

**The social experiences and sense of belonging in adolescent females with
Autism in mainstream school**

KEYWORDS: school belonging, autism, female students, educational psychology, inclusive
education

Word Count (without refs): 5,100

The social experiences and sense of belonging in adolescent females with Autism in mainstream school

Abstract

Aim(s)

This qualitative study explored the social experiences and sense of belonging of adolescent females with autism in mainstream schooling.

Method/Rationale

The research explored the views of eight adolescent females with autism. Semi-structured interviews were used to explore the ways in which they experience a sense of belonging and exclusion in school, and what they feel would support them socially.

Findings

The findings suggest that key friendships, understanding and perceived social competence are important for adolescent females with autism in developing a sense of belonging in mainstream school. Adolescent females with autism are motivated to form a sense of belonging in school, but experience pressure to adapt their behaviour and minimise their differences in order to gain acceptance.

Limitations

This study represents a small sample of adolescent females with autism. Further replication is needed before the findings can be generalised to other females with autism in mainstream school.

Conclusions

The current study addressed an identified gap in the literature by seeking the first-hand views and experiences of adolescent females with autism in mainstream school. Consistent with prior research, the findings suggest that adolescent females with autism are motivated to seek social contact and form friendships in the same way as females without a diagnosis of autism. The findings also highlight the specific social difficulties experienced by females with autism and the way in which this can add to their feelings of exclusion in the school environment.

In recent years, there has been an increased awareness that Autism Spectrum Disorder (henceforth referred to as ‘autism’) presents differently in males and females (Nichols et al., 2009; Tierney et al., 2016). Females with autism are better able to mask their difficulties (Gould & Ashton-Smith, 2011) and tend not to receive a diagnosis until a later life stage, compared to males (Begeer, et al., 2013). Missed or late diagnosis could be associated with increased social isolation and greater risk for mental health difficulties within this population (Wilkinson, 2008). With the majority of research to date using predominantly male samples (Lai, 2015), there is little known about the first-hand experiences of females with autism, and how to support their social and emotional well-being most effectively.

Autism awareness in schools has increased significantly over the past two decades, however it is suggested that teachers are less aware of how autism presents in females and how to support their needs (Moyses & Porter, 2015). The social impairments, isolation and social exclusion of females with autism can increase the likelihood that they fall “under the radar” in the school environment (NASEN, 2016, p. 10). As a result of the presentation of symptoms in females with autism is less apparent/obvious/apparent, this could mean they do not receive the social and emotional support they require. This lack of provision is supported by research studies, which identify a need for further exploration into issues for adolescents with autism that are specific to females (Cridland et al., 2014; Tierney et al., 2016).

The current study aims to consider this gap in the literature by exploring, first-hand, the social experiences of adolescent females with autism in a school setting.

Sex differences in autism

Autism is included within the International Statistical Classification of Diseases 11th Revision (ICD-11) (WHO, 2018). The prevalence of autism has increased gradually over the past four decades and it is estimated to affect approximately one percent of the population (Baron-Cohen et al., 2009). One of the earliest descriptions of autism emerged from the work of Kanner (1943), who identified a number of shared characteristics in a sample of 11 children. He suggested that these children were displaying early infantile autism. Kanner’s sample consisted of eight males and three females and from this point onwards, research into autism has tended to include predominantly male samples. This may have been due to the presumption that autism affected more males than females. However, it may be that the current understanding of the condition is biased towards males, which results in females going undiagnosed (Dworzynski, et al., 2012).

Presentation of autism in males and females

The Brain Differences Theory (Greenberg et al., 2018) suggests that sex differences in autism are the result of differences between the female and male brain structure, patterns of activation and hormones. Baron-Cohen's (2002) Extreme Male Brain theory proposes that male brains are naturally programmed to understand and build systems, while female brains are better at empathising. Therefore, it is proposed that females are less susceptible to autism because genetic profile makes them more socially competent. This implies that autism is likely to present differently in females compared to males, due to their superior empathy and social skills (Baron-Cohen, 2002). It could also explain why females are more likely to receive a diagnosis of autism later than males.

A number of studies suggest that there is a difference in the social presentation of males and females with autism, albeit with inconsistent findings. For example, Hsiao et al. (2013) found that male children with autism were less socially emotional, less socially aware and had fewer autism traits overall than female children with autism. Meanwhile Head, McGillivray and Stokes (2014) found that, compared to males with and without autism, females were more likely to have close, empathetic and supportive relationships with others, regardless of whether they had a diagnosis of autism.

