Autism and Education

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Abstract

Education has a dual role in autism: compensating for failures in intuitively understanding and benefiting from the social world, and providing access to culturally valued skills and knowledge. Professionals need an understanding of autism to identify special needs accurately and to provide appropriate education. Autism presents particular challenges to inclusion but can be managed in different settings. Autism-specific education needs to be specified carefully rather than just claimed.

Introduction

Originally autism was regarded as a psychosocial disorder and 'treatment' was largely clinical, with many children excluded from education. This changed when the following occurred.

- Children with intellectual disabilities, including some with autism, were admitted to education.
- The first schools for children with autism demonstrated that such children could make substantial progress in a suitably adapted environment.
- Autism was recognised as a developmental disorder with a biological base (1), and a particular information processing style (2).
- Autism was recognized as a spectrum disorder (3) encompassing a wide range of intellectual ability.

The current focus is on the what, where and how of this education.

Identifying educational needs in an atypical, heterogeneous, population

Educational needs are individual, not solely determined by medical categories (4). This entails educational assessment of individuals, yet this remains problematic. Understanding behaviour is based on instinctive empathetic processes, supported by experience and professional knowledge of typical development. Typically developing individuals do not have instinctive understanding of the atypical any more than the atypical have instinctive understanding of them. This applies to all parents, and professionals. Thus, there is a mutual problem of empathy with those on the autism spectrum. The assessor must understand how autism may be influencing the behaviour displayed, in order to not make assumptions based on typical development.

Most individuals on the autism spectrum will have additional difficulties that influence their behaviour and learning style. Educational assessment is thus a complex activity, often requiring multidisciplinary input. Teachers and others need initial training to understand autism and any other developmental or mental health problems, and regular access to more 'expert' support, as needs change.

The Role of Education

A core aspect of autism is the failure to instinctively recognize and respond to social signals, taking account of context. Human brain development largely happens under the influence of the child's experiences, shaped through 'social tutoring', enabling typically-developing infants to understand and react appropriately to the world around them (2). Children with autism are truly 'in a world of their own' in that they have to try to make sense of the world for themselves. This is almost impossible; most find the social world deeply confusing and even frightening. The more intellectually able may develop strategies to 'get by' but will have difficulty taking account of the relevant context or adjusting to

situations that appear illogical. This group often suffers most in school, where academic ability leads teachers to assume social and communication understanding, and attribute failures to behavioural problems. Those with additional learning disabilities may not be fully understood, but their obvious difficulties are recognised as such.

If social understanding is not being acquired instinctively, it needs to be taught explicitly. This goes beyond teaching social skills. Children with autism need to be taught all the social understanding and responsiveness to social signals that underpin social skills before they can acquire flexible skills and not just rigid patterns of behaviour. This is a key aspect of the educational needs for anyone on the autism spectrum. This 'cognitively-acquired' social understanding may never be as effective and fluent as the instinctive birthright of the neurotypical, but early education in this is likely to be most effective. There is no compelling evidence that autism can be 'cured' in this way but there are reports of some considerable success, at least at a behavioural level (5,6). Ethical concerns are whether this is an appropriate goal, rather than appreciation of their strengths and helping them to develop on their own terms (7), but there is general agreement regarding the need to reduce fear and confusion for them and for their carers.

Education aiming to compensate for the lack of intuitive understanding addresses the therapeutic educational needs of those with autism (8). However, education is also a right to the skills, knowledge and understanding that are valued in their society and that will enable participation in, and acceptance by, that society (9). Quality outcomes in adulthood are assisted by possessing marketable skills (10), which means enabling access to the academic curriculum and developing interests and talents.

What is 'specialist' autism education?

Parents will often seek, and service providers claim, 'specialist autism education', but there is little consensus about what this means. All the stakeholders in the education of those with autism (11), however, agree that educators should have an understanding of autism. Additional expectations are that educators know of, and can apply, 'evidence-based practice' in the form of strategies and teaching approaches, including environmental adaptations (12). Attempts to identify 'evidence-based practice', however, often take a clinical rather than educational approach (13). They have evaluated whether particular interventions lead to more improvement than other interventions, or 'treatment as usual'. This is valid when introducing a particular intervention into a service, whether at national or local level, and for those marketing particular interventions. Yet such evaluations often ignore the rationale and how they fit what is known about the learning needs of those with autism (14). Nor do they address educational concerns. For parents and practitioners, the question of concern is not about particular interventions but rather about a particular child, i.e. what interventions best fit the needs of this child? Mesibov (15) has articulated this as the difference between 'evidence-supported treatment' versus true 'evidence-based practice', which pays attention to the treatment evaluations but also includes individual needs, the assessment of the environment and the process of the intervention.

