Macrothink Institute™

Journal of Educational Issues
ISSN 2377-2263
2016, Vol. 2, No. 2

Students' Stereotypes of Autism

Chantelle Wood (Corresponding author)

Department of Psychology, University of Sheffield

1 Vicar Lane, Sheffield S10 2TP, United Kingdom

E-mail: chantelle.wood@sheffield.ac.uk

Megan Freeth

Department of Psychology, University of Sheffield

1 Vicar Lane, Sheffield S10 2TP, United Kingdom

E-mail: m.freeth@sheffield.ac.uk

Received: September 1, 2016 Accepted: October 13, 2016 Published: October 19, 2016

doi:10.5296/jei.v2i2.9975 URL: http://dx.doi.org/10.5296/jei.v2i2.9975

Abstract

This research aimed to ascertain the contents (Study 1) and valence (Study 2) of the stereotype associated with Autism Spectrum Conditions (ASC) in university students. Study 1 used a free-response methodology where participants listed the characteristics that they thought society associates with individuals with ASC. This study revealed that the stereotypic traits most frequently reported by students without personal experience of ASC were poor social skills, being introverted and withdrawn, poor communication and difficult personality or behaviour. Study 2 had participants rate the valence of the 10 most frequently mentioned stereotypic traits identified in Study 1, along with additional traits frequently used to describe disabled and non-disabled people. This study found that eight of the ten most frequently listed stereotypic traits from Study 1 were seen as negative, and were rated significantly more negatively than traits used to describe non-disabled people. The knowledge of the contents and valence of the stereotype of ASC gained from this research can be used to tackle negative aspects of this stereotype.

Keywords: Autism Spectrum Condition, Autism, Stereotype, Stereotypical traits, Societal beliefs

1. Introduction

Although great inroads have been made into understanding autism since it was first recognised by Leo Kanner in 1943, recent reports have highlighted the extreme paucity of knowledge around societal issues relevant to autism, such as the lack of research addressing inaccurate perceptions of autistic people (Pellicano, Dinsmore, & Charman, 2014). While the level of awareness of autism within the general population has recently been reported to be high (Dillenburger, Jordan, McKerr, Devine, & Keenan, 2013), aspects of public perceptions of autism can be negative and inaccurate (Huws & Jones, 2010). Negative behaviour towards autistic people is also prevalent - bullying is widely reported (Humphrey & Lewis, 2008; Huws & Jones, 2008). Examination of media representations suggests that the media perpetuates negative and inaccurate characterisations of autism. Recent content analyses of both Australian and British print media report that autistic people are often portrayed as unstable or dangerous (Huws & Jones, 2011; Jones & Harwood, 2009), and that the prevalence of savant skills is overstated (Jones & Harwood, 2009). Draaisma (2009) similarly notes that it is very difficult to think of an example of a character in a film or television series who is autistic but who does not have some form of savant skill. However, in reality less than 30% of those who are autistic actually possess such a skill (Howlin, Goode, Hutton, & Rutter, 2009).

Before research can evaluate potential interventions for changing perceptions of autism, a greater understanding of the contents of the stereotype of autism is needed. Stereotypes are the set of traits and characteristics that society ascribes to a particular social group (Brown, 1995). Autism affects approximately 1 in every 100 people in the UK (Brugha et al., 2011). For a large proportion of the population therefore, direct contact with autistic people will be infrequent. In the absence of direct experience, perceptions of and attitudes towards autistic people may be largely based on stereotypes. Studies examining stereotypes of disabled people in general indicate a predominantly negative stereotype. For example, Nario-Redmond (2010) found that disabled men and women were characterised as dependent, incompetent, and asexual. Fiske, Cuddy, Glick, and Xu (2002) similarly found that disabled people were seen as low in competence, though high in warmth. To date however, there have been are no published quantitative studies that attempt to explicitly document the contents of the stereotype of autistic people.

