

ARTICLE



Perceptions of friendship among girls with Autism Spectrum Disorders

Christian Ryan^a, Maeve Coughlan^b, Jean Maher^b, Patricia Vicario^c and Alison Garvey^a

^aSchool of Applied Psychology, University College Cork, Cork, Ireland; ^bDepartment of Occupational Therapy, Cope Foundation, Cork, Ireland; ^cDepartment of Occupational Therapy, St. Joseph's Foundation, Co, Cork, Ireland

ABSTRACT

Friendships have a central importance in childhood and adolescence, and the friendship demands on girls with autism spectrum disorder (ASD) may be higher than for boys. Few previous studies have examined the experiences of friendship from the perspective of girls with ASD. A qualitative focus group methodology was used with ten adolescent girls with a confirmed diagnosis of ASD. The results indicate the high importance of friendship to the participants, with themes emerging about friendship establishment, how friendships transcend contexts, the experience of conflict in friendships, and friendship loss. The role of social media and mobile phone use on friendships was also examined. The themes that emerged in this study concur with, and elaborate on, the emerging literature on girls with ASD. The risks to friendships of school transitions and weak texting skills both emerged as potential targets for interventions to support girls with ASD during adolescence.

ARTICLE HISTORY

Received 12 December 2019
Accepted 7 April 2020

KEYWORDS

ASD; Asperger Syndrome;
girls; friendship; adolescence

Introduction

Girls with autism spectrum disorder (ASD) have been neglected in both research and practice (Shefcyk 2015). Given that four times as many boys as girls receive a diagnosis of ASD, many studies have focused on samples containing few female participants (Bauminger et al. 2008; Mazefsky et al. 2014) or none at all (Doody and Bull 2011). As a result, Shefcyk (2015) argued that many services are designed with stereotypically masculine ASD characteristics in mind. A lack of knowledge about the female profile in ASD risks inappropriate treatment and management of the symptoms for girls and women with ASD (Kirkovski, Enticott, and Fitzgerald 2013). The research to date has tended to neglect gender-specific aspects of the social challenges faced by girls with ASD (Dean et al. 2014). However, research is changing, and some studies have started to address this shortfall including more girls with ASD (Cook, Ogden, and Winstone 2018; Dean, Harwood, and Kasari 2017; Tierney, Burns, and Kilbey 2016) and women with ASD (McGillivray and Evert 2018).

Children with ASD experience many difficulties in friendship establishment, development and maintenance (Carrington, Templeton, and Papinczak 2003) though some

evidence suggests high-functioning children have genuine friendships (Bauminger and Shulman 2003), perceive their friendships as being close (Bauminger, Shulman, and Agam 2004) and report reasonable levels of satisfaction (Calder, Hill, and Pellicano 2013). By contrast, parents of children with ASD typically describe these friendships as lacking reciprocity and responsiveness, relying on prearranged settings (Orsmond, Krauss, and Seltzer 2004), or not involving mutuality (Rowley et al. 2012). However, friendships are a significant priority for parents of children with ASD, being rated more important than either physical or academic skills (Petrina, Carter, and Stephenson 2015). Four criteria described in the Autism Diagnostic Interview-Revised (ADI-R, Lord, Rutter, and Le Couteur 1994) for 'friendship' include someone roughly the same age, engages in a variety of activities and these must take place outside of prearranged groups, and interactions must possess reciprocity and mutual responsiveness. Only 8% of friendships in a large sample of adolescents and adults with ASD met these criteria (Orsmond, Krauss, and Seltzer 2004). However, it may be the friendships of children with ASD meet social and emotional needs through enjoyable companionship, without necessarily fulfilling all of the criteria of close friendship such as intimacy and affection as suggested by Bauminger et al. (2008), though this study only included two girls in the sample. Bauminger and Shulman (2003) examined maternal perceptions of friendships and found children with ASD had a high dependence on adult support, their friendships were less stable, they met less frequently and participated in more structured activities. Kuo et al. (2013) highlight the differing perspectives between adolescents with ASD and their parents. The adolescents identified friends as peers with similar interests, whereas parents focused on reciprocal and emotional interactions. In O'Hagan and Hebron (2017) study of three boys with ASD, they point out the importance of consulting with children and young people with ASD about their views on friendship.

Friendship is an area in which gender differences have been highlighted in the typically developing population, being particularly pronounced during adolescence (Rose and Rudolph 2006). Adolescent girls display a greater interpersonal sensitivity, show more empathy and more sensitive to others' distress than adolescent boys (Tilburg, Unterberg, and Vingerhoets 2002). The girls' focus on relationships may lead to high levels of anxiety about social approval, the status of friendships and fears of abandonment (Rose and Rudolph 2006). It would seem likely that at least some of these pressures will also be experienced by girls with ASD during adolescence.

Adolescent girls with ASD may have different coping styles to boys with ASD, with girls typically camouflaging their social difficulties (Attwood and Grandin 2006; Tierney, Burns, and Kilbey 2016). Strategies such as staying in close physical proximity to other girls in the playground or weaving in and out of social groups have been identified in younger girls with ASD (Dean, Harwood, and Kasari 2017). Girls with ASD are reported to internalise psychological distress more than boys (Solomon et al. 2012), and engage in imitation of the social style of their peers, mimicking their personality or imitating their behaviour, though this use of imitation may not be adequate to maintain friendships into adolescence (Cridland et al. 2014).