The developmental trajectory of males and females

There are differences in the developmental trajectories of males and females from an early age. Female infants have been found to demonstrate more prosocial behaviour than male infants (Takahashi et al., 2015), to have more advanced speech and to have better social imitation skills (Rivet & Matson, 2011). However, this is often not recognised by research into sex differences in autism. Furthermore, the literature suggests that the expression of autism in females is significantly influenced by their stage of development in relation to the demands of the social environment. In their early years, females with autism have been found to show less impaired social communication than males with autism (Rivet & Matson, 2011). However, they tend to demonstrate greater difficulty with friendships than males with autism as they enter adolescence; this being a period during which there are increased social demands and female friendships become highly dependent on communication, empathy and social sensitivity (Kopp & Gillberg, 2011). It may therefore be that the symptoms of females with autism are more intense and expressed more obviously at a later stage of development. This highlights the need to consider the impact of the social environment and expectations on the social functioning of adolescent females with autism.

The ‘female camouflage effect’

It is suggested that females with autism have a greater need for social contact and interaction than males with autism, which motivates them to learn ways of appearing socially-typical (Hsiao et al., 2013). Gould and Ashton-Smith (2011) propose that females with autism are able to give the impression that they have well-developed social skills by watching and mirroring the behaviour of others. There is a growing body of research into the ability of females with autism to camouflage their difficulties specific to the characteristics of autism in this way. Some of this evidence is based on anecdotal accounts such as that of Holliday Willey (2015), who describes the amount of effort she put into ‘pretending to be normal’ for much of her life. More recently, studies have begun to directly examine social camouflaging in females with autism. Tierney et al. (2016) interviewed adolescent females with autism and found that camouflaging was a strategy that they commonly used to make and maintain social relationships. Hull et al. (2017) obtained similar findings from their research based on adults with autism, which suggested that motivations for camouflaging included the desire to fit in and to build connections with others. Whilst these studies provide useful insights into the function and nature of camouflaging, they do not consider differences in camouflaging behaviours between males and females.

Rynkiewicz et al. (2016) suggest one of the ways in which females with autism camouflage their social difficulties is through their non-verbal communication. This research, based on a Polish sample, found that female children with autism used physical gestures more vividly and noticeably than male children with autism. However, the females with autism performed worse than males with autism on a test which required them to identify emotions depicted in photographs. The authors suggest that because females with autism appear more able than males with autism in regard to their non-verbal communication, they are able to camouflage their diagnostic features. This increases the risk of a diagnosis of autism, in females, not being made when one may be necessary.

Social challenges for females with autism

Difficulties with social understanding and communication can make it hard for females with autism to develop relationships and fit in with their typically developing peers (Cridland et al., 2014). This could contribute to the higher rates of social isolation and mental health difficulties (such as anxiety, depression and eating disorders) in females with autism (Nichols et al., 2009; Solomon et al., 2012). It is suggested that internalising symptomology

in females with autism may go unrecognised, due to their tendency to hide their differences (Dworzynski et al., 2012).

Considering the proposed link between mental health difficulties and a sense of belonging (Baumeister & Leary, 1995) there are surprisingly few studies that have explored this construct for females with autism. The exploration of belonging in mainstream schools is particularly relevant, given recent guidance from the Department for Education in England and Wales (DfE, 2015) on mental health and behaviour in schools. This document emphasises the need to develop pupils' sense of belonging within their school environment in order to promote their mental health. The complexities of female peer relationships and concerns around fitting in make adolescence a critical time for females with autism (Nichols et al., 2009). Furthermore, exploring the factors that impact on sense of belonging for adolescent females with autism may lead to a more advanced understanding of how to support their mental health needs.

The need for belonging

The importance of experiencing a sense of belonging is well-established within the literature (Allen & Boyle, 2018; Boyle & Allen, 2018; Slaten et al., 2018). In his hierarchical theory of motivation, Maslow (1987) proposed that progression towards achieving self-esteem or self-actualisation is dependent on humans fulfilling their needs for love and belongingness. Baumeister and Leary (1995) nevertheless support the notion of belonging as a basic psychological need. Following their extensive review of the literature they concluded that a lack of belonging is associated with higher incidence of maladjustment, stress, psychological pathology, and health problems. This indicates that there is a human motivation to develop stable, fulfilling relationships with other individuals and that lack of belonging can have significant consequences for well-being. The issue of inclusion in schools and the attitudes of teachers and support staff are key factors in whether a sense of belonging for all students is achievable or, indeed, workable (Anderson & Boyle, 2015; Chodkiewicz & Boyle, 2014; Kraska & Boyle, 2014)

The need to belong to groups still seems very apparent by the popularity and success of social networking sites such as Facebook or Instagram. The need and motivation to belong has also been demonstrated by real life studies into individuals' peer group relationships, occupational settings, school settings and various life transitions (Boyle, 2007; Osterman, 2000; Pesonen et al., 2015).

Aim of this study

This study addresses the need to better understand the lived social experiences of adolescent females with autism at mainstream school by exploring factors that add to and take away from their sense of belonging. Specifically, the aim is to capture the meaning and significance of ‘sense of belonging’ for adolescent females with autism and the impact that this has on their social experiences at school.

Research Question:

1. What do adolescent females with autism feel about their social experiences in mainstream secondary school?
 - a. In what ways do adolescent females with autism feel they belong?
 - b. In what ways do adolescent females with autism feel excluded?

