Key factors associated with Asperger’s syndrome and implications for effective teaching to enhance student participation and engagement

Ashwin Kumar

Abstract
This paper discusses the key factors associated with Asperger’s syndrome and the implications for effective teaching to enhance student participation and engagement. Firstly, it presents a brief introduction to Asperger’s syndrome and its main characteristics. Secondly, it explores student communication, social interaction, challenging behaviours and learning, and the implications for effective teaching. Thirdly, the importance of and the implications for collaborating with parents, teachers, professionals and individuals living with Asperger’s syndrome are discussed.

Keywords: Asperger’s syndrome, Inclusive education, Special education, Learning; Teaching, Home-School partnership; Parental collaboration.

Introduction

A brief introduction to Asperger's syndrome

Individuals living with Asperger’s syndrome often display many of the characteristics associated with autism spectrum disorders. The Diagnostic and Statistical Manual of Mental Disorders criteria stipulate that individuals must display a qualitative impairment in social interaction, and restricted, repetitive and stereotyped patterns of behaviour in order to be diagnosed with Asperger’s syndrome. In addition, individuals must possess at least average cognitive abilities and adaptive functioning skills (Barnhill, 2014a; Ehlers, Gillberg, & Wing, 1999; Jones, 2003; Klin & Volkmar, 2000a; Lozzi-Toscano, 2004a).

1 Ph.D., MA (Distinction), BA., University of Western Sydney, Australia. Corresponding author: akum6802@uni.sydney.edu.au, PO Box 571, Toongabbie, Sydney, Australia NSW 2146.
The main differences between people with autism spectrum disorders and those with Asperger’s syndrome is that individuals with Asperger’s syndrome do not have clinically significant delays in early language development or significant delays in cognitive development (Christidou, Tsevreni, Epitropou, & Kittas, 2013; Klin & Volkmar, 2000a). They usually do not have the same degree of difficulty in the development of age-appropriate self-help skills, adaptive behaviour and curiosity about the environment in childhood (Koning & Magill-Evans, 2001). However, even though individuals living with Asperger’s syndrome may obtain scores in the average or above average range, they continue to demonstrate subtle but important differences in cognitive and social processing.

Asperger’s syndrome is characterised by a qualitative impairment in social interaction. People with Asperger’s syndrome may be keen to relate to others but do not have the necessary skills and may approach others in peculiar ways (Klin, McPartland, & Volkmar, 2005a; Lozzi-Toscano, 2004a). They frequently lack understanding of social customs and may appear socially awkward, have difficulty with empathy and misinterpret social cues. They often have the same difficulties as individuals with autism spectrum disorders in understanding that other people have their own perceptions, thoughts and feelings. People with Asperger’s syndrome do not acquire social skills efficiently through incidental learning and frequently need explicit instruction in the area of socialisation (Barnhill, 2001; Holmes, Liden, & Shin, 2013; Ryogi, 2013). Although children with Asperger’s syndrome usually speak fluently by the time they enter kindergarten, they often have problems with the complexities of language including: pragmatics (the use of language in social contexts), semantics (multiple meanings), and prosody (the pitch, stress and rhythm of speech) (Klin, McPartland, & Volkmar, 2005a).

One common characteristic of people with Asperger’s syndrome is that they have difficulty carrying on social conversations. They may have an advanced vocabulary and talk incessantly about a favourite subject, however the topic may be somewhat narrowly defined and they may have difficulty switching to other topics (Barnhill, 2014a; Lozzi-Toscano, 2004a; Sciutto, Richwine, Mentrikoski, & Niedzwiecki, 2012). People with Asperger’s syndrome may have problems communicating with others because they do not naturally learn the rules of conversation. They may: interrupt or talk over the speech of others, make irrelevant comments, have difficulty initiating and terminating conversations, use speech characterised by a lack of variation in pitch, stress and rhythm, use overly pedantic or formal speech, particularly as they
reach adolescence; stand too close when talking to someone, stare, use abnormal body posture or other strange body language, fail to understand gestures and facial expressions of others (Christidou et al., 2013; Klin, McPartland, & Volkmar, 2005b; Kunce & Mesibov, 1998a; Lozzi-Toscano, 2004b).