The social environment of young people has changed markedly with the proliferation of social media (O'Keeffe and Clarke-Pearson 2011). During the 1990's and 2000's much of the psychological literature on media use was concerned with listening to music, watching television and console-based computer-gaming. However, adolescents currently use

their mobile phones as the primary means to interact online (Lenhart 2015) and Kuo et al. (2013) found adolescents with ASD who used social networking websites and emails to interact with friends, reported more positive friendships. Unlike most forms of media use (watching television, listening to music, playing offline computer games) texting is quintessentially social and is positively associated with friendship maintenance among typically developing adolescents (Blais et al. 2008). Recent research suggests that using mobile devices to self-disclose (sharing personal information that is not easily discussed, such as one's feelings and secrets) can enhance the sense of closeness between friends and increase off-line self-disclosure, foster intimacy and increase closeness (Desjarlais and Joseph 2017).

The need for further research targeting adolescent girls and boys with ASD separately, has been highlighted (Cridland et al. 2014). Our study sought to explore how girls with ASD conceptualised friendships, what activities they do with friends, how they meet new friends, how they cope with friendship conflict and the use of social media in friendships.

Method

Design

Focus groups can encourage open communication between participants, capture novel issues and facilitate the collection of rich, in-depth data about the experiences of participants (Liamputtong 2011). The moderator can encourage participation and interaction between members of the group to ensure that discussions are not dominated by one participant.

A number of steps were taken to increase methodological rigour: we employed data source triangulation (Carter et al. 2014) by running two separate parallel focus groups. We utilised investigator triangulation (Carter et al. 2014) by having two different professions in the research team (psychologists and occupational therapists) all of whom had worked with adolescents with ASD in a variety of contexts, and we used audio recorded full-transcript based analysis of the focus group to ensure descriptive validity (Chioncel et al. 2003). The same moderator and focus group guide was used for both sessions. To foster interpretative validity, we highlight in the discussion section when we move beyond the words of the participants in making interpretations. Credibility checks included the research team reviewing all transcripts together following the identification of potential themes by two of the authors.

Participants

Participants were recruited from a community service for children with ASD. Inclusion criteria were that participants have a diagnosis of Autism Spectrum Disorder, Childhood Autism (ICD-10) or Asperger Syndrome (ICD-10) and, given the verbal demands of participation in focus groups, we only included girls without an intellectual disability. Though current IQ scores were not available, consultation with psychologists in the service confirmed that none of the girls had a diagnosis of intellectual disability or a verbal IQ in the intellectual disability range on previous cognitive assessments. Participants were all between 12 to 15 years old. Nine were attending mainstream secondary school and one was in the final year of mainstream primary school. In total, 10 girls participated in the two focus groups. All participants had English as their first language (See Table 1)

Table 1. Summary of girls' age and diagnosis.

Focus Group	Pseudonym	Age	Diagnosis
1	Mary	13	ASD
1	June	14	AS
1	Lucy	13	AS
1	April	14	AS
1	Emma	14	CA
1	Hilary	15	CA
2	Jane	15	AS
2	Sarah	13	AS
2	Ruth	12	AS
2	Claire	13	AS

CA – Childhood Autism (ICD-10), AS – Asperger Syndrome, ASD – Autism Spectrum Disorder

Diagnosis

Each of the participants had previously been diagnosed through a multidisciplinary assessment using both the ADOS-G (Lord et al. 2000) and either the Autism Diagnosis Interview-Revised (ADI-R: Lord, Rutter, and Le Couteur 1994) or the Diagnostic Interview for Social and Communication Disorders schedule (DISCO-10: Wing et al. 2002).

Procedure

Ethical approval was granted from the relevant local ethics committee and the parents of the participants gave written, informed consent on behalf of the teenagers, as the participants were under 16 years of age and the girls gave verbal assent to participate. Parents and participants were informed of their right to withdraw from the study at any point without explanation and assured that confidentiality would be maintained. All study procedures were in accordance with the ethical standards of the 1964 Helsinki declaration and its later amendments.

Two focus groups (six girls, four girls), lasting an hour each, were held in a community building that all of the girls had attended previously, as familiar surroundings can be beneficial in focus group studies in reducing any sense of intimidation (Gibbs, Brown, and Muir 2008). The discussion was guided by the use of a semi-structured moderator's guide, covering several themes: (1) what does it mean to be a friend, (2) what do you do with your friends, (3) where would you meet new friends (4) what are the difficulties in staying friends with someone (5) what role does social media play in your friendships. Two members of the research team drafted the guide with questions intended to elicit perceptions, and stimulate discussion, about the meaning and experience of friendship.

Data analysis

The digital audio files were transcribed verbatim. Data analysis was guided by principles of Thematic Analysis (Braun and Clarke 2006). A number of cycles of coding were used (Miles, Huberman, and Saldaña 2014). First, two of the authors did a naïve reading of the transcripts to become familiar with the data set, checked the transcripts for accuracy and coded line by line. The transcripts were coded by different team members independently, to foster inter-rater reliability. During the open coding phase each coder reviewed the focus group transcripts to identify and define emerging codes that captured mutually exclusive dominant themes (Corbin and Strauss 1990). These initial codes, categories and subsequent

themes were compared for consistency. In line with an inductive approach to thematic analysis, codes and themes were data driven and did not fit into a pre-existing coding frame (Braun and Clarke 2006). Codes, categories and themes were then refined and collapsed by the researchers during a series of face to face meetings and were gradually combined and sorted into categories. Any discrepancies between the coders were resolved by consensus, following discussions and refinement of coding category definitions and dependability was supported when the authors decided they had reached a consensus about the major themes to be reported (Lincoln and Guba 1985).