Methodology

Research Design

The research explored the views and experiences of adolescent females with autism in regard to the ways in which they feel they belong and the ways in which they feel excluded in school. Semi-structured interviews were employed to obtain the perspectives of adolescent females with autism.

Participants

Ethical approval was received by the University of Exeter Human Research Ethics Committee. Participants were selected purposively, with the following inclusion criteria:

- Female, aged 11-18 years old, with a formal diagnosis of autism or Asperger Syndrome.
- Attending mainstream secondary or middle school.
- Able to express themselves verbally.

To begin the process of participant recruitment Special Educational Needs Coordinators (SENCOs) in secondary and middle schools in the south west of England were contacted by email, providing a written explanation of the research. Seven SENCOs were contacted and

four agreed for their school to take part and to pass on details of the research to female pupils with autism and their parents. Ten pupils were invited to participate in the research and eight agreed to take part. Participants were from three mainstream schools and were aged between 12-17 years old (See Table 1). The details of the three schools attended by the participants are as follows:

- School 1: Mainstream secondary school for girls
- School 2: Mainstream mixed secondary school
- School 3: Mainstream mixed middle school with an on-site autism base

Table 1. Participant information

Pseudonym	Age	Diagnosis	Age at Diagnosis	School	Education, Health and Care Plan
Ella	12	Asperger Syndrome	12	School 1	No
Zara	14	Autism Spectrum Disorder (ASD)	11	School 1	Yes
Jasmine	13	ASD	10	School 1	No
Scarlett	15	Asperger Syndrome	15	School 2	No
Saffy	13	ASD	10	School 2	No
Sophia	17	Asperger Syndrome	15	School 2	No
Darcy	12	ASD	9	School 3	Yes
Charlie	12	ASD	6	School 3	Yes

Semi-structured interviews

The research aimed to explore the social experiences of adolescent females with autism in mainstream school. Semi-structured interviews were used to obtain the individual views and experiences of females with autism in regard to belonging and exclusion within school. This method has been used effectively in other studies which seek the views of young people with autism (Cridland et al., 2014; Tierney et al., 2016).

Hierarchical focusing, as proposed by Tomlinson (1989), was used to develop the interview schedule. This allowed for the discussion to be led by participants, with prompts employed when a topic had not been raised. Questions¹ explored how participants experience belonging and exclusion and were based on themes identified in the literature, as well as the dimensions of belonging (e.g. psychological involvement and meaningfulness) proposed by Hagerty et al. (1992). The broad themes explored by the questions were as follows:

- Importance and understanding of belonging

¹ The main set of questions used for the semi-structured interviews are detailed in Appendix A

- Views and experiences around “fitting in”
 - Identification with others
 - Barriers and support around “fitting in”
- Views and experiences around “valued involvement”
 - Nature of peer relationships
 - Social acceptance, exclusion and bullying
 - Relationships and support from school staff

Procedure

Each participant was interviewed on two occasions, to build rapport and trust. Each session lasted between 30-45 minutes and there was approximately a one-week gap between the first and second interview. At the end of the first interview the ‘feelings of belonging’ sheet was introduced and participants were asked to complete at least one of these before the next interview. These sheets required participants to reflect on the extent to which they felt a sense of belonging at particular times during the school day. Participants discussed their responses for this activity during the second interview.

Results

Semi-structured interviews in phase one were analysed using thematic analysis (Braun & Clarke, 2006; Clarke & Braun, 2013) in order to gain a rich and detailed account of the data. Thematic analysis generated key themes corresponding to the research questions for the study. For each research question, a summary of the related themes and sub-themes is presented, followed by relevant quotes taken from the interview transcripts.

Research Question: What do adolescent females with autism feel about their social experiences in mainstream secondary school?

Research Question 1a: In what ways do adolescent females with autism feel they belong?

Themes:

- Reciprocal friendships
- Feeling safe and supported
- Encouragement and inclusion
- Establishing and adhering to social expectations

Reciprocal friendships

Participants saw friendship as an important basis for belonging and as beneficial for their school experience. The important qualities of a close, reciprocal friendship were discussed and participants suggested that their overall happiness in school was largely impacted by having a friendship.

Participants identified particular qualities that set apart the people they would consider their friends. Scarlett emphasised the importance of feeling comfortable and tended to place less importance on verbal interaction.

Scarlett: *Like you know when you're with someone and you're comfortable with them, so when it's quiet it's not weird.*

Zara described close friends, who knew her well and who were accepting of her autism. She compared them to other peers in school, who did not tolerate her difficulties and support her in the same way.

Zara: *...true friends... they actually understand and just don't not like me for my autism.*

The companionship that came with having one key friend was seen as particularly important. Some participants reported generally happy experiences of school, which were enhanced by time spent with a close friend. Jasmine described the experience of her best friend joining her in secondary school, after a year apart from her.

