

FACTSHEET #7

INTELLECTUAL DEVELOPMENT, BEHAVIOUR & EDUCATION

Noonan Syndrome Association



People with Noonan syndrome show a wide range of intellectual development, but some children may be slower in their developmental milestones and need extra help at school.

The majority of people with Noonan syndrome have an IQ within the normal range but more children fall into the low-average range than the general population. In some cases, especially where there is an overlap with the CFC syndrome, there may be moderate to severe intellectual disability.

In both children and adults, difficulties with language are more common than in the general population. These can include problems with reading and spelling (dyslexia), and so some children with Noonan syndrome perform more poorly in tests of verbal ability than in tests of non-verbal ability. They can also have difficulties in explaining the meaning of words - which relies on overall reasoning ability and on vocabulary. In addition there may be problems with numeracy.

Behavioural and emotional problems

Children with Noonan syndrome are more likely to display social and emotional problems than their peers. In particular, they can tend to be inattentive. Some can find it difficult to express emotions verbally, and other issues such as mood disturbances, communication difficulties, attention deficit/hyperactivity disorder, and difficulties with social interaction have also been reported (e.g autism).

The teenage years may be difficult for any child but especially so in Noonan syndrome as they may have difficulty fitting in with their peer group as they are shorter, later

in entering puberty and may have some educational problems.

Motor coordination

Parents often report that their children are 'clumsy', and children with Noonan syndrome do have a higher incidence of suspected developmental coordination disorder than their peers.

Older children tend to have fewer problems than younger ones - clumsy children learn to adapt and manage their clumsiness but the underlying motor difficulties remain. Referral to physiotherapy and practice in specific skills, such as writing, might lead to improvements.

Self-esteem

As children with Noonan syndrome are usually of shorter stature than their peers, it might be proposed that this would affect their self-esteem - in the same way that it seems to in other disorders with short stature. However, this is not always the case and some children with Noonan syndrome can be very self-confident. Strong parental support will help to improve the child's confidence.

Education

Educational achievement varies. Many gain a GCSE or equivalent qualification, but a significant proportion with more marked difficulties do not attain a qualification.

A study in 2007 found that:

- 43% gained a GCSE,
- 8% gained an A Level,
- 16% had a higher educational qualification.

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- About a third of adults had attended a school for children with learning difficulties.
- 20% attended a mainstream school but needed extra help.
- Of those adults who were no longer in school, 60% had a full-time job.

It is important that any affected child with delay in development should have an educational assessment at the start of their schooling. This will help families find the best placement for their child and may bring additional input from a speech therapist or classroom assistant.

REFERENCES/FURTHER READING

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