Results

The themes included establishing friendship, friendship volatility, friendships and technology and gender differences (See Figure 1).

Establishing friendship

Throughout the focus groups the girls discussed strategies for, their feelings about, and difficulties when making friends. Sharing allegiances or interests was consistently highlighted as a means of initiating spontaneous interactions and starting friendships.

if you saw a person walking by and they had some kind of anime shirt, I would probably walk up to them and say "Hey, where did you get your t-shirt? ... it's like bands, anime, any of that ... as long as they look my age though. If they were older, I'd be kind of hmmm. (FG1 Mary)

Other girls in the group agreed with this.

it shows that they have the same interests so probably you feel more confident going up to them (FG1 June)

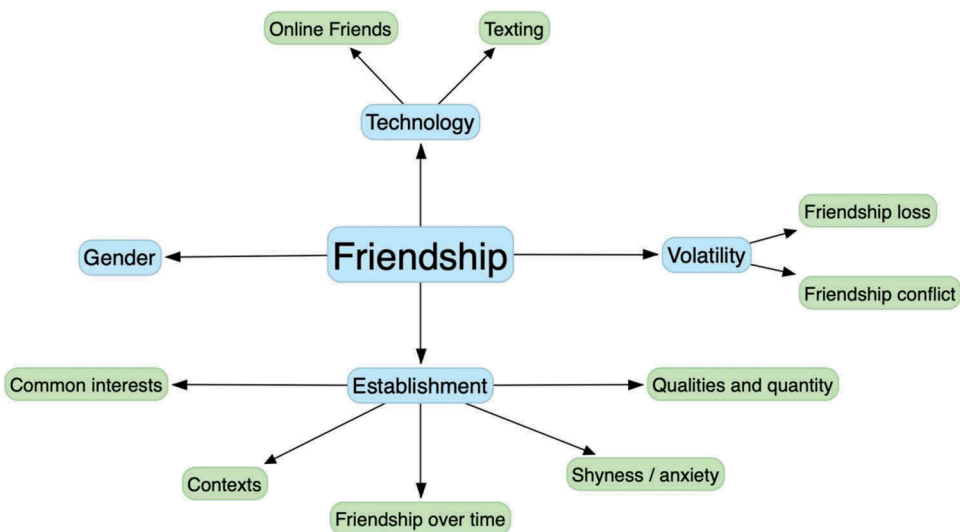


Figure 1. Themes and subthemes.

The sentiment was echoed by the second group.

You got to find out who has the same interest as you and then just talk to them ... about that thing (FG2 Ruth)

You just have to approach them and just talk to see what ye have in common, and then try to talk more about what ye have in common (FG2 Claire)

In addition to the support provided by some adults, the girls highlighted that the main physical context in which friendships are formed is the school environment, although they also reported that these friendships transcend settings.

easy when you are introduced in the right situation ... you could meet them at social gatherings or Con or anything like that' (FG1 June)

In order to sustain and develop friendships the girls referenced the importance of opportunities to continue to meet the person regularly, and that friendships can take time to develop.

Because if you are around that person for a couple of days or weeks, you grow to become friendly towards them (FG1 Mary)

The girls identified strong emotions experienced when forming friendships. They reported fears that are common in typically developing girls, such as being judged by potential friendship partners, while acknowledging these were their own thoughts and not the reality of the situation.

you'd be paranoid that they're judging you. (FG1 Mary)

I think I'll probably be like kind of shy and I'll avoid people for the first few weeks and then I'll just start taking (FG2 Ruth)

The girls distinguished between different levels and types of friendship and picked out a range of qualities they expect in friends, highlighting the importance of being trustworthy and loyal.

Well I have all my old friends as well that I don't see that much (FG1 Hillary)

Loyal (FG1 Emma)

You know more about them; they understand more about you ... there is more trust (FG1 June)

You trust a friend more than an acquaintance (FG2 Claire)

The girls stated that they were happy with the number and quality of their friendships; with some emphasising the benefits of a small number of friends.

the less friends I have the more I can trust them, cause I have less friends ... I can spend more time with then ... and develop more trust (FG1 June)

Friendship conflict and loss

Experiences of friendship conflict were explored with some insight into conflict in friendships being a normal process.

Sometimes I might have an argument with a friend but- and I won't talk to them for the day, but that doesn't mean I don't want to be their friend anymore, it just means you had a fight (FG2 Jane)

One source of potential conflict identified by the girls was when their current friends make new friends, with one of the girls described being left behind when her friend made new friends.

I get jealous (FG1 Mary)

And then when something happened, she went with the other people and then we stopped talking. I just usen't to talk to anyone in my class ... I just stopped talking to her when she did that (FG2 Sarah)

However, not all agreed that this was a negative experience – some described tolerance of expanding friendship networks.

I don't mind my friends talking to other people (FG2 Jane)

Friendship loss was described as distressing, with a range of causes: friends moving away, transitioning to new schools, and death of a friend were cited as the primary causes.

I went to ... secondary school – I lost every friend I had from primary [school]. Like you would be crying for weeks. You miss them so much (FG1 Lucy)

Once the summer ended, none of them text me. I haven't gotten a single text from them since sixth class (FG2 Claire)

First year, the teachers would give us a new seating arrangement and made us talk to the person beside us. Michelle and I ended up getting along, but at the end of first year, she went off with her old friends and I was left alone (FG2 Jane)

The girls recognised that friendship loss can be a gradual process that might occur because of changing allegiances within a friendship network.

