

Lawrence, Clare (2019) The effect of familiarisation with autistic individuals on trainee teachers' attitudes. *Teacher Education Advancement Network Journal*, 11 (1). pp. 37-45.

Downloaded from: <http://insight.cumbria.ac.uk/id/eprint/4646/>

*Usage of any items from the University of Cumbria's institutional repository 'Insight' must conform to the following fair usage guidelines.*

Any item and its associated metadata held in the University of Cumbria's institutional repository Insight (unless stated otherwise on the metadata record) may be copied, displayed or performed, and stored in line with the JISC fair dealing guidelines (available [here](#)) for educational and not-for-profit activities

**provided that**

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
  - a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

**You may not**

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

The full policy can be found [here](#).

Alternatively contact the University of Cumbria Repository Editor by emailing [insight@cumbria.ac.uk](mailto:insight@cumbria.ac.uk).

**The effect of familiarisation with autistic individuals on trainee teachers' attitudes**

Teacher Education Advancement  
Network Journal  
Copyright © 2019  
University of Cumbria  
Vol 11(1) pages 37-45

Clare Lawrence  
Bishop Grosseteste University

**Abstract**

Consideration of attitudes towards people with disabilities has been the subject of study for many years (e.g. (Kenneth, Antonak and Livneh, 1989; Campbell, Gilmore and Cuskelly, 2003; Praisner, 2003), although trainee teachers' preconception of autistic pupils specifically has not been addressed. The purpose of this study was to determine whether previous exposure to autistic individuals influences trainee teachers' initial attitudes towards autistic pupils. 84 trainee teachers with equal exposure to autism education during their undergraduate degree in Primary Education self-categorised themselves as 'knowing' or 'not knowing' an autistic individual and were asked to write a brief description of their expectations of how autism might present in a pupil. Responses were compared. Findings were that those with or without personal experience did not show significant differences in their broad descriptions of the presentation of autism, but descriptions by those with personal experience focused more on communication and less on social aspects than those without and were more positive, more varied, more specific and less 'generic'. Implications for teacher education are discussed.

**Keywords**

Autism; trainee teachers; attitudes; familiarity; pre-conceptions.

[N.B. Although the American Psychological Association (APA) suggests the use of 'person-first' language (i.e. 'person with autism'), research by Kenny et al. (2016) suggests that 'autistic' is the term preferred by autistic people themselves and their families. Both terms are used in this article, especially when reporting from other literature, but 'autistic' predominates.]

**Introduction**

Although some research has been undertaken into the effect that exposure to individuals with disabilities has on others' attitudes, little research has been undertaken into this effect on the preconceptions of trainee teachers towards their pupils, and none regarding attitudes to autism specifically. This study therefore seeks to investigate whether familiarity with autistic individuals influences trainee teachers' preconceptions regarding autistic pupils, and if so, how these preconceptions might differ to those without previous exposure to autistic individuals.

Lack of familiarity with individuals with specific disabilities may contribute to a person's failure to respect that individual's needs and dignity (Abramson, 2008). Given the need for teachers to understand autism's 'exceptionality and its many complexities' (Leblanc, 2009, p. 176), and that positive teacher attitudes may be predictors of success in the outcome for pupils with disabilities (Rodriguez, Saldana and Moreno, 2012; Robertson, Chamberlain, and Kasari, 2002; Stanovich and Jordan, 1998), the influence of trainee teachers' 'starting points' in autism merits scrutiny. Understanding of autism is essential for professionals working with autistic pupils if they are to facilitate an educational and social environment in schools that enables these children to learn and flourish, and education in autism is now a statutory component of Initial Teacher Education in the UK (A framework of core content for Initial Teacher Training (ITT), 2016).

