

Child development ages, stages and online behaviour

Overview of research and evidence

8 May 2024



Introduction

1. Policy Context

Under the Online Safety Act, Ofcom is the regulator for online safety in the UK, Under the Act, online services that are accessed by children – such as social media apps, instant messaging platforms and gaming sites, as well as search engines and pornography sites – are required in a range of different ways to take steps to better protect children online.

After carrying out a children’s access assessment, services in scope are required to carry out a risk assessment, including an assessment of **“the level of risk of harm to children presented by different kinds of content that is harmful to children, giving separate consideration to children in different age groups.”**

2. Ages and Stages: Child development and online behaviour review

In this review, we **examined a variety of sources** to understand **key ages and stages in child development and online behaviour**, and the **implications for risk of harm online**.

Through this we identified ages to group children by, and key themes relating to their behaviour and risks online.

The data used in this slide pack is from Ofcom’s long-running Children’s and Parent’s Media Literacy tracker, including some bespoke age group analysis, unless otherwise stated.

Ages and developmental stages

There is no perfect way to group children into developmental ages and stages. The most appropriate grouping is context dependent, and no age categories are absolute as children can develop at different rates.

Method:

We carried out a review of child development and online behaviour to allow us to consider the risk of harm to children in different age groups.

We reviewed key reports outlining different online safety considerations at different ages and developmental stages. This includes the [ICO Children's Code](#).

We considered evidence of differences in online behaviour at different ages and stages, in particular Ofcom's Children's and Parents' Media Literacy tracker (See Appendix for List of Key Sources).

We also considered other key contextual factors, such as ages at different stages of education.

Age Groups:

Based on our review of key areas of change in a child's development and online behaviour we propose five stages for use in online safety work.

This aligns with the ages used in the ICO Children's Code. Given the close relationship between ICO and Ofcom's area of work, using similar age groups helps to bring coherence towards data protection and online safety work.

Stage of development

- Pre-literate & early literacy (0-5)
- Core Primary School years (6-9)
- Transition years (10–12)
- Early teens (13-15)
- Approaching adulthood (16-17)

Overview: Key considerations at each developmental stage

A time of significant growth and brain development.

Children are heavily dependent on their parent/carer.

Digital use largely **mediated** by adults, but some independent use.

Digital habits start to be **formed**.

Children now in mainstream education.

Increasingly **independent**.

Peer influence begins.

Digital habits become ingrained.

Rapid cognitive and emotional development.

Limited ability to interpret information/intent.

Critical age for development - **puberty** typically begins and leads to physical changes.

Period of rapid social and biological transition.

Many **transition** to secondary school.

Increasing **device ownership** and **independent use**.

Peers and **'fitting in'** increasingly important.

Parental influence declining

Impulsive and **risk-taking** behaviour may begin with the onset of adolescence.

Early teens
(13-15)

Children gain personal responsibility and consent over their own **personal data at 13**.

13 is the minimum age for many social media sites.

Critical age for **mental health** challenges.

Great shift in behaviour and capabilities.

Neurobiological changes = **variable emotions**.

Identity exploration and **testing boundaries**.

Peers influence greater than parents.

High risk taking and impulsivity.

Exploring intimate relationships and **sexuality**.

Approaching adulthood
(16-17)

Children in the UK gain **new rights and freedoms at age 16** include being able to leave school, leave home, earn the minimum wage, and consent to sex.

Increasingly independent in all aspects of life.

Mental health challenges can intensify.

Engaging in **adult activities**, and perceive themselves as mature.

Cognitive and emotional processing **still not fully developed**.

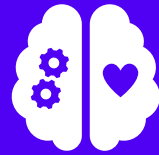
Transition years
(10-12)

Pre-literate and early literacy (0-5)

Core primary school years (6-9)

Child development and online behaviour

We outline nine themes in child development and online behaviour:



Cognitive development



Neurobiological changes



Impulsivity and risk taking



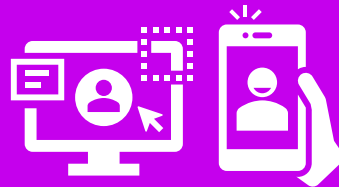
Self-image and self-esteem



Increasing peer influence



Natural curiosity in romantic and sexual relationship



Online presence and digital habits



Encountering harmful content



Parental supervision

Cognitive development



Young people's limited critical thinking skills and **overconfidence** in their abilities may put them at **risk** of being **mised** by others and information online.