Jasmine: *She makes it happy. Cos year 7... I loved year 7 so much but the only bad thing was she wasn't there. That was the only bad thing I had.*

Feeling safe and supported

Pupils spoke about the social security that comes through peer relationships. For some, close physical proximity to friends was important to enable them to feel confident in a large secondary school environment.

Ella: *Like you sort of have to have friends so you can go around with them and if you don't have friends there's nowhere really to go.*

In addition to the safety provided by peer relationships, participants also discussed the importance of safety and support provided by aspects of the school environment. Pupils discussed particular areas in school where they feel safe and are able to check in with staff or peers. For Ella, this was a lunchtime club, where she felt comfortable and welcome.

Ella: *It's just a place to go like away from every body and people from student support run it. ...So we sit there as a place to go and they chat about like how's your week's going and that's been a nice thing to do.*

Encouragement and inclusion

Participants emphasised social inclusion as a key aspect of belonging, giving examples of instances where their peers had acknowledged them and made them feel valued.

Sophia: *It's like wanting to be there and feeling that people want you to be there... I guess it's just nice to have people to talk to and sort of like realise you're there and... kind of interact with.*

Jasmine: *Like every time she sees me, even though she's talking she'll turn and say hi to me.*

Establishing and adhering to social expectations

When describing the profile of an individual with a greater sense of belonging in school, pupils often identified qualities that were in line with social norms, particularly in regard to female behaviour. These tended to include references to verbal interaction skills, confidence and kindness.

Researcher: *So can you tell me what sort of person you think might be inside the circle of belonging?*

Ella: *Someone who's confident and has quite a fun, bubbly personality and is chatty. If you don't act nice to them then they won't act nice to you.*

Pupils also explained the social benefits of behaving in a way that pleases others and being able to adapt their behaviour to ensure positive interactions with peers. For Ella, this involved

mirroring the behaviour of her peers to feel confident that she was adhering to the social expectations of the group.

Ella: *I do whatever they're doing...*

...Yeah it helps because then it's doing the sort of thing that they like. Then you'll know that they'll like what you're doing.

Research Question 1b: In what ways do adolescent females with autism feel excluded?

Themes:

- Being on the periphery
- Feeling de-valued

Social skills

Being on the periphery

Participants described experiences where they did not feel they were personally involved in the social group. This occurred more regularly for some than others. Sophia made particular reference to feeling ignored during group interactions.

Sophia: *Well I'm just usually kind of like on the outside and I can step away and no one notices.*

Zara spoke about instances where she had been more overtly excluded or left out.

Zara: *And I join in their conversation and they just look at me and say 'Why are you joining in? You don't need to.'*

Others explained that there had been instances where they felt unable to join in with the conversation and activities of the group. Charlie discussed her past experience of being part of a friendship group with whom she could not relate to; and who had very different interests and priorities to her.

Charlie: *When I was in a group of girls, they used to like talk about stuff all the time and make fun of like people... at break times they used to go to the toilets all the time*

and do their hair and make-up... And they could all do gymnastics... I used to have to just stand there and watch them.

Feeling de-valued

Participants made reference to social situations where they did not feel listened to, or their contribution was not valued by others.

Scarlett: *If I was in the conversation at all I was always like... we always talked about what they wanted to talk about... sometimes I wasn't listened to at all...*

Ella: *I just sat in the corner for the rest of the time cos I just felt... like left out. No one was listening to my ideas.*

Some were conscious of others underestimating them and treating them as they would a younger child. Participants discussed the way in which staff spoke to them when they found out they had a diagnosis of autism and suggested that this could often lead to differential treatment.

Darcy: *When I first got diagnosed everyone started treating me differently ... I got treated differently, like babyish.*

Darcy: *I think everyone thinks that we're stupid, but we're not.*

Charlie: *They just talk to us weirdly... Like we're babies... And they sometimes look at us really weird.*

Meanwhile, Ella reported that she felt some teachers disliked her because of their perception that she does not listen. For Ella, this seemed to demonstrate the teachers' misunderstanding of her needs.

Researcher: *And do the teachers like you generally do you think?*

Ella: *Some of them... and then some of them absolutely hate me... They hate me because they don't think I listen but I do.*

Social skills

Participants discussed their nerves preceding social interactions with peers; often associated with what to say and how to behave. Scarlett expressed fears of awkwardness and rejection due to what she felt were limited social skills. In some instances, this had led to her calling off or avoiding social arrangements outside school.

Scarlett: *Because of my lack of social skills it gets pretty awkward pretty quickly...*

Sophia explained that she had needed to educate herself about hidden social rules when she began secondary school. She also mentioned that she had not received adequate support in this area during primary school, which may have made the process of transition more challenging.

Sophia: *... I still wasn't entirely sure of like what to do in social situations all the time... So I did quite a lot of working it out and sort of... and it took like a while.*

Participants also discussed their experiences of managing complex social dynamics within groups of friends. Many expressed a preference for having one key friend, or a small peer group, as opposed to being part of a large social network.