In the current research we formally measured the contents of the stereotype of autistic people (Study 1), and the valence of that stereotype (Study 2), in two studies using separate university student samples. In order to measure the contents of the stereotype of autistic people, Study 1 had participants freely list the characteristics/traits that they thought society associates with individuals with an Autism Spectrum Condition (ASC). Frequency tables were then used to analyse stereotype content. In order to measure the valence of the stereotype of autism, Study 2 had participants rate the valence of the 10 most frequently mentioned stereotypic traits from Study 1, along with traits frequently used to described disabled and non-disabled people, in general (Nario-Redmond, 2010). The latter sets of traits were included in order to provide appropriate comparison groups for interpreting the valence of the stereotype of autism. Given the literature reviewed above, concerning negative media

representations and lay perceptions of autism (*i.e.*, Huws & Jones, 2010; Huws & Jones, 2011; Jones & Harwood, 2009) we expected the stereotype of ASC to be largely pejorative.

2. Study 1: Content of the Stereotype of Autism

2.1 Method

2.1.1 Participants

An invitation to complete an online questionnaire was sent to undergraduate and postgraduate students on a research volunteers mailing list at a university in the United Kingdom. The survey was completed by 298 individuals. In order to tap into general stereotypes of ASC in the UK student population, we excluded participants from the main analysis if they a) had not lived in the UK for five years or more; b) had a diagnosis on the autism spectrum; c) had a family member or close friend who was autistic. The resulted in a final sample size for the main analysis of 163 participants (100 female, 63 male; 129 British, 34 other nationality). The mean age of the sample was 24.54 years (SD = 9.60).

2.1.2 Materials and Procedure

The study was approved by the appropriate University Ethics Committee. The online questionnaire was run using Qualtrics software (Provo, UT). Participants were informed that the questionnaire was designed to help researchers better understand the social stereotype of individuals with an Autism Spectrum Condition. Participants were told that the interest was in the beliefs that society as a whole holds of this group, rather than their own personal beliefs (cf. Devine, 1989). This emphasis on societal beliefs is commonly used when measuring stereotypes (*e.g.*, see Devine, 1989; Fiske et al., 2002; Nario-Redmond, 2010), and helps to reduce social desirability concerns.

Following completion of demographic information (including whether the participant, a family member, or a friend had an Autism Spectrum Condition diagnosis), participants were asked to list all of the characteristics/traits that society associates with Autism Spectrum Conditions. This free-response method (*e.g.*, see Devine, 1989) was used to avoid unduly constraining the responses of participants from the outset. Participants were reminded to report the beliefs that society as a whole holds of individuals with Autism Spectrum Conditions, rather than their own.

2.2 Results

2.2.1 Data Coding

From the questionnaire responses, 1332 separate traits and characteristics were generated. Using a similar thematic identification methodology to Nario-Redmond (2010), the authors reviewed all responses and identified 33 trait category themes that characterised all answers. Three pairs of coders were provided with the list of trait categories and a short description summarising the content of each category. Each pair coded a third of the responses, such that each of the 1332 items were independently coded by two people. Inter-rater reliability was high ($M = .80$; $\kappa = .79$). Disagreements were resolved via discussion.

2.2.2 Free response Analyses

The ten most frequent trait categories are reported in Table 1. As shown in the table, the most frequently mentioned characteristic was poor social skills, which was noted by over 50% of participants.

Table 1. Frequency counts for the ten most frequently mentioned characteristics/traits

Rank	Category label	Frequency count	% of total respondents
1	Poor social skills	92	56.1
2	Introverted and withdrawn	52	31.7
3	Poor communication	48	29.3
4	Difficult personality or behaviour	46	28.0
5	Poor emotional intelligence	38	23.2
6	Special abilities	30	18.3
7	High intelligence	27	16.5
8	Awkward	21	12.8
9	Obsessive	21	12.8
10	Low intelligence	20	12.2

3. Study 2: Valence of the Stereotype of Autism

3.1 Method

3.1.1 Participants

An invitation to complete an online questionnaire was advertised to undergraduate and postgraduate students via a volunteering webpage at a university in the United Kingdom. The survey was completed by 42 students (40 female, 2 male), with a mean age of 21.86 years (SD = 3.45).

