

## Teenage brain development and mental health

### About this briefing paper

As part of our [Fostering Communities](#) programme, we will be producing a series of briefing papers for the fostering community in Wales, which will cover a range of relevant and useful topics.

This briefing paper will provide a short introduction to teenage brain development and mental health. It includes exploration of what aspects of the evolving brain and cognitive processes affect development, alongside the other factors that can influence and shape how a young person matures. What is mental health, why is it important to have good mental health and some information about mental health illnesses and statistics in children and young people.

### The Fostering Communities programme

[Fostering Communities](#) is a national programme of improvement and support led by The Fostering Network in Wales and funded by the Welsh Government from 2020 – 2023. The programme will support looked after children and their foster families throughout Wales, by improving wellbeing outcomes for children and increasing the competence, confidence and motivation of the fostering workforce.

The programme is underpinned by a fostering community shared power model, built around workstreams and interventions, which will aim to improve wellbeing, in line with the Social Services and Well-being (Wales) Act 2014.

Through our bespoke programme of work, we will improve the experience of looked after children in Wales, support foster carers to provide permanent, stable and aspiring homes, and ensure that children in foster care are able to make a positive and valued contribution to their own wellbeing. Briefing papers for all the programme workstreams/projects are available upon request.

### Introduction

As adolescents enter puberty, there is a lot for them to contend with and many factors impact on their development.

We know that teenagers change rapidly as they mature, and the impact of hormonal changes can affect their emotions and everyday routines, such as their eating and sleeping patterns.

There are also many external factors in today's society that have major influences on how teenagers can live their lives, as well as how past trauma or life events may have impacted on them.

It can, therefore, be difficult to distinguish the difference between a developing mental health issue and normal teenage changes. It is important to establish if those changes; such as being secretive and not wanting to take part in education or activities, is causing them to withdraw and what that could mean.

As foster carers, you will be living with these young people and potentially understanding why some things may be 'normal' development, as opposed to poor behaviour or a lack of care or interest.

## **Teenage brain development**

Adolescence can generally be broken down into stages, with young people going through Early (ages 11 to 14), Middle (ages 15 to 17) and Late adolescence, (18 to 21). The main factors affecting development are physical, social, cognitive and emotional.

Physical changes include noticeable physical growth and development of body hair for both sexes and additionally for boys, their voice breaking and deepening, erections and wet dreams, with girls beginning menstruation.

Social, emotional and cognitive changes include how they prioritise relationships; with friends often becoming more important than family. They start to develop their own views which can often lead to friction or arguments with parents/carers. Developing their own identity, which can include experimenting and taking risk behaviours never displayed before. There may be an emergence of 'mood swings', with some young people displaying over-confidence or losing confidence and sometimes becoming quite vulnerable.

The brain undergoes massive changes; neural 'growing pains' as a teenager, it becomes stronger faster and more sophisticated by the time it has been 'completed', in reality it never stops developing, changing and pruning.

Sleep is vital to everyone, but especially for teenagers, as during sleep the pituitary gland releases an essential growth hormone needed for development. During puberty, teenagers' sleep clocks get pushed back so they don't start producing melatonin (sleep hormone) until around 1.00am, hence potentially staying up late, as they're not tired and then not wanting to get up as the cortisol has not kicked in to wake them up properly.

Their brains can take longer to mature. Adults know how to make decisions by

evaluating choices and weighing up consequences, they do this with their pre-frontal cortex. This is responsible for impulses, emotions and forming judgements, those neurons communicate with the other parts of the brain. However, the pre-frontal cortex is the last part of the brain to develop and may not be fully developed until their early 20's.

As the brain develops, connections also start to be lost, as the brain 'prunes' synapses that are not used, so it is important to encourage use as a teenager. Use it or lose it. Learning a language, learning an instrument and playing sport can help to keep a brain active and stimulated.

Teenagers may not register subtleness and may recognise emotions that are displayed on people's faces differently. They use a different part of the brain to adults and can misread expressions. Teenage actions are guided more by the emotional and reactive amygdala and less by the thoughtful, logical frontal cortex used in adulthood. So, this can lead to conflict, anger or worry, hence the 'moods'.

Teenagers do not always understand, and have the ability to rationalise, all of the emotions that they face. Teenage brains are also wired to seek reward, act out, and otherwise exhibit immaturity, but this will change as they become adults. Teenagers are more likely to develop addictions or take risks, as the reward elements in the brain becomes more highly triggered. This is at its peak in teenagers, whose reward elements are highly significant as opposed to those in adults or younger children. It is also known that the habits that develop and form in the teenage years can be the ones that last through a lifetime, so it is important to try and encourage positive choices and gently 'steer' them in the right direction.

Judgment can be impaired owing to the increased levels of hormones in their bodies, new experiences, peer pressure and emotions running riot and those may all be in competition with each other within the individual's head. There is a lot of energy needed in being a teenager, at the time when the brain may be reacting more slowly than anticipated. Teenagers adapt as they prepare for the adult world, so you could see impulsiveness as boldness or independent thinking, moodiness as new-found empathy and excitability as passion.

So, based on the stage of their brain development, teenagers are more likely to:

- act on impulse
- misread or misinterpret social cues and emotions
- get into accidents of all kinds
- get involved in fights
- engage in dangerous or risky behaviour

Adolescents are less likely to:

- think before they act
- pause to consider the consequences of their actions
- change their dangerous or inappropriate behaviours

## What is mental health?

Mental health is often seen as either not having a mental illness or mental health problems, or as having a positive sense of wellbeing and sound coping strategies.