But eventually she started mixing with like a more horror group, and I didn't ever connect with the friends, so she kind of started drifting away a tiny bit (FG1 June)

The girls also reported experiencing some relational aggression – these are behaviours intended to harm others, usually as a means of asserting dominance, that are more common in girls than in boys, and can include gossiping, social exclusion, and withdrawing friendship (Crick and Grotpeter 1995; Crothers, Field, and Kolbert 2005).

They'd be giving you bad looks; they could pass you in the corridor and try to push you over (FG1 Lucy)
being mean (FG1 Mary)

They expressed fears of friendship loss, and worries about feelings of isolation and loneliness.

I'd feel kind of nervous, because I don't want to lose them ... just the few friends that I have like ... I don't want to be alone for the rest of primary year (FG2 Ruth)

Friendship and technology

Online friendships were described by many of the girls as being easier than friendships in real life.

(online friends) they're easier ... because they're less awkward (FG1 April)

However, they also acknowledged both risks and limitation to online friendships and highlighted safety concerns, showing some awareness of common risks around online friends.

I feel like they are a bit more risky at times. 'cause if I met someone face to face at least I know their age and if they are not lying to me if let's say if I heard many stories of a fully-grown man pretending to be a girl or something. (FG1 June)

You don't know, you could have a stalker following you (FG1 Emma)

I used to go on random chat rooms. I felt a strong guilt because my parents didn't know ...

I eventually just stopped doing it because I was doing it at the wrong age (FG2 Ruth)

Furthermore, they showed some awareness of the risks in the use of social media, such as Snapchat.

If you send a picture on Snapchat, Facebook will have it, Snapchat will have it, your like data provider would have it, everyone has it (FG2 Claire)

those pictures don't completely disappear forever, they have to go somewhere (FG2 Jane)

The girls unanimously expressed a preference for real life friends over online friends with one girl stating:

But I would still rather if my friend knew them in real life and not Facebook friends that they haven't met personally. I'd be more open. I feel like real friends is because as humans we do need the actual contact with another human being (FG1 June)

One girl reported liking using text messages, however many of the girls said they have mobile phones but do not use them.

I don't use mine (FG1 Hilary)

I lost mine but it doesn't matter though – cause I kind of hate it (FG1 Mary)

I might get confused or mixed up in what they say so I might try to re-read it and try to understand it (FG2 Jane)

If you're texting someone on Facebook, or anything and they screenshot it – like whenever I text my sister, she loves to screenshot our chats and send them to her friends, cause they think it's so funny, our conversations (FG2 Claire)

There was a sense that the girls found texting difficult and challenging.

Gender differences

The girls had mixed feeling about having boys as friends. Some talked positively about having a male friend, while others reported anxiety in relation to boys.

I have a boy that's a friend (FG2 Ruth)

When I was younger, I used to have a lot of friends that were boys (FG1 Hilary)

One of my best friends is a guy (FG1 April)

Like I just don't trust boys ... boys scare me (FG1 Mary)

Discussion

This study offers an insight into the perspectives of adolescent girls with ASD on their friendships. It addresses a specific gap highlighted in previous research (Kuo et al. 2013) by gathering the views of girls with ASD and offers some alternative perspectives on the experiences and definition of friendship, which in some ways contradict the dominant discourse of parents of children with ASD. Identifying differences in the female profile of ASD will enable services to be more responsive to the needs of girls and women with ASD (Kirkovski, Enticott, and Fitzgerald 2013).

The role of shared interests is a common feature in the literature on mainstream friendship development and as children reach adolescence, 'commonality' continues to be important (Newcomb and Bagwell 1995) alongside the growing value attached to intimacy in judging and evaluating the status of the friendship (Hartup 1993). This acknowledgement of shared interests expressed by the girls in this study contrasts with the evidence from Orsmond, Krauss, and Seltzer (2004) who found that adolescents with ASD rely on prearranged settings to establish friendships. Some adolescents with ASD have described interactions arranged by adults as potentially stigmatising and uncomfortable (Bottema-Beutel et al. 2016). As Koegel et al. (2012) had found with a small sample of younger children, the girls in our focus groups reported a willingness to initiate interaction in a spontaneous manner, when they knew the other person had a shared interest. This demonstrated some knowledge required to initiate age-expected reciprocal social interactions; at least in being able to name the skill, though whether this declarative knowledge is enacted in reality is beyond the scope of this paper. It is possible that the identification of a shared interest allows the conversation to be more object-oriented rather than immediately personal (allowing talk about the shared interest rather than the self); this may be more comfortable for the adolescent with ASD.

Children with ASD tend to establish friendships within the school environment (Bauminger and Shulman 2003) or through interest-based events, however, as Matheson, Olsen, and Weisner (2007) noted in a study of teens with developmental disabilities, for a friendship to develop and be maintained, it was important that it transcended the context in which it was established. The girls acknowledged their friendships may have started in school but extended to other contexts such as the cinema, and anime shows. This contrasts with the adolescent boys with ASD described by O'Hagan and Hebron (2017) where the genuineness of the friendships was questioned precisely because they did not socialise outside of the school setting.

The girls discussed the quality and number of their friendships, with themes of trust, caring and loyalty emerging, which have much in common with those of typically developing teenagers (Rubin et al. 2004). They emphasised the importance of reciprocity and emotional interactions with friends, all of which are key components of intimacy in friendship (Bauminger, Shulman, and Agam 2004). These descriptions clearly met all four criteria for friendship of the ADI-R: similar age, engaging in a variety of activities, for the activities to be outside of prearranged groups, and to show reciprocity (Lord, Rutter, and Le Couteur 1994).

