
Asperger's and Girls: What Teachers Need to Know

Belinda Jarman and Christopher Rayner

Faculty of Education, University of Tasmania, Australia

Individuals with the pervasive developmental disorder Asperger's syndrome (AS) are generally of average or above average intelligence and attend mainstream schools. Despite their intelligence, some of the characteristics and challenges associated with AS can impact upon the quality of life they experience at school. Although both males and females are diagnosed with AS, females have been underrepresented and unrepresented in much of the AS research. Consequently, much of what is known about the school experiences of students with AS is based on studies consisting predominately of male perspectives. This article discusses what adult females with AS and parents of females with AS currently attending school wish teachers understood about AS in females. Many of the experiences described by participants indicate there is a lack of understanding about AS, both generally and specifically, in relation to females. Implications of these findings and recommendations for educators and schools are provided, and directions for future research are outlined.

Keywords: Asperger's syndrome, females, school

Since Asperger's disorder (often called Asperger syndrome [AS]) first appeared in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994), there has been debate and controversy with regard to whether it is indeed a separate condition or whether it is high-functioning autism (HFA; Howlin, 2003; Young & Rodi, 2014). The term HFA is often used interchangeably with AS, and has been used to refer to individuals who initially showed indicators of autistic disorder (AD), but as they developed, were found to have greater intellectual ability and social and communication skills than would be expected for an individual with AD (Attwood, 2007). Ozonoff, South, and Miller (2000) have suggested that the difference between AS and HFA may be the developmental course, and that by adolescence, any differences are no longer apparent. Moreover, Kaland (2011) reported that the majority of research to date has been unable to conclusively establish that AS and HFA are separate conditions.

The recent publication of the *DSM-5* (American Psychiatric Association, 2013) has brought with it the removal of AS, along with the other autism spectrum disorder (ASD) subtypes. The revised diagnosis is ASD, and individuals will be classified in terms of the severity of their symptoms (American Psychiatric Association, 2013). The rationale for the introduction of the single diagnosis of ASD in *DSM-5* is the lack of

Correspondence: Belinda Jarman, Faculty of Education, University of Tasmania, Private Bag 66, Hobart, Tas. 7001, Australia. E-mail: bcjarman@postoffice.utas.edu.au

evidence that AS is a distinct condition from AD (Tsai & Ghaziuddin, 2014; Young & Rodi, 2014). However, from their analysis of studies comparing the various types of autism-related disorders in *DSM-IV*, Tsai and Ghaziuddin (2014) reported that their findings do not support these conditions being combined as a single category, and suggest the diagnostic label of AS has been removed prematurely.

Despite these recent diagnostic changes, it is still valuable to research and discuss AS. It has been reported that almost two thirds of individuals with an ASD are in the high-functioning range (Centers for Disease Control and Prevention, 2012), with IQs ranging from borderline to above average and without impairments or delays in language and cognitive development (O'Reilly & Wicks, 2013). Therefore, it would be reasonable to assume that findings from research carried out in relation to individuals diagnosed with AS according to *DSM-IV* criteria will also be relevant for many individuals with a *DSM-5* ASD diagnosis. In addition, and perhaps more importantly, many individuals with AS strongly, and often proudly, identify themselves as 'Aspies' (O'Reilly & Wicks, 2013), a term first used by Willey (1999) in her autobiography *Pretending to be Normal: Living With Asperger's Syndrome*. The modified diagnostic terms should not change how individuals self-identify, and it is important that any professionals working with a population with ASD are sensitive and respectful of this (Linton, Krcek, Sensui, & Spillers, 2014).

According to Simone (2010), a female author on the spectrum, AS has been perceived as 'a guy's thing' (p. 10). More males than females are referred for assessment and are subsequently diagnosed with AS (Attwood, 2007; Wagner, 2006), with the reported male to female ratio for AS ranging from 8:1 to 9:1 (Mandy et al., 2012) to 12:1 (Whiteley, Todd, Carr, & Shattock, 2010). Although several well-known females on the spectrum (e.g., Temple Grandin, Wendy Lawson, Rudy Simone, Liane Willey) have published autobiographies and other nonfiction works, females have been largely underrepresented and unrepresented in the AS research. With the exception of Jarman, Rayner, Ollington, and Beswick (2015), who focused solely on females with AS, and Sciutto, Richwine, Mentrikoski, and Niedzwiecki (2012), in which adult females with AS have been adequately represented, the school experiences of females with AS have been overlooked. In addition, no comparisons have been made between the responses of males and females. Moreover, when participant quotes were included, the gender of the individual the quote was from (or in relation to) was not indicated unless a parent participant used a gender pronoun to refer to their child. Consequently, much of what is known about educating students with AS, and their school experiences, is based on predominately male populations and perspectives (Wagner, 2006; Wilkinson, 2008).