Individuals living with Asperger’s syndrome are of average to above-average intelligence and may appear quite capable. Many Individuals living with Asperger’s syndrome are relatively proficient in their knowledge of facts and may have extensive factual information about a subject that absorbs them (Koning & Magill-Evans, 2001; Owens, Granader, & Humphrey, 2008; Simpson & de Boer-Ott, 2003a). However, they demonstrate relative weaknesses in comprehension and abstract thought, as well as in social cognition. Consequently, they experience academic problems, particularly with: reading comprehension, problem solving, organisational skills, concept development, and making inferences and judgements (Kawamura, 2013; Klin & Volkmar, 2000a; Klin, McPartland, & Volkmar, 2005b; Sansosti, Powell-Smith, & Cowan, 2011).

In addition, they often have difficulty with cognitive flexibility— their thinking tends to be rigid. Individuals living with Asperger’s syndrome often have considerable difficulty adapting to change or accepting failure (Lamarine, 2001; Simpson & Myles, 1998; Villa, Thousand, & Nevin, 2008a). They do not readily learn from their mistakes. An estimated 50–90 percent of people with Asperger’s syndrome have problems with motor coordination (Klin, McPartland, & Volkmar, 2005b). The affected areas include locomotion, balance, manual dexterity, handwriting, rapid movements, rhythm and imitation of movements. Individuals living with Asperger’s syndrome may be hypersensitive or hyposensitive to specific stimuli and may engage in unusual or repetitive behaviours to obtain a specific sensory stimulation (Barnhill, 2014b). Many students diagnosed with Asperger’s syndrome are inattentive, easily distracted and have received a diagnosis of Attention-Deficit/Hyperactivity Disorder at one point in their lives (Klin, McPartland, & Volkmar, 2005a). Anxiety is also a characteristic associated with this syndrome. They may experience some difficulty understanding and adapting to the social demands of school. Appropriate instruction and support can help alleviate stress (Hay & Winn, 2005; Kawamura, 2013; Pillay & Bhat, 2012a).
Key factors associated with Asperger's syndrome and implications for effective teaching to enhance student participation and engagement.

Communication

All individuals living with Asperger's syndrome experience language and communication difficulties (Barnhill, 2014c; Sciutto et al., 2012), although there are considerable differences in language ability among individuals (Minne & Semrud-Clikeman, 2011). Some individuals are nonverbal (Barnhill, 2014a; Minne & Semrud-Clikeman, 2011), while others have extensive language with deficits in the social use of language (Smith, 2011). Individuals living with Asperger's syndrome may seem caught up in a private world in which communication is unimportant (Donoghue, Stallard, & Kucia, 2011a). This is not an intentional action but rather an inability to communicate. Language difficulties include: difficulties with nonverbal communication (inappropriate facial expressions (Lozzi-Toscano, 2004b); unusual use of gestures (Koning & Magill-Evans, 2001); lack of eye contact (Rao, Beidel, & Murray, 2008); strange body postures (Klin, McPartland, & Volkmar, 2005a); lack of mutual or shared focus of attention (Rao et al., 2008); and delay in or lack of expressive language skills (Simpson & de Boer-Ott, 2003b). There are significant differences in the use of oral language: odd pitch or intonation (Rao et al., 2008); faster or slower rate of speech than normal (Klin, McPartland, & Volkmar, 2005a); unusual rhythm or stress (Koning & Magill-Evans, 2001); monotone or lilting voice quality (Lozzi-Toscano, 2004a); a tendency to use language to have needs met, rather than for social purposes (Rao et al., 2008); repetitive and idiosyncratic speech patterns (Simpson, de Boer-Ott, Griswold, & Griswold, 2004); echolalic speech, immediate or delayed literal repetition of the speech of others (Rao et al., 2008); appears to be non-meaningful, but may indicate an attempt to communicate (Klin, McPartland, & Volkmar, 2005a); indicates the ability to produce speech and imitate (Rao et al., 2008); may serve a communication or cognitive purpose for the student (Klin & Volkmar, 2000a).