3.1.2 Materials and Procedure

The study was approved by the appropriate University Ethics Committee. The online questionnaire was run using Qualtrics software (Provo, UT). Participants were informed that the questionnaire was designed to help researchers better understand whether various traits are considered to be positive, negative or neutral. Participants then rated 38 traits on a 7-point likert scale ranging from “extremely negative” to “extremely positive”. The 10 most frequently mentioned traits identified in Study 1 were presented inter-mixed with 28 traits identified by Nario-Redmond (2010) as traits frequently used to describe disabled and non-disabled people, in general.

3.2 Results

A mean valence score of the 10 most frequent stereotypic traits from Study 1 was calculated for each participant. A single-sample *t*-test then assessed whether mean scores were above or below the neutral point on the likert scale (a score of 4). The mean score for autistic traits was 2.87, which was significantly below neutral, $t(41) = 14.72$, $p < .001$, $d = 4.60$, indicating that overall, the traits generated by participants in Study 1 as stereotypic of autistic individuals were rated as negative. However, a repeated measures ANOVA conducted on the individual valence scores for each trait found significant differences in ratings, $F(5.5, 224.0) = 101.86$, $p < .001$ $\eta p^2 = 0.72$ (Note 1). As can be seen in Figure 1 panel A, eight out of the ten traits were rated as negative, and two rated as positive.

A repeated measures ANOVA was also conducted to compare the mean valence score for the autism stereotypic traits to the mean valence score for the traits identified by Nario-Redmond (2010) as representing the general categories of disabled and non-disabled people (see mean scores for each trait item in Figure 1 panels A, B & C). An extremely large and significant effect of trait type was observed, $F(1.58, 65.4) = 261.94$, $\eta p^2 = 0.87$ (Note 1). Post-hoc paired samples *t*-tests indicated that autistic traits were rated much more negatively than traits used to describe the general category of non-disabled people, $t(41) = 17.06$, $p < .001$, $d = 3.66$ ($M = 2.87$ vs. $M = 4.46$). However, autism stereotype traits were rated more positively overall than traits used to describe the general category of disabled people, $t(41) = 2.53$, $p = .015$, $d = 0.3$ ($M = 2.87$ vs. $M = 2.72$), though the effect size was small.