A number of qualitative studies (predominantly consisting of, or in relation to, male samples) have examined the school experiences of students with AS, both in a broad sense, and in relation to the social aspects. Some were from the perspectives of adolescents with AS (Humphrey & Lewis, 2008; Saggars, Hwang, & Mercer, 2011), whereas Brewin, Renwick, and Fudge Schormans (2008) focused on the perspectives of parents of school-aged children with AS. Another study (Carrington & Graham, 2001) included the school experiences of two adolescent males with AS, and the perspectives of their mothers. In addition, Carrington, Templeton, and Papinczak (2003) focused on the social experiences of adolescents with AS, and a study examining the school experiences of students with AS included the perspectives of adults with AS, and parents of school-aged children with AS (Sciutto et al., 2012). A qualitative study was also carried out that involved a chart review of children and adolescents with AS diagnosed at a university medical centre (Church, Alisanski, & Amanullah, 2000). Overall, these studies found school to be a challenging and stressful place as a result of the demands that AS-related challenges

placed on these students. The social aspects of school were described as being particularly problematic for this population of students (Brewin et al., 2008; Carrington & Graham, 2001; Carrington et al., 2003; Church et al., 2000; Humphrey & Lewis, 2008; Sciotto et al., 2012). Other challenges associated with AS, such as sensory sensitivities (Church et al., 2000; Humphrey & Lewis, 2008; Sagers et al., 2011; Sciotto et al., 2012), impaired executive function (Carrington & Graham, 2001; Church et al., 2000; Sagers et al., 2011), and difficulty with skills requiring higher order thinking (Church et al., 2000) were also discussed. Furthermore, it was also found that some teachers do not have an adequate understanding of AS, which in turn impacts the degree of understanding and flexibility afforded these students (Brewin et al., 2008; Sciotto et al., 2012).

This article reports on a qualitative study that examined the school experiences of females with AS, drawing from the recollections of adult females with AS and the perspectives of parents whose daughters with AS currently attend school. In this article we discuss what parents of school-aged females with AS and adult females with AS want teachers to understand about AS in females. Although the social challenges involved with school are significant for individuals with AS, the scope of this article does not include these; they are discussed in another article (Jarman et al., 2015). By focusing on female experiences and perspectives, we have ensured that females with AS (and their parents) had the opportunity to 'have their say' and not be overlooked based on the reported diagnostic gender ratios.

Ethical Considerations

Permission to conduct this study was granted by the University of Tasmania Human Research Ethics Committee Network. Participants were guaranteed anonymity, as no identifying data was collected.

Methods

Participants and Recruitment

Participants were recruited via advertisements on the following AS- and ASD-related websites: Amaze (the website of the main organisation for ASD in Victoria, Australia; <http://www.amaze.org.au>), the professional website of Tony Attwood (<http://www.tonyattwood.com.au>), Aspergers Victoria (<http://www.aspergersvic.org.au>), Autism Queensland (<http://www.autismqld.com.au>), and Autism New Zealand (<http://www.autismnz.org.nz>). Advertisements contained a link to the Qualtrics online survey website, which directed participants to detailed information outlining the study and a button to access the survey, which also allowed participants to provide their informed consent. The anonymous nature of the survey protected participants' privacy and provided them with a safe forum to share their insights. However, it also necessitated a level of trust regarding the honesty of participants in relation to meeting the eligibility criteria. The questions answered by adult participants can be found at the end of this article in Appendix A, and the questions answered by parent participants are in Appendix B.

This study was carried out by the first author in partial fulfilment of the requirements for the degree of Master of Education with Honours in the Faculty of Education at the University of Tasmania, Australia, under the supervision of the second author and another academic professional.

Two groups of participants were recruited for this study: (a) parents of females aged between 5 and 18 years ($M = 10.43$, $SD = 4.28$), attending school at the time of the study, who had a diagnosis of AS; and (b) adult females 18 years of age and older ($M = 35.60$, $SD = 11.27$) with a diagnosis of AS. Of the 45 participants who submitted surveys,

TABLE 1
Overview of Themes That Emerged From the Data

Theme	Parent participants (n = 15)	Adult participants (n = 30)	Summary
Teachers' recognition of the AS diagnosis	13	20	<ul style="list-style-type: none"> • Lack of understanding of how AS can present in females • Incredulity of the diagnosis of AS in females • General lack of understanding about AS
Lack of understanding about the challenges associated with AS	14	28	<ul style="list-style-type: none"> • Disregard of challenges and difficulties • Lack of flexibility • Lack of awareness of how AS impacts students
Helpful attitudes and actions of teachers	12	18	<ul style="list-style-type: none"> • Understanding the characteristics and challenges associated with AS • A positive perception of AS • Willingness to be flexible and supportive

15 identified themselves as parents of school-aged daughters with AS, and 30 were adult females with AS. Five of the adult participants reported or implied they received their diagnosis of AS while attending school; the remaining 25 stated or implied they were diagnosed as adults. There were no differences regarding the issues discussed by the adult participants who were diagnosed while at school in comparison to those who received their diagnosis later in life. All of the female children discussed by parent participants were reported to have a diagnosis of AS of which the schools were aware.