Scarlett: *I was actually pretty content, but at the same time... lonely. Like, I wanted friends that I could talk to, like a group... like a small group. Cos this was a big group, everyone was always moving about. It was hard to keep a small group together before they broke up and went off to speak to individuals.*

Discussion

The aim of this study was to explore how adolescent females with autism feel about their social experiences in mainstream school. Specifically, it investigated the ways in which they feel they belong and the ways in which they feel excluded in the school environment. It

also explored what adolescent females with autism feel would enhance their social experiences in mainstream school.

Reciprocal friendships

Friendship was suggested as an important prerequisite for belonging. Some pupils discussed the factors that set apart “true friends” who added to their sense of belonging, compared to other peers at school. For some pupils, this was determined by feeling “comfortable”, understood and by the reciprocal kindness they experienced with their friend. The pupils’ ability to distinguish and describe “true” friendship in this way is perhaps surprising, considering the association of autism with difficulties around social interaction and reciprocity (Kopp & Gillberg, 2011; Myles & Simpson, 2001). Furthermore, the more recent findings support recent research suggesting that females with autism are motivated to seek social contact and to make and maintain friendships (Calder et al., 2013; Sedgewick et al., 2016; Tierney et al., 2016).

For many pupils, a sense of belonging was associated with happiness, which was linked to time with friends. This finding is reflective of the views and experiences of the wider population. Coverdale and Long (2015) found that young people identified friends as one of the most important factors in regard to supporting and promoting their emotional well-being. Furthermore, the current findings support research suggesting that social connectedness and a sense of belonging in school impacts on engagement, motivation and likelihood of withdrawal (Osterman, 2000) and that that a sense of belonging can be a protective factor in regard to mental health and needs to be promoted within the school environment (Boyle & Allen, 2018; DfE, 2016; Furrer & Skinner, 2003).

Feeling safe and supported

Participants made reference to the challenges of attending a large and busy school. Factors that promoted a sense of safety and security in school were seen as important. These fell into two categories; support through peer relationships and support within the school. Pupils emphasised that it was important to locate friends and “stick together” during break times to feel more confident in the busy school environment. This could be one of the reasons underlying the “clingy” behaviour described by Rivet and Matson (2011) in relation to females with autism. The number of students and the size of the secondary school environment was perceived as challenging by the majority of pupils, as found by Hill (2014). The participants in the current study expressed a preference for smaller, quiet areas of school,

“away from everybody”; and where they had the option to talk to familiar peers or staff members.

Establishing and adhering to social expectations

Adapting one’s behaviour to “get along with people” emerged as another important aspect of belonging. Pesonen et al. (2015) obtained similar findings from the retrospective accounts of women with autism, who recalled adapting their behaviour in school to fit in. This is also consistent with the notion that females with autism are adept at hiding their difficulties by mirroring others (Attwood, 2006). Adapting one’s behaviour to fit in with social norms is something that is likely to motivate the majority of adolescents, due to the importance of peer relationships and social acceptance at this stage (McElhaney, Antonishak & Allen, 2008). It may be that the effort and energy that goes in to this is greater for females on the autistic spectrum due to their social difficulties.

Being on the periphery

Managing group situations was identified as a challenging social aspect of school. Pupils described their experiences of being “on the outside” of social groups and not feeling that their contribution was valued, or acknowledged. In contrast to the encouragement to participate, which was identified as promoting belonging, pupils recalled instances where peers had excluded them and left them out of social arrangements and activities. A number of studies have highlighted the difficulties that children and young people with autism can experience with social isolation and bullying (Muller et al., 2008; Humphrey & Symes, 2010). However, in line with Dean et al. (2014), participants in the current study tended to describe feelings of being ignored, rather than being directly bullied or overtly excluded. The current findings also demonstrate the ability of females with autism to give the outward impression that they are part of a social group. This is consistent with suggestions that females with autism tend to lack social confidence and possess low self-esteem (Nichols et al., 2009).

Feeling de-valued

A number of participants expressed the view that others underestimated them and did not value their contribution. Once again, this is consistent with the Hagerty et al. (1992) model of belonging, which emphasises the importance of “valued involvement”. Two pupils felt that others thought they were “stupid” and treated them “like babies”. One participant

explained that her sense of humour often caused others to get “offended really quickly” and that she could “irritate people” in this way. Tierney et al. (2016) found that adolescent females with autism reported unintentionally breaking social conventions. Similarly, pupils in the current study explained that teachers and peers sometimes thought they were being rude or choosing not to listen when this was not their intention.