May lead to **potential contact risks** e.g. **fraud, grooming** or a susceptibility to **mis or dis-information**.

Overconfidence may mean they don't seek help.

Young children have **limited ability** to make **decisions** and to **critically evaluate** information or intentions.

Rapid development in their **cognitive** and **emotional** skills.

Pre-literate and early literacy (0-5)

Core primary school years (6-9)

Children show **increasingly sophisticated cognitive skills** and start to question information. They continue to **develop critical thinking skills** and ability to **understand other perspectives**.

Transition years (10-12)

Early teens (13-15)

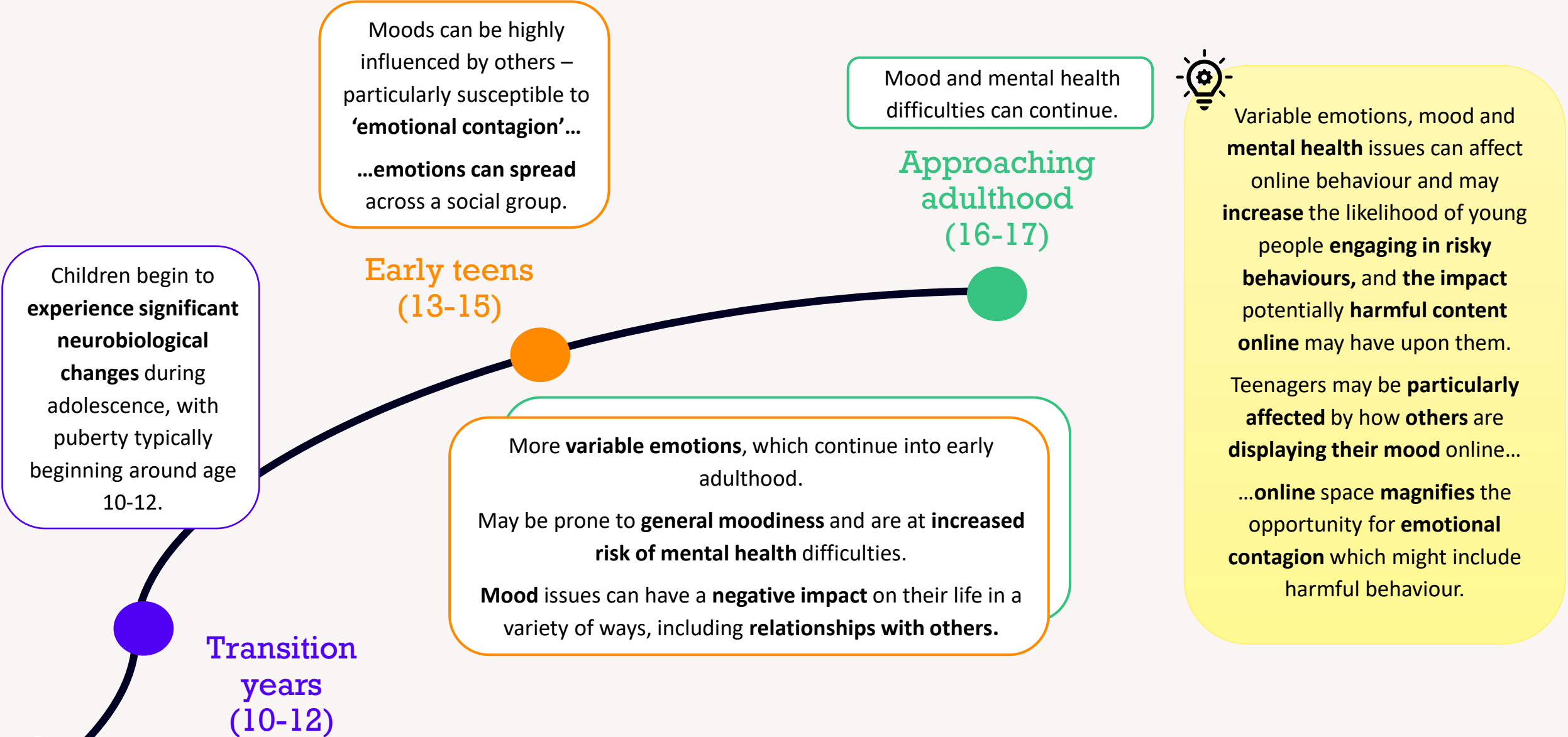
Tend towards **idealised** and **polarised thinking** and may **overestimate** their **ability** to **interpret information**.