For most people, mental health is a continuum, ranging from good mental health, through to having a diagnosed mental illness. Throughout everyone's lives, they will move along the continuum. A person with good mental health will feel the ability to control their emotions, be able to think, reason and remember, and make and sustain positive relationships with people around them, in a variety of settings.

## Why is it important to have good mental health?

Mental health influences how we think and feel about ourselves and others, and how we interpret events. It affects our capacity to learn, to communicate and to form, sustain and end relationships. It also affects our ability to cope with change, transition and life events; for example, moving house, experiencing bereavement or having a baby.<sup>1</sup>

Children, who are deemed to be mentally healthy, develop resilience, emotional intelligence, empathy and coping mechanisms to manage disappointment or negative emotions.

## How common are mental illnesses in young people?

The most recent British Child and Adolescent Mental health survey, carried out by the National Centre for Social Research, the Office for National Statistics in 2017, found that one in eight (12.8%) 5 to 19 year olds had at least one mental disorder when assessed.<sup>2</sup>

The survey also found that of 9,117 children aged 5 to 19:

- One in twelve (8.1%) 5 to 19 year olds had an emotional disorder, with rates higher in girls (10.0%) than boys (6.2%).
- One in twenty (4.6%) 5 to 19 year olds had a behavioural disorder, with rates higher in boys (5.8%) than girls (3.4%).
- About one in sixty (1.6%) 5 to 19 year olds had a hyperactivity disorder, with rates higher in boys (2.6%) than girls (0.6%).
- About one in fifty (2.1%) 5 to 19 year olds were identified with one or more of these other types of disorder: 1.2% with ASD, 0.4% with an eating disorder, and 0.8% with tics or another less common disorder.<sup>3</sup>

The same survey found that among children with a disorder, around one in five reported waiting over six months for contact with either a mental health specialist (20.7%), a physical health specialist (21.6%), or for educational support services (21.9%).<sup>4</sup>

It is also important to recognise that many young people with common mental health illnesses do not seek any professional help, so there may be many more who are undiagnosed and struggling to manage on their own, or who cannot express themselves to gain help and support.

### **Impact of mental illness on adolescents**

Remember, it can be difficult to distinguish the difference between a developing mental health issue and normal teenage changes. Teenagers are changing rapidly as they mature. They are experiencing hormonal changes, many become secretive, moody, withdraw, experience changes in eating and sleeping patterns, all as they develop their independence.

It is important to establish if those changes; such as being secretive, not wanting to go to school or take part in activities and withdrawing, are from you as foster carers, or are from everyone. Having best friends or a group who all go around together and only talk and tell each other things whilst just 'hanging out', is relatively normal.

Many adolescents may also not know that they are developing symptoms of mental health issues. They may feel embarrassed and scared, as they do not know what is happening and they cannot always control it. They could be worried that they will be singled out for attention seeking and be teased.

Despite increasing positive recognition for having and seeking support for mental health illnesses or issues, there is still societal stigma. This is heightened for many teenagers as they become acutely aware of their own image and what people say. There are also many more forums that they can be identified through: phone apps, social media as well as their peer groups. It is important to check that these are appropriate or legitimate sites, as some can be used to encourage further negative thoughts and feelings through suggestion, bullying or coercion to negatively experiment. These groups may be found through the internet - Facebook, Snap Chat, Instagram and You Tube are some of the most popular.

### **Impact of mental health issues on adolescent development**

- Experiencing a lack of concentration/motivation can lead to difficulties in cognitive development.
- Not attending education can lead to low self-esteem in the future.
- Withdrawing from family and friends can lead to poor psychological and social development.
- Misuse of substances can interfere with normal brain development and lead to longer term impairment.
- Significant weight loss (for young women) can lead to issues of fertility.

Most teenagers go through their adolescence without ever experiencing mental health issues; they are simply learning their place in the world and may make some mistakes along the way.

### **Resources and further reading**

Highlighted below are some useful places to read further about the topic. Do not forget that you can access support from many sources, your social workers and local authority, GP surgeries and resources and school pastoral teams.

The Department of Health published a report in 2015: *Future in Mind*, which outlines a vision for achieving better mental health provision for children and young people by 2020.<sup>5</sup>

<http://ourvoiceteen.blogspot.co.uk/2012/06/my-teenage-brain-takes-that-as-insult.html>

- <sup>1</sup> Friedli, L. Scottish executive national programme for Improving Mental Health and Wellbeing: Concepts and definitions'.  
[http://www.taysidemindset.org.uk/documents/Terms & Definitions.pdf](http://www.taysidemindset.org.uk/documents/Terms%20&%20Definitions.pdf)
- <sup>2</sup> <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017>
- <sup>3</sup> <https://files.digital.nhs.uk/A6/EA7D58/MHCYP%202017%20Summary.pdf>
- <sup>4</sup> <https://files.digital.nhs.uk/A6/EA7D58/MHCYP%202017%20Summary.pdf>
- <sup>5</sup> Gov.uk <https://www.gov.uk/government/publications/improving-mental-health-services-for-young-people>

The Welsh Government has an online mental health toolkit for young people.

<https://hwb.gov.wales/repository/discovery/resource/e53adf44-76cb-4635-b6c2-62116bb63a9a/en>

## How The Fostering Network can help

The Fostering Network is the UK's leading fostering charity, bringing together everyone who is involved in the lives of fostered children to make foster care the very best it can be.

## Get in touch

For further information about our work in Wales, please contact Maria Boffey, Head of Operations. [maria.boffey@fostering.net](mailto:maria.boffey@fostering.net)

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