Data Analysis

The survey responses were analysed qualitatively using an inductive reasoning approach (O'Leary, 2004), which ensured the perspectives of participants were heard and accurately reported. Through thorough reading and rereading of the survey responses, the themes were identified by the first author and discussed with and agreed upon by the second author and another academic professional. However, no independent reliability checks were made regarding the themes identified. Due to the qualitative nature of the data and the data analysis, it seemed most appropriate to present the Results and Discussion sections within the same section in this article. The use of this approach allowed unnecessary repetition to be avoided and for connections to be made between the experiences described by participants in this study and in previous research.

Results and Discussion

Three key themes emerged from the survey responses. These are outlined in [Table 1](#), and are discussed in detail in the subsequent section. The authors acknowledge that although these are not discrete categories, they are in many ways independent. Participant quotes have been included to enhance the explanation of each theme. Following each quote, the question from which the quote was drawn is indicated, and whether it was from an adult participant or a parent participant. Spelling errors made by participants in their responses have been corrected when the intention of the participant was clear.

Teachers' Recognition of the AS Diagnosis in Females

Some parents reported they had difficulty convincing teachers their daughters had AS. For example, Parent Participant 15 reported, 'When I told the principal she has Asperger's, he looked at me and laughed before he realised I was serious' (Question 1). Similarly, an adult participant who was diagnosed with AS while in secondary school provided the following account:

I utilised the disability support centre at my school, but found the director of the centre to be unprofessional. She argued against my diagnosis many times (even though I had the documentation stating I had been diagnosed with Asperger's). She simply did not believe that I, a female, could possibly be diagnosed with Asperger's. (Adult Participant 20, Question 1)

Willey (2012) also described such an experience. After she and one of her daughters were diagnosed with AS, she disclosed their diagnoses to a friend who worked with children with special needs, believing this individual would be supportive and understanding. However, Willey (2012) recounted: 'She told me we were not on the spectrum, and either looking for attention or making excuses for our problematic behaviors and issues' (p. 26). Similarly, Simone (2010) emphasised that although parents may be accepting of an AS diagnosis in their daughter, other people 'may shake their heads in disbelief and refuse to believe she is autistic [*sic*]' (p. 220).

Participants indicated they believed there should be more education for teachers and schools about AS in females. 'Schools just need to be re-educated with girls on the spectrum', Parent Participant 14 reported (Question 8). Furthermore, instances were also described in this study where teachers were unwilling to learn about AS in females. Parent Participant 11 explained, 'They have not taken any information I've provided regarding girls on the spectrum' (Question 3), and another parent commented that some teachers 'refused to learn about high-functioning autism/Asperger's syndrome in girls' (Parent Participant 12, Question 3). In addition, some parents expressed frustration that teachers sometimes dismissed their concerns when they tried to discuss issues related to their daughters' AS. Parent Participant 13 emphasised, 'I get frustrated at being treated like a nuisance parent when I try to explain some of the issues my daughter has' (Question 7).

The responses from participants in this study indicate that there may be a stereotype surrounding AS, with teachers believing that for AS to be present, behavioural problems must be apparent. A parent emphasised, 'Because her behaviour is perfect, teachers think she is fine and happy. They then question her diagnosis' (Parent Participant 2, Question 1). Parent Participant 2 also asserted, 'Teachers need to be made aware that quiet, perfectly behaved little girls may have AS. They seem to believe that all kids with AS have to be badly behaved and cannot seem to comprehend that my daughter has AS' (Question 8).

When they reflected on their school experiences, a number of adult participants emphasised the need for teachers to be aware that AS may present differently in females, such as in this appeal to teachers: 'Do not dismiss the possibility because the child may have good eye contact, laugh, have empathy or want to interact with other children. We don't all have the "full hand" of Asperger's characteristics' (Adult Participant 7, Question 7). These results are consistent with what has been reported by Attwood (2007) and Wagner (2006). Both authors have described female students with AS as generally well behaved, and have observed they tend to be perceived by teachers as shy or passive as opposed to having social impairments (Attwood, 2007; Wagner, 2006). This stereotype about the behaviour of students with AS has also been reported by Kite, Tyson, and Gullifer (2011). That is, when these authors asked what participants in an education professional focus group believed to be the key characteristics of the condition, they described disruptive

and noncompliant behaviour, rather than issues consistent with the AS diagnostic criteria, such as social skills impairments and intense interests (Kite et al., 2011).

