

AUTISM AND HIGH LEARNING POTENTIAL

F02

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FACT SHEET

Summary

Children who have high intelligence alongside another neurodivergence are considered “dual or multiple exceptional” (DME).¹ The term dual or multiple exceptionality is used in the UK to describe children who have both high learning potential *and* would be classed as having a special educational need. DME means the same thing as “twice exceptional”, or “2e”, a term which is used in other parts of the world. This fact sheet is for teachers, professionals, parents and carers who would like clear information on how autistic DME children may present in terms of behaviours and characteristics, and strategies to support strengths and possible weaknesses at home and at school.

Introduction

Since variations in the human genome were first recognised in the 1990s, it has been accepted that there is no such thing as a “normal” brain. This diversity in the way human mind’s function is known by the term “neurodivergence”, which recognises that within the world population there are different sets of neurological characteristics with their own profile of strengths and challenges². Autism is one such neurodivergence, and individuals who fall within this group usually share some advantageous characteristics, such as attention to detail and advanced logical thinking, and some challenges within our societal norms, such as strong intrinsic motivation over extrinsic pressures or potentially a preference for strict routines.

An autistic child with Dual or Multiple Exceptionality (DME) is someone who shares both autistic characteristics and high intellectual ability. Due to the fact that they usually perform at higher levels in one or more areas at school and fail to exhibit the intellectual disabilities often associated with autistic people, these children may not fit the diagnostic criteria clearly. There are, however, certain traits that autistic people, including those with high intelligence, have in common, such as sensory differences, niche areas of interest or expertise, logical, precise and/or divergent thinking.³

Terminology

There are several different terms which have previously been associated with a diagnosis of autism, including Asperger Syndrome and High Functioning Autism. From a medical point of view, the collective term “Autism Spectrum Disorder” (ASD) has replaced these terms in the DSM-5 (an international diagnostic manual) and ASD is now likely to be the most given diagnosis. However, the terminological preferences of autistic people, their families, friends, and associated professionals vary, with no one term considered preferable by everyone. Therefore, ask a child or young person what their preferred term is, whether they talk about “being autistic”; “having autism” or just use autistic as an adjective, as many feel strongly about the terminology used.

Characteristics for an Autism Diagnosis

The National Autistic Society lists the following characteristics as the basis of diagnosis:⁴

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1. Differences in Communication

Some autistic people may have a more literal understanding of language. They may find it difficult to use or interpret facial expressions, tone of voice, jokes, sarcasm and vague or abstract concepts. These traits are not expressed in a singular way, and there are many different nuances to such communication differences. Someone may, for instance, be incredibly funny or sarcastic themselves, but they may not always pick up on sarcasm in others.

Some autistic people may struggle with speech and others may have good language skills but may find it difficult to understand the expectations of others within conversations, sometimes repeating what the other person has just said (echolalia) or talking at great length about their own interests. They may also need more time to process information, finding clear and concrete language easier to understand than more abstract idioms.

2. Differences in Social Interactions

Some autistic people may have difficulty “reading” other people. It can be more difficult to recognise or understand others’ feelings or intentions and to express their own emotions. This can make the process of navigating the social world very tricky for some. Autistic people may seem to be insensitive, even though they do not mean to be. Autistic people can find themselves overloaded and overwhelmed by other people and seek time out on their own. Some autistic people may also appear to behave in ways that some consider socially inappropriate. It should not be assumed that autistic people lack empathy or the ability to feel emotions. It can often be the case that, in fact, they are more emotionally aware and empathetic than someone who is not autistic, it is just that they may have difficulty in dealing and/or expressing these feelings in a conventional or socially expected manner.