**Citation**

Lawrence, C. (2019) 'The effect of familiarisation with autistic individuals on trainee teachers' attitudes', *TEAN journal*, 11(1), pp.37-45

The 'mere-exposure effect' (Zajonc, 1968) suggests that familiarity with an object will tend to increase a subject's preference for that object. This theory has been explored further to consider its effect on racial prejudice (Zebrowitz, White and Wieneke, 2008), on volunteers' attitudes towards people with intellectual disabilities (Li and Wang, 2013; Rillotta, 2007) and on peer attitudes on first meeting autistic adults (Sasson and Morrison, 2017). Each of these studies suggests that exposure to members of the targeted group may result in a positive response from the participants. Li and Wang (2013) suggest that volunteers' attitudes towards inclusion of people with intellectual disabilities were enhanced after their one-week exposure to people with intellectual disabilities during the Special Olympic Games', although they cautioned that the change in attitudes may 'depend on the nature of exposure' (p. 519). Zebrowitz et al. found that supraliminal exposure to non-white faces increased white participants' subsequent liking for different sets of other-race faces, and Sasson and Morrison (2017) suggest that autism familiarisation was 'positively associated with more favourable impressions of ASD participants' during their research into the first impressions of autistic adults made by their peers.

Barr and Bracchitta (2008) sought to understand if having contact with individuals with disabilities would improve attitudes towards such individuals as one goal of their wider research into the likelihood of undergraduates choosing to major in education. Their work built on that by Brownlee and Carrington (2000), Hodge and Jansma (1999), Yucker (1988) and Tait and Purdie (2000) which suggests that the way in which teachers relate to pupils with disabilities may be influenced by their previous experience of disabled pupils. This suggests that more positive attitudes are shown by those who have had previous experience. Avramidis and Kalyva (2007) suggest that teachers who have previous experience teaching pupils with SEN have significantly more positive attitudes than those who do not, and Syriopoulou-Delli et al. (2011) suggest that previous experience with autistic pupils is one element (together with training) that positively impacts teachers' perceptions of autistic pupils. Campbell, Gilmore and Cuskelly (2003) suggest that education alone does not influence attitudes, but that education coupled with fieldwork with children with Downs Syndrome improved trainee teachers' attitudes both to people with Downs Syndrome and to those with disabilities more generally. Barr and Bracchitta's research (2008) further found that 'more contact does lead to more positive attitudes', particularly regarding individuals with developmental disabilities or behavioural disabilities.

Where familiarity with disabled people generally may allow for an overcoming of a negative perception of 'otherness', in autism it has the further potential to allow for the celebration of the autistic person's differences. There has long been a fascination with the co-existence of savant skills in autistic people (Sacks, 1985; Treffert, 1989, 2009; Howlin et al., 2009). Cardinal (2009) expresses this in his description of how autistic art allows the viewer, 'to savour the extreme experience of Otherness, in the form of a seductive exoticism that produces an inarticulate yet intense pleasure' (p.1466). Although not all autistic individuals exhibit remarkable skills, there remain elements of autism – for example an increase in the use of neologisms and idiosyncratic language (Volden and Lord, 1991) – which can provoke interest (Happé, and Frith, 2009). Familiarity with such elements of autism through the relating of anecdote and example may have potential to ameliorate for the otherwise negative effects of 'otherness'.

## **Method**

Participants in this study were 3rd year undergraduates [n84] studying for a Bachelor of Arts degree in Primary Education. There was a ratio of 7:1 female to male in the cohort, with 12% of the sample being classed as 'mature' (i.e. over age 25). Data was gathered at the beginning of, and as part of, a university teaching session on autism. Their self-identification as someone who did or did not 'know' an autistic individual, and their perceptions about autistic individuals, formed a reflective introduction to the session. Participants were asked to write a brief description of their expectations of how autism might present in a pupil, completing this description in one of two boxes, depending on whether they

'knew or had personal experience of someone with autism'. This description was modified with the examples, 'This could be yourself, a family member, a friend or a pupil you have observed on placement'.

Responses were analysed inductively in order for congruent themes to emerge. This analysis sought to generate knowledge grounded in the specific human experiences of the participants (Sandelowski, 2004), taking the epistemological position of valuing understanding and perception as they are interpreted by the participant (Henwood, 1996). It sought to investigate how participants made sense of the concept of 'knowing' an autistic person (Pietkiewicz & Smith, 2014); as such it accepts that participants are 'expert in their own experiences' (Reid, Flowers and Larkin, 2005, p. 20) rather than seeking to question their perceptions.