Participants in this study discussed the effective coping skills of females with AS. Parent Participant 14 emphasised that 'girls are very different and have fantastic coping skills' (Question 8). These 'fantastic coping skills' were another reason identified by participants why teachers were sometimes incredulous regarding an AS diagnosis in a female student. One parent explained, 'My daughter holds her emotions in during the day and then melts down in the car and at home. The teachers see none of her behaviours, they find it difficult to believe she has Asperger's' (Parent Participant 4, Question 6). There is a cost, however, in successfully maintaining this façade throughout the school day, as Parent Participant 3 remarked: 'trying to "behave" in a socially acceptable manner takes an enormous amount of stamina' (Question 6).

The effective coping skills of students with AS have also been discussed in studies involving predominantly male samples (Carrington & Graham, 2001; Carrington et al., 2003; Humphrey & Lewis, 2008). This has been referred to as 'masquerading' — the ability of some individuals with AS to watch and imitate what others say and do, particularly in social situations, to conceal their social impairments (Carrington et al., 2003). It has been suggested that females with AS are more proficient than their male counterparts at concealing their confusion and anxiety in social situations (Attwood, 2007). Although this may provide females with AS with the advantage of not alerting their peers to the true extent of their social difficulties, it also means their difficulties are less likely to be recognised by teachers and other school personnel, thus they may never receive the social support that they would benefit from. Interestingly, when reporting on male adolescents with AS, Carrington et al. (2003) noted it was clear that some were masquerading during their interviews regarding their social lives and the number of friends they had. Masquerading has also been noted by Simone (2012), who emphasised that females with AS often 'become avid observers of other children and intellectually decipher what to do in social situations; they learn to imitate other girls, adopting a persona and acting like someone who can succeed in social situations' (p. 7). Masquerading has been identified as an important adaptive skill for students with AS wishing to fit in with their peers, particularly in a secondary school environment (Carrington et al., 2003). Notwithstanding, the effort involved in masquerading can be exhausting, representing a source of anxiety and stress (Carrington & Graham, 2001; Carrington et al., 2003; Sciotto et al., 2012; Willey, 2012). Indeed, participants from the current study described the anxiety and stress experienced by themselves or their daughters from their efforts in maintaining a 'normal' façade during the school day.

Lack of Understanding About the Challenges Associated With AS

Participants asserted that teachers' lack of understanding of AS resulted in a subsequent lack of flexibility. One parent stated, 'Our school experience has been poor due to a lack of understanding and unwillingness to adapt classroom practice' (Parent Participant 5, Question 2). Furthermore, Parent Participant 5 identified that 'working with the school has been the most difficult part of having a child with ASD' (Question 8). Likewise, another parent commented, 'The most distressing aspect was the disregard of teachers for her difficulties and their unwillingness to help her' (Parent Participant 8, Question 1).

Similar to this study, it has previously been reported that teachers sometimes lack understanding of the characteristics and challenges associated with AS. The parents of children with AS and adults with AS reported on by Sciotto et al. (2012) emphasised they

wished teachers understood that AS is a neurological condition, and that behaviours which some teachers interpreted as rudeness, defiance, or indifference are, in fact, a component of the challenges of AS. Likewise, according to Brewin et al. (2008), parents of children with AS indicated that the less teachers understood about AS and how it impacts individuals on a daily basis, the less willing they were to be flexible. Additionally, some parents believed that because their children were verbal and ‘looked normal’, any deviation from normal behaviour led to them being labelled as ‘problem children’ (Brewin et al., 2008). Sciuotto et al. (2012) reported that participants in their study also emphasised that teachers need to understand that AS is an actual condition, and all the challenges that accompany it are real. The findings from this study and from past AS research (Brewin et al., 2008; Sciuotto et al., 2012) are consistent with the following observation of Simone (2010). Although she is referring specifically to females, it is relevant for all individuals with AS:

AS is in some respects a disability — no one is allowed to tell a person in a wheelchair that if they want to get to the second floor, they must climb the stairs. But when we try to explain our problems, such as auditory processing difficulties or social interactions, the response from staff and counselors is usually to tell us that we must ‘try to get on with it’ (p. 110).

