
Evaluating the Wellbeing Impacts of the Online Safety Act: a Feasibility Study

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Executive Summary



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Executive Summary



Headline finding: Used properly, subjective wellbeing measurement could be instrumental to online safety evaluation. A well-rounded evaluation requires high-quality data across multiple domains - we see subjective wellbeing as a complement to other metrics.

Section 1: Introduction

- This report explores the feasibility of evaluating the wellbeing impacts of the Online Safety Act (OSA) for children and young people.
- Wellbeing encompasses all aspects of life that are important to us. We focus on self-reported, subjective wellbeing measures.
- Capturing how children and young people experience their own lives is crucial, rather than imposing adult assumptions about what matters most.
- Wellbeing measure go beyond the absence of negatives (harms or illness) to capture the positive aspects that help children to thrive online, through social connections and learning opportunities.
- As well as being useful as a ‘final’ outcome in evaluation, wellbeing measures provide context to online safety, as either a risk or protective factor.

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Section 2: Evidence Review

- We highlight behavioral aspects in the wider wellbeing literature, which could help to develop theories of change for the OSA interventions.
- E.g., anticipatory effects and adaptation matter. We generally do not adapt to things that repeatedly draw our attention - relevant when assessing the effects of harmful content.
- There is evidence linking online harms to wellbeing, although this is mainly cross-sectional and for adults. The OSA evaluation could significantly advance international research in this area.



Section 3: Wellbeing measures

- We advise against creating new measures - there are no shortage of wellbeing measures for children. We identify the most common, pre-tested and validated scales.
- We recommend prioritising the ‘ONS4’ measures of wellbeing, especially life satisfaction, in tracker surveys. Next, ‘domain-specific’ measures that link wellbeing to online activity / safety.
- Where space allows in surveys (and for detailed intervention-level evaluation) consider multi-item scales. SDQ and WEMWEBS are leading candidates for children.

Executive Summary



Section 4: Data

- Reliable wellbeing measures are tracked in national surveys, but generally lack context on online activity/safety.
- Conversely, online safety surveys lack evaluative wellbeing questions.
- Ofcom could usefully add wellbeing questions to their own tracker surveys and other primary data collections.
- We highlight the best available surveys to support contextual analysis, and possibly to establish counterfactuals. Partnering up, e.g. with The Children's Society or other government departments, may be necessary to leverage these data for the OSA evaluation.



Section 5: Methods

- At the program level, monitoring wellbeing trends before/during/after the OSA's phased rollout is valuable, despite difficulties in establishing causal effects.
- Sample sizes for at-risk children are relatively small, limiting the use of econometric methods to control for observable characteristics.
- Randomised controlled trials (RCTs) with difference-in-differences are feasible for specific interventions.
- We emphasises ethical considerations, recommending risk assessments.

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Section 6: Value for Money evaluation

- Value for money evaluation will be crucial to ensure the evaluative evidence is instructive in future policy changes, impact assessments and business cases.
- VfM can however be treated as a ‘tailpiece’, added later in the evaluation, and so recommend ‘designing in’ a wellbeing / social value component.
- Subjective wellbeing measures lend themselves well to capturing and monetising social welfare impacts, going beyond narrow fiscal savings.
- We recommend considering wellbeing-adjusted life years (WELLBYs), as supported by the [Green Book](#).

***Thank you** for the opportunity to contribute to this important evaluation. At State of Life, we are happy to support further with dissemination to your evaluation partners, and look forward to hearing how the evaluation progresses.*

1 Introduction



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1.1 The Online Safety Act (OSA)

Ofcom: is the UK's communications regulator overseeing sectors including TV, radio, fixed-line and mobile telecoms, postal services, and wireless device airwaves.

Online Safety Act: Enacted in late 2023, designating Ofcom as the formal regulator for online safety.

Objectives:

- Protect UK users from illegal content online, including child sexual abuse material and terrorist and fraudulent content.
- Shield UK children from harmful or inappropriate content.