3. Repetitive Behaviours and Routines

Some autistic people may repeat some physical movements such as hand flapping, rocking or the repetitive use of an object such as twirling a pen to help regulate emotions or just because it is enjoyable. Some autistic people excel at making sense of patterns and order and usually find comfort in routine, clear rules and knowing what to expect. Thus, they may feel anxious or extremely uncomfortable about unpredictability and changes of any kind. Asking for a different approach may be met with discomfort or distress, although allowing time to prepare for any changes and explaining the need for them in advance can help to minimise such stress.

4. Highly Focused Interests

Many autistic people develop intense and highly focused interests at which they can excel. These interests may change over time or become lifelong passions. The loci of these interests can vary between different people, but autistic people report that the pursuit of them feels utterly essential to their wellbeing.

Characteristic Strengths of Autistic People

Differences in the cognitive processing of autistic people may also endow them with strengths⁵. An autistic child is likely to have at least some of these characteristics:

- Attention to detail, thoroughness, and accuracy.
- Methodical, analytical, able to spot patterns.
- Deep focus on themes of interest, for which they develop in-depth knowledge.
- Determination, and ability to challenge status quo.
- Excellent long-term memory and memory for facts and details.
- Unique way to look at things, resulting in novel approaches and innovation.
- Honesty, loyalty, and commitment.
- Direct and straightforward when talking to others.

Characteristics of Children with High Learning Potential (HLP) vs Autistic DME Children

Children with high learning potential (HLP) often display many shared characteristics with autistic DME children, for example, their development is asynchronous (with some skills developing at age expectations while others develop faster); however, there are some differences^{6,7}:

Memory and Attention

- Both groups of children show an excellent memory for events and facts, however, HLP children enjoy a variety of topics and generally dislike rote memorization tasks, while autistic DME children usually focus on one interest (possibly two) and enjoy remembering rote information.
- Both groups show an intense and prolonged focus on topics of interests, however, HLP children can focus on other topics as well, and can be redirected when distracted, while autistic DME children are more likely to have difficulty engaging with other topics, and they generally struggle to refocus if distracted (e.g., noise or internal thoughts).

Speech and Language

- Both children with high learning potential and those with an autistic DME profile can show verbal fluency or precocity and elaborate on their ideas with or without prompts. However, while HLP children usually understand all the language that they use, and use a variety of language styles and abstract language (e.g., metaphors), autistic DME children may develop language later, not understand all the advanced language they use, or conversely be pedantic about vocabulary (e.g., correcting others), use language literally and have a restrictive use of language, for example, repeating phrases or copying sentences from books or other people.
- While both groups have lots to say about what matters to them, some HLP children participate in reciprocal conversations, show interest in the life and opinions of others, while autistic children with DME usually talk 'at' people and fail to inquire about their interlocutor's point of view.
- HLP children usually understand that context is needed for the other person to understand their tale or story, while some autistic DME children may fail to provide it even when prompted.
- Both groups can understand jokes and irony, but HLP children can also understand those that involve social reciprocity, whilst some autistic children with DME may not, and may also fail to detect irony or sarcasm in others, despite being able to use it themselves.

- HLP children are able to express their distress verbally whilst some autistic children with DME may do this through actions instead.

Social and Emotional

- While both groups of children are highly concerned with justice and fairness, and will give respect to those who earn it, HLP children may find it easier to comply with demands from adults they do not respect, than autistic DME children are able to do.
- Many HLP children have social insight, are aware of social norms and tend to respond to social cues and follow unwritten rules for social interaction, while some autistic DME children are unaware or indifferent to them and may not know how to respond to social clues. However, some autistic girls, during their teenage years, are aware of their lack of understanding and may feel anxious about how to pick up and react to these rules that others seem to simply 'absorb'.
- HLP children can usually tell that they are different from their peers, but some autistic DME children may not be aware of this.
- HLP children usually show appropriate emotions and although they have intense feelings these subside quickly, while autistic DME children may show emotions that are socially inappropriate, and can struggle to regulate them, thus having intense emotions more often and for longer, which could lead to aggression.
- Some HLP children are highly attuned to the feelings of others in a variety of situations, including subtle body language, while some autistic DME children may only respond to overly clear displays of emotions from some key people (like parents).