Despite the good to excellent academic results achieved by females with AS in this study, many participants stressed that teachers were often unaware of the effort required to achieve such results. Challenges related to sensory sensitivities, handwriting, impaired executive function, and higher order thinking skills placed additional demands on females with AS, which meant they had to work exceptionally hard to achieve their good academic results. A number of participants discussed the anxiety and stress experienced by themselves or their daughters in relation to the additional demands their AS-related challenges placed on them. Parent Participant 1 noted that her/his daughter’s ‘overall academic performance is good, but comes at a personal cost (lack of free time, stress)’ (Question 5). Adult Participant 20 agreed, recalling, ‘I had a lot of anxiety going to class and completing assignments. I had to put in extra effort to complete assignments and to make sure I understood them’ (Question 5). Another adult participant, who stated she was a straight A and honour roll student throughout secondary school, explained, ‘After meltdowns and some self-injury though, I managed to pull through’ (Adult Participant 13, Question 5).

Participants explained that teachers often did not understand the sensory sensitivities that frequently accompany AS, and how these can make the school environment stressful and overwhelming. Parent Participant 5 noted that a ‘lack of knowledge about sensory sensitivities impacts high stress levels for my daughter’ (Question 1). Similarly, Adult Participant 4 commented that she wished her teachers had ‘understood what it is like to live with sensory issues and anxiety’ (Question 7). Another adult participant recalled, ‘I could never get my locker open and fluorescent lights gave me headaches. I would ask teachers to be more understanding about how difficult an environment school can be for someone that has ASD issues’ (Adult Participant 23, Question 7). Sensory sensitivities in individuals with AS have been reported by a number of authors (e.g., Attwood, 2007; Church et al., 2000; Saggars et al., 2011; Sciuotto et al., 2012). Difficulty coping with noise and disruption were particularly prominent (Church et al., 2000; Humphrey & Lewis, 2008; Saggars et al., 2011), with it impacting the ability of students with AS to concentrate (Saggars et al., 2011) and causing anxiety (Sciuotto et al., 2012).

Some participants described their own, or their daughter’s handwriting difficulties; for example: ‘I found handwriting very difficult, holding the pencil or pen took up so much energy it made me sick’ (Adult Participant 4, Question 5). Furthermore, parents were concerned that teachers did not appreciate that handwriting difficulties are often

associated with AS. One parent disclosed that it was distressing for her/his daughter when teachers 'accused her (because of poor handwriting) of being careless with her schoolwork' (Parent Participant 15, Question 3). Likewise, handwriting difficulties have been frequently reported to be associated with AS (Attwood; 2007; Church et al., 2000; Sagers et al., 2011). Church et al. (2000) found that handwriting remains difficult for students with AS throughout school; some of the students with AS reported on in that study still had illegible handwriting in secondary school (Church et al., 2000). Similarly, adolescent participants with AS and ASD reported on by Sagers et al. (2011) emphasised there was 'too much writing' (p. 180) involved at school, and expressed a preference for typing.

Challenges related to impaired executive function were frequently reported by participants in this study. Some participants explained that teachers did not appear to appreciate the difficulties that they or their daughters experienced in processing and following verbal instructions. One parent explained that some teachers did not understand that 'even though it might seem to them that she can't listen or follow instructions, it's not that she isn't listening, she just has trouble with spoken instructions, it is better to write them down' (Parent Participant 1, Question 7). Parent Participant 1 also indicated that 'teachers who raised their voices, spoke impatiently, or shouted at her when she didn't understand something were not beneficial to her' (Question 3). Another parent expressed a concern that teachers 'were not going over instructions with her to make sure she has heard and understood, taking it for fact when she has said "yes", she understood' (Parent Participant 4, Question 3). An adult participant also explained, 'We need clear, concise directions, and teachers need to check that we understand those directions and know what we are supposed to be doing' (Adult Participant 17, Question 7). This is consistent with the findings of Saalasti et al. (2008), who reported that children with AS have more difficulty following verbal instructions in comparison to their typically developing peers. Attwood (2007) also emphasised that because children with AS generally have good verbal skills and can use complex sentences, teachers may be unable to comprehend the difficulty these students can experience in following instructions.

Other common difficulties associated with impaired executive function were organisation, planning, prioritising, time management, and multitasking. Parent Participant 6 emphasised, 'I wish that teachers really understood and accepted the inability for organisation' (Question 7). Another parent concurred, explaining that her daughter 'has trouble with being organised and with multitasking, which causes her (and me, when she is in a panic) a lot of stress' (Parent Participant 15, Question 5). Similar sentiments were expressed by adult participants; for instance:

Even though I did well at school academically, it was hard for me to organise myself and to prioritise my time when I had lots of tasks and assignments. I have no doubt if I had been better at this, it would have spared me a lot of stress. (Adult Participant 24, Question 1)

Church et al. (2000) also reported on challenges experienced by students with AS related to their organisational skills. In addition, Carrington and Graham (2001) and Sagers et al. (2011) found it overwhelming for adolescents to manage their workload at school, especially when multiple assignments were due at the same time (Sagers et al., 2011).

