, or social anxiety. One student attributed: "I believe there's more to Taylor and that he could possibly struggle with a disorder like ADHD, or deals with personal issues," and another said: "Taylor seems like an alright guy with social anxiety." Another suggested Taylor should not be at fault, again reinforcing the issues were external to him: "Taylor clearly has some anxiety and other such issues and it

**Table 1.** Attitude themes: research question 3.

Theme	Frequency
Empathy/sympathy	51
Tolerance for inclusion	47
External attributions	36
Interaction hesitation	14

isn't his fault nor should he be blamed for it." Other participants explicitly speculated about ASD: "This sounds like my cousin who has asbergers [*sic*], he is good at what he does, but has issues with social cues and socializing."

Finally, it is important to note that not all of the responses to Taylor were positive. The final theme that emerged from these data was a hesitation about having to interact with Taylor. One student said: "I would not want to interact with Taylor because I would find him to be irritating, but I could ignore him if I needed." Also, when participants focused on completing coursework with Taylor, their comments were less inclusive:

I would definitely feel a little hesitate [*sic*] to have Taylor in my class let alone in my group. He seems like a person who would drag you down there for [*sic*] I would not want him in my group or in my class.

Many of these participants expressed a strong concern about Taylor's ability to share the workload. One student affirmed: "I prefer to work with someone who is not distracted, and knows what they are talking about, and are able to work/interact with other students." Additionally, students did not seem to believe Taylor would be a good group member for a project:

If Taylor was in my group assigned by the teacher, I would more than likely be annoyed because I always get stuck having to do all the work, but I would deal with it if he were willing to work with me and do his share in the project.

Participants were also concerned about having to do an unfair share of the workload: "I feel like if Taylor was in my group I would have to pick up most of the slack and do the presentation myself because he couldn't handle it." Finally, some expressed unease toward Taylor: "Taylor is obviously an anxious and temperamental person which can cause issues in a group setting or when giving presentations and speeches;" others expressed a sense of peril about working with him:

Based on the passage, it seems like public speaking makes Taylor extremely nervous, or he is taking some kind of drug to help him with school that is making him fidgety and explosive toward others. The latter reasoning would make me nervous to have him in my group.

The fourth research question explored peer attitudes toward disclosure of an ASD diagnosis. Participants were first asked if a student should disclose an autism diagnosis to classmates in a communication course. Fifty percent of the participants ( $n = 107$ ) said students should not disclose, 41% said they should "maybe" disclose ( $n = 89$ ), and 5% said they should disclose ( $n = 11$ ). Four percent of participants did not respond to this question. A follow-up question asked for an explanation for their response. Four themes emerged from this open-ended data ( $N = 184$ ): disclosure as a personal decision; disclosure as a violation of privacy; disclosure as an unnecessary decision; and disclosure as a beneficial decision (Table 2).

**Table 2.** Disclosure themes: research question 4.

Theme	Frequency
Personal decision	73
Privacy	36
Unnecessary	24
Beneficial	23

The majority of participants who provided open-ended feedback indicated that disclosure should be a personal decision. One student stated: “If they want to by all means no one should stop them but they should not be required to say such personal information that many people have stigmas against,” while others suggested it should only happen because the student has a need or desire to disclose: “I feel that they shouldn’t have to disclose their disability unless they feel the need to because it is their decision,” and “Their diagnosis is their personal information—they are entitled to keeping their information private—that is their right. If they want to disclose that information that is their choice.” The idea of being comfortable with the disclosure was paramount in the responses: “People with autism should do what makes them comfortable, so they should only disclose their diagnoses if they are comfortable doing it.” Additionally, some worried that disclosing an autism diagnosis could lead to embarrassment or bullying: “This is a sensitive and personal subject, and some could find it to be embarrassing,” and “I feel like some people would make fun of the person with autism.”