Furthermore, individuals may have a narrow/restricted vocabulary: dominated by nouns (Klin, McPartland, & Volkmar, 2005a); often confined to requests or rejections to regulate one's physical environment (Rao et al., 2008); and limited in social functions (Klin, McPartland, & Volkmar, 2005a). They also exhibit a tendency to perseverate on a topic—that is, to continually discuss one topic and have difficulty changing topics (Klin, McPartland, & Volkmar, 2005a). Individuals living with Asperger's syndrome may have difficulty with the pragmatics of conversation: problems

initiating communication (Rao et al., 2008); difficulty using unwritten rules (Klin, McPartland, & Volkmar, 2005b); inability to maintain conversation on a topic (I. C. Gillberg & Gillberg, 1989); inappropriate interrupting (Kadesjö, 2000); and inflexibility in style of conversation, stereotypic style of speaking (Rao et al., 2008). Individuals living with Asperger’s syndrome often have difficulty comprehending verbal information, following long verbal instructions and remembering a sequence of instructions (Klin, McPartland, & Volkmar, 2005b; Lozzi-Toscano, 2004a; Rao et al., 2008). The comprehension of language may be context-specific. The extent of difficulty varies among individuals (Klin & Volkmar, 2000a), but even those who have normal intelligence, usually referred to as high-functioning, may have difficulty comprehending verbal information (Rao et al., 2008).

**Implications for effective teaching**

Programs for individuals living with Asperger’s syndrome and other Pervasive Developmental Disorders include comprehensive communication assessment and intervention (Klin, McPartland, & Volkmar, 2005b; Rao et al., 2008). This involves assessment by a speech-language pathologist, as well as informal observation and classroom-based evaluation. Assessment serves as the basis for identifying goals and strategies for facilitating development of receptive and expressive language skills, particularly pragmatic skills.

Effective teaching instruction should emphasise: paying attention (Pollock, 2013); imitating (Scattone, 2008); comprehension of common words and instructions (Baker & Welkowitz, 2004); using language for social reasons and not just to have basic needs met (Hu, 2013); and communication goals should emphasise the functional use of language and communication in various settings (Klin, McPartland, & Volkmar, 2005a; Rao et al., 2008).

**Social interaction**

Individuals living with Asperger’s syndrome demonstrate qualitative differences in social interaction, and often have difficulty establishing and maintaining relationships (Klin, McPartland, & Volkmar, 2005b; Rao et al., 2008; Wainscot, Naylor, Sutcliffe, & Tantam, 2008). They may have limited social interactions or a rigid way of interacting with others. These difficulties are not a lack of interest or unwillingness to interact with others but rather an inability to distil social information from the social interaction and use appropriate communication skills to respond. Understanding
social situations requires language processing and nonverbal communication, which are often areas of deficit for people living with Asperger's syndrome. They may not notice important social cues, e.g., tone of voice, facial expressions (Rao et al., 2008). They tend to have difficulty using nonverbal behaviours and gestures in social interaction, e.g., eye contact, body posture, and they may have difficulty reading the nonverbal behaviour of others (Klin & Volkmar, 2000b; Villa, Thousand, & Nevin, 2008a).