We had a strong sense that the friendships reported by the girls do meet some of their social and emotional needs. This contrasts with the results of a study by Orsmond, Krauss, and Seltzer (2004) that found that the majority of adolescents and adults surveyed had

friendships that lacked reciprocity. The girls identified a small group of friends as being ideal (between four and six), which replicated the findings of Kuo et al. (2013) where the majority of participants identified at least three friends. This is consistent with other studies showing children with ASD as more satisfied with their friendships than their parents are with these friendships (Calder, Hill, and Pellicano 2013; Kuo et al. 2013).

Conflict is an inevitable part of friendship (Hartup 1993), and children recognise that disagreements and fights between friends differ from animosity to non-friends in that the conflict is temporary and will usually be addressed with accommodating and compromising behaviours (Rose and Asher 1999). Children learn about social roles such as dominance and deference through their friendships. Rubin et al. (2004) points out friends are more responsive to each other and negotiate in their resolution of conflicts. The girls in the focus groups were able to cite a range of strategies for reducing conflict in their friendships, including accepting friends will disagree at times, one can continue to be a friend despite the disagreement and sometimes it is important to 'let go' of bad feelings towards a friend.

Volatility in one's friendship network is a normal part of child development (Berndt and Hoyle 1985; Poulin and Chan 2010). New attachments are formed, and some friends are lost, sometimes through conflict, but often due to changing circumstances: families move to a new house, children change schools. The girls cited friendship loss as a serious cause of distress; many found the transition to secondary school intimidating and said it led to friendship loss, consistent with the findings of Cridland et al. (2014). The girls talked about how friends can be lost through gradual processes as well, such as 'drifting away' or experiencing relational aggression: gossiping, social exclusion, and threatening to withdraw emotional support, which are common features of adolescent girls' relationships (Crothers, Field, and Kolbert 2005; Sedgewick, Hill, and Pellicano 2019). The risk of relational aggression and bullying for adolescents with ASD has been highlighted in a recent review (Humphrey and Hebron 2015). Secondly, the transition to secondary school coincides with the stage of early adolescence marked by a shift towards mature patterns of friendship, based on mutuality, trust and intimacy, which render the maintenance of these friendships more challenging.

Kuo et al.'s study (2013) found that adolescents with ASD spend more time playing video games than typically developing peers, however the girls did not report spending much time playing video games, but talked about their social media use, as a leisure activity, as well as for forming friendships. This may reflect gender differences in the use of phones and computers for more social purposes by girls, compared with the interest in gaming of boys (Witt, Massman, and Jackson 2011). The girls showed some awareness of the risks involved in online friendships. The other form of technology frequently mentioned in the groups was texting. It has been identified as a

particularly intense element of social interaction during adolescence (Ling 2010). Participants appeared to find texting challenging and were not using it extensively to maintain friendships. Girls with ASD may be missing opportunities to interact with peers and develop and deepen friendships, if they do not have the requisite skills and experience in texting.

Mixed feelings emerged in relation to boys: some girls reported mistrust and fear of interacting with boys, while others reported having male friends. Cridland et al. (2014) argued that girls with ASD get along more easily with boys due to greater common

interests and they were described as being 'surrounded by boys', partly through sharing classes in school. In contrast, the majority of the girls in our focus groups attend all-girl schools, so may not have many contexts in which to develop the skills and experience of interacting with boys.

Some have argued that delays in the diagnosis of ASD in girls is commonly the result of 'camouflaging' (Rivet and Matson 2011) as they may have better language and social mimicry skills, which can allow them to pass in social environments without their core deficits being noticed. Rather than displaying social aloneness, girls with ASD might behave in a more 'clingy' or dependent interactional style. We saw some evidence of the use of stereotypic phrases or learned speech patterns, such as the use of common phrases: '*It's a natural thing*', '*Don't judge a book by its cover*', and '*let it go*', but for the most part, these were used appropriately and seemed to relate to non-scripted aspects of the girls' narrative.

Inevitably with focus groups, we are only examining the girls' perspective on friendships: we do not know how accurately what the girls told us, matches their actual friendships. Furthermore, we do not know what social skills training the girls have had in school, or how this may have moderated any pre-existing social skills deficits. None of the participants in this study has an intellectual disability or attends a special school and it is possible that children with ASD and an intellectual disability would face unique challenges in friendship development (Cook, Ogden, and Winstone 2018). Likewise, the focus group methodology could pose unique challenges for young people with autism, however efforts were made to reduce the potential problems. We hosted the groups in a familiar setting, ensured that moderation was carried out by a skilled, female psychologist with many years' experience working with teenage girls with ASD and kept the group size relatively small (4–6 girls). Though this did result in good participation by the majority of the girls, two only contributed some very brief comments.

This study adds to the emerging literature on girls with ASD and provides an alternative perspective to parental accounts of ASD in the published literature. The girls reported a strong desire for friendships, corroborating recent findings by Tierney, Burns, and Kilbey (2016) and Cook, Ogden, and Winstone (2018). The participants' friendships appeared to some degree reciprocal and to be less dependent on adult support. Identifying ways in which to support the development of friendship for adolescents with ASD would provide a useful focus for social skills work, beyond that normally covered within a social skills curriculum. Participants reported frequent friendship loss, some of which was associated with changing schools, which appears to be a high-risk period for girls with ASD (Tierney, Burns, and Kilbey 2016). Support for the continuation of friendships beyond school change, could provide a useful intervention; if friendships could receive a higher level of support before key transition stages, this may enable adolescents with ASD to maintain friendships more successfully. Likewise, further exploration of the significance and distribution of difficulty with texting among girls with ASD is warranted and may suggest a role for teaching appropriate texting behaviour, along with other social media safety skills, to potentially enhance the friendship skills of girls with ASD.