<https://www.ofcom.org.uk/news-centre/2023/safer-life-online-for-people-in-uk>

1.2 Ofcom's emerging evaluation strategy

Ofcom's evaluation work will consider broadly whether their interventions are leading to changes in services' systems and processes, and a safer life online for users, particularly children. This will involve several strands of work, which will include, amongst others:

- Evaluating whether service providers are assessing the risk of harm on their services and putting in place measures to address the areas of greatest risk to people, especially children
- Tracking whether users are having a better experience online as the Online Safety Act is embedded
- Understanding the impact of discrete changes made by regulated services on safety outcomes and incentivising them to embed evaluation into product development
- Evaluating the impact of regulation on businesses' costs, particularly small and micro businesses

1.3 Aims of this study

Explore **whether and how wellbeing metrics could be used to measure the impact that harmful content online** has on those who experience it, and how we might assess whether the implementation of the Act reduces harm to individuals and society, particularly children.

Three key areas:

1. **Tracking:** Assess **longitudinal impacts** of safety improvements to online services, partly due to the OSA.
2. **Causal links:** better understand how changes in 'intermediate' outcomes on services reduce harms and improve wellbeing.
3. **Evaluation:** wellbeing impacts of particular interventions made by services, including where these are introduced due to the OSA.

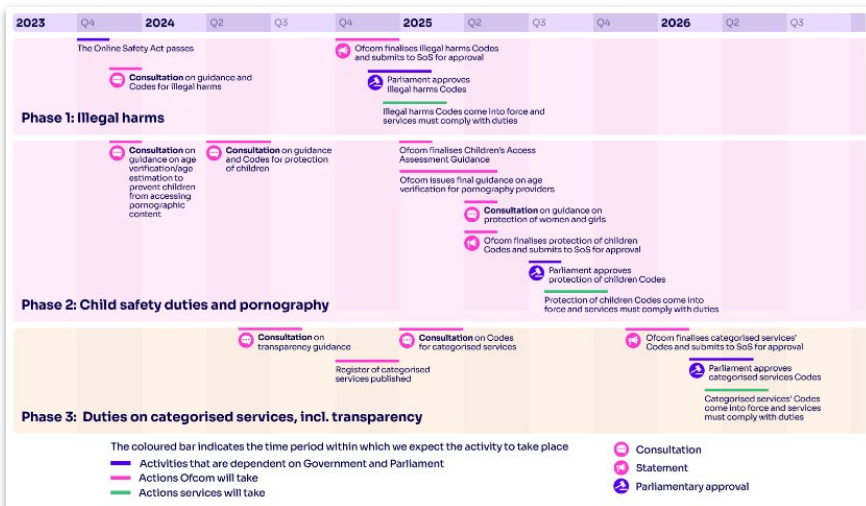
Specifically:

- identify **when measures of subjective wellbeing may be useful (and when not)** in evaluating policies / interventions / services;
- identify wellbeing **questions that would be most suitable to pose in surveys** to explore the impact of the OSA and interventions by services
- indicate what **methods** may be most/least useful given the harms the OSA seeks to target;

1.4 Focus areas

Ofcom expects all services to have appropriate measures tackling the full range of harms in scope of the Online Safety Act.

However, in the first three to five years, they particularly want to focus on ensuring that children are protected from harmful content and activity online, including pornography, that they don't face unsafe contact and that they are empowered to have control over their online experience. Thus, the focus in this study is on **children and young people (CYP)**



Primary Priority Content
Pornographic content
Suicide
Self-harm
Eating disorder

Priority Content
Abusive
Incites hatred
Serious violence
Bullying
Depicts real/realistic serious violence
Stunts
Physically harmful substances

1.5 Why wellbeing?

The OSA could be regarded as having objectives similar to a public health intervention, particularly for children.

The Magenta Book supplementary *Evaluation of Health and Wellbeing Projects and Programmes* (OHID, 2021) underscores importance of conducting evaluation when:

1. **Substantial investment** - time, financial, other.
2. Potential **risk or harm** assoc. with the intervention.
3. Approach is **novel or innovative**.
4. Under significant **political scrutiny** / high priority.
5. **Gaps: in services**, understanding how to effectively address a problem, cater to needs



OSA arguably meets all these criteria: ~ £2.5 billion cost; risks of harm; novel; under scrutiny; with gaps in service provision.

The screenshot shows a GOV.UK page with a black header containing the GOV.UK logo. Below the header is a blue navigation bar with the text 'Home > Health and social care > Public health'. The main content area is white and features the word 'Collection' in a small font, followed by the title 'Evaluation in health and wellbeing' in a large, bold, black font. Below the title is a short description: 'A guide to evaluation of health and wellbeing projects and programmes.'