Behaviour

- HLP children may complain about changes or joining in with activities that they don't like, but will usually go along with them, while autistic DME children may fiercely resist.
- Although there is some variance, HLP children will generally question rules and structure, whilst some autistic DME children adhere to rules and need structure.
- Some autistic DME children often show noticeable stimming behaviours (repetitive movements such as flapping) while these are not always present in HLP children.
- HLP children notice when problems arise in their environment and may become distressed, whilst some autistic DME children may not notice the problem unless it affects them directly.

Sensory Processing

- Both children with high learning potential and children with an autistic, dual or multiple exceptional profile may be hypersensitive to stimuli (noise, lights, textures, and tastes). However, autistic DME children may experience this with higher intensity and to the point that it might impair everyday functioning.
- HLP children often develop as expected for their age in their ability to dress, wash and feed themselves, whilst some autistic DME children may show delay in these areas.
- HLP children (with no additional diagnosis) often develop coordination as expected, while some autistic DME children can struggle with fine and/or gross motor coordination.

Therefore, while HLP children may enjoy *team* sports, autistic DME children may be more likely to dislike them.

Intelligence Profile of Autistic DME Children

When formally assessed for IQ, autistic DME children often score highly on subtests which involve information, definition of vocabulary, mathematics, and block design. However, they may struggle with processing speed, or social skills and motor coordination.⁸ Hence, in these cases, their overall IQ profile will be considerably uneven. This discrepancy between high ability in some areas and considerable barriers in others is a determining factor of dual or multiple exceptionality.⁹ Therefore, it is necessary to provide appropriate support for barriers regardless of how highly a child has scored in other areas.

Prevalence and Diagnostic Process

Recent studies have reported a prevalence of autism in at least 1 in 100 children.¹⁰ With a male to female ratio of 4:2, although it could be lower, at about 3:1¹¹. Girls and children with high ability are often more difficult to diagnose, and thus usually diagnosed at later age, as they are more socially skilled than the stereotypical autistic child. Autistic girls are often able to mask or compensate for many of their difficulties in early and middle childhood.

The process of diagnosis of ASD in the UK usually involves a multi-disciplinary team. This team can be made up of a variety of different professionals, but very often includes a paediatrician, speech and language therapist (SALT), psychiatrist and/or psychologist. Information from a diverse range of sources, including assessment of social and communication skills and behaviours, medical and developmental history, and parental, carers' and, where appropriate, the young person's concerns, are all considered, as well as clinical judgement, when diagnosing autism based on criteria from the ICD-10 (International Statistical Classification of Diseases and Related Health Problems) or DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) criteria.¹²

While there is no official diagnosis of "High Learning Potential", an assessment which includes IQ testing and academic skills can be used as evidence that the child has high learning potential.

Girls

As shown above, it is currently estimated that there is a ratio of 3:1 of girls receiving an autism diagnosis versus boys. However, this ratio is thought to be much higher, meaning that many girls were not diagnosed in childhood and remain undiagnosed in adulthood. Some of the reasons behind this are that traits were initially taken from boys' behaviours, which include externalising behaviours, while girls (as can also happen with boys or girls with high ability) are often more likely to show internalised behaviours. This internalisation may then result in a mental health diagnosis, such as anxiety, depression or disordered eating, and thus the underlying reason may never be discovered. Some girls are more likely to copy social norms and can appear 'a bit odd', rather than being perceived as socially awkward. For some autistic girls, although they may suffer from sensory difficulties and may also show intense interests and obsessions, these can

be areas that are more stereotypically associated with their gender (e.g., horses or unicorns) so may not be noticed as unusual.¹³

Support for Autistic DME children

Just like neurotypical children, there is no universal way to support autistic DME children. Effective support involves creating an awareness for others around them as much as focusing on the child's individual and unique profile of strengths and needs. Some areas that may require support are as follows^{14,15,16,17,18}

Attention

Some autistic DME children have more (not less) attentional resources. These mean that they can (and have to) pay attention to more than one thing at a time. Teachers and parents can try to use sensory strategies to “fill up” their attention capacity when a task is not engaging their full attention, in order to aid focus.