Individuals living with Asperger's syndrome often are not able to understand the perspectives of others, or even understand that other people have perspectives that could be different from their own (Klin, McPartland, & Volkmar, 2005b; Lamarine, 2001; Rao et al., 2008). They may also have difficulty understanding their own, and other people’s, beliefs, desires, intentions, knowledge and perceptions. They may have problems understanding the connection between mental states and actions. For example, children with Asperger’s syndrome may not be able to understand that another child is sad, even if that child is crying, because they are not themselves sad at that particular moment (Falk-Ross, Iverson, & Gilbert, 2004). Individuals living with Asperger's syndrome have a tendency to play with toys and objects in unusual and stereotypical ways (Christidou et al., 2013; Holmes et al., 2013; Rao et al., 2008). Some may engage in excessive or inappropriate laughing or giggling. Play often lacks the imaginative qualities of social play. Some children with Asperger’s syndrome play near others but do not share and take turns, while others may withdraw entirely from social situations (Macintosh & Dissanayake, 2006a; Rao et al., 2008).

The quality and quantity of social interaction occurs on a continuum (Rao et al., 2008). Social interaction can be classified into three subtypes along this continuum: (a) aloof—those who show no observable interest or concern in interacting with other people except for when necessary to satisfy basic personal needs; they may become agitated when in close proximity to others and may reject unsolicited physical or social contact; (b) passive—those who do not initiate social approaches but will accept initiations from others; and (c) active—those who will approach for social interaction but do so in an unusual and often inappropriate fashion (Klin, McPartland, & Volkmar, 2005a). Individuals living with Asperger’s syndrome may demonstrate social behaviour that fits into more than one subtype.
Implications for effective teaching

Social skill development is essential for individuals living with Asperger’s syndrome and it is a critical component in developing plans for managing challenging behaviours (Macintosh & Dissanayake, 2006b; Marriage, Gordon, & Brand, 1995; Rao et al., 2008; Whitby, Ogilvie, & Mancil, 2012a). Many children with Asperger’s syndrome develop social interest but do not possess the social skills necessary to successfully initiate or maintain interactions. Individuals living with Asperger’s syndrome have difficulty learning social skills incidentally or by simple observation and participation. It is generally necessary to target specific skills for explicit instruction and provide support to encourage students to consistently use them (Bock, 2007; Marriage et al., 1995). The following social skills are generally considered to be critical to social success and should be explicitly taught within classrooms: tolerating others in one’s work and play space (Whitby, Ogilvie, & Mancil, 2012b); imitating the actions and vocalisations of others (Scattone, 2008); engaging in parallel activities with others (Rao et al., 2008); sharing materials (Marriage et al., 1995); taking turns within the context of a familiar activity (Villa, Thousand, & Nevin, 2008b); and using eye contact to initiate and maintain interactions (Macintosh & Dissanayake, 2006b).

Challenging behaviours

Individuals living with Asperger’s syndrome often demonstrate unusual, distinctive behaviours, including: restricted range of interests and preoccupation with one specific interest or object (Prior, 2003); inflexible adherence to a non-functional routine (Klin, McPartland, & Volkmar, 2005a); stereotypic and repetitive motor mannerisms (Donoghue, Stallard, & Kucia, 2011b), such as hand flapping, finger flicking, rocking, spinning, walking on tiptoes, spinning objects (Allik, 2006a); preoccupation with parts of objects (Klin, McPartland, & Volkmar, 2005b); fascination with movement, such as the spinning of a fan or turning wheels on toys (Prior, 2003); insistence on sameness and resistance to change (Macintosh & Dissanayake, 2006b); and unusual responses to sensory stimuli (Klin, McPartland, & Volkmar, 2005a).

In addition, many individuals living with Asperger’s syndrome have challenging behaviours, such as aggression, destruction, screaming, self-injurious behaviours and/or tantrums (Klin, McPartland, & Volkmar, 2005b; Prior, 2003). Given that most individuals with Asperger’s syndrome are not able to effectively communicate their thoughts and desires, it is not surprising that they rely on their behaviour to communicate specific messages. For instance, a student may use aggression or destruction to communicate that a task is too difficult (Macintosh & Dissanayake, 2006a).
Alternatively, some students may use these behaviours to avoid activities or manage their anxiety (Klin, McPartland, & Volkmar, 2005a). As such, teachers may need to look below the surface to identify the message a student is trying to communicate (Donoghue, Stallard, & Kucia, 2011a).