Social skills

Despite a desire to engage and spend time with peers, a number of pupils discussed their feelings of anxiety in relation to social encounters. It is suggested that while females with autism are socially motivated, they still exhibit social-communication difficulties (NASEN, 2016). However, females with autism are more adept at masking these than males (Lai et al., 2015). Some pupils shared experiences where they had decided not to approach peers, or meet up with friends due to their concerns about “what to do in social situations” and the potential for it to become “awkward”. Additionally, participants discussed the challenges of managing the complexities of female friendships such as arguments, jealousy and gossiping. This is also referred to as relational conflict (Nichols et al., 2009). Sedgewick et al. (2016) found that females with autism reported high levels of relational conflict in their friendships. Participants in the current study often reported that they found it easier to manage individual friendships or small groups, which they described as “not too complicated”. It was suggested that this reduced the likelihood of conflict and exclusion.

Limitations

This study represents a small sample of adolescent females with autism. Further replication is needed before the findings can be generalised to other females with autism in other mainstream schools. The pupils each had a diagnosis of autism, but while some were needed limited support others required greater support. Furthermore, the age range of the pupils ranged from age 12 to age 17. Future research may therefore need to include a more homogenous sample.

In the current research, it is possible that the pupils’ accounts of their social experiences in school did not accurately reflect their lived experiences. Pupils may have wanted to give the impression that they had more friends than they really did, or misinterpreted others’ behaviour as rejection or bullying.

Conclusion

The current study addressed an identified gap in the literature by seeking the first-hand views and experiences of adolescent females with autism in mainstream school. Key themes emerging from the responses were around perceived peer acceptance, friendship and social competence. This was suggested to have an important influence on the sense of belonging experienced by adolescent females with autism in mainstream school. Consistent with prior research, the findings suggest that adolescent females with autism are motivated to seek social contact and form friendships in the same way as females without a diagnosis of autism. However, it is important to look beyond a neuro-typical understanding of belonging when considering how to support female pupils with autism. For some, the priority may be the understanding and identification that comes from one key friendship, rather than membership in a larger group.

The findings also highlight the specific social difficulties experienced by females with autism and the way in which this can add to their feelings of exclusion in the school environment. The findings reveal important insights into the specific social challenges for adolescent females with autism.

References

- Allen, K., & Boyle, C. (2018). The Varied pathways to belonging. In K. Allen & C. Boyle (Eds.) *Pathways to school belonging* (pp. 1-6.). Boston: Brill-Sense.
- Anderson, J., & Boyle, C. (2015). Inclusive education in Australia: Rhetoric, reality, and the road ahead. *British Journal of Support for Learning*, 30(1), 4-22. doi: 10.1111/1467-9604.12074
- Attwood, T. (2006). *The complete guide to Asperger's syndrome*. Philadelphia, PA: Jessica Kingsley Publishers.
- Baron-Cohen, S. (2002). The extreme male brain theory of autism. *TRENDS in Cognitive Sciences*, 6(6), 248-254.
- Baron-Cohen, S., Scott, F. J., Allison, C., Williams, J., Bolton, P., Matthews, F. E., & Brayne, C. (2009). Prevalence of autism-spectrum conditions: UK school-based population study. *The British Journal of Psychiatry*, 194(6), 500-509.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Begeer, S., Mandell, D., Wijnker-Holmes, B., Venderbosch, S., Rem, D., Stekelenburg, F., & Koot, H. M. (2013). Sex differences in the timing of identification among children and adults with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 43(5), 1151-1156.
- Boyle, C. M. (2007). An analysis of the efficacy of a motor skills training programme for young people with moderate learning difficulties. *International Journal of Special Education*, 22(1), 11-24.
- Boyle, C., & Allen, K. (2018). The path least followed: Moving into the future of school belonging research and towards clearer interventions. In K. Allen & C. Boyle (Eds.) *Pathways to school belonging* (pp. 219-224.). Boston: Brill-Sense.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Calder, L., Hill, V., & Pellicano, E. (2013). 'Sometimes I want to play by myself': Understanding what friendship means to children with autism in mainstream primary schools. *Autism*, 17(3), 296-316.
- Clarke, V., & Braun, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2), 120-123.