<https://www.gov.uk/government/collections/evaluation-in-health-and-wellbeing>

1.5 Why wellbeing?

Wellbeing: *"how we are doing as individuals, communities, and as a nation, and how sustainable this is for the future."*

The 'ONS4':

Measure	Question
Life satisfaction	Overall, how satisfied are you with your life nowadays?
Worthwhile	Overall, to what extent do you feel that the things that you do in your life are worthwhile?
Happiness	Overall, how happy did you feel yesterday?
Anxiety	On a scale where 0 is 'not at all anxious' and 10 is 'completely anxious', how anxious did you feel yesterday overall?

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/personalwellbeingsurveyuserguide>

Advantage (vs objective health conditions): reflects individuals' views and perceptions of their own wellbeing. Respects their distinct perspectives and priorities in assessing their wellbeing. Particularly inclusive for children and young people, allowing them to articulate their experiences, emotions, and aspirations - without over-laying adult assumptions about what matters to them.

As a 'final' outcome in the OSA: wellbeing measures provide a holistic view of life domains potentially impacted by online safety: mental and physical health, social connections, trust in online platforms, community engagement, etc..

As a precursor: identify disparities in wellbeing among children and young people, informing understanding of online risks and behaviours. Low wellbeing could be a risk factor; high wellbeing a protective factor. Provides context for evaluating other (health) outcomes. Could help to explain subgroup variation, such as by age and gender.

“

“...an extensive body of evidence has accumulated on the validity of measures of life evaluation and affect. This evidence strongly supports the view that measures of both life evaluation and affect capture valid information.”

OECD (2013) | Guidelines on measuring subjective well-being

<https://www.oecd.org/wise/oecd-guidelines-on-measuring-subjective-well-being-9789264191655-en.htm>

”

1.5 Why wellbeing?

OECD (2013) review evidence on:

1. **Face validity**, e.g., response rates and time to reply.
2. **Convergent validity**, e.g., correlate with other ways of measuring wellbeing
3. **Construct validity**, predictive power.

Does not mean that measures are universally valid or devoid of limitations. E.g., consider representative and repeated sampling, question ordering etc.

Used properly, they're fit for purpose.

Supported by more than forty years of burgeoning wellbeing research (our next section).

Table 1.2. Evidence on the validity of measures of subjective well-being

Type of evidence	Sources
Face validity	
● Item-specific non-response rates.	Rässler and Riphahn (2006); Smith (2013); ONS (2011);
● Time to reply.	
Convergent validity	
● Ratings by friends and family.	Frey and Stutzer (2002); Pavot and Diener (1993); Schneider and Schimmack (2009).
● Ratings by interviewers.	Pavot and Diener (1993).
● Emotion judgements by strangers.	Diener, Suh, Lucas and Smith (1999).
● Frequency/intensity of smiling.	Frey and Stutzer (2002); Kahneman and Krueger (2006); Seder and Oishi (2012).
● Changes in behaviour.	Frijters (2000); Diener (2011); Clark, Georgellis and Sanfrey (1998).
● Biophysical measures.	Urry et al. (2004); Steptoe, Wardle and Marmot (2005); Kahneman and Krueger (2006)
● Relationships among different evaluative, affective and/or eudaimonic measures.	Diener, Helliwell and Kahneman (2010); Kahneman and Krueger (2006), Clark and Senik (2011); Diener, Wirtz, Biswas-Diener, Tov, Kim-Prieto, Choi and Oishi (2009); Huppert and So (2009)
Construct validity	
● Association with income (individual and national level).	Sacks, Stevenson and Wolfers (2010).
● Life events (e.g. impact of becoming unemployed, married, disabled, divorced or widowed).	Diener, Lucas and Napa Scollon (2006); Lucas (2007); Lucas, Clark, Georgellis and Diener (2003); Winkelmann and Winkelmann (1998).
● Life circumstances (health status, education, social contact, being in a stable relationship).	Dolan, Peasgood and White (2008); NEF (2009).
● Daily activities (e.g. commuting, socialising, relaxing, eating, praying, working, childcare, housework).	Kahneman and Krueger (2006); Frey and Stutzer (2008); Helliwell and Wang (2011); Stone (2011).

2. Wellbeing Evidence Review



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2.1 Momentary and evaluative measures

Wellbeing ‘in the moment’ or overall?

Individuals experience daily (and hourly) fluctuations in wellbeing, which can be measured by **momentary affective measures*** (e.g. how happy you are in that particular hour or moment).