**Implications for effective teaching**

Many of the odd, stereotypical behaviours associated with Asperger's syndrome may be caused by other factors, such as: hypersensitivity or hyposensitivity to sensory stimulation (Lozzi-Toscano, 2004a), difficulties understanding social situations (Klin, McPartland, & Volkmar, 2005b), difficulties with changes in routine and anxiety (Salvia, Ysseldyke, & Bolt, 2007). The instructional plan needs to incorporate strategies for: expanding students' interests; developing skills across a variety of functional areas; helping students monitor their level of arousal or anxiety; preparing students for planned changes; and facilitating ways to calm down and reduce anxiety (Potvin, Prelock, & Snider, 2008). In planning instruction, teachers need to consider the problematic behaviour and its function for that particular student. Rather than attempting to control or eliminate all changing behaviours, successful teaching strategies often focus on making environmental adaptations to decrease inappropriate behaviours, and/or helping students learn more appropriate behaviours that will serve the same function (Donoghue, Stallard, & Kucia, 2011b; Macintosh & Dissanayake, 2006b; Prior, 2003).

**Learning**

Individuals living with Asperger's syndrome have psycho-educational profiles that are characterised by uneven patterns of development. Studies indicate that there may be deficits in many cognitive functions, yet not all are affected (Donoghue, Stallard, & Kucia, 2011a; Holmes et al., 2013; Simpson & Myles, 1998). In addition, there may be deficits in complex abilities, yet simpler abilities in the same area may be intact (Klin, McPartland, & Volkmar, 2005b). Research has identified some of the cognitive features commonly associated with Asperger's syndrome, including: deficits in paying attention to relevant cues and information, and attending to multiple cues; receptive and expressive language impairments, particularly the use of language to express abstract concepts; deficits in concept formation and abstract reasoning; impairment in social cognition, including deficits in the capacity to share attention and emotion with others, and understand the feelings of others; and inability to plan, organise and solve problems (Barnhill, 2014b; Donoghue, Stallard, & Kucia, 2011b; Klin, McPartland, & Volkmar, 2005b; Lozzi-Toscano, 2004a).
Some students have stronger abilities in the areas of rote memory and visual-spatial tasks than they have in other areas. They may actually excel at visual-spatial tasks, such as putting puzzles together, and perform well at spatial, perceptual and matching tasks (Dunlap & Fox, 1999; Klin, McPartland, & Volkmar, 2005a; Laushey, 2008). Some may be able to recall simple information but have difficulty recalling more complex information (I. C. Gillberg & Gillberg, 1989; Klin & Volkmar, 2000a). Some students can more easily learn and remember information presented in a visual format, and may have problems learning about things that cannot be thought about in pictures (Klin, McPartland, & Volkmar, 2005a; Sansosti et al., 2011). Individuals living with Asperger’s syndrome may have difficulty comprehending oral and written information, for example, following directions or understanding what they read (Barnhill, 2014b; Klin, McPartland, & Volkmar, 2005b). Yet, some higher-functioning individuals are relatively capable of identifying words, applying phonetic skills and knowing word meanings (Kunce & Mesibov, 1998b). Some students demonstrate strength in certain aspects of speech and language, such as sound production, vocabulary and simple grammatical structures, yet have significant difficulty carrying on a conversation, and using speech for social and interactive purposes (Bianco, Carothers, & Smiley, 2009). Similarly, a student who is high-functioning may perform numerical computations relatively easily but be unable to solve mathematical problems (Kliman, Jaumot-Pascual, & Martin, 2013).