Skills involving higher order thinking, which participants indicated they or their daughters with AS had difficulty with, included understanding complex or abstract ideas, generalising, making inferences, and summarising and synthesising information. One parent noted, 'She has typical Aspie problems with abstract ideas and generalising' (Parent Participant 7, Question 5), and Parent Participant 8 described her/his daughter's weaknesses

as ‘generalising inferences and synthesising or summarising information’ (Question 5). An adult participant said she wished teachers ‘had better understood the difficulties which come from being exceptionally literal, particularly in studies requiring inferential thinking’ (Adult Participant 6, Question 7). Difficulties with dichotomous thinking were also reported by some participants; for example, ‘School work has to be very black and white and she struggles to understand things that seemingly don’t make sense but are in fact just new, or written in a different way’ (Parent Participant 14, Question 5). In terms of difficulties with higher order thinking skills, Church et al. (2000) identified tasks requiring analytical writing and synthesising information as particularly problematic for students with AS. Other difficulties reported by participants in the current study, such as difficulty with generalising, inferential thinking, and understanding abstract and complex ideas, have been reported by Attwood (2007) and Myles and Simpson (2002) as common challenges for students with AS.

In addition, Wagner (2006) observed that female students with AS often ‘withdraw into themselves, and sometimes demonstrate an increased anxiety regarding assignments’ (p. 24) as their schoolwork becomes more complex, thus requiring higher order thinking skills. Furthermore, it has been found that female students with AS are reluctant to tell their teachers if they are experiencing difficulty with their school work, believing that their teachers will be angry or upset with them (Wagner, 2006). This may be related to Simone’s (2010) assertion that females with AS often have a ‘life-long guilt complex’ (p. 55). Females with AS are often people pleasers, who try not to inconvenience others: ‘We may try very hard to behave. We think that if we are very, very good, people will like us and all will be well’ (Simone, 2010, p. 55). It is plausible that female students with AS who generally achieve well academically may believe their teachers will be angry with them, or not like them, if they ask for help, or say they do not understand something.

Helpful Attitudes and Actions of Teachers

Participants spoke highly, and with gratitude, of teachers who understood the characteristics and challenges associated with AS, and were flexible and supportive. Correspondingly, the adolescent sample reported on by Saggars et al. (2011) underscored the importance of having teachers who understood their needs. In this study, teachers who understood specific challenges experienced by female students with AS were flexible in providing accommodations. One parent noted it helped when a teacher allowed her/his daughter to ‘put on headphones and listen to music to help her concentrate’ (Parent Participant 4, Question 2), and Adult Participant 23 recounted, ‘One teacher allowed me to draw in his classroom during lunch time, I didn’t like the bustle and noise of the lunch room’ (Question 2). These findings are consistent with previous research that reported that accommodating sensory sensitivities, such as allowing students to wear ear plugs or listen to music through headphones, was beneficial for students with AS in terms of their concentration and anxiety levels (Saggars et al., 2011; Sciotto et al., 2012).

Both parent and adult participants in this study emphasised that it was helpful for teachers to ensure female students with AS were always aware of the class schedule; for example, ‘In primary school, it helped when teachers wrote the class schedule on the whiteboard so she always knew what was going on’ (Parent Participant 1, Question 2). Adult Participant 7 also explained that she appreciated teachers who ‘expected students to stay seated, and not discuss issues and chat’ (Question 2). This supports previous research (Brewin et al., 2008; Sciotto et al., 2012) that found that visual schedules were beneficial for students with AS. It is also consistent with the findings that students with AS prefer

and benefit most from structured but flexible classrooms (Brewin et al., 2008; Myles & Adreon, 2001; Sagers et al., 2011; Sciotto et al., 2012). One parent reported that the best teachers her/his daughter had were 'those that are firm, but caring' (Parent Participant 15, Question 2). Parent Participant 13 agreed, commenting that one of her/his daughter's teachers 'is firm but also very positive. She manages my daughter with the least amount of trouble' (Question 2). Similar results were found by Sagers et al. (2011), who reported that adolescents with ASD and AS expressed a preference for teachers who are firm but understanding and reasonable.

Other AS-related difficulties accommodated by some teachers were also reported by participants in this study. A parent commented that one of her/his daughter's teachers 'understood her behaviours regarding accepting changes in class or big school projects, so gave her extra time to process things' (Parent Participant 14, Question 2). Adult Participant 2, for whom handwriting was difficult, recalled, 'One high school teacher would write the homework assignments for me as I had trouble writing quickly and legibly' (Question 2). In addition, parents commented that they appreciated it when teachers kept them informed of what was happening in the classroom; for instance, 'They've notified me immediately when things aren't going well for her in the classroom' (Parent Participant 10, Question 2).