This may result in **misinterpreting** the **intentions** of others and **overestimating** their own **abilities to cope** with challenges that arise.

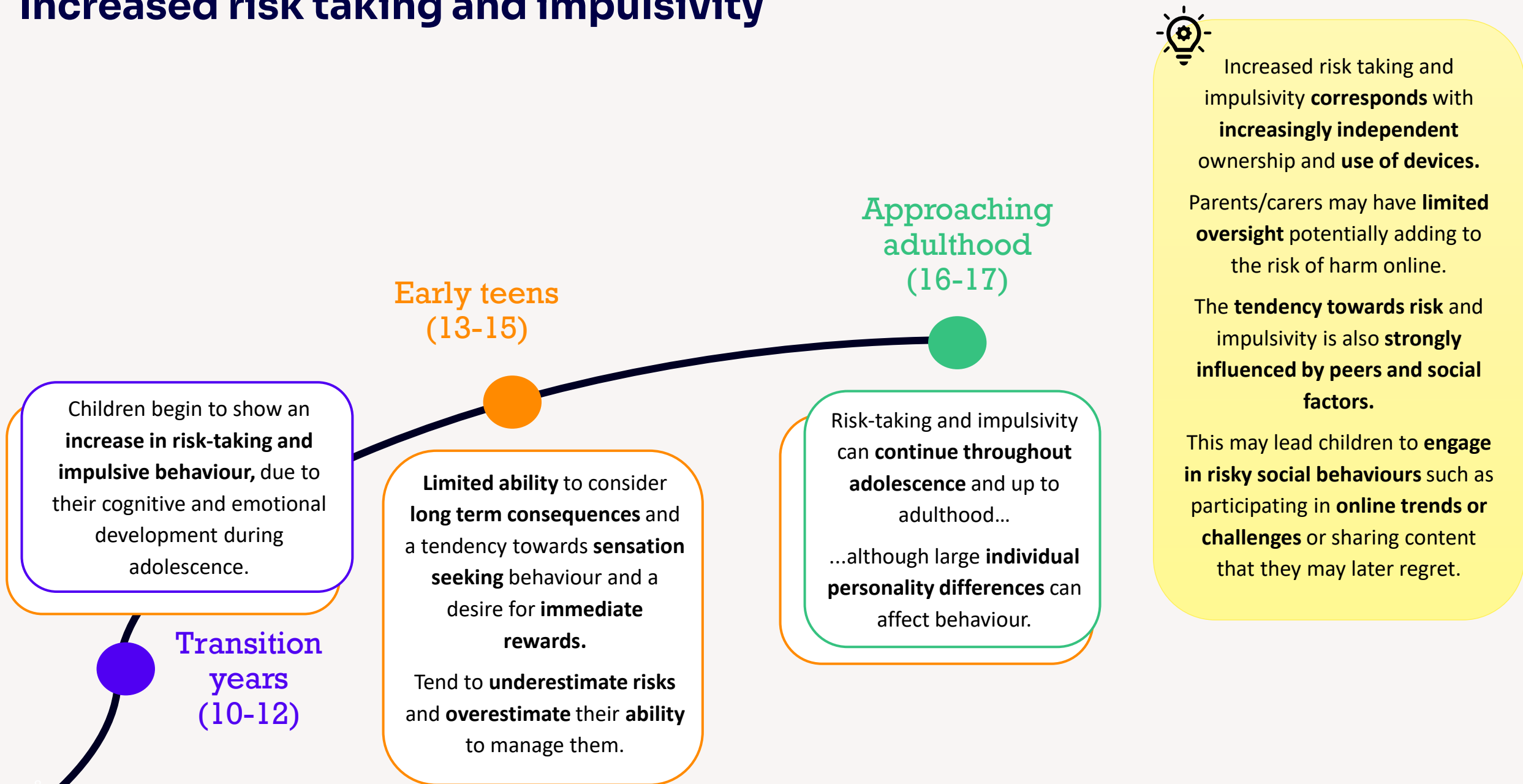
Approaching adulthood (16-17)

May present as adult-like, however **cognitive** and **emotional** skills are **still developing** into their mid-20s.