For many children the 'best' approach is unlikely to be a single intervention (16) but an appropriate blend of interventions to meet individual and developing needs. Many successful early interventions incorporate several different elements (17) and more are being developed, based on common elements of several valued approaches (18).

Research on Education for Autism

Most scientific research in autism education is concerned with the evaluation of early intervention; features that are found to be helpful are:

- explicit structure
- visual rather than speech cueing
- involving parents
- building on the child's interest

In all evaluations, some children are found to benefit while others do not (13,16). Most evaluations are of limited duration so there is little evidence of long-term benefit.

Research of school-based education may be of particular interventions, usually within the therapeutic curriculum e.g. social-skills training. A recent study found that pupils with autism benefited more from a structured programme, involving a co-operative building task, in which the rules for collaboration were clear, than from a programme focused directly on social skills (19).

Many school interventions are used because of the endorsement of practitioners, rather than through scientific evidence, which is usually at the case study level. Good quality case studies give contextual details (including child characteristics) that enable parents and professionals to make judgements about their suitability for the child with whom they are concerned. Such studies may identify common themes, which can then be tested more scientifically. General evaluations of 'good' educational practice in autism often use data from school inspections and the opinions of relevant stakeholders (20).

Educational inclusion

Expertise in autism education has developed alongside a movement for inclusion. Autism may present the most challenging situation for educational inclusion (21,22), and there is little scientific evidence of the benefits or disadvantages of educational inclusion for lifetime social inclusion. A variety of educational placements differ in the degree of inclusion involved.

- A European study (23) demonstrated that some countries described as 'inclusive', forms of education that would be more accurately described as 'clinical' treatment', with no contact with typically-developing peers
- Specialist schools cater exclusively for those with autism and benefit from the expertise of staff and the ability to adapt the environment. However, they may limit opportunities to learn from and with neurotypical peers and may have a narrow curriculum with low expectations. Most try to overcome isolation by having planned opportunities for mixing with neurotypical peers.
- Generic special schools may have enhanced resources for those with autism. The benefits are small classes, more capacity to adapt and access to a peer group that may be at an appropriate developmental level (e.g. also have learning difficulties). Disadvantages may be lack of autism expertise and low expectations.
- Specialist provision for those with autism may be attached to a mainstream school. This may be a co-locational specialist school, a specialist class, a unit or a resource base. This may provide the 'best of both worlds' but only if there are ways of developing and maintaining the expertise of the autism staff and if the resource is truly part of the mainstream school. Degree of inclusiveness should be flexible and managed according to the fluctuating needs of the children.
- The child with autism may attend a mainstream school with additional support. This may be a classroom aide or support from a peripatetic autism team. Success depends on the involvement of the school management team (20), the training of the classroom aides (24) and access to support. Where classroom aides are assigned to a child, often long-term concerns arise with 'learned helplessness' (25), or the aide as a barrier to inclusion (26). More success may be through the mainstream teacher receiving theoretical and practical training (27).

Post-school education

There are programmes helping children transition from school to further education or adult living (28). Some schools switch in mid-teens to a curriculum with a greater focus on future needs. This 'ecological curriculum' (29) identifies the environments in which the school graduate is expected to function, assessing the skills, knowledge and experience needed to function successfully in those environments. The teenager is then assessed for those attributes and the gap between their current status and what is needed for the future becomes the curriculum.

Many individuals with autism suffer accumulating stress in the school years, often resulting in mental

health problems. Many of these will persist into adulthood but life may become more settled in adulthood and the individual may then become more open to education. Programmes have been developed to support students with autism in mainstream, further and higher education (30) as well as some specialist educational provision. Those caring for adults with autism in residential or day services also need to value an educational approach, enabling adults to become more independent and expand their opportunities.

GP Comment.

What have I learned from this paper?

1. Educating individuals with autism spectrum disorder (ASD) is a complex process and requires multidisciplinary support, taking into account multiple needs of the individuals that affect their behaviour and learning style. Therefore teachers and school staff need relevant training and regular access to experts' support.

2. It is essential to teach individuals with ASD the social skills, including social understanding and how to respond to social signals as most individuals are confused and even scared of the social world they live in.

3. To suit their learning and developmental needs, many children with ASD would require an appropriate blend of educational interventions supported by evidence-based practice.

4. It is fascinating to learn about the concept of educational inclusion for people with ASD and about several different educational placements that exist, which include specialist schools, generic special schools, mainstream schools with specialist provision and mainstream schools with additional support.

5. Post-school education with programmes offers an opportunity for further education based on future needs of the individual and to enable independent living as an adult.

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