Adolescent girls with ASD shared their views and experiences of friendship development, offering a first-hand account of some of the strengths and difficulties of establishing and maintaining friendships in the teenage years. Engaging with young people with ASD to explore their perspective can offer useful insights in how best to support them in inclusive educational environments.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Christian Ryan is a Senior Lecturer in Clinical Psychology and a chartered Clinical Psychologist. He specialises in working with children and adults with Autism Spectrum Disorder. His research focuses on emotion processing difficulties.

Maeve Coughlan is a Senior Occupational Therapist working in Cope Foundation's ASD paediatric service. Her research interests centre on play experiences and preferences of young children with ASD, with a particular focus on the outdoors and children's play rights.

Jean Maher is an Occupational Therapist with an MSc in Advanced Healthcare Practice. She specialises in working with children with Autism Spectrum Disorder. Her main research interests are parent coaching and parent mediated interventions in Autism Spectrum Disorder.

Patricia Vicario is a Principal Clinical Psychologist who specializes in working with children and adults with Autism Spectrum Disorder.

Alison Garvey is a Trainee Clinical Psychologist at University College Cork whose research interests relate to clinical psychology, including judgements of control, resilience processes and eating disordered behaviour.

References

- Attwood, T., and T. Grandin. 2006. *Asperger's and Girls: World-Renowned Experts Join Those with Asperger's Syndrome to Resolve Issues that Girls and Women Face Every Day!* Arlington, Tex: Future Horizons.
- Bauminger, N., and C. Shulman. 2003. "The Development and Maintenance of Friendship in High-Functioning Children with Autism: Maternal Perceptions." *Autism* 7 (1): 81–97. doi:10.1177/1362361303007001007.
- Bauminger, N., C. Shulman, and G. Agam. 2004. "The Link between Perceptions of Self and of Social Relationships in High-Functioning Children with Autism." *Journal of Developmental and Physical Disabilities* 16 (2): 193–214. doi:10.1023/B:JODD.0000026616.24896.c8.
- Bauminger, N., M. Solomon, A. Aviezer, K. Heung, L. Gazit, J. Brown, and S. J. Rogers. 2008. "Children with Autism and Their Friends: A Multidimensional Study of Friendship in High-Functioning Autism Spectrum Disorder." *Journal of Abnormal Child Psychology* 36 (2): 135–150. doi:10.1007/s10802-007-9156-x.
- Berndt, T. J., and S. G. Hoyle. 1985. "Stability and Change in Childhood and Adolescent Friendships." *Developmental Psychology* 21 (6): 1007–1015. doi:10.1037/0012-1649.21.6.1007.
- Blais, J. J., W. M. Craig, D. Pepler, and J. Connolly. 2008. "Adolescents Online: The Importance of Internet Activity Choices to Salient Relationships." *Journal of Youth and Adolescence* 37 (5): 522–536. doi:10.1007/s10964-007-9262-7.
- Bottema-Beutel, K., T. S. Mullins, M. N. Harvey, J. R. Gustafson, and E. W. Carter. 2016. "'Avoiding the Brick Wall of Awkward': Perspectives of Youth with Autism Spectrum Disorder on Social-Focused Intervention Practices." *Autism* 20 (2): 196–206. doi:10.1177/1362361315574888.
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. doi:10.1191/1478088706qp0630a.
- Calder, L., V. Hill, and E. Pellicano. 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. doi:10.1177/1362361312467866.