The themes, or 'specific patterns found in the data' (Joffe and Yardley, 2004 p.57) which emerged were then grouped into ten broad headings using both manifest and latent content coding (Joffe and Yardley, 2004). Thus, the theme 'Need for sameness' might include comments on a preference for sameness or a need for routine or might express that the child would be distressed by changes in routine. The data was then grouped into ten themes: social, emotional, communication, a need for sameness, 'Special Interests', sensory, learning styles, behaviours, eye contact and positives. Responses within these categories were reported from the group who profess no experience with a person with autism and were then compared with the responses of those who do.

## Results

50 of respondents (64%) did not consider themselves to have had personal experience of a person with autism and 28 (36%) respondents did consider themselves to have had personal experiences of a person with autism. There were 6 non-responders to this question or trainees who did not choose to have their data shared.

Of those who responded that they did have experience of a person with autism, 37 additionally gave an indication of who this was: 14 (38%) were family members, including brother, sister, cousins and 2<sup>nd</sup> cousins; 6 (16%) were pupils from placement and 17 (46%) were 'friends', including current friends, friends from childhood and the children of friends.

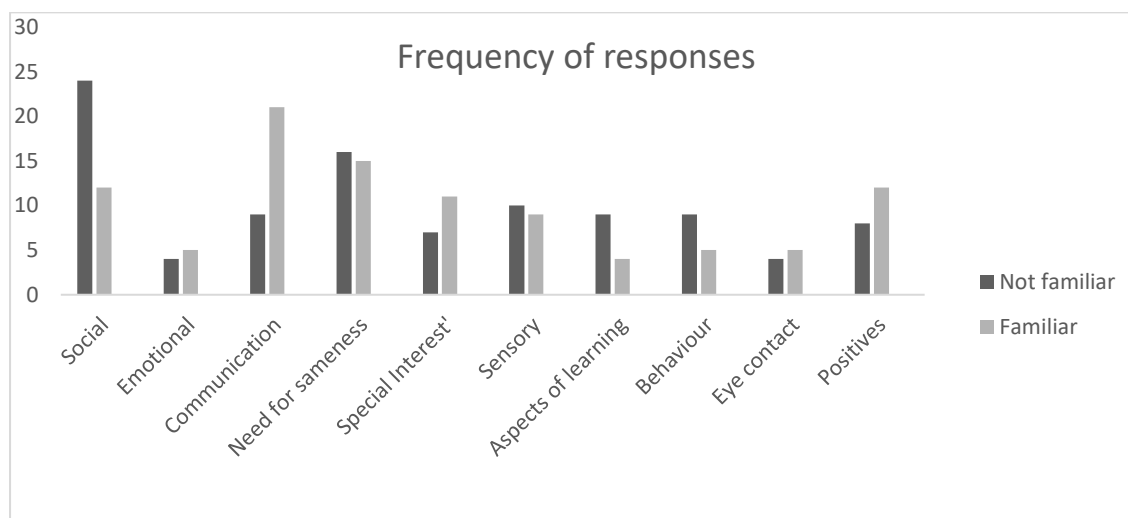


Figure 1: Frequency of responses.

***Responses of those without personal experience of someone with autism***

The frequency of response from this group within each category was social (24%), emotional (4%), communication (9%), a need for sameness (16%), 'Special Interests' (7%), sensory (10%), learning styles (9%), behaviours (9%), eye contact (4%) and positives (8%).

*Social*

Predictions from this group of social elements in an autistic pupil were primarily framed as negative. These included comments such as that the pupil would struggle to socialise, would find it difficult to make friends or socialise with peers and would have difficulty understanding the emotions of others. One respondent predicted that this would make the child 'feel isolated'. Other responses were more neutral in tone, identifying that the autistic pupil might be quiet and shy, might be reserved or might have a preference for their own company.

*Emotional*

Responses were generalised, including that the autistic child might 'have emotional difficulties' or have difficulty controlling their emotions. Participants predicted that the child might be uncomfortable in new situations or 'get nervous, stressed, upset easily'.

*Communication*

Although 8 (8.8%) responses referred to communication, respondents did not indicate a clear understanding of how this might manifest itself. Responses were all generic, for example, 'Have communication problems', 'Struggle with communication' or 'Have lack of communication'.

*Need for sameness*

Comments on the need for sameness and routine were both positively expressed ('Prefer a strict routine', 'Need a routine') and negatively expressed ('Be distressed by changes in routine', 'Find change of routine challenging', 'Be reluctant to accept change').