**Implications for effective teaching**

These cognitive variations result in patterns of strengths and weaknesses in a student’s academic performance, social interaction and behaviour. Development of cognitive skills is usually uneven (Donoghue, Stallard, & Kucia, 2011a; Holmes et al., 2013). Education programs should be based on the unique combination of strengths and needs of individual students. Programs may need to be modified on an ongoing basis to ensure they are appropriate. Many individuals living with Asperger’s syndrome have deficits in attention and language development, problems with concept formation and difficulties with memory for complex information (Klin & Volkmar, 2000b; Lozzi-Toscano, 2004a). These characteristics, considered in combination with personal accounts of how individuals with Asperger’s syndrome are visually oriented, suggest that visual material should be incorporated in teaching (Bianco et al., 2009; “Gifted and Talented Children with Special Educational Needs,” 2013).
The importance of and the implications for collaborating with parents, teachers, professionals and individuals living with Asperger's syndrome.

Developing and implementing effective educational programs that are meaningful for individuals living with Asperger's syndrome involve collaboration with parents. Parents of children with Asperger's syndrome work closely with professionals to obtain diagnoses, early intervention programs and other resources, and are usually knowledgeable about both the disorder and their children (Allik, 2006b; Fenlon & Keppel, 2005; Porter, 2008a; Sofronoff & Farbotko, 2002). Bringing the experiences and knowledge of parents to the program planning process, serves not only to enhance students' school success, but also creates a climate for ongoing learning, communication and collaboration. A collaborative parent-school relationship is based on parents and teachers understanding each other's perspectives and realities. It is important for parents to have a clear understanding of their child's school program, the roles of staff members and how individual classrooms meet the diverse needs of all the students (Porter, 2008b; Ruble & Akshoomoff, 2010; Wagner, 2002). It is equally important for teachers and school staff to have an understanding of the experiences families go through in living with children with Asperger's syndrome, the interventions they access and the important role that schools play in families' lives. With these understandings and a commitment to collaboration, parents and teachers can work together to create positive and effective educational programs for students.

It is important that educators understand the perspectives and experiences that families bring to the home-school partnership. Many parents have a wealth of knowledge about the disorder, resources and interventions, and an overall understanding of what works for their individual child (Fenlon & Keppel, 2005; MacLeod & Green, 2009a; Monahan & Bryer, 2003; Porter, 2008a). Families may be experiencing stress and anxiety about the transition from one education system to another. It is also helpful for teachers to understand that there are other factors, such as family size, cultural background, socioeconomic status and geographic location that affect the degree to which families are able to engage in the school-home partnership (Leonard, 2013; Porter, 2008a). Most parents are motivated to help their children, but vary greatly in how they act on this motivation (Starr & Foy, 2010). Some parents have the time, temperament, educational background or knowledge about Asperger's syndrome to work closely with the school staff. Other parents, although motivated and concerned about their children's development, may not be actively involved in their children's school programs. Educators need to be sensitive to the
perspectives and beliefs families bring to the school context. Creating a collaborative home-school partnership must be carefully planned, keeping in mind the ultimate goal of working together to best meet the needs of students. Combining the strengths and knowledge of parents who know their children best and have a history of supporting and advocating for their children, with the expertise of teachers, creates a powerful partnership that directly benefits students (Bankier, Lenz, Gutierrez, & Bach, 1999; MacLeod & Green, 2009b; Porter, 2008b; Young, 2008). Collaboration between home and school can lead to improved academic and social success, positive attitudes and behaviour toward school, better attendance and improved parent-teacher communication.