Some daily experiences may impact on our momentary assessments of wellbeing without having a noticeable effect on our overall evaluation of wellbeing. An example would be a one-off cinema trip.

Momentary assessments of happiness or anxiety or purpose are capturing a different concept of wellbeing than life satisfaction - they are measuring a flow of feelings, whereas life satisfaction is measuring an individual’s assessment of how their life is. Societal norms and expectations can shape life satisfaction assessments.

We are interested in understanding the impacts of a policy, which means that impacts over years (life satisfaction) are likely to be more relevant than impacts which last minutes (momentary measures).

However, where experiences (and associated impacts on momentary wellbeing) **are frequent, this can impact on overall life satisfaction.** More frequent higher levels of happiness and purpose throughout an average day correlates with higher evaluative assessments of wellbeing.

*Wellbeing ‘in the moment’ has been measured for example with a smartphone app, which beeps and asks an individual how they are feeling in this moment and what they are doing / where they are. It can also be measured through Day Reconstruction Method (see e.g. Kahneman)

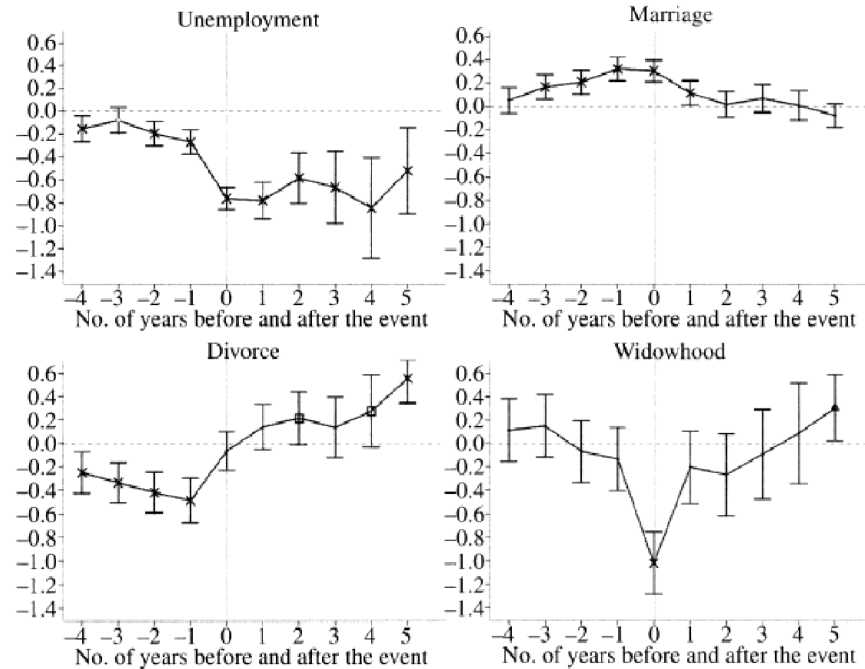
2.2 Are life satisfaction scores meaningful?

How much variation is due to things that are important, and how much due to random noise that is otherwise irrelevant such as whether or not you have had your lunch?

- To understand whether life satisfaction scores are meaningful, we need to understand how much variation in **life satisfaction** is due to long-term factors (*“chronically accessible information”*, things that are important), and how much variation in scores is due to short-term factors or random noise that is otherwise irrelevant (*“temporarily accessible information”* such as whether you have had your lunch or not, or you have just watched a funny video).
- In meta-analysis, Schimmack and Oishi (2005) estimate:
 - 80% due to chronically accessible information
 - 10% due to temporary accessible information
 - 10% due to random noise
 - Some share of life satisfaction is fixed due to genetic heritability, between 30-50% (Oishi et al., 2012)
- Donnellan and Lucas (2007) find that 36% of variation in life satisfaction is due to stable trait differences (e.g. personality) and 31% due to moderately stable autoregressive component that changes slowly over years (i.e. life circumstances), and the remaining 33% due to occasion-specific factors or random error.

2.2 Are life satisfaction scores meaningful?

Life Satisfaction scores tend to meaningfully reflect perceived changes in circumstances (Clark et al, 2008)



2.3 Adaptation: general background

Is wellbeing even relevant to measure for policy changes or do people adapt to everything anyway?

Even when measuring with an evaluative measure such as life satisfaction, we adapt to many significant or longer term changes. This means our wellbeing increases in the short term, then adjusts back to a previous 'set point'. For example, a promotion at work. Our wellbeing increases (especially in anticipation), then returns to previous levels.