*Special interest*

The autistic child's special interest was suggested in 6 (6.6%) responses. Some of these were neutral, describing special interests or attachment to particular objects, but some were more negative, describing the child as having 'an obsession', 'repetitious behaviour' or a need to 'repeat things over and over again'.

*Sensory*

9 respondents (9.9%) suggested that sensory issues might be present in an autistic child. These largely focussed on sensitivity to sound or noise (7 responses), with light or less specific 'certain stimuli' and 'the environment' also being mentioned.

*Aspects of learning*

7 respondents made reference to aspects of learning in autism. Two of these were to the expectation that the autistic pupil would be a visual learner, with two further suggesting that the pupil would struggle academically ('Struggle with class learning' and 'Struggle with basic educational subjects e.g. maths, English'). Other suggestions in this broad category referred to possible delays in development of gross motor skills and the need for (non-specified) specialised lessons and resources and teaching equipment.

*Behaviour*

Predictions regarding autistic pupils focussed on behaviour in 8 (8.8%) comments. These included that the child might 'fixate' on a task, might struggle with getting things wrong, be hyperactive, display non-functional repetitive behaviours or 'have meltdowns'.

### *Eye contact*

Prediction of reduced eye contact in autism was made in 4 (4.4%) comments. Suggestions regarding this were that the pupil might 'find it hard', might 'avoid' or 'have no' eye contact.

### *Positives*

Comments on the potential positives of autism were made in 7 (7.7%) instances. These included that the child might be 'bright' or 'smart' in some areas or have exceptional knowledge about specific subjects. There was suggestion that the autistic child might have good memory and recollection skills. There was awareness, too, that the child might develop at a different (but not necessarily slower) pace than peers, and that any one autistic child might have very different needs from another.

### ***Comparison with comments by those with personal experience of autism***

Response frequency in this group were: social (12%), emotional (5%), communication (21%), a need for sameness (15%), 'Special Interests' (11%), sensory (9%), learning styles (4%), behaviours (5%), eye contact (5%) and positives (12%). Examples were more specific and related to the autistic people they knew.

### *Social*

Social issues were identified as relevant by fewer people who know someone with autism than by those who do not (12% as opposed to 24%). Qualitatively, too, descriptions did not focus so strongly on elements of separateness or isolation. There was comment on social awkwardness, lack of awareness of social rules and the issue of struggling to make and maintain friendships, but there were also more wide-ranging examples. One comment was that the person's social challenge might come from trying to impress, and another that a person might display inappropriate levels of questioning about details. Another suggested that attachment by an autistic person may be strong, although vulnerable: 'If [the person attached to] does something 'wrong' [an autistic child] will not have anything to do with them again'. A specific example was that the autistic person was reported to prefer to immerse himself within society in order to feel part of a group rather than an individual.

### *Emotional*

Although there was one suggestion from this group of 'high anxiety' in autism and one that suggested that a person may be distressed by confrontations or arguments, two respondents described autism in terms of positive emotions; the first as being people who 'enjoy own company', and the second giving an example of an autistic person who, although initially very shy had developed to become someone 'creative and sociable'. This person is reported to be now studying to become an actor.

### *Communication*

There was greater focus on communication in the group who know someone with autism (21%) than the group of those who did not (9%). Two respondents mentioned inappropriate laughter in those they knew and a further two reported delayed speech. Other reports included suggestion of a lack of 'filter', so that autistic people might speak without thinking or without understanding that what they said may offend or hurt, the need to use specific terminology (the example given being about terminology around trains), and an inability to understand sarcasm. Some reports were specific and idiosyncratic. One was that the person likes to use food-related words to replace non-food ones, so that 'feet becomes feast and leg becomes egg'. Another was that the child used portions of a script (in this case that of the film *Toy Story*) to communicate.

### *Need for sameness*

A preference for routine and sameness was reported to a similar degree in this sample as in those who do not have experience of people with autism. This was reported negatively in some instances ('Finds it hard to accept change', 'Becomes upset if order broken'), but was primarily framed positively. These

positive statements included, 'Likes to have set routine', 'Likes consistent routine', 'Prefers to sit in same place' and 'Enjoys repeatedly drawing the same thing'. There were also some more specific examples given. One child was reported to spend 'every break time colouring', another child described as enjoying the repetition of numbers, particularly countdown to zero and a third as insisting that the light switches be switched off.