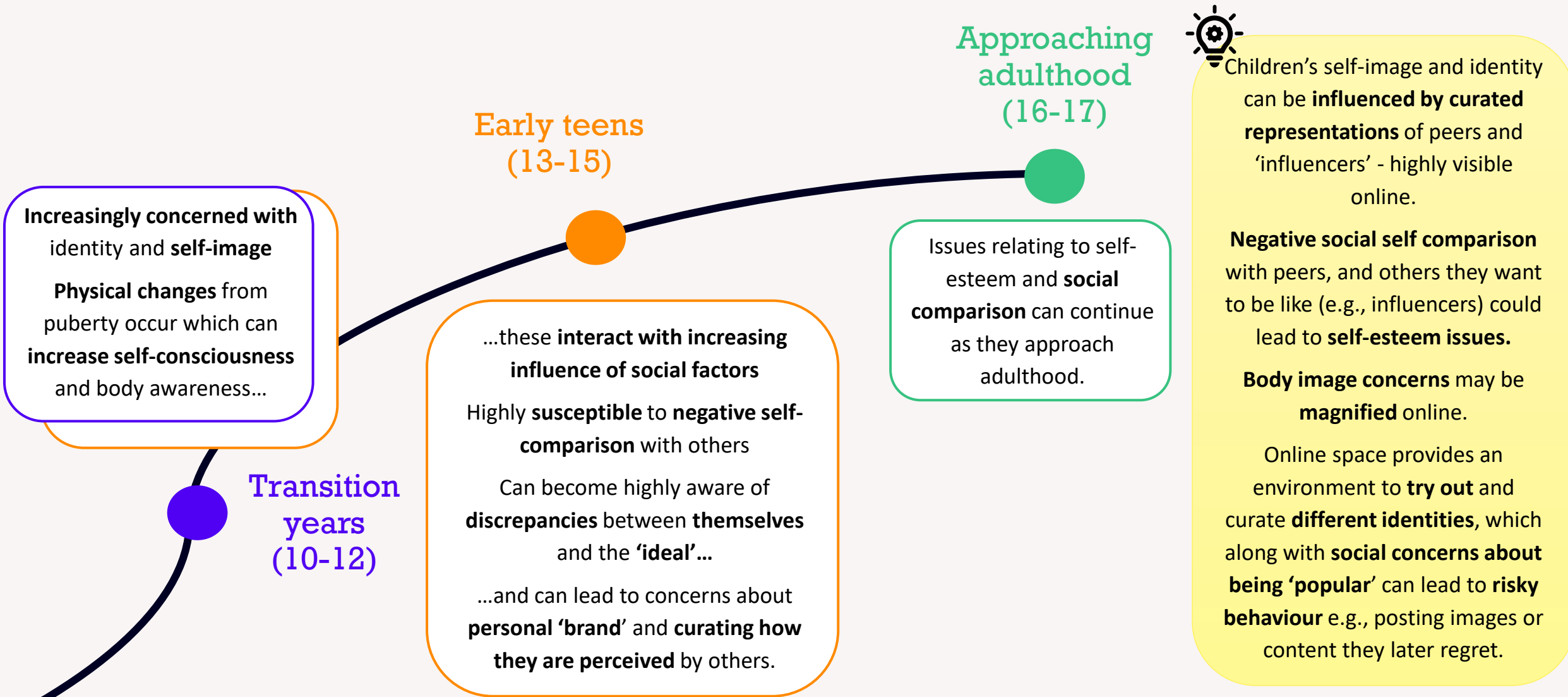
Neurobiological changes impact emotions and mood



Increased risk taking and impulsivity



Self-image and self-esteem: vulnerable to comparison



Increasing peer influence



Peer influence and the desire to fit in/gain popularity could:

- encourage access to **inappropriate sites/underage** use of **social media**
- encourage **risky behaviour (e.g. online trends)**

Peer influence can interest with increased risk-taking tendencies and impulsivity.