- Chodkiewicz, A., & Boyle, C. (2014). Exploring the contribution of attribution retraining to student perceptions and the learning process. *Educational Psychology in Practice, 30*(1), 78-87. doi: 10.1080/02667363.2014.880048
- Coverdale, G. E., & Long, A. F. (2015). Emotional wellbeing and mental health: an exploration into health promotion in young people and families. *Perspectives in Public Health, 135*(1), 27-36.
- Cridland, E. K., Jones, S. C., Caputi, P., & Magee, C. A. (2014). Being a female in a males' world: investigating the experiences of females with autism spectrum disorders during adolescence. *Journal of Autism and Developmental Disorders, 44*(6), 1261-1274.
- Dean, M., Kasari, C., Shih, W., Frankel, F., Whitney, R., Landa, R., Lord, C., Orlich, F., King, B., & Harwood, R. (2014). The peer relationships of females with ASD at school: comparison to males and females with and without ASD. *Journal of Child Psychology and Psychiatry, 55*(11), 1218-1225.
- Department for Education. (2016). *Mental health and behaviour in schools: Departmental advice for school staff, March 2016*. Retrieved from <https://www.gov.uk/government/publications/mental-health-and-behaviour-in-schools--2>
- Dworzynski, K., Ronald, A., Bolton, P., & Happé, F. (2012). How different are girls and boys above and below the diagnostic threshold for autism spectrum disorders? *Journal of the American Academy of Child & Adolescent Psychiatry, 51*(8), 788-797.
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology, 95*(1), 148-162.
- Gould, J. & Ashton-Smith, J. (2011). Missed diagnosis or misdiagnosis: females and women on the autism spectrum. *Good Autism Practice, 12*(1), 34-41.
- Greenberg, D. M., Warrier, V., Allison, C., & Baron-Cohen, S. (2018). Testing the Empathizing–Systemizing theory of sex differences and the Extreme Male Brain theory of autism in half a million people. *Proceedings of the National Academy of Sciences, 115*(48), 12152-12157. doi: 10.1073/pnas.1811032115
- Hagerty, B. M., Lynch-Sauer, J., Patusky, K. L., Bouwsema, M., & Collier, P. (1992). Sense of 'belonging': A vital mental health concept. *Archives of Psychiatric Nursing, 6*(3), 172-177.

- Head, A. M., McGillivray, J. A. & Stokes, M. A. (2014) Gender differences in emotionality and sociability in children with autism spectrum disorders. *Molecular Autism*, 5(1), 5–19.
- Hill, L. (2014). Some of it I haven't told anybody else': Using photo elicitation to explore the experiences of secondary school education from the perspective of young people with a diagnosis of autistic spectrum disorder. *Educational and Child Psychology*, 31(1), 79-89.
- Holliday Willey (2015). *Learning to be normal*. London: Jessica Kingsley Publishers.
- Hsiao, M. N., Tseng, W. L., Huang, H. Y., & Gau, S. S. F. (2013). Effects of autistic traits on social and school adjustment in children and adolescents: The moderating roles of age and gender. *Research in Developmental Disabilities*, 34(1), 254-265.
- Hull, L., Petrides, K.V., Allison, C., Smith, P., Baron-Cohen, S., Lai, M-C, Mandy, W. (2017). *Journal of Autism and Developmental Disorders*, 47(8), 2519–2534. doi: 10.1007/s10803-017-3166-5
- Humphrey, N., & Symes, W. (2010). Responses to bullying and use of social support among pupils with autism spectrum disorders (ASDs) in mainstream schools: A qualitative study. *Journal of Research in Special Educational Needs*, 10(2), 82-90.
- Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child*, 2, 217–250.
- Kopp, S., & Gillberg, C. (2011). The Autism Spectrum Screening Questionnaire (ASSQ)-Revised Extended Version (ASSQ-REV): An instrument for better capturing the autism phenotype in girls? A preliminary study involving 191 clinical cases and community controls. *Research in Developmental Disabilities*, 32(6), 2875-2888.
- Kraska, J., & Boyle, C. (2014). Attitudes of pre-school and primary school pre-service teachers towards inclusive education. *Asia-Pacific Journal of Teacher Education*, 42(3), 228-246. doi: 10.1080/1359866X.2014.926307
- Lai, M. C., Lombardo, M. V., Auyeung, B., Chakrabarti, B., & Baron-Cohen, S. (2015). Sex/gender differences and autism: setting the scene for future research. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(1), 11-24.
- Maslow, A.H. (1987). *Motivation and personality* (3rd ed.). New York, NY: Harper and Row.
- McElhaney, K. B., Antonishak, J., & Allen, J. P. (2008). “They Like Me, They Like Me Not”: Popularity and Adolescents’ Perceptions of Acceptance Predicting Social Functioning Over Time. *Child Development*, 79(3), 720-731. doi:10.1111/j.1467-8624.2008.01153.x