The second emergent theme reflected participants’ values around privacy. One student typified this theme by stating: “I believe the rule of ‘Don’t ask, Don’t tell.’” Others indicated students have the right to confidentiality, even though the open-ended question itself implied voluntary disclosure. The term “nobody’s business” was invoked in many of the responses: “It’s none of our business,” and “It’s none of their damn business.” The tenor of the responses also demonstrated that peers perceived an ASD diagnosis as extremely sensitive information: “Students with autism should never be expected to tell someone something personal like that.” Some even compared disclosure of ASD to other stigmatized information, such as sexual orientation: “Just like how we don’t expect gay people to tell everyone in the class that they are gay, it is no one’s business;” mental health status: “As a mentally ill person that strikes me as really invasive and rude. I wouldn’t want someone to force me to disclose any of my disorders so I feel the same about people with autism;” and HIV status: “I don’t think they should have to because if that was the case then people with HIV should have to disclose that with there [*sic*] classmates as well.” Many objected at the suggestion of disclosure, as well: “Who are we to tell them that they should disclose that they are autistic? It’s like telling someone with anxiety, depression, cancer, etc. to disclose their diagnosis.”

Another theme that emerged from the responses was a lack of necessity or benefit to disclosing. Many of these participants believed it was unnecessary to share an ASD diagnosis, making statements such as: “There is no reason for it to be disclosed.” Others could not conceptualize a reason for disclosure; one participant suggested: “Why does it matter if someone is autistic?” Another participant also expressed a belief that ASD only affects the diagnosed student and has no influence on classmates: “It should not be the concern of other classmates what disability one has.” Additionally, some participants associated disclosure with creating difference, with one person stating: “I do not think they should disclose that they have autism because it does not matter if they do. We are all humans and we are created unique and should be treated the same no matter what.” In another response, a participant suggested that peers were not seen as having agency in supporting a student who disclosed an ASD diagnosis: “Students with autism should not disclose their diagnoses because it would be impossible to know what their problem is and others won’t be able to help them.” In general, while participants articulated that the professor should

know “I do feel teachers should be aware; not necessarily the students,” participants did not see disclosure to peers as necessary or beneficial:

No one should have to know for certain if someone has autism other than the professor. It is their business and their professor’s business, not anyone else. That information has no benefit or even gives a benefit from being told to everyone.

The students who did express any support for peer disclosure argued that it could have positive benefits for the student with ASD and/or for peers. These participants argued that disclosure would help peers be more accepting, with one stating: “It would allow others to understand what’s going on, and be more accepting of that person,” and another suggesting: “I think it should be known to the other classmates so they can have a better understanding of how that student is feeling or acting the way they are.” Some participants also believed that disclosure could allow peers to provide needed support. One suggested: “I feel that it make [*sic*] be easier to disclose their diagnosis rather than try to hide it because then the student’s classmates could help if needed.” Disclosure was also seen as a way to avoid misunderstanding: “Just in case if they have trouble with something then people won’t be as judgmental;” frustration: “They should make their diagnosis public that way other students don’t get frustrated when the other person may not talk or be able to help much;” and discrimination: “I think it is good for a student to disclose information like this so they do not get discriminated against more easily.” While many saw disclosure to peers as potentially beneficial, some participants expressed the belief that concealment was deleterious to the student with ASD because it would cause them to be isolated from their peers. One participant argued this by stating: “Withholding this information from other students may cause mental instability simply because they have no-one [*sic*] to talk to about their possible struggles in this class.”

## Discussion

As more young adults with ASD enter higher education, campus communities must address barriers that inhibit their success (Cai & Richdale, 2016). One of these barriers is stigma, which often leads to social rejection and isolation from peers. Whereas many college students with ASD report that their academic needs are met, most also report that their social needs remain unaddressed (Ashbaugh et al., 2017); hence issues related to the communicative aspects of stigma are paramount. Research has demonstrated that ASD stigma results in social disadvantages and daily discrimination (Botha & Frost, 2018) and that peers are largely responsible for the pervasive social rejection and isolation of college students with ASD (Sasson et al., 2017). This isolation can lead to poorer mental health outcomes and increased suicide rates of people with ASD (Botha & Frost, 2018). The classroom can be a place where this isolation is maintained or challenged. Although the classroom is not the only place to find kindred spirits, the structure, size, and nature of many communication courses affords students opportunities to develop relationships. As such, instructional researchers are uniquely positioned to explore how to communicatively decrease stigma and empower peers to change their perceptions of and behaviors toward stigmatized students (Rudick & Dannels, 2018). The MSC (Smith, 2007) provides a useful framework for exploring the underlying mechanisms of stigma and its effects on peer perceptions in communication classrooms. The current investigation is an initial step in using