Bullying

Some autistic DME children cannot comprehend why interests, thoughts or appearances adapt to suit popular culture. This means that their special interests, unique fashion style, or potential problems with social communication (e.g., missing sarcasm in others even if able to use them themselves), may leave autistic DME children vulnerable to targeting by bullies. Many children who are bullied may find it difficult to fully explain what is happening to them. This problem may be compounded in autistic children by a lack of understanding that they *need* to tell someone that there is a problem, or difficulty in knowing *how* to express that there is a problem. There may be a misconception that because they know it is happening, that everyone is also aware. Parents and teachers need to be extra alert to changes in behaviour and to when they should offer support.

Communication

It is of vital importance that autistic DME children are given as much support and understanding as possible in the area of social communication. One of the first lessons that parents or teachers need to learn is, to tailor their language so that metaphors are rarely used - phrases like “keep an eye on something” may be unfathomable to an autistic child. Clear communication and simple instructions are of paramount importance, try to explain what to do instead of what not to do (e.g., “please walk in the hall”, as opposed to “don’t run in the hall”). This is necessary even if the child themselves is understands and uses sarcasm for example, as they may find it difficult to pick up on it in others.

Compliance

Some autistic DME children do not conform well to social norms, and as such, they do not comply as peers normally do. It is necessary not to take this personally and to explain reasons behind any requests, including how and why they will affect them. Punishment usually fails to achieve deterrence in autistic DME children, as they fail to see the cause and effect of imposed punishment. It is better to use natural consequences when possible and/or Social Stories to establish a desired behaviour in specific circumstances.

Flexibility

Autistic DME children may be generally inflexible in their thinking and in their way of doing things. While some learning in this area can be gently scaffolded, it is the adults around the child, and in some cases, peers who need to act flexibly.

Generalisation

Because autistic DME children are extremely bright in one or more specific areas (e.g., perhaps they are studying quantum physics at home) but are unable to generalise their learning to other areas, they will need support to make cross-themes or cross-subject connections (e.g., applying what they know about physics to the age-related science taught at school). However, once these are pointed out and internalised, they are highly likely to remember them. Nevertheless, it is important that the expectations of teachers about generalisation are managed.

Group Work

HLP children often struggle with group work due to their advanced understanding but lack of skill in managing a group; for children who are also autistic, who may struggle with conforming to social norms and social communication, these differences can be exacerbated. Teachers need to be highly selective when choosing peers for a DME child to work with in group work, they need to give clear instructions of how to divide the group work and to be prepared to mediate and/or model how to work within a group.

Interests

Make the best of specialist interests by using them to introduce learning in all areas, e.g., work on maths about space, read and write about the planets, buy clothes with planets on, etc. use the theme to highlight comparisons, for example, a family unit can be compared to the solar system, the galaxy to their community and the universe to their country.

Motor Skills

Another area in which many autistic DME children may require support is motor skills, both fine motor and gross. Handwriting can prove to be a very difficult task and despite having the intellectual and oral ability, autistic children who are DME may struggle with pencil grip, hypermobility, core control, etc. and become very anxious when given a task involving writing by hand. These children tend to thrive when allowed to touch type. Physical Education is another area that they may find challenging, particularly when they involve ball skills, as their gross motor skills and hand-eye coordination may be under-developed in comparison with their peers.

Routine

Autistic DME children may thrive on repetition and routines and even slight disruptions could upset them considerably. An awareness of how an autistic child may feel or react to a change in their routine is a starting point in preparing them when change is inevitable. Visual schedules could be used for daily timetables, checklists for step-by-step processes (e.g., change for PE), or strategies like “first X, then Y” (e.g., first homework, then play).