#### *Special Interest*

Reports on interests in the group who know someone with autism are, understandably, richer than from those who do not. These include an interest in the weaponry of the World Wars (and the report that the child prefers to talk about this subject than to engage in reciprocal conversation), an interest in collecting objects (in this case Bic biro), and an intense interest in multi-link cubes as well as the more common interests in autism of dinosaurs, cars and trains. The latter report included an anecdote of a trip to the zoo where the child had ignored the animals and focussed instead on the trains which ran every half hour.

#### *Sensory*

Report of sensory differences included cases of dislike of loud/sudden noises, but provided further examples, including putting objects into the mouth, walking on tiptoes and playing with hands whilst talking.

#### *Aspects of learning*

As with the group who did not have familiarity with an autistic person, there was little reference to learning in reports by this group. One response indicated that a child was very distractible, and another that the child answered questions very quickly and without time for consideration. There was description of an adjustment made for one child in school, where he was provided with a small tent in the corner of the classroom into which he could withdraw if he became overwhelmed.

#### *Behaviour*

Negative behaviour in autism were described in four instances and included 'meltdown' if a preferred object is removed, inappropriate nakedness, an increase in aggression as the child has grown older and inappropriate hugging.

#### *Eye contact*

Eye contact differences was mentioned in four instances and was described as 'no eye contact', 'eye contact difficulties', 'lack of eye contact' and 'struggles with eye contact'.

#### *Positives*

There were more positives reported by the group who knew someone with autism (12%) than by those who did not (8%), and the examples were more specific. They included an ability to recall facts and dates, a child who wrote and then recorded his own book at age 9, a strong memory for places visited, a precise knowledge of bus routes, an ability to 'learn and retain vast amounts of information', someone who could copy what another person plays on the piano and being in the top ten in the rankings at a certain X-Box game. Some responses were more generic, including that the person is 'very focussed', is 'highly creative' and is 'very affectionate'.

#### **Discussion**

The participants in this study who relied on training in autism rather than developing their understanding through personal interaction with autistic people did not show significant differences in their descriptions of autism in this 'thumbnail sketch' scenario. However, those with personal experience of autistic people provided a richer, more varied and less 'generic' description. Their examples were more focussed and more varied, and they moved away from a stereotyped view of

autism to begin to describe some of heterogeneity of its manifestation. These responses show an awareness that autism is complex, individually experienced and difficult to understand as a generic 'condition'. Description by those with personal experience of autistic people focussed less on social aspects, particularly those regarding social isolation, and more on communication, and had a greater number – and more specific examples – of positives in autism.

The increase in positive statements, together with the greater specificity of those examples, suggest that in line with the literature (Zebrowitz, White and Wieneke, 2008; Li and Wang, 2013; Rillotta, 2007; Sasson and Morrison, 2017; Campbell, Gilmore and Cuskelly, 2003) familiarity with an 'other' group may increase positive attitudes to members of that group. These positive attitudes may be achieved more effectively by this familiarity than through direct education, which has implications for teacher education. Beattie, Anderson and Antonak (1997) compared the effect of showing positive film images of people with disabilities to trainee Special Education teachers to that of showing the same film with an additional input by a lecturer with an overt physical disability. Attitudes of the trainee teachers in their study were not altered by the film images, but only after the input from the disabled lecturer. This suggests that input into ITE around autism may be more effective if delivered by an autistic person. Equally, the range of positive examples given by those who know autistic people reflects something of the acceptance of 'otherness' in autism as described by Happé and Frith (2009).

The greater likelihood of trainees in this study who profess to 'know' someone with autism to focus on communication may indicate greater awareness of this need in autism. The social model of disability examines the extent to which the 'problems' experienced by individuals seen as disabled are socially constructed rather than intrinsic to the individual (Rieser, 1990; Tregaskis, 2002). In autism, this model suggests that challenges in, for example, communication may stem as much from the social and educational environment experienced by that individual as from the condition itself (Kossvaki, Jones and Guldberg, 2012). Kossvaki, Jones and Guldberg (2012) suggest that adults' interactive style may impact on autistic children and suggest that 'attention should be paid to adult style when developing communication in children with autism' (p. 173). Greater awareness of communicative need may facilitate this attention.