Parents/carers primary source of influence and support.

Children largely **receptive to messages** and rules from voices of **authority**.

Pre-literate and early literacy (0-5)

Forming **friendships/peers** become important and **influential**.

But parent influence remains strong.

Core primary school years (6-9)

Transition years (10-12)

Behaviour driven by strong **desire to 'fit in'** or a **'fear of missing out'** (FOMO).

Use **social media** to interact with peers/build networks/**create identity**.

Peer influences and social pressure impact behaviour.

68% of 10-12s say they use social media and messaging apps to **feel closer to their friends**.

20% of 8-12s are signed up to social media with an age of 18 or older.¹

Online space key in maintaining **friendships**.

Early teens (13-15)

Peers highly influential
Children seek greater **autonomy** and **independence** and may increasingly **rebel** against and test parents' **rules**.

Of children who report having multiple profiles on apps/sites, almost a quarter say the reason is to have one for their closest friends to see only.

Approaching adulthood (16-17)

Peer influence remains strong.

Intimate relationships become **important**.

May **struggle to navigate complex relationship** dynamics.

May resume accepting parental influence, when they choose to.



Important to consider the appropriate **'messenger'** in relation to **online safety advice** as children get older.

Natural curiosity in romantic and sexual relationships

Online sexual safety issues can start to arise at this age.

Half (51%) of 11-13-year-olds **had seen pornography**, of which 18% reported it was mostly intentional.²

Transition years (10-12)

Begin **exploring** their **sexuality** and intimate relationships - these become increasingly important as they enter early adulthood

Sexual development and **exploration** are a **normal** part of adolescence, as is the **desire** to establish more **intimate** and romantic relationships

66% of 14-15s **had seen pornography**, of which 28% reported that it was mostly intentional.²

Early teens (13-15)

Interest in romantic relationships and **sexuality is well established**

Romantic relationships are highly important

Increasingly viewing pornography with 79% of 16-17-year-olds having viewed pornography, of which 29% reported that it was mostly intentional.²

Approaching adulthood (16-17)



Natural **curiosity**/interest in sexual behaviour exists alongside **peer pressure**, **over-confidence** and **inability** to consider longer term **consequences** – which could increase the **risk** to children **online**.

Curiosity may lead to searching for information and result in **inappropriate content** (which may affect online feeds/ algorithms...)

Desire for **intimacy** may lead to online sexual behaviour e.g. **intimate image** sharing.

Desire for romantic relationships may lead to interest in **online dating sites or apps**.

Online presence and digital habits

Most children are **online from a very early age**, 87% of 3-5s go online.

Much of children's initial online and digital behaviour is **mediated by parents/guardians**.

Children **as young as 3-5** take their first **steps towards independent** use of online devices, 54% of 3-5s **have their own profiles** on at least one app or website they use.

Digital habits start to form.

Pre-literate and early literacy (0-5)

Online presence **rises steeply to 97%**.

Digital **habits** become **ingrained**, and **mobile ownership increases** to 28% of 6-7s and 43% of 8-9s.

Online activities become more varied, including watching videos and playing games.

Children **start to use social media** with 42% of 6-7s and 54% of 8-9s on social media apps or sites.

Core primary school years (6-9)

Device ownership rises, 84% of 10-12s have their own phone, and all children in this age range are now online.

Use of **social media** becomes increasingly popular with 76% of 10-12s on social media.

Large increase in use of apps/sites for **messaging & calls**, rises to 92% of 10-12s.

Transition years (10-12)

Early teens (13-15)

Online use is largely **well-established** and **independent**.

99% have their own phone.

All 13-15s are online, and 97% have their own profile on a social media site.

19% have an adult-aged online profile.¹

98% **send messages and make calls**.

Approaching adulthood (16-17)

16-17s begin to use the internet for more online services, such as several different apps for videos and messaging.

27% of 16-17s have an adult aged online profile.¹



The **opportunity to effectively influence** digital habits (e.g. use of parental controls/rules/ boundaries) is likely relatively **small**

Once habits are ingrained, **changing behaviour** (e.g. screen limits) **may require more effort / different approach** and may result in a stronger emotional response from children

Encountering harmful content



Children are at risk of encountering harmful content at all ages, but the types of harmful content may vary as children get older and more actively engage online.