Teachers who demonstrated a positive and accepting attitude towards AS and a genuine liking for female students with AS were valued by participants. A parent described a teacher who promoted understanding and acceptance of AS and ASD in the classroom:

One of her teachers actually assigned readings about autism as part of the regular curriculum, without ever identifying my daughter or anyone else in the class as autistic [sic]. This helped when my daughter 'came out' later to some of her classmates. (Parent Participant 7, Question 2)

Similarly, Sciotto et al. (2012) reported that an adult participant in their study recalled a teacher who encouraged him/her to not only accept but also embrace their differences, rather than trying to be like everyone else. A parent emphasised that the best teachers her/his daughter had were those who 'believe the child can achieve anything, and work toward finding the best way to teach the child' (Parent Participant 5, Question 7). Likewise, an adult participant recalled a teacher who made a difference for her: 'I went from being "dim" to "highly able" in the year I was in her class. Freed from my former mystery I was able to engage with the school work and was good at it' (Adult Participant 3, Question 2). Similar results have been reported in previous AS research. A parent of a child with AS reported on by Sciotto et al. (2012) described in detail a teacher who refused to give up on her/his child when others had, constantly telling the child with AS 'I am not giving up' (p. 182). In the present study, Adult Participant 1 recalled it helped her when teachers 'smiled at me and made me feel welcome, and gave me jobs to do like returning books' (Question 2). This is supported by Sciotto et al. (2012), who reported that a parent participant described a teacher who emphasised to her/his child with AS that she was an important member of the class.

Participants in this study indicated it was important for teachers to demonstrate to female students with AS that they are liked and valued. Parent Participant 15 commented, 'just taking an interest in her and checking in to see how she is managing, without making an issue of it helps' (Question 2). Likewise, some adult participants expressed gratitude toward teachers who acted as informal mentors for them, particularly in secondary school; for instance:

Some of my teachers also took a personal interest in my talents and wellbeing and encouraged me to pursue my passion, writing, and to take care of my mental and personal health. This support

and encouragement could easily be designated as the only reason I survived high school. (Adult Participant 13, Question 2)

Correspondingly, Sciotto et al. (2012) reported that although it is important for all students to feel they are liked and valued, it is especially important for students with AS.

Recommendations

Some of the experiences described by participants in this study suggest there are some stereotypes about AS that need to be dispelled, such as ‘children who are quiet and well-behaved cannot have AS’, and ‘females cannot have AS’. Others are related to a lack of understanding about AS and its associated challenges and characteristics, particularly in females. There is evidence that providing teachers with education on the nature of AS and appropriate strategies to support students with the condition can be effective. In one study teachers who currently taught one or more student(s) with AS had the opportunity to attend an AS-related teacher training program. This program involved information about the characteristics and challenges associated with AS, as well as strategies for classroom management and social support. Following their participation in this program, participants reported that they felt more confident teaching students with AS. In addition, they reported fewer problem behaviours from students with AS, and increased confidence in their own ability to implement behavioural and social strategies to support these students (Hinton, Sofronoff, & Sheffield, 2008). Similar teacher training programs could be carried out in which information specifically relating to females with AS could be included with the topics covered by Hinton et al. (2008). Although there has been a lack of research related specifically to females with AS, authors such as Simone (2010, 2012) and Willey (2012) provide valuable insights into the female experience of AS.

The results from the present study indicate that even if female students with AS are performing well academically, teachers should never assume they are not having any difficulties. Even female students with AS who are achieving academic results ranging from good to excellent may still require assistance with their school work, such as extra time, and multiple explanations. Wagner (2006) has recommended that regardless of their academic results, teachers need to find out how long female students with AS are spending on their homework and assignments to ensure it is not taking over their home lives and causing undue anxiety and stress. With regard to handwriting difficulties, although Wagner (2006) does not advocate eliminating written work entirely, she does suggest teachers allow female students with AS to continue to ‘print’ if that is easier for them to manage than cursive writing. In addition, she recommends allowing larger pieces of work to be word-processed (Wagner, 2006). The results from this study also suggest that teachers need to be aware of the organisational skills of female students with AS, and, if necessary, explicitly teach them how to organise themselves and prioritise their time effectively.

Limitations and Future Directions

A degree of caution should be taken when considering the results of the present study, as there were several factors that limit the conclusiveness and generality of the findings. First, the sample size was relatively small. For the results from this study to be more conclusive, it needs to be replicated with a larger sample. Also, as stated in the Data Analysis section of this article, there were no independent reliability checks made regarding the identified themes; however, the themes are consistent with what has been reported in past research.

