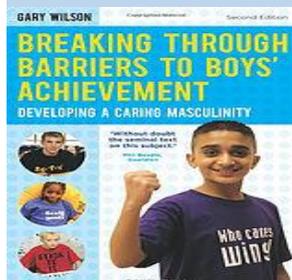
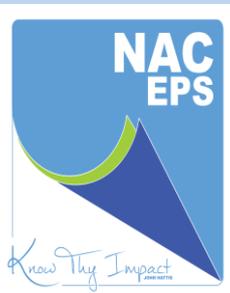


Boys Achievement and Gender: Nature or Nurture?

North Ayrshire Council Educational Psychology
Service

Research
Snapshot
April
2018



What is the local picture?

North Ayrshire data for 2015 and 2016 shows that girls outperform boys across Literacy and Numeracy at National 5 Level and at Higher Level. This trend mirrors results nationally. Data gathered in North Ayrshire for Listening and Talking, Writing, Reading and Numeracy among SIMD 1 and 2 across P1, P4, P7 and S3 show similar trends with the gap getting wider as boys get older across all of these subject areas.

What else?

There are significantly more boys accessing our external Nurture resources than girls (93% at November 2017).

There are significantly more boys referred to Stop Now and Plan (SNAP) than girls (Data from Spring term 2017, 7 boys for every 1 girl).

What does research tell us?

A global study from the Organisation for Economic Co-operation and Development (OECD) based on more than 60 countries, says there is nothing innate, immutable or inevitable about gender differences in education.

There is no "maths gene", there is nothing inherent about boys or girls doing particularly well or badly in different subjects. If boys can do better than girls in maths tests in some western countries - and then girls in Shanghai can do better at maths than those western boys, it shows the variable factor is not gender, but those education systems.

The OECD study also highlighted that girls do much more homework than boys and this has a direct impact on results. Boys are much more likely to spend long hours playing on computer games and this can have a direct impact on the likelihood of doing homework. However contrary to this, there is also evidence to suggest that homework, particularly in primary, does not have a significant impact on results (Hattie, 2009).

There may be a complex mix of overlapping influences - self-confidence, parental expectations, society's stereotypes, gender bias, and school support - which can affect how young people behave.

So according to this research nothing is hardwired by gender.

Nature or Nurture?

In the womb, boys experience a surge of testosterone between six weeks and 24 weeks that may make their brains develop differently from girls' brains. Research also suggests that the more testosterone unborn boys are exposed to, the more likely they are to be impulsive as children (Lombardo et al 2012).

Boys' brains grow slightly faster than girls' in the first three months after birth. The part of the brain that controls movement and coordination grows about 8% faster. (HNS Choices, 2014)

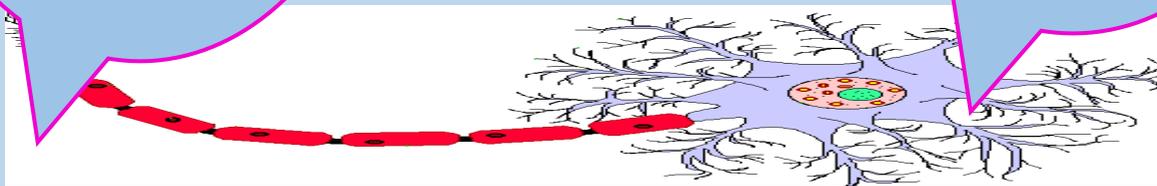
Some of the differences between girls' and boys' brains may be a result of expectations about their gender. For example, if you expect a child to be caring because she's a girl, you may direct her towards dolls to look after. As she plays with them, the part of her brain responsible for compassion and nurture will develop more.

However the brain is complex. Other factors, such as the personality traits inherited by both parents and how they look after their young child, could have an even bigger effect.

There is strong evidence to suggest that boys are more negatively affected by early environmental stress inside and outside the womb, than are girls due to different rates of brain development between the sexes. (A.N. Schore, 2017) This could account for boys increased vulnerability to affect regulation and more diagnosis of autism and ADHD in boys than girls.

Children develop connections between brain cells as they learn and experience new things. The toys children play with have an impact not only on how they see themselves and on what skills they learn but also on how their brains physically develop. Girls who are exposed to high levels of a particular hormone in the womb choose the same kinds of toys as boys (Williams and Pleil 2008). **So there may be a biological reason for girls and boys liking different toys.**

The biggest influence on a baby's language development is how much they're talked to (Hart and Risley 2003). A boy whose parents talk and read to him often may communicate better than a girl whose parents don't. On average, baby girls are a month ahead of boys in the number of words they understand. This may be because newborn girls are more developed on the side of the brain that's responsible for speech and language (Eliot 2010).



Implications for practice

- Anything we do to positively influence the attitudes and behaviour of boys will have a knock on effect for the girls.
- Raising boys' achievement is about good teaching for all children (Gary Wilson)
- Boys benefit from praise and encouragement, positive mindsets, the right sort of feedback (see Hattie, 2009) but so does everyone
- Engage and motivate
- Reduce negative labelling – labels and the language of positivity is vital
- Identify the 'ones' – give them leadership in a positive way
- Punishment and detention doesn't work – be restorative!
- Watch your language! Do not say "boys will be boys", do not praise girls for their looks and boys for their abilities
- Don't build negative reputations
- Create challenge
- Remember – boys may need more cuddling and kindness as babies – not less

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