- Moyse, R., & Porter, J. (2015). The experience of the hidden curriculum for autistic females at mainstream primary schools. *European Journal of Special Needs Education*, 30(2), 187-201.
- Muller, E., Schuler, A., & Yates, G.B. (2008). Social challenges and supports from the perspective of individuals with Asperger syndrome and other autism spectrum disabilities. *Autism*, 12(2), 173-190.
- Myles, B. S., & Simpson, R. L. (2001). Understanding the Hidden Curriculum: An Essential Social Skill for Children and Youth with Asperger Syndrome. *Intervention in School and Clinic*, 36(5), 279-286.
- NASEN. (2016). *Girls and autism: Flying under the radar*. Retrieved from <http://www.nasen.org.uk/resources/resources.girls-and-autism-flying-under-the-radar.html>
- Nichols, S., Moravcik, G. M., & Tetenbaum, S. P. (2009). *Females growing up on the autism spectrum: What parents and professionals should know about the pre-teen and teenage years*. Philadelphia: Jessica Kingsley Publishers.
- Osterman, K. F. (2000). Students' need for 'belonging' in the school community. *Review of Educational Research*, 70(3), 323-367.
- Pesonen, H. V., Kontu, E. K., & Pirttimaa, R. A. (2015). Sense of 'belonging' and life transitions for two females with autism spectrum disorder in Finland. *Journal of International Special Needs Education*, 18(2), 73-86.
- Rivet, T. T., & Matson, J. L. (2011). Review of gender differences in core symptomatology in autism spectrum disorders. *Research in Autism Spectrum Disorders*, 5(3), 957-976.
- Rynkiewicz, A., Schuller, B., Marchi, E., Piana, S., Camurri, A., Lassalle, A., & Baron-Cohen, S. (2016). An investigation of the 'female camouflage effect' in autism using a computerized ADOS-2 and a test of sex/gender differences. *Molecular autism*, 7(1), 10.
- Sedgewick, F., Hill, V., Yates, R., Pickering, L., & Pellicano, E. (2016). Gender differences in the social motivation and friendship experiences of autistic and non-autistic adolescents. *Journal of Autism and Developmental Disorders*, 46(4), 1297-1306.
- Slaten, C. D., Allen, K., Ferguson, J. K., Villa-Broderick, D., & Waters, L. (2018). A historical account of school belonging: Understanding the past and providing direction for the future. In K. Allen & C. Boyle (Eds.) *Pathways to school belonging* (pp. 7-26.). Boston: Brill.

- Takahashi, Y., Okada, K., Hoshino, T., & Anme, T. (2015). Developmental trajectories of social skills during early childhood and links to parenting practices in a Japanese sample. *Plos One*, *10*(8). doi: e0135357
- Tierney, S., Burns, J., & Kilbey, E. (2016). Looking behind the mask: social coping strategies of girls on the autistic spectrum. *Research in Autism Spectrum Disorders*, *23*, 73-83.
- Tomlinson, P. (1989). Having it both ways: hierarchical focusing as research interview method. *British Educational Research Journal*, *15*(2), 155-176.
- Wilkinson, L. A. (2008). The gender gap in asperger syndrome: Where are the girls? *Teaching Exceptional Children Plus*, *4*(4), n4.
- World Health Organisation. (2018). *ICD-11 for Mortality and Morbidity Statistics (ICD-11-MMS)*. Retrieved from: <https://icd.who.int/browse11/l-m/en>

Appendix A – Semi Structured Interview Questions

Themes	Question
Importance and understanding of belonging	
	If a friend said that when they were at school they felt like they belonged what would they mean?
	Introduce blob playground:
	Point to a figure who belongs.
	Point to a figure who does not belong.
	Which of those two figures is most similar to you?
	Circle of belonging introduced: <i>“This is the circle of belonging. People inside the circle feel a sense of belonging when they are in school. People outside the circle do not feel a sense of belonging when they are in school.”</i>
	Can you tell me what kind of person would be inside the circle of belonging at school?
	Can you tell me what kind of person would be outside the circle of belonging at school?
	Which circle are you in most of the time at school?
	Which circle would you like to be in most of the time at school?
	How important is it to be inside the circle of belonging at school?
Identification with others	
	Tell me about the people you like to spend time with at school (Option to draw this)
	Are there people at school who are similar to you?
	How important is it for you to be similar to other people at school?
	Are there people at school who are different to you?
	Would you like to feel more similar to others at school?
	If you had to be someone else at school (other student or staff) who would you most like to be?
	How much do you feel like people at school understand you?
	Is there anything that would help people to understand you better?
	How much time at school do you spend with other girls who have autism/ Aspergers?
Barriers and support around social skills and fitting in	Do the people you spend time with affect how you feel about school?
	Social challenge prompts introduced to aid with the following questions.
	Is there anything difficult about making friends at school?
	What do you do to manage when you are finding these things difficult?
	Is there anything that helps you to make friends at school?
	What else could make it easier to form friendships at school?
Nature of peer relationships	
	Tell me about your friends at school (Give option of drawing sociogram).
	How important is it to have friends?
	What do your friends like best about you?
	How can you tell when someone is your friend?
	How important is it to be part of a group?
	What do your friends think about your autism/Aspergers?
	Is there anything you would change about the number/type of friends you have?
Social exclusion and bullying	

	Introduce ‘You in groups’ images and discuss which figures are being left out or bullied by others
	Do you ever feel left out at school?
	Have you ever experienced bullying from people at school?
	Is there anything at school that helps to stop bullying or people being left out?
	What else could be done to stop bullying or people being left out?
Relationships and support from school staff	
	How do you get on with the teachers and staff at school?
Re-visit ‘feelings of belonging’ activity	Is there anything else the adults at school could do to help you?
	Review completed ‘ feelings of belonging’ sheets
	<i>For each image:</i> What do you think is happening in the picture?
	<i>Review responses:</i> Did you choose different pictures/ ratings for different times of day? What was your highest/ lowest rating on the belonging scale?