Humans mainly adapt to things which can be explained (rationalised) and which don't draw attention. (Gilbert, 2008)

On the flip side, where things are **difficult to explain** and / or it **draws attention**, we don't adapt.

An example is depression – where the individual can't understand why they feel this way or where it has come from, plus they can't escape from their feelings. Another example is unemployment.

In some cases (such as unemployment) there are long term impacts, or 'scarring', where wellbeing stays lower, even after the individual has returned to employment.

2.3 Adaptation: relevance to online safety

Individuals don't adapt to changes which can't be explained and which continue to draw attention

There are some aspects of online content which individuals are likely to adapt to, such as e.g. the momentary feelings (whether positive or negative) of accessing graphic content.

However, **if** this content has an impact on mental health, relationships, or on feelings of self-worth or trust, evidence shows that individuals do not adapt to these changes, and these would have **longer term wellbeing implications**. Evidence is unclear on the link between content and these intermediate steps, but there is an evidenced link between these intermediate steps and wellbeing.

Implications will likely depend on dosage and existing vulnerability.

Theoretically, individuals would be less likely to adapt to e.g. cyberbullying, since it is difficult to explain / understand why they have been singled out and the individual will have their attention drawn to their feelings.

2.4 Can wellbeing be used for policy evaluation?

A number of **government** policies, programmes and decisions have successfully been evaluated for their wellbeing impact:

- [National Citizenship Service](#)
- Investing in [broadband](#)
- Active [Labour Market Intervention](#)(s) trialled by DWP
- Hosting the [Olympics](#)

As well as a large list of smaller-scale case studies, e.g. physical activity for adults in [social care](#), taking part in [Parkrun](#), [canals and rivers](#), [churches](#)... or hosting [Eurovision](#)!

Government's [Levelling Up White Paper](#) wellbeing mission: the 'very essence of levelling up'

2.5 Wellbeing vs. Mental Illness

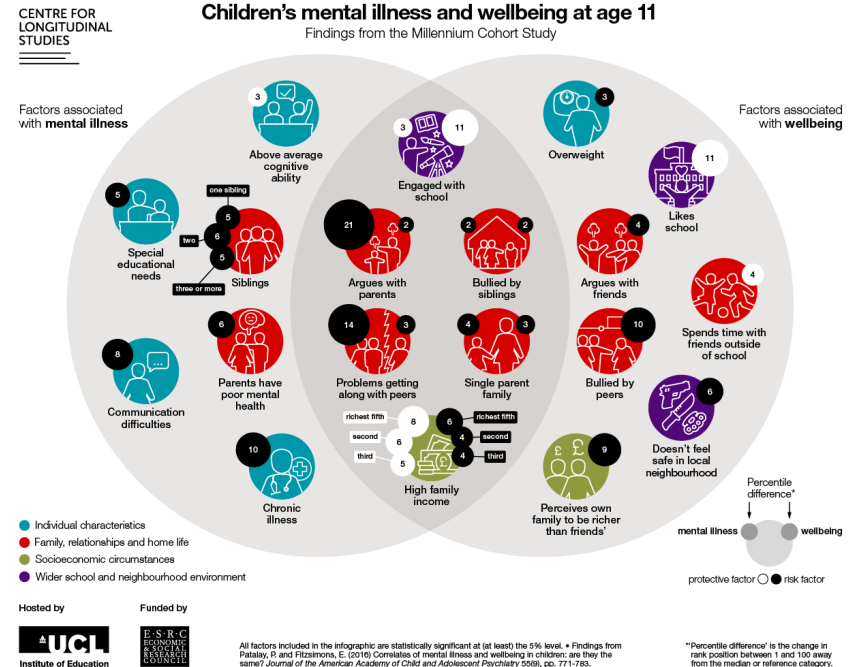
Empirically, some factors are significantly associated with child wellbeing or mental illness, *not always both*. This is because SWB is not simply the absence of mental illness, e.g. , it encompasses positive feelings.

OSA evaluation may have an impact on severe health outcomes (e.g., self-harm, suicide attempts) and changes in their clinical prevalence or severity.

By improving safety, the OSA could also enhance children's social and emotional development in online spaces.

As such, SWB can offer additional insight into the quality of online experiences and the ability of children to thrive digitally, once exposure to harmful content is reduced.