Conversely, the greater focus on those without familiarity with autistic individuals on negative social aspects – specifically the perception that pupils may struggle to socialise or to make friends – may support suggestion (Campbell et al., 2003; Tait and Purdie, 2000; Maras and Brown, 2000; Campbell, Gilmore and Cuskelly, 2003) that education alone without contact with individuals from the 'other' group may not lead to positive perceptions.

### **Conclusion**

Results from this study suggest that trainee teachers' attitudes towards autism are positively impacted by exposure to autistic people. This has implications for effective Initial Teacher Training in autism. Education about autism by neuro-typical lecturers, without input from autistic individuals, may not provide as effective education as if input were made by autistic individuals. In a similar way, results from this study suggest that input into teacher training from autistic individuals may enable trainees to gain familiarity with autism in a way that mere instruction about it does not. Specifically, use of anecdote and personal experiences may help engender a feeling of familiarity with autism. Although because of the heterogeneity of autism, no one individual can represent the needs of the autistic population in quite the way that an individual who is blind, for example, may articulate the needs of individuals who are blind, nevertheless input into teacher training from an autistic individual may positively impact trainees' preconceptions.

The percentage self-categorisation of the trainees as 64% 'not knowing' and 36% 'knowing' a person with autism may reflect lack of awareness of autism rather than lack of exposure to autistic people. If



autistic people make up over 1% of the population (Brugha, T. et al., 2012), it is likely that 3rd year undergraduate students will have had greater exposure to autistic people than they are aware. This lack of awareness may be contributing to their negative preconceptions. The use of personal report by an autistic individual may serve to increase (conscious) familiarity for trainee teachers with autistic people, and to break down the barrier of 'otherness' which trainee teachers may perceive themselves to be experiencing. Similarly, access to a wider experience and richer examples of autism from family members and friends of autistic individuals, may additionally impact positively on trainee teachers' perceptions of autistic pupil.

### Limitations of the study and implications for future research

This research is limited in that the data set is relatively small and is taken from a single cohort, all of whom had received the same teacher training input. This limits both the neutrality and the generalisability of the findings. Future investigation should include larger samples across different courses and across different institutions. Research should also investigate the impact which input into autism training in Initial Teacher Education by autistic individuals has on trainee teachers' perceptions.

### References

- A framework of core content for Initial Teacher Training (ITT)*. (2016). Retrieved from [www.gov.uk/https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/536890/Framework\\_Reoport\\_11\\_July\\_2016\\_Final.pdf](http://www.gov.uk/https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536890/Framework_Reoport_11_July_2016_Final.pdf)
- Abramson, B. (2008). *Article 2: the Right of Non-discrimination*. Boston: Martinus Nijhoss Publishers.
- Avramidis, E., & Kalyva, E. (2007). The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion. *European Journal of Special Needs Education*, 22(4), 367-389.
- Barr, J. and Bracchitta, K. (2008). Effects of Contact with Individuals With Disabilities: Positive Attitudes and Majoring in Education. *The Journal of Psychology*, 142(3), pp.225-244.
- Beattie, J., Anderson, R. and Antonak, R. (1997). Modifying Attitudes of Prospective Educators Toward Students With Disabilities and Their Integration Into Regular Classrooms. *The Journal of Psychology*, 131(3), pp.245-259.
- Brownlee, J. and Carrington, S. (2000). Opportunities for Authentic Experience and Reflection: A Teaching Programme Designed to Change Attitudes Towards Disability for Pre-service Teachers. *Support for Learning*, 15(3), pp.99-105.
- Brugha, T et al. (2012). Estimating the prevalence of autistic spectrum conditions in adults. NHS Information Centre for Health and Social Care; Leeds.
- Campbell, J., Gilmore, L. and Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual & Developmental Disability*, 28(4), pp.369-379.
- Cardinal, R. (2009). Outsider Art and the autistic creator. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1522), 1459-1466.
- Happé, F., & Frith, U. (2009). The beautiful otherness of the autistic mind.
- Hodge, S. R., & Jansma, P. (1999). Effects of contact time and location of practicum experiences on attitudes of physical education majors. *Adapted Physical Activity Quarterly*, 16(1), pp.48-63.
- Howlin, P., Goode, S., Hutton, J., & Rutter, M. (2010). Savant skills in autism: Psychometric approaches and parental reports. *Autism and talent*, 13-24.
- Joffe, H., & Yardley, L. (2004). Content and thematic analysis. *Research methods for clinical and health psychology*, 56, 68.
- Kenneth, I., Antonak, R. and Livneh, H. (1989). The Measurement of Attitudes Toward People with Disabilities: Methods, Psychometrics, and Scales. *Contemporary Sociology*, 18(1), p.130.
- Kenny, L., Hattersley, C., Molins, B., Buckley, C., Povey, C., & Pellicano, E. (2016). Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism*, 20(4), 442-462