the MSC to investigate the dynamics of stigma communication that potentially affect atypical students within the classroom.

Results of this study illustrate the influence of attitudes toward including students with ASD in college classrooms on both openness toward interaction and desired social distance from students with ASD. The positive attitudes expressed toward students with ASD showed more support for classroom inclusion at the college level than previous research findings (Gibbons et al., 2015; Jackson et al., 2018; Nevill & White, 2011). These results also inform us that increasing positive attitudes through intervention could likely lead to more openness toward interacting with and less desired social distance from atypical peers in communication classrooms. Therefore, stigma reduction interventions developed for communication classrooms would be well served to focus on increasing positive attitudes toward full inclusion.

Results also reveal the potentially limited role that knowledge can play in stigma reduction. In this study, knowledge was not an independently significant predictor for openness or social distance. While some past stigma reduction interventions have alluded to this finding (Swaim & Morgan, 2001), others have relied on increasing knowledge as a central component of stigma reduction (Gillespie-Lynch et al., 2015; Obeid et al., 2015; Ranson & Byrne, 2014; Someki et al., 2018; Staniland & Byrne, 2013). As such, the relevance of this finding cannot be overstated. Instead of focusing on general knowledge about ASD, these results indicate that more peer-specific interventions are needed. Peers not only should be equipped with knowledge about the etiology and manifestations of ASD but also need to learn how stigma communication isolates and stereotypes their atypical peers.

Furthermore, the open-ended peer feedback provides great depth in understanding the development, transmission, and effects of ASD stigma in the classroom. Whereas students expressed sympathetic attitudes toward atypical classmates, they mostly did not see their role extending beyond kind feelings and the endorsement of classroom presence. Instead, peers essentially expressed all four MSC components of stigma (Smith, 2007). The atypical behaviors exhibited by the student in the vignette were perceived as stigma markers by the majority of participants, leading students to identify this classmate as different from them. Many peers labeled the hypothetical student with psychological and developmental disorders like Asperger's, ASD, or ADHD, making attributions about why the student behaved in abnormal ways. Participants assigned responsibility for his atypical behaviors to these conditions, allowing them to make sense of his classroom behavior and often absolving him of full responsibility for his actions (Brosnan & Mills, 2016). Kindness and understanding for his atypical classroom behavior was clearly expressed in participants' feedback, but the lack of desire to interact and form relationships with him was just as clear. The student was seen as deficient and unlikely to be able to contribute fully to group projects, even though he was described as a good student and as studious in the vignette. In this way, students communicated a type of academic peril for peers with ASD (Smith, 2007); they expressed fear that having to complete coursework with atypical students would hurt their academic success. Beyond working together on a project, intimate levels of socialization such as friendship or dating were rarely addressed in participant responses (even though the quantitative openness measure asked about these types of relationships). These responses demonstrate the efficacy of the MSC's tenets and indicate that decreased

openness and social distance are outcomes of stigma communication and are also potential considerations for those who construct stigma messages.

Responses from our study also suggest that a desire for social distance might function differently when students are within the walls of a classroom. While attitudes were significantly predictive of social distance in the quantitative analyses, the qualitative feedback demonstrated a level of apprehension that advances our understanding about the nuances of social distance. Although asked to explain their responses holistically, participants focused on the student's potential effect on their own class performance, and many ignored the questions about socializing. Perhaps in classroom settings, social distance is more than a function of stigma marking and negative attitudes. It may also be fueled by potential academic and social consequences an individual may accrue upon interacting with atypical classmates. As Smith (2007) argues, peril messages serve as a warning to the dominant group that social interaction with stigmatized group members threatens the dominant group's status. Even if peers are open to helping a student with ASD in the classroom, an important question remains about how to facilitate more connected classroom relationships, especially given the academic pressures and potential perceived negative academic consequences of social engagement.