We hold both concepts in mind through this review.



Findings from Patalay, P. and Fitzsimons, E. (2016) Correlates of mental illness and wellbeing in children: are they the same? Journal of the American Academy of Child and Adolescent Psychiatry 55(9) pp 771-783. Diagram by P. Patalay

2.6 Children's mental health & wellbeing



In 2023, about 1 in 5 children and young people aged 8 to 25 years had a probable mental disorder.

This was 20.3% of 8 to 16 year olds, 23.3% of 17 to 19 year olds and 21.7% of 20 to 25 year olds.



Among 8 to 16 year olds, rates of probable mental disorder were similar for boys and girls, while for 17 to 25 year olds, rates were twice as high for young women than young men.



Children aged 11 to 16 years with a probable mental disorder were 5 times more likely than those unlikely to have a mental disorder to have been bullied in person (36.9% compared with 7.6%).

They were also more likely to have been bullied online (10.8% compared with 2.6%).



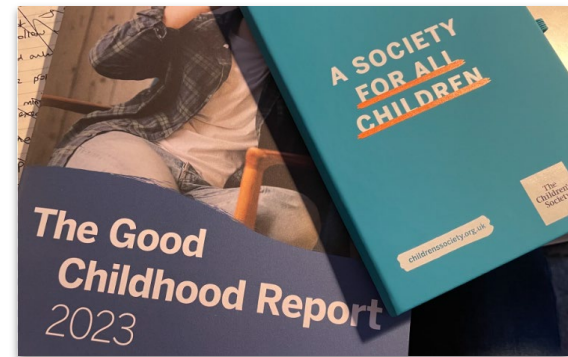
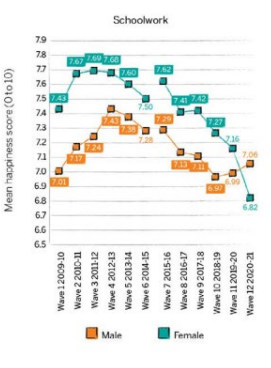
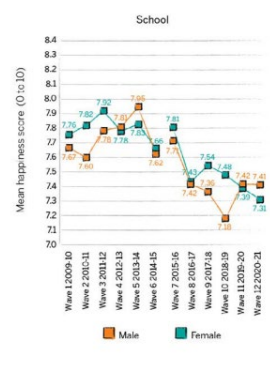
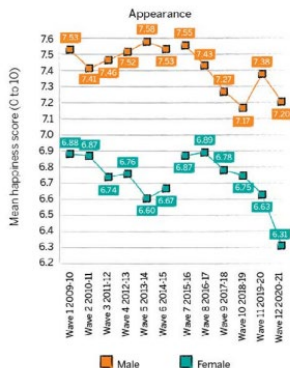
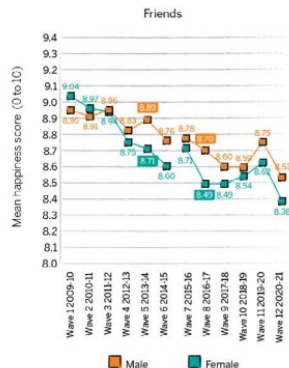
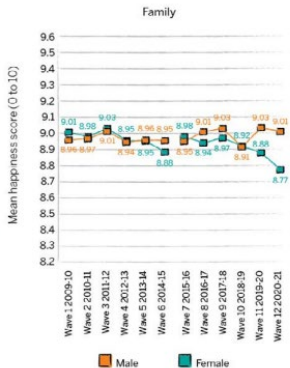
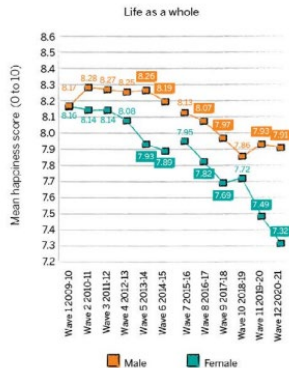
In 2023, eating disorders were identified in 12.5% of 17 to 19 year olds, with rates 4 times higher in young women (20.8%) than young men (5.1%).

2.6% of 11 to 16 year olds were identified with eating disorders, with rates 4 times higher in girls (4.3%) than boys (1.0%) and 5.9% of 20 to 25 year olds, were identified with eating disorders with no difference in rates evident between women and men.

2.6 Children's mental health & wellbeing