- Carrington, S., E. Templeton, and T. Papinczak. 2003. "Adolescents with Asperger Syndrome and Perceptions of Friendship." *Focus on Autism and Other Developmental Disabilities* 18 (4): 211–218. doi:10.1177/10883576030180040201.
- Carter, N., D. Bryant-Lukosius, A. DiCenso, J. Blythe, and A. J. Neville. 2014. "The Use of Triangulation in Qualitative Research." *Oncology Nursing Forum* 41 (5): 545–547. doi:10.1188/14.ONF.545-547.
- Chioncel, N. E., R. G. W. Van Der Veen, D. Wildemeersch, and P. Jarvis. 2003. "The Validity and Reliability of Focus Groups as a Research Method in Adult Education." *International Journal of Lifelong Education* 22 (5): 495–517. doi:10.1080/0260137032000102850.
- Cook, A., J. Ogden, and N. Winstone. 2018. "Friendship Motivations, Challenges and the Role of Masking for Girls with Autism in Contrasting School Settings." *European Journal of Special Needs Education* 33 (3): 302–315. doi:10.1080/08856257.2017.1312797.
- Corbin, J. M., and A. Strauss. 1990. "Grounded Theory Research: Procedures, Canons, and Evaluative Criteria." *Qualitative Sociology* 13 (1): 3–21. doi:10.1007/BF00988593.
- Crick, N. R., and J. K. Grotpeter. 1995. "Relational Aggression, Gender, and Social-Psychological Adjustment." *Child Development* 66 (3): 710. doi:10.2307/1131945.
- Cridland, E. K., S. C. Jones, P. Caputi, and C. A. Magee. 2014. "Being a Girl in a Boys' World: Investigating the Experiences of Girls with Autism Spectrum Disorders during Adolescence." *Journal of Autism and Developmental Disorders* 44 (6): 1261–1274. doi:10.1007/s10803-013-1985-6.
- Crothers, L. M., J. E. Field, and J. B. Kolbert. 2005. "Navigating Power, Control, and Being Nice: Aggression in Adolescent Girls' Friendships." *Journal of Counseling & Development* 83 (3): 349–354. doi:10.1002/j.1556-6678.2005.tb00354.x.
- Dean, M., R. Harwood, and C. Kasari. 2017. "The Art of Camouflage: Gender Differences in the Social Behaviors of Girls and Boys with Autism Spectrum Disorder." *Autism* 21 (6): 678–689. doi:10.1177/1362361316671845.
- Dean, M., C. Kasari, W. Shih, F. Frankel, R. Whitney, R. Landa, C. Lord, F. Orlich, B. King, and R. Harwood. 2014. "The Peer Relationships of Girls with ASD at School: Comparison to Boys and Girls with and without ASD." *Journal of Child Psychology and Psychiatry* 55 (11): 1218–1225. doi:10.1111/jcpp.12242.
- Desjarlais, M., and J. J. Joseph. 2017. "Socially Interactive and Passive Technologies Enhance Friendship Quality: An Investigation of the Mediating Roles of Online and Offline Self-Disclosure." *Cyberpsychology, Behavior, and Social Networking* 20 (5): 286–291. doi:10.1089/cyber.2016.0363.
- Doody, J. P., and P. Bull. 2011. "Asperger's Syndrome and the Decoding of Boredom, Interest, and Disagreement from Body Posture." *Journal of Nonverbal Behavior* 35 (2): 87–100. doi:10.1007/s10919-010-0103-0.
- Gibbs, S. M., M. J. Brown, and W. J. Muir. 2008. "The Experiences of Adults with Intellectual Disabilities and Their Carers in General Hospitals: A Focus Group Study." *Journal of Intellectual Disability Research* 52 (12): 1061–1077. doi:10.1111/j.1365-2788.2008.01057.x.
- Hartup, W. W. 1993. "Adolescents and Their Friends." *New Directions for Child and Adolescent Development* 1993 (60): 3–22. doi:10.1002/cd.23219936003.
- Humphrey, N., and J. Hebron. 2015. "Bullying of Children and Adolescents with Autism Spectrum Conditions: A 'State of the Field' Review." *International Journal of Inclusive Education* 19 (8): 845–862. doi:10.1080/13603116.2014.981602.
- Kirkovski, M., P. G. Enticott, and P. B. Fitzgerald. 2013. "A Review of the Role of Female Gender in Autism Spectrum Disorders." *Journal of Autism and Developmental Disorders* 43 (11): 2584–2603. doi:10.1007/s10803-013-1811-1.
- Koegel, L. K., T. W. Vernon, R. L. Koegel, B. L. Koegel, and A. W. Paullin. 2012. "Improving Social Engagement and Initiations between Children with Autism Spectrum Disorder and Their Peers in Inclusive Settings." *Journal of Positive Behavior Interventions* 14 (4): 220–227. doi:10.1177/1098300712437042.
- Kuo, M. H., G. I. Orsmond, E. S. Cohn, and W. J. Coster. 2013. "Friendship Characteristics and Activity Patterns of Adolescents with an Autism Spectrum Disorder." *Autism* 17 (4): 481–500. doi:10.1177/1362361311416380.
- Lenhart, A. 2015. "Teens, Social Media & Technology Overview 2015." Pew Research Center. <http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/>