Due to being online, children in this age group do begin to be at risk of encountering harmful content.

Many children **use family members' devices** and may be at risk of seeing content that is not age-appropriate.

Children increasingly encounter harmful content.
64% of young people have viewed pornography. Of those, 1 in 10 **encountered pornographic content by the age of 9.**³

21% of 8-9s reported that people had been hurtful or nasty to them online.

Children begin to have **more independent use** of devices, and alongside a **shift in parental supervision** there is an increased risk of online harmful encounters.

1 in 4 children who have encountered pornography have been exposed to the content by 11 years.³

Transition years (10-12)

Early teens (13-15)

In this age group, children make more **independent decisions** and have **higher risk-taking** tendencies.

Sexual **curiosity** leads to children in this age group being more likely to **seek out** pornographic content than younger age group.

Other harmful content seen includes self-harm, suicide, and eating disorders.

There is an increase to exposure to hate and bullying content, with **three quarters of 13-15s seeing online hate** on social media.⁴

Approaching adulthood (16-17)

16-17s are most likely to be **viewing/posting on livestreaming services** (81%).¹

Adult profiles (18+) may increase likelihood of encountering adult content.¹

Core primary school years (6-9)

Pre-literate and early literacy (0-5)

Parental supervision

Parents predominantly use **direct supervision** to keep their child safe online (46%).

The most common forms of supervision of online use are **being nearby and regularly checking** what they do (70%) and **sitting beside them** and watching or helping them (56%).

Pre-literate and early literacy (0-5)

80% of **parents** of 6–7-year-olds, and 76% of parents of 8–9-year-olds **supervise** their children online by **being nearby and regularly checking** what they are doing.

There is a **decrease** in parents supervising by **sitting beside their child and watching** (44% of 6-7s and 29% of 8-9s).

Core primary school years (6-9)

Parental supervision changes, 9% of parents directly supervise their child online and the most common strategy becomes **asking their child** what they have been doing (78%).

52% of parents **check** their child's browser or device history, and most (99%) **speak** to their child about **online safety**.

81% of parents **have rules** about what their child can watch online, and 84% have rules about who they may contact.

Transition years (10-12)

Early teens (13-15)

Parents become **increasingly confident in their child's ability** to be safe online, 34% **trust their child** to be sensible.

69% **ask their children** what they have been doing online, and 36% **check** their child's browser or device history.

There is a **steep drop** in the number of parents having **rules** on what their child can watch (64%), or about who their child can contact (64%).



Parents increasingly rely on **more hands-off** supervision approaches such as trusting their children to be sensible. As **parental supervision drops**, children may be increasingly exposed to online harms, with their **parents unaware** of these.

Approaching adulthood (16-17)

Direct parental supervision remains low, 42% trust their child to be sensible.

47% **ask their children** about what they have been doing and 18% **check** their browser or device history.

20% of parents have rules about when and 31% have rules about how much time their child can spend online.

Appendix

Key sources informing age groupings

[Information Commissioner's Office: Appropriate age design – Annex B: Age and developmental stages](#)

[UK Council for Child Internet Safety: Child Safety Online \(2015\). A Practical Guide for Providers of Social Media and Interactive Services.](#)

[5Rights Foundation, \(2015\). Digital Childhood - Addressing Childhood Development Milestones in the Digital Environment](#)

[Children's online activities, risks and safety: A literature review by the UKCCIS Evidence Group \(2017\)](#)

Statistics

The data used in this slide pack is from Ofcom's long-running Children's and Parent's Media Literacy tracker, including some bespoke age group analysis, unless otherwise stated.

1. Ofcom, 2024, [Children's Online 'User Ages'](#).
2. BBFC & Revealing Reality, 2020, [Young people, Pornography & Age-verification](#). [accessed 23rd June 2023]
3. Children's Commissioner, 2023, [Evidence on pornography's influence on harmful sexual behaviour among children](#) [accessed 15th April 2024].
4. UK Safer Internet Centre, 2016. [Creating a Better Internet for All: Young people's experiences of online empowerment + online hate](#). [accessed 14 March 2024].