A collaborative home-school partnership is an informed partnership where both parents and teachers understand the child's realities at home and at school (Fenlon & Keppel, 2005; Jacobsen, 2003; Porter, 2008b). It uses a team approach to program planning and development and it establishes a clear home-school communication plan. Being an informed partner in the home-school partnership requires that each participant have background information when beginning the collaboration process. Teachers need a general understanding of the nature of the student's disorder, the student's history, previous interventions and their effectiveness, and specific strengths and areas of growth. It is important for teachers to understand the experiences parents have gone through, and have a global knowledge of the goals, dreams and hopes that they hold for their children. Parents, in turn, need a thorough understanding of how the school system works, what program options are available and how educational decisions are made at the school (Bankier et al., 1999; MacLeod & Green, 2009b; Porter, 2008b; Young, 2008). Collaborative partnerships involve a team approach (Potvin et al., 2008). Programming for and meeting the unique needs of children with Asperger's syndrome involve complex decisions that parents and teachers cannot make in isolation. Team members can include administrators, special education consultants, teachers, teacher assistants, therapists, parents and other community resource personnel. The school-based team is a critical part of the individualised program plan (IPP) process (Bianco et al., 2009).

Together, the team works to set meaningful academic and social goals and objectives, select strategies, develop positive behaviour plans, and devise social programs to enhance peer relationships both at home and at school. The team can also plan and implement programs and inservices to augment parent and teacher knowledge in the field of Asperger's syndrome.

The key to effective collaboration is communication. In order to maximise children's potential, and generalise skills both at home and at school, parents and teachers will need to communicate beyond

the traditional parent-teacher interview modes (Brewin & Renwick, 2008; Myles, Adreon, Gatlitz, Bandini, & Bolick, 2012). Parents and teachers need to work together to develop an effective communication plan. This plan should address how teachers and parents will communicate on a regular basis, and how emergent concerns will be handled. The process also includes setting regular meeting times to review IPPs. A variety of communication methods should be considered, including daily diaries, home-school communication books, notes, letters, journals, newsletters and regular phone calls (Brewin & Renwick, 2008; Myles et al., 2012). Parents often want daily in-depth reporting about their children’s learning and behaviour. While meaningful communication between home and school is an essential ingredient for successful collaboration, it is important for teachers not to become overwhelmed with the task of reporting (Barnhill, 2014b). It is often helpful for teachers and parents to prioritise specific areas to discuss on a daily basis. The communication protocol should be re-examined periodically to ensure that it continues to meet the needs of parents and teachers. It is important for teachers to identify the amount and type of communication that parents require and to keep in mind that parents need to hear some positive news about their children. Like all parents they appreciate personal messages that recognise their children’s achievement and progress.

Collaborating with parents often involves scheduling meetings for a variety of purposes. These meetings help teachers gain understanding of the child and family, and the supports the family has in place (Klin, McPartland, & Volkmar, 2005a). These meetings provide opportunities to: clarify roles, set goals and objectives, and develop strategies and communication plans in order to effectively plan and implement education programs. Parents may be working with other professionals who have valuable suggestions for education programming and developing behaviour plans. Ask parents who they think should attend meetings to share information and provide ideas for strategies. Schools may also be able to access professionals within the school division who can contribute to the collaboration and planning process.

**Conclusion**

Asperger syndrome is a developmental disability on the autism spectrum. It is characterised mainly by difficulties with social interaction, communication and some cognitive processing difficulties, which include executive function, sensory perception and the ability to comprehend the perspective of others. The presence of idiosyncratic interests is also a characteristic of Asperger syndrome. Approximately 1 in 125 individuals in the general population are affected by

This disability (Barnhill, 2014a). The current average age for diagnosis of Asperger syndrome is 7–8 years (Donoghue, Stallard, & Kucia, 2011b). Most children with Asperger syndrome will begin school without a formal diagnosis. This has implications for teachers and special education consultants, who monitor children’s development, liaise with families and refer to specialist practitioners for assessment and therapy when needed. The most successful management and effective teaching practices adopt a situation-specific and flexible approach, which acknowledges the varied support needs of individuals living with Asperger’s syndrome (Kawamura, 2013). It is probable that the demand on available diagnostic and educational services for individuals living with Asperger syndrome will increase because there remains in schools a large number of individuals living with Asperger syndrome who are yet to be diagnosed (Donoghue, Stallard, & Kucia, 2011b). Many individuals living with Asperger syndrome are participating at their local school successfully, with or without a diagnosis. Some receive minimal support (e.g. they may have extra assistance with organisation, curriculum or social skills development). Others receive more intensive support for areas of identified need, such as: communication and language disorder, attention deficit hyperactivity disorder (ADHD), behavioural support and mental health problems.