Due to the anonymous nature of this study, there was no way of ensuring that participants or participants' daughters had a formal diagnosis of AS. However, participants' descriptions of their own or their daughters' challenges and experiences are consistent with what has been reported by several authors (Attwood 2007; Simone, 2010, 2012; Wagner, 2006; Willey, 2012).

This study focused on the perspectives of adult females with AS, and parents of school-aged females with AS. Future research could examine teachers' understanding and perspectives of AS, their experiences in teaching students with AS, and, in particular, experiences teaching females with AS could be specifically explored. In addition, school-aged females with AS were not included in this study. This population group could be the focus of future research.

Conclusion

This article reported on the school experiences of females with AS. The results indicate that there is a lack of teacher understanding about AS and its associated characteristics and challenges. This study also suggests there is a lack of understanding about AS in females, and in some cases a lack of awareness that females can have AS. These results also suggest that the extent of the difficulties experienced by female students with AS are not always recognised by teachers.

This article has emphasised the voice of an often overlooked and underdiagnosed population (Wagner, 2006), and allowed parents of females with AS to share their daughters' experiences. It is vital that the often invisible challenges of females with AS are recognised and validated so they can receive support for their areas of difficulty as early as possible, and have the best possible chance of reaching their full potential, not only academically, but also socially and emotionally. As this article has focused on the perspectives of parents of female students with AS, and adult females with AS, it is appropriate that the concluding words come from a participant's concluding statement about her/his daughter:

She is a talented, loving, sweet, generous, compassionate and empathetic girl who should be appreciated for who she is. It is amazing that she can accomplish all that she does every day. Thank you for doing this study. I hope you will be able to help teachers understand that their students with Asperger's can teach them a lot. My daughter teaches me every day and it often breaks my heart to see her struggle with so much of her life. (Parent Participant 8, Question 8)

Acknowledgements

This article is based on results obtained by Belinda Jarman for a thesis completed in partial fulfilment of the requirements of the M.Ed. (Hons.) degree in the Faculty of Education at the University of Tasmania, Australia, under the supervision of Doctor Christopher Rayner and Professor Kim Beswick. The authors would like to thank Kim Beswick for her intellectual support and literary advice.

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Appendix A

Adult Survey Questions

1. Think about your experiences throughout school. In your opinion, what were the most significant challenges you faced which you believe were related to Asperger's syndrome? In other words, how did Asperger's syndrome affect your experiences in school?
2. Think about your experiences in the classroom. Please describe some things which your teachers did (or did not do) which you believe were beneficial to your school experiences.
3. Think about your experiences in the classroom. Please describe some things which your teachers did (or did not do) which you believe were not beneficial to your school experiences.
4. Thinking back to your time at school, how would you describe your peer relationships and social experiences?
5. Think about your academic experiences at school. In your opinion, what were your strengths and weaknesses? What were your favourite subjects and why? What were your least favourite subjects and why? How would you describe your overall academic performance?
6. Thinking back to your time at school, what are some of the emotions you can remember experiencing in relation to school? In what specific situations at school did you experience particular emotions?
7. Imagine you are discussing Asperger's syndrome and your school experiences with a group of teachers. Thinking back to your time at school, whether or not you had received a diagnosis of Asperger's syndrome at the time, what do you wish your teachers had understood better about Asperger's syndrome?
8. If there is anything else you would like to add about Asperger's syndrome and your school experiences, please do so here.

Appendix B

Parent Survey Questions

1. Think about your daughter's experiences at school up until this point. In your opinion, what have been the most significant challenges she has faced which you believe are related to Asperger's syndrome? In other words, in what ways has Asperger's syndrome affected your daughter's experiences at school?
2. Think about your daughter's experiences in the classroom up until this point. Please describe some things which her teachers did (and did not do) which you believe have been beneficial to her school experiences.
3. Think about your daughter's experiences in the classroom up until this point. Please describe some things which her teachers did (and did not do) which you believe have not been beneficial to her school experiences.
4. Think about your daughter's peer relationships and social experiences at school up until this point. Please describe her peer relationships and social experiences. How, in your opinion, does Asperger's syndrome impact upon this area of her school life?
5. Think about your daughter's academic experiences at school up until this point. What are her strengths and weaknesses? What subjects does she like/dislike? How would you describe her overall academic performance?
6. Think about your daughter's experiences at school up until this point. Based on your own observations, and what your daughter has shared with you, what are some of the emotions she experiences in regards to school? What specific aspects of school elicit particular emotional responses from your daughter?
7. Imagine you are discussing your daughter's school experiences and Asperger's syndrome with a group of teachers. Please describe what you wish teachers understood better about Asperger's syndrome.
8. If there is anything else you would like to add about Asperger's syndrome and your daughter's school experiences, please do so here.