One unexpected finding of this study was that many participants did not perceive that students with ASD should disclose their diagnosis. Goffman (1963) notes that when stigma concealment is an option, both typical and stigmatized individuals often prefer this strategy to avoid uncomfortable interactions that occur with disclosure. It was very clear that these participants desired to enact phantom normalcy and extend phantom acceptance to all students (Goffman, 1963). Despite research indicating more positive attitudes toward students who are known to have ASD and exhibit atypical behaviors (Brosnan & Mills, 2016; Matthews et al., 2015), these participants seemed to perceive no benefit of disclosing an ASD diagnosis. This paradox highlights the need to critically examine the relationships between how students communicatively negotiate labels, disclosure, and social distance.

### ***Implications for teaching and learning***

What types of curricula, interventions, or activities can instructors develop and test that will expand the hearts and minds of students in our courses toward students with atypical communicative behaviors (including those due to ASD)? Building on the results of this study, any type of intervention seeking to build inclusive communication classrooms should address openness toward interaction and social distance in at least two important ways. First, it seems intervention efforts would benefit from educating students on the ways they stigmatize atypical peers through stigma marks, labeling students inferentially, and then creating social distance from them. Moreover, stigma interventions might benefit from a focus on changing perceptions about the role that students can play in the success of their atypical peers.

Primarily, interventions should attempt to bolster positive attitudes about communicating with atypical peers. Although previous stigma interventions have focused on increasing knowledge, we argue that increasing positive attitudes toward interaction and inclusion will ultimately be more influential for increasing openness and decreasing desired social distance. Typical students need to understand that abnormal classroom

behavior should not be equated with social disinterest, and classroom interventions should focus on teaching students to reach out to and communicate with atypical peers. For those focusing on creating a classroom climate grounded in inclusiveness, it might be helpful to explicitly introduce and discuss difference; while exhibiting some behaviors that are different from typical students—could also want the college experience of friends and romantic partners (Ashbaugh et al., 2017). Since it is often people’s misunderstanding of atypical communication and behaviors that tends to isolate peers with ASD (Harrison et al., 2017; Sasson et al., 2017), instructors should teach students to accept a variety of communicative behaviors, integrating communicative difference into lessons related to audience analysis, nonverbal and verbal behavior, interpersonal communication, group communication, and/or diversity and inclusion.

These results do not make a strong argument about whether a student with ASD should or should not disclose to classmates, as they are exploratory in nature; instead, these findings demonstrate that the majority of peers do not perceive any relevance, utility, or value in peer disclosure. Despite research demonstrating that peers exhibit more positive attitudes toward students with ASD upon disclosure (Brosnan & Mills, 2016; Matthews et al., 2015), advocating for disclosure could remove ASD students’ autonomy and may induce stress (Botha & Frost, 2018). Instead, typical peers should be persuaded to take responsibility for making unfair judgments about their atypical classmates (Sasson et al., 2017). Additionally, peers could be reoriented to proactively communicate with students who demonstrate atypical nonverbal and verbal communication behaviors, without requiring a disclosure to prompt inclusion.

### ***Limitations and future research***

There are several limitations in this study. First, a convenience sample on one campus was used, preventing the results from being generalizable. Second, we used a vignette with one example of how ASD typically manifests in male college students to measure openness toward interaction. Our artificial measures cannot begin to fully encapsulate the full range of peer stigma communication. Moreover, this study does not consider how previous experiences with ASD might have shaped participant attitudes. Finally, this project cannot speak to the experience of students with ASD in communication courses. Instead, this project seeks to serve as a preliminary exploration of how peer perceptions could shape stigma communication in our courses.