There is a growing concern for the mental health of individuals living with Asperger syndrome, particularly during adolescence. Research indicates that depression is the most frequently experienced co-morbid condition for people with Asperger syndrome, and prevalence rates may be higher for this cohort than the general community (Klin, McPartland, & Volkmar, 2005a; Pillay & Bhat, 2012b). However, it is unclear as to whether co-morbid psychiatric conditions, such as major depression, are independently occurring disorders or whether they result directly or indirectly from the pathogenic processes causing Asperger’s syndrome. Pillay (2012) discusses those people with Asperger syndrome who are often creative, highly intelligent and technologically, mathematically or scientifically astute as having the potential for momentous contributions to our society. Yet, it is their depression, often associated with their isolation, which interferes with their functioning and contributes to a higher than average incidence of suicide. It has been suggested that, “early intervention to promote the resilience of people with Asperger syndrome may tilt the balance between risk and protective factors just enough to lessen the severity of any depressive episode, improve the quality of life for the affected individual and substantially ease the burden of care” (Pillay, 2012, p.14).
In summary, the body of literature available on individuals living with Asperger syndrome indicates that quality educational practice for individuals living with Asperger syndrome requires flexibility to accommodate the individual and fluctuating needs of individuals living with this disability. Working in partnership with consultants, service providers, educators and families is essential to plan for successful educational experiences and outcomes for individuals living with Asperger syndrome. Most individuals living with Asperger’s syndrome further benefit from a consistent and predictable approach without rigidity because they have a need to be familiar with their environment and other people’s actions. In general, changes cause anxiety for individuals living with Asperger syndrome; they may respond poorly to spontaneous change, and it may take them longer than other students to adjust to changes. Friendships, social relationships, bullying and harassment represent some of the most difficult aspects of school life for individuals living with Asperger’s syndrome. It is widely recognised that social and relational learning for individuals living with Asperger’s syndrome is equally as important as academic attainment. Specific strategies designed to improve learning opportunities for individuals living with Asperger’s syndrome should be negotiated with staff, families and students, to meet individual student needs (e.g. visual prompts, tutorial support and designing the curriculum around students’ specific interests).

References


Barnhill, G. P. (2001). Social attributions and depression in adolescents with Asperger syndrome. Focus on Autism and Other Developmental ... Retrieved from http://foa.sagepub.com/content/16/1/46.short


Fenlon, A., & Keppel, F. (2005). *ACTIVITIES TO EMPOWER PARENTS AS COLLABORATORS IN THEIR CHILDREN’S EDUCATION. … to Communicate and Connect with Families …*. Retrieved from http://books.google.com/books?hl=en&lr=&id=Tf12m8De0z0C&output=print&dq=aspergers+(collaboration+parents)&source=gbs_v2_search


---

*Education for ….* Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/10459889809603730


Wagner, S. (2002). *Inclusive Programming for the Middle School Student with Autism/Asperger’s Syndrome: Topics and Issues for Consideration by Teachers and Parents.* Retrieved from http://books.google.com/books?hl=en&amp;ampdr=&amp;ampid=jNHvkGgg0WQC&amp;ampoi=fn&amp;amppg=PT6&amp;ampdq=aspergers+(teaching+school)&amp;ampots=1paDNZLV1W&amp;amp:sig=9sDh25TUUEqz1Hho5r7xU2Qqod