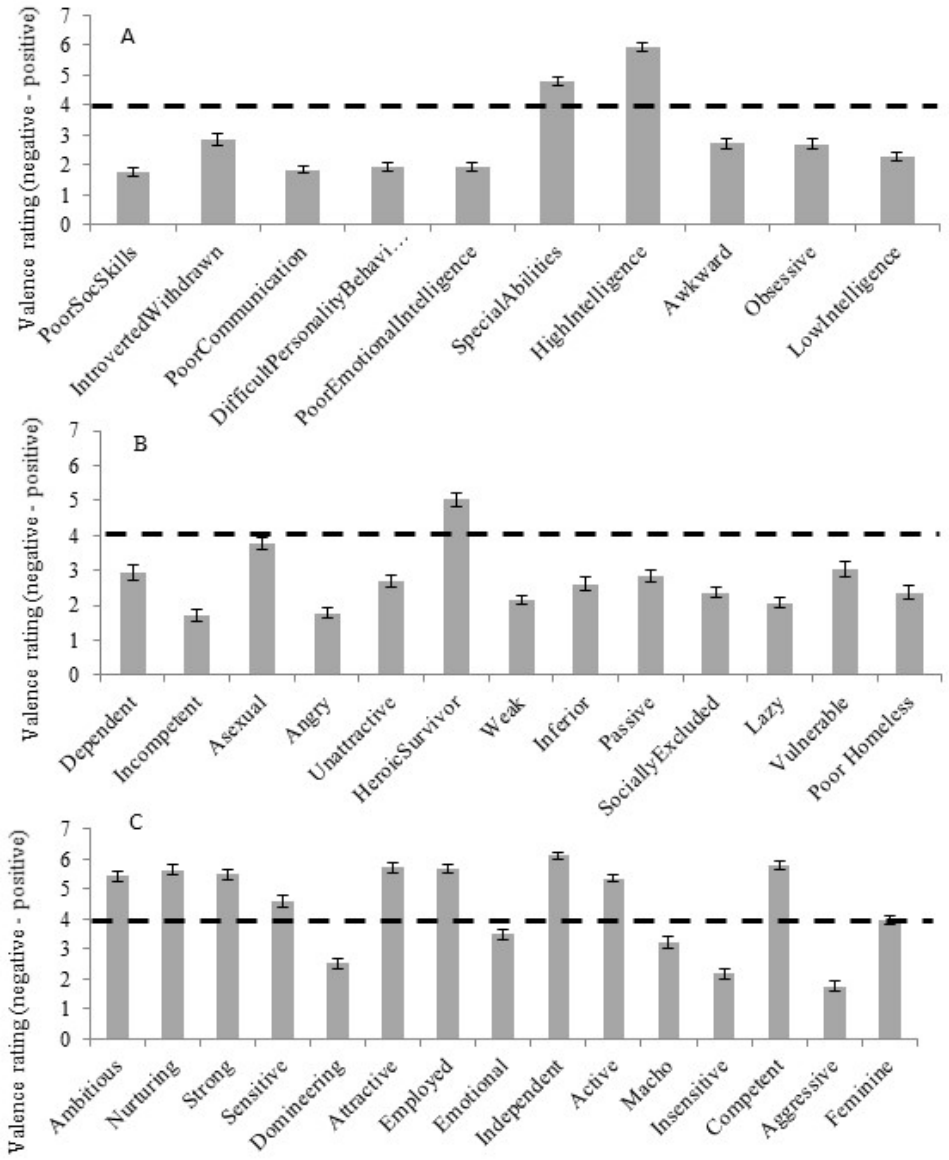

Figure 1. Mean valence score for traits stereotypic of autistic (Panel A), disabled (Panel B) and non-disabled (Panel C) people. Dashed line indicates a neutral response. Error bars represent standard error

4. Discussion

The current research aimed to establish the content of the stereotype of individuals with ASC held by university students with no personal experience of ASC, and the valence of that stereotype. With respect to the content of the stereotype, Study 1 found that the ten most commonly mentioned characteristics were poor social skills; being introverted and withdrawn; poor communication; difficult personality or behaviour; poor emotional intelligence; special abilities; high intelligence; awkward; obsessive; and low intelligence. Notably, while the above traits are all characteristics sometimes seen in autistic individuals, the observed stereotype omits many positive skills and traits often expressed by autistic individuals, such

as good attention to detail (Happé & Frith, 2006), enhanced perceptual capacity (*e.g.*, Mottron, Dawson, Soulieres, Hubert, & Burack, 2006; Remington, Swettenham, & Lavie, 2012) and enhanced ability to analyse or construct systems (Baron-Cohen, 2009), and accordingly presents a narrow view. The distinct split in stereotypes related to intelligence is also notable- both low and high intelligence are featured in the top ten stereotypic traits. Indeed, intelligence is in fact independent of an autism spectrum diagnosis, (DSM 5, American Psychiatric Association, 2013) and the observed pattern of responses could be argued to reflect the range of cognitive abilities of autistic people. However, it is worth noting that there are also many autistic people who are of approximately average intelligence.

With respect to the valence of the stereotype, Study 2 found that the most frequent stereotypic traits generated in Study 1 were generally considered to be negative, with eight out of ten traits being rated as significantly below neutral and significantly more negative than traits describing non-disabled individuals. Overall, autistic traits were rated slightly more positively than those used to describe disabled people. Arguably, the largely pejorative nature of the identified stereotype may have a negative effect on autistic people. For instance, it could be a contributing factor as to why autistic people frequently report being bullied (Humphrey & Lewis, 2008).