Sensory Sensitivity

Some autistic DME children can suffer greatly from sensory overload, which can be particularly problematic when away from the comfort of home. The school environment (in the class, lunch hall and playground), journeys on public transport or shopping in a supermarket can be unpleasant experiences as noise, smells, lighting etc. are perceived with high intensity. Although a complete avoidance of bright lights, loud noises, strange smells, and uncomfortable textures might be what they may want, this is counterproductive and impossible in practice. However, some adjustments can be offered in such ways as a different space for lunch, a safe space in the class or outside it, earplugs, etc. It may be worth contacting an occupational therapist who is also qualified to offer Sensory Integration Therapy, to help an autistic child with extreme sensory overload.

Transitions Between Activities

HLP children enjoy a number of special interests which can consume most of their time. To an autistic DME child, their special interest may provide them with incomparable enjoyment; any interruption whilst engaged in their chosen activity may be likely to cause considerable anxiety resulting in possible emotional or physical outbursts. Instead of interrupting the activity, let the child know that they have 5 more minutes (and use a visual timer) or that they can finish two more sequences before moving on to the requested activity. Because autistic DME children tend to adhere to rules, a timetable that clearly states free time and, for example, dinner time can be useful in easing anxiety around transitions.

Transition To and From School

Transition into school from home can be particularly difficult as an autistic DME child may experience it as an extreme change. If this becomes an issue, ensure that there is a welcoming person or activity (based on the child's choice) available as soon as they arrive at school.

Transition to a new or secondary school can be particularly challenging. Not only are the location and building different, but children often need to adapt to dealing with different teaching styles and potentially an increased number of pupils who may make halls and communal areas considerably noisier and stressful. For those who struggle with spatial skills, they may fear getting lost between classes. Having an inset day just for SEN students, having a safe space and a buddy can help.

Choosing a School for DME Child on the Autism Spectrum

Because of the differences outlined above, when choosing a school for an autistic DME child, it is important to consider the following policies of the school: ¹⁹

1. The Special Educational Needs (SEN) and/or Inclusion policy
2. The whole school policy on Bullying and/or Behaviour Management
3. The Gifted and Talented/Academically More Able Policy

This is because DME children require support in several different areas simultaneously; one is not more important than the other.

Initially, school can appear to be a very hostile environment to an autistic child. Compared with the relative comforts and calm of their home environment, school, in contrast can feel loud, chaotic, with bright lights and colours, odd smells, strange textures, sudden noises and, most importantly, many people (sometimes unpredictable) with whom they must interact. However, with the right support from the school's SEND Coordinator (SENDCo) and the member of staff with responsibility for academically more able pupils, it can be possible to make certain adjustments to support autistic DME children. This requires an unwavering commitment on the part of the school to work with parents to fully support all the child's needs, to ensure that the child's experience of school is, overall, a positive one.

Conclusion

For autistic children with high learning potential, the world outside of their familiar comforts and routines of home and support of their parents may feel like a very unwelcoming place. It is important for parents, teachers, and professionals to understand these children's strengths as well as their weaknesses and to try to make their day-to-day life as positive as possible, by providing the appropriate level of challenge as well as consistent support for their needs.

Potential Plus UK regularly supports parents whose children are experiencing problems with sensory, organisational, handwriting, friendship, or bullying issues. It can be a daunting prospect for parents to consider whether their children are autistic or are simply experiencing certain social, organisational, and sensory difficulties due to the extreme asynchronous development that can be experienced by children with high learning potential. However, a medical diagnosis of autism, for those who have it, can be only way to ensure that much-needed support, understanding and specialist (both SEN and HLP) provision is available to the children who would really benefit from it.

To give feedback on this fact sheet, please go to: <https://www.surveymonkey.com/s/Factsheetfeedback>

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