Future research could continue to investigate how to improve our classroom environments for students with ASD. First, investigations need to seek greater generalizability by working to include diverse types of peers, classrooms contexts, and campus environments. Moreover, research could consider the full spectrum of ASD and the wide range of ASD stigma markers that can result from atypical behavior and communication. Scholars could examine how these markers influence peer perceptions and ASD stigma levels from a variety of methodological perspectives. Research is needed to first identify the antecedents of ASD stigma and then develop strategies to combat it. Ashbaugh et al. (2017) called for “specific outreach programs to the typical student population to increase knowledge, awareness, and inclusion of students with ASD” (p. 194). Stigma reduction interventions that increase positive attitudes and motivations for social interaction with atypical peers need to be developed and tested in a more systematic manner. Moreover, future work

should formally test the MSC in classroom contexts and consider the relative contribution of stigma message features in developing and maintaining stigma and desired social distance. Ultimately, communication researchers should consider focusing more attention on the effects of stigma and the pervasive, negative influence it can have in our classrooms (Rudick & Dannels, 2018). We must also begin to consider how our curricula and assessments reinforce stigma toward atypical students.

## Conclusion

As instructors, we are architects of our classrooms, and we have the power to build spaces that promote inclusive social interaction and celebrate differences. The promotion of these values transforms into action when we wholeheartedly welcome and integrate students with ASD into our courses. An important first step in this process is teaching our students that presence and inclusion are not synonymous. Our findings indicate that peers do not recognize the role they play in either inhibiting or facilitating the success of classmates with ASD. As instructors, we can fill this gap and assist students in becoming aware of how their stigma communication toward atypical peers often creates barriers for building relationships and leads to social isolation. By proactively fostering connections, we can empower our students to develop relationships with their peers—one of the most powerful mechanisms for reducing stigma and building inclusive classrooms.

## Note

1. A male character was chosen for this hypothetical scenario for multiple reasons. First, there is an estimated 4:1 ratio of male to female ASD diagnosis. Moreover, there are often major differences in the presentation of atypical behavior by college-aged males and females with ASD (Halladay et al., 2015). Research that examines autism stigma using vignettes has featured male characters (Brosnan & Mills, 2016; Butler & Gillis, 2011; Matthews et al., 2015). Overall, analysis showed that male ( $M = 3.31$ ,  $SD = .95$ ) and female ( $M = 3.50$ ,  $SD = 0.94$ ) participants did not differ in their openness levels toward Taylor,  $t(192) = -1.44$ ,  $p = .152$ . This decision is further discussed in the “Limitations and future research” section.

## References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Ashbaugh, K., Koegel, R. L., & Koegel, L. K. (2017). Increasing social integration for college students with Autism Spectrum Disorder. *Behavioral Development Bulletin*, 22, 183–196. doi:10.1037/bdb0000057
- Bogardus, E. S. (1933). A social distance scale. *Sociology & Social Research*, 17, 265–271.
- Botha, M., & Frost, D. M. (2018). Extending the minority stress model to understand mental health problems experienced by the autistic population. *Society & Mental Health*. Advance online publication. doi:10.1177/2156869318804297
- Brosnan, M., & Mills, E. (2016). The effect of diagnostic labels on the affective responses of college students toward peers with “Asperger’s Syndrome” and Autism Spectrum Disorder. *Autism*, 20, 388–394. doi:10.1177/1362361315586721
- Butler, R. C., & Gillis, J. M. (2011). The impact of labels and behaviors on the stigmatization of adults with Asperger’s disorder. *Journal of Autism Development & Disorders*, 41, 741–749. doi:10.1007/s10803-010-1093-9