4.1 Limitations and Future Directions

The studies reported here were all conducted with university students. We believe that students are an important population to assess given that many autistic adults now attend university but tend to report lower overall satisfaction with their experience (White, Ollendick, & Bray, 2011). The predominance of negative stereotypes of ASC within the University student population may have a negative effect on students with ASC. However, we acknowledge that further work would be required to establish whether the stereotypic traits reported herein are also reported by the broader population.

Given the predominantly negative nature of the observed stereotype, and the absence of many positive characteristics of ASC, future research should develop and evaluate interventions to reduce reliance on these stereotypes. Recent anti-stigma interventions revolving around education and information provision have been found to be effective in changing attitudes towards and increasing knowledge about autism in adolescents (*e.g.*, Ranson & Byrne, 2014; Staniland & Byrne, 2013), however, these interventions are also highly time-intensive. A simple alternative could involve presenting descriptions or reports of individuals that counter the autism stereotype. A substantial pool of research suggests that exposure to counterstereotypic exemplars of a group has the potential to reduce implicit stereotyping (*e.g.* Blair, Ma, & Lenton, 2001; Dasgupta & Asgari, 2004; Hutter & Crisp, 2008). Research has also demonstrated that exposure to counterstereotypic exemplars can change explicit beliefs, *e.g.* exposure to well-liked or positive atypical exemplars from the media can lead to greater acknowledgement of discrimination in society against other members of the group (Bodenhausen, Schwartz, Bless, & Wanke, 1995) and reduced endorsement of stereotypes (Ramasubramanian, 2011). In addition, when forming impressions of individuals in counterstereotypic occupations, people rely less on stereotypes and instead engage in

individuation (Hutter & Crisp, 2005; Hutter, Wood, & Turner, 2013).

5. Conclusion

The current research has shed light on the contents and valence of the stereotype of ASC, demonstrating a number of shared views regarding the characteristics of autistic people. However, we also found that the stereotype of ASC did not accurately reflect the variety of traits that characterise ASC, and particularly neglected more positive aspects. We hope that this research can be a starting point for improving perceptions of autism, forming the basis for interventions designed to reduce reliance on stereotypes of autistic people.

Acknowledgements

We are grateful to Ione Haddock; Leandra Hawarden; Victoria Hoban; Louisa Neely; Carla Rogers; Francesca Springhall; Hannah de Val and Louise Wisson for their assistance with data collection and coding.

References

American Psychiatric Association. (2013). *DSM 5*.

Baron-Cohen, S. (2009). Autism: The Empathizing-Systemizing (E-S) Theory. *Annals of the New York Academy of Sciences, 1156*(1), 68-80. http://dx.doi.org/10.1111/j.1749-6632.2009.04467.x

Blair, I. V., Ma, J. E., & Lenton, A. P. (2001). Imagining stereotypes away: The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology, 81*(5), 828-841. http://dx.doi.org/10.1037/0022-3514.81.5.828

Bodenhausen, G. V., Schwartz, N., Bless, H., & Wanke, M. (1995). Effects of atypical exemplars on racial beliefs: Enlightened racism or generalized appraisals. *Journal of Experimental Social Psychology, 38*, 497-516. http://dx.doi.org/10.1006/jesp.1995.1003

Brown, R. (1995). *Prejudice: Its social psychology*. Massachusetts, US: Blackwell Publishing.

Brugha, T. S., McManus, S., Bankart, J., Scott, F., Purdon, S., Smith, J., … Meltzer, H. (2011). Epidemiology of autism spectrum disorders in adults in the community in England. *Archives of General Psychiatry, 68*(5), 459-465. http://dx.doi.org/10.1001/archgenpsychiatry.2011.38

Dasgupta, N., & Asgari, S. (2004). Seeing is believing: Exposure to counterstereotypic women leaders and its effect on the malleability of automatic gender stereotyping. *Journal of Experimental Social Psychology, 40*(5), 642-658. http://dx.doi.org/10.1016/j.jesp.2004.02.003