- Kossyvaki, L., Jones, G., & Guldberg, K. (December 01, 2012). The Effect of Adult Interactive Style on the Spontaneous Communication of Young Children with Autism at School. *British Journal of Special Education*, 39, 4, pp.173-184.
- Leblanc, L. R. (2009). Autism Spectrum Disorder and the Inclusive Classroom. *Teacher education and special education*, pp.166 -179.
- Li, C., & Wang, C. K. J. (2013). Effect of exposure to Special Olympic Games on attitudes of volunteers towards inclusion of people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, 26(6), pp.515-521.
- Praisner, C. L. (2003). Attitudes of elementary school principals toward the inclusion of students with disabilities. *Exceptional children*, 69(2), 135-145.
- Rieser, R. &. (1990). *Disability equality in the classroom: a human rights issue*. London: Disability equality in education.
- Rillotta, F. A. (2007). Effects of an awareness program on attitudes of students without an intellectual disability towards persons with an intellectual disability. *Journal of Intellectual and Developmental Disability*, pp.19-27.
- Robertson, K., Chamberlain, B., & Kasari, C. (2003). General education teachers' relationships with included students with autism. *Journal of Autism and developmental disorders*, 33(2), pp.123-130.
- Rodriguez, I. R., Saldana, D. & Moreno, F.J. (2012) Support, inclusion and special education teachers' attitudes towards the education of students with autism spectrum disorders. *Autism research and treatment*, 2012.
- Sacks, O., & Stein, S. M. (1995). The man who mistook his wife for a hat. *The British Journal of Psychiatry*, 166(1), 130-131.
- Sandelowski, M. (2004). Using qualitative research. *Qualitative health research*, 14(10), 1366-1386.
- Sasson, N. J, and Morrison, K. E. (2017). First impressions of adults with autism improve with diagnostic disclosure and increased autism knowledge of peers. *Autism*.
- Stanovich, P. J., & Jordan, A. (1998). Canadian teachers' and principals' beliefs about inclusive education as predictors of effective teaching in heterogeneous classrooms. *The Elementary School Journal*, 98(3), pp.221-238.
- Syriopoulou-Delli, C. K., Cassimos, D. C., Tripsianis, G. I., & Polychronopoulou, S. A. (2012). Teachers' perceptions regarding the management of children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 42(5), 755-768.
- Tait, K., & Purdie, N. (2000). Attitudes toward disability: Teacher education for inclusive environments in an Australian university. *International Journal of Disability, Development and Education*, 47(1), pp.25-38.
- Treffert, D. A. (1990). *Extraordinary people: understanding savant syndrome*. Ballantine Books.
- Treffert, D. A. (2009). The savant syndrome: an extraordinary condition. A synopsis: past, present, future. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1522), 1351-1357.
- Tregaskis, C. (2002). Social model theory, the story so far... *Disability and Society*, pp.457 - 470.
- Volden, J., & Lord, C. (1991). Neologisms and idiosyncratic language in autistic speakers. *Journal of autism and developmental disorders*, 21(2), 109-130.
- Yuker, H. E. (1994). Variables that influence attitudes toward persons with disabilities: Conclusions from the data. *Journal of Social Behavior and Personality*, 9(5), p.3.
- Zajonc, R. B. (1968). Attitudinal Effects Of Mere Exposure. *Journal of Personality and Social Psychology*. 9 (2, Pt.2), pp.1-27.
- Zebrowitz, L. A., White, B., & Wieneke, K. (2008). Mere exposure and racial prejudice: Exposure to other-race faces increases liking for strangers of that race. *Social cognition*, 26(3), pp.259-275.