- Cai, R. Y., & Richdale, A. L. (2016). Educational experiences and needs of higher education students with Autism Spectrum Disorder. *Journal of Autism & Developmental Disorders*, 46, 31–41. doi:10.1007/s10803-015-2535-1
- Dachez, J., Ndofo, A., & Ameline, A. (2015). French validation of the multidimensional attitude scale towards persons with disabilities (MAS): The case of attitudes towards autism and their moderating factors. *Journal of Autism and Developmental Disorders*, 45, 2508–2518. doi:10.1007/s10803-015-2417-6
- de Boer, A., & Pijl, S. J. (2016). The acceptance and rejection of peers with ASD and ADHD in general secondary education. *The Journal of Educational Research*, 109, 325–332. doi:10.1080/00220671.2014.958812
- Gerhardt, P. F., & Holmes, D. L. (2005). Employment: Options and issues for adolescents and adults with Autism Spectrum Disorders. In F. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., pp. 1087–1101). Hoboken, NJ: Wiley.
- Gibbons, M. M., Cihak, D. F., Mynatt, B., & Wilhoit, B. E. (2015). Faculty and student attitudes toward postsecondary education for students with intellectual disabilities and autism. *Journal of Postsecondary Education and Disability*, 28, 149–162. Retrieved from <https://www.ahead.org/professional-resources/publications/jped>
- Gillespie-Lynch, K., Brooks, P. J., Someki, F., Obeid, R., Shane-Simpson, C., Kapp, S., ... Smith, D. S. (2015). Changing college students' conceptions of autism: An online training to increase knowledge and decrease stigma. *Journal of Autism and Developmental Disorders*, 45, 2553–2566. doi:10.1007/s10803-015-2422-9
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. New York: Simon & Schuster Inc.
- Goldman, Z. W. (2018). Responding to mental health issues in the college classroom. *Communication Education*, 67, 399–404. doi:10.1080/03634523.2018.1467563
- Grandin, T., & Duffy, K. (2008). *Developing talents: Careers for individuals with Asperger Syndrome and high-functioning autism*. Shawnee Mission, KS: Autism Asperger Publishing Company.
- Halladay, A. K., Bishop, S., Constantino, J. N., Daniels, A. M., Koenig, K., Palmer, K., ... Szatmari, P. (2015). Sex and gender differences in Autism Spectrum Disorder: Summarizing evidence gaps and identifying emerging areas of priority. *Molecular Autism*, 6(36), 1–5. doi:10.1186/s13229-015-0019-y
- Harrison, A. J., Bradshaw, L. P., Naqvi, N. C., Paff, M. L., & Campbell, J. M. (2017). Development and psychometric evaluation of the autism stigma and knowledge questionnaire (ASK-Q). *Journal of Autism and Developmental Disorders*, 47, 3281–3295. doi:10.1007/s10803-017-3242-x
- Hendrix, K. G., Mazer, J. P., & Hess, J. A. (2016). Forum: Diversity and scholarship on instructional communication editor's introduction: Interrogating the darkness. *Communication Education*, 65, 105–107. doi:10.1080/03634523.2015.1110247
- Jackson, S. L. J., Hart, L., Brown, J. T., & Volkmar, F. R. (2018). Brief report: Self reported academic, social, and mental health experiences of post-secondary students with Autism Spectrum Disorder. *Journal of Autism & Developmental Disorders*, 48, 643–650. doi:10.1007/s10803-017-3315-x
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.
- Lindlof, T. R., & Taylor, B. C. (2011). *Qualitative communication research methods* (3rd ed.). Los Angeles: Sage Publications.
- Matthews, N. L., Ly, A. R., & Goldberg, W. A. (2015). College students' perceptions of peers with Autism Spectrum Disorder. *Journal of Autism Development & Disorders*, 45, 90–99. doi:10.1007/s10803-014-2195-6
- Nevill, R. E. A., & White, S. W. (2011). College students' openness towards Autism Spectrum Disorders: Improving peer acceptance. *Journal of Autism and Developmental Disorders*, 41, 1619–1628. doi:10.1007/s10803-011-1189-x
- Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., & Swarting, M. (2011). *The post-high school outcomes of young adults with disabilities up to 8 years after high school* (A report from the National Longitudinal Transition Study–2 [NLTS2; NCSER 2011–3005]). Menlo Park, CA: SRI International.
- Obeid, R., Daou, N., DeNigris, D., Shane-Simpson, C., Brooks, P. J., & Gillespie-Lynch, K. (2015). A cross-cultural comparison of knowledge and stigma associated with Autism Spectrum Disorder