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*(1), 5-18. http://dx.doi.org/10.1037/0022-3514.56.1.5

Dillenburger, K., Jordan, J. A., McKerr, L., Devine, P., & Keenan, M. (2013). Awareness and knowledge of autism and autism interventions: A general population survey. *Research in Autism Spectrum Disorders, 7*(12), 1558-1567. http://dx.doi.org/10.1016/j.rasd.2013.09.004

Draaisma, D. (2009). Stereotypes of autism. *Philosophical Transactions of the Royal Society B: Biological Sciences, 364*(1522), 1475-1480. http://dx.doi.org/10.1098/rstb.2008.0324

Happé, F., & Frith, U. (2006). The weak coherence account: Detail-focused cognitive style in autism spectrum disorders. *Journal of Autism and Developmental Disorders, 36*(1), 5-25. http://dx.doi.org/10.1007/s10803-005-0039-0

Howlin, P., Goode, S., Hutton, J., & Rutter, M. (2009). Savant skills in autism: Psychometric approaches and parental reports. *Philosophical Transactions of the Royal Society B: Biological Sciences, 364*(1522), 1359-1367. http://dx.doi.org/10.1098/rstb.2008.0328

Humphrey, N., & Lewis, S. (2008). 'Make me normal': The views and experiences of pupils on the autistic spectrum in mainstream secondary schools. *Autism, 12*, 23-45. http://dx.doi.org/10.1177/1362361307085267

Hutter, R. R. C., & Crisp, R. J. (2005). The composition of category conjunctions. *Personality and Social Psychology Bulletin, 31*(5), 647-657. http://dx.doi.org/10.1177/0146167204271575

Hutter, R. R. C., & Crisp, R. J. (2008). Reduced constituent category application in surprising combinations. *The Journal of Social Psychology, 148*(2), 247-252. http://dx.doi.org/10.3200/SOCP.148.2.247-252

Hutter, R. R. C., Wood, C., & Turner, R. N. (2013). Individuation moderates impressions of conflicting categories for slower processors. *Social Psychology, 44*(4), 239-247. http://dx.doi.org/10.1027/1864-9335/a000108

Huws, J., & Jones, R. (2010). 'They just seem to live their lives in their own little world': Lay perceptions of autism. *Disability & Society, 25*(3), 331-344. http://dx.doi.org/10.1080/09687591003701231

Jones, S. C., & Harwood, V. (2009). Representations of autism in Australian print media. *Disability & Society, 24*(1), 5-18. http://dx.doi.org/10.1080/09687590802535345

Nario-Redmond, M. R. (2010). Cultural stereotypes of disabled and non-disabled men and women: Consensus for global category representations and diagnostic domains. *British Journal of Social Psychology, 49*(3), 471-488. http://dx.doi.org/10.1348/014466609X468411

Pellicano, E., Dinsmore, A., & Charman, T. (2014). What should autism research focus upon? Community views and priorities from the United Kingdom. *Autism, 18*(7), 756-770. http://dx.doi.org/10.1177/1362361314529627

Ramasubramanian, S. (2011). The impact of stereotypical versus counterstereotypical media exemplars on racial attitudes, causal attributions, and support for affirmative action. *Communication Research, 38*, 497-516. http://dx.doi.org/10.1177/0093650210384854

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 and Developmental Disorders, 44*(11), 2778-2796. http://dx.doi.org/10.1007/s10803-014-2139-1

Staniland, J. J., & Byrne, M. K. (2013). The effects of a multi-component higher-functioning autism anti-stigma program on adolescent boys. *Journal of Autism and Developmental Disorders, 43*(12), 2816-2829. http://dx.doi.org/10.1007/s10803-013-1829-4

White, S. W., Ollendick, T. H, & Bray, B. C. (2011). College students on the autism spectrum: Prevalence and associated problems. *Autism, 15*(6), 683-701. http://dx.doi.org/10.1177/1362361310393363

Notes

Note 1. Greenhouse geiser values reported due to Mauchley's test indicating significant sphericity.

Copyright Disclaimer