- Liamputtong, P. 2011. *Focus Group Methodology: Principles and Practices*. Los Angeles: SAGE.
- Lincoln, Y. S., and E. G. Guba. 1985. *Naturalistic Inquiry*. Beverly Hills, Calif: Sage Publications.
- Ling, R. 2010. "Texting as a Life Phase Medium." *Journal of Computer-Mediated Communication* 15 (2): 277–292. doi:10.1111/j.1083-6101.2010.01520.x.
- Lord, C., S. Risi, L. Lambrecht, E. H. Cook, B. L. Leventhal, P. C. DiLavore, A. Pickles, and M. Rutter. 2000. "The Autism Diagnostic Observation Schedule—Generic: A Standard Measure of Social and Communication Deficits Associated with the Spectrum of Autism." *Journal of Autism and Developmental Disorders* 30 (3): 205–223. doi:10.1023/A:1005592401947.
- Lord, C., M. Rutter, and A. Le Couteur. 1994. "Autism Diagnostic Interview-Revised: A Revised Version of A Diagnostic Interview for Caregivers of Individuals with Possible Pervasive Developmental Disorders." *Journal of Autism and Developmental Disorders* 24 (5): 659–685. doi:10.1007/BF02172145.
- Matheson, C., R. J. Olsen, and T. Weisner. 2007. "A Good Friend Is Hard to Find: Friendship among Adolescents with Disabilities." *American Journal on Mental Retardation* 112 (5): 319. doi:10.1352/0895-8017(2007)112[0319:AGFIHT]2.0.CO;2.
- Mazefsky, C. A., X. Borue, T. N. Day, and N. J. Minshew. 2014. "Emotion Regulation Patterns in Adolescents with High-Functioning Autism Spectrum Disorder: Comparison to Typically Developing Adolescents and Association with Psychiatric Symptoms: Emotion Regulation in Adolescents with ASD." *Autism Research* 7 (3): 344–354. doi:10.1002/aur.1366.
- McGillivray, J. A., and H. T. Evert. 2018. "Exploring the Effect of Gender and Age on Stress and Emotional Distress in Adults with Autism Spectrum Disorder." *Focus on Autism and Other Developmental Disabilities* 33 (1): 55–64. doi:10.1177/1088357614549317.
- Miles, M. B., A. M. Huberman, and J. Saldaña. 2014. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, California: SAGE Publications, .
- Newcomb, A. F., and C. L. Bagwell. 1995. "Children's Friendship Relations: A Meta-Analytic Review." *Psychological Bulletin* 117 (2): 306–347. doi:10.1037/0033-2909.117.2.306.
- O'Hagan, S., and J. Hebron. 2017. "Perceptions of Friendship among Adolescents with Autism Spectrum Conditions in a Mainstream High School Resource Provision." *European Journal of Special Needs Education* 32 (3): 314–328. doi:10.1080/08856257.2016.1223441.
- O'Keeffe, G. S., and K. Clarke-Pearson. 2011. "The Impact of Social Media on Children, Adolescents, and Families." *Pediatrics* 127 (4): 800–804. doi:10.1542/peds.2011-0054.
- Orsmond, G. I., M. W. Krauss, and M. M. Seltzer. 2004. "Peer Relationships and Social and Recreational Activities among Adolescents and Adults with Autism." *Journal of Autism and Developmental Disorders* 34 (3): 245–256. doi:10.1023/B:JADD.0000029547.96610.df.
- Petrina, N., M. Carter, and J. Stephenson. 2015. "Parental Perception of the Importance of Friendship and Other Outcome Priorities in Children with Autism Spectrum Disorder." *European Journal of Special Needs Education* 30 (1): 61–74. doi:10.1080/08856257.2014.943566.
- Poulin, F., and A. Chan. 2010. "Friendship Stability and Change in Childhood and Adolescence." *Developmental Review* 30 (3): 257–272. doi:10.1016/j.dr.2009.01.001.
- Rivet, T. T., and J. L. Matson. 2011. "Review of Gender Differences in Core Symptomatology in Autism Spectrum Disorders." *Research in Autism Spectrum Disorders* 5 (3): 957–976. doi:10.1016/j.rasd.2010.12.003.
- Rose, A. J., and S. R. Asher. 1999. "Children's Goals and Strategies in Response to Conflicts within a Friendship." *Developmental Psychology* 35 (1): 69–79. doi:10.1037/0012-1649.35.1.69.
- Rose, A. J., and K. D. Rudolph. 2006. "A Review of Sex Differences in Peer Relationship Processes: Potential Trade-Offs for the Emotional and Behavioral Development of Girls and Boys." *Psychological Bulletin* 132 (1): 98–131. doi:10.1037/0033-2909.132.1.98.
- Rowley, E., S. Chandler, G. Baird, E. Simonoff, A. Pickles, T. Loucas, and T. Charman. 2012. "The Experience of Friendship, Victimization and Bullying in Children with an Autism Spectrum Disorder: Associations with Child Characteristics and School Placement." *Research in Autism Spectrum Disorders* 6 (3): 1126–1134. doi:10.1016/j.rasd.2012.03.004.
- Rubin, K. H., K. M. Dwyer, C. Booth-LaForce, A. H. Kim, K. B. Burgess, and L. Rose-Krasnor. 2004. "Attachment, Friendship, and Psychosocial Functioning in Early Adolescence." *The Journal of Early Adolescence* 24 (4): 326–356. doi:10.1177/0272431604268530.

- Sedgewick, F., V. Hill, and E. Pellicano. 2019. "It's Different for Girls': Gender Differences in the Friendships and Conflict of Autistic and Neurotypical Adolescents." *Autism* 23 (5): 1119–1132. doi:[10.1177/1362361318794930](https://doi.org/10.1177/1362361318794930).
- Shefcyk, A. 2015. "Count Us In: Addressing Gender Disparities in Autism Research." *Autism* 19 (2): 131–132. doi:[10.1177/1362361314566585](https://doi.org/10.1177/1362361314566585).
- Solomon, M., M. Miller, S. L. Taylor, S. P. Hinshaw, and C. S. Carter. 2012. "Autism Symptoms and Internalizing Psychopathology in Girls and Boys with Autism Spectrum Disorders." *Journal of Autism and Developmental Disorders* 42 (1): 48–59. doi:[10.1007/s10803-011-1215-z](https://doi.org/10.1007/s10803-011-1215-z).
- Tierney, S., J. Burns, and E. Kilbey. 2016. "Looking behind the Mask: Social Coping Strategies of Girls on the Autistic Spectrum." *Research in Autism Spectrum Disorders* 23 (March): 73–83. doi:[10.1016/j.rasd.2015.11.013](https://doi.org/10.1016/j.rasd.2015.11.013).
- Tilburg, M. A., M. L. Unterberg, and A. J. Vingerhoets. 2002. "Crying during Adolescence: The Role of Gender, Menarche, and Empathy." *British Journal of Developmental Psychology* 20 (1): 77–87. doi:[10.1348/026151002166334](https://doi.org/10.1348/026151002166334).
- Wing, L., S. R. Leekam, S. J. Libby, J. Gould, and M. Larcombe. 2002. "The Diagnostic Interview for Social and Communication Disorders: Background, Inter-Rater Reliability and Clinical Use." *Journal of Child Psychology and Psychiatry* 43 (3): 307–325. doi:[10.1111/1469-7610.00023](https://doi.org/10.1111/1469-7610.00023).
- Witt, E. A., A. J. Massman, and L. A. Jackson. 2011. "Trends in Youth's Videogame Playing, Overall Computer Use, and Communication Technology Use: The Impact of Self-Esteem and the Big Five Personality Factors." *Computers in Human Behavior* 27 (2): 763–769. doi:[10.1016/j.chb.2010.10.025](https://doi.org/10.1016/j.chb.2010.10.025).