- among college students in Lebanon and the United States. *Journal of Autism and Developmental Disorders*, 45, 3520–3536. doi:10.1007/s10803-015-2499-1
- Ranson, N. J., & Byrne, M. K. (2014). Promoting peer acceptance of females with higher-functioning autism in a mainstream education setting: A replication and extension of the effects of an autism anti-stigma program. *Journal of Autism & Developmental Disorders*, 44, 2778–2796. doi:10.1007/s10803-014-2139-1
- Rudick, C. K., & Dannels, D. P. (2018). Yes, and\* ... : Continuing the scholarly conversation about mental health stigma in higher education. *Communication Education*, 67, 404–408. doi:10.1080/03634523.2018.1467563
- Rudick, C. K., & Golsan, K. B. (2016). Difference, accountability, and social justice: Three challenges for instructional communication scholarship. *Communication Education*, 65, 110–112. doi:10.1080/03634523.2015.1110247
- Sasson, N. J., Faso, D. J., Nugent, J., Lovell, S., Kennedy, D. P., & Grossman, R. B. (2017). Neurotypical peers are less willing to interact with those with autism based on thin-sliced judgments. *Nature Scientific Reports*, 6, 40700. doi:10.1038/srep40700
- Smith, R. A. (2007). Language of the lost: An explication of stigma communication. *Communication Theory*, 17, 462–485. doi:10.1111/j.1468-2885.2007.00307.x
- Smith, R. A. (2014). Testing the model of stigma communication with a factorial experiment in an interpersonal context. *Communication Studies*, 65, 154–173. doi: 10.1080/10510974.2013.851095
- Smith, R. A., & Applegate, A. (2018). Mental health stigma and communication and their intersections with education. *Communication Education*, 67, 382–393. doi:10.1080/03634523.2018.1465988
- Smith, R. A., Zhu, X., & Fink, E. L. (2017). Understanding the effects of stigma messages: Danger appraisal and message judgments. *Health Communication*. Advanced online publication. doi:10.1080/10410236.2017.1405487
- Someki, F., Torii, M., Brooks, P. J., Koeda, T., & Gillespie-Lynch, K. (2018). Stigma associated with autism among college students in Japan and the United States: An online training study. *Research in Developmental Disabilities*, 76, 88–98. doi:10.1016/j.ridd.2018.02.016
- Staniland, J., & Byrne, M. (2013). The effects of a multi-component higher-functioning autism anti-stigma program on adolescent boys. *Journal of Autism and Developmental Disorders*, 43, 2816–2829. doi:10.1007/s10803-013-1829-4
- Swaim, K. F., & Morgan, S. B. (2001). Children's attitudes and behavioral intentions toward a peer with autistic behaviors: Does a brief intervention have an effect? *Journal of Autism and Developmental Disorders*, 31, 195–205. doi:10.1023/A:1010703316365

## Appendix

### Study vignette

Taylor is a college student, the same age and year as you. Taylor is funny, studious, energetic, and likes attending college. He enjoys all sports, but is a baseball fanatic. He is a good student overall and is majoring in mathematics. Taylor is in the same communication class as you. Through the beginning of the semester you notice some different characteristics about Taylor. He has difficulty making eye contact when talking, and trouble realizing it's time to end a conversation. During class discussion, Taylor has trouble switching topics. He tends to get fixated on details and has trouble shifting his attention quickly. When he was frustrated one day, he raised his voice at a classmate and left the classroom all together. You later heard him apologize. You assume Taylor has trouble paying attention because he gets restless, including rocking, shaking his foot, or twirling a pen while people are giving speeches. It is now time to start the semester project for your class. The teacher is assigning groups to all of the students in the class. The project includes a paper and presentation. Based on the passage, please answer the following questions with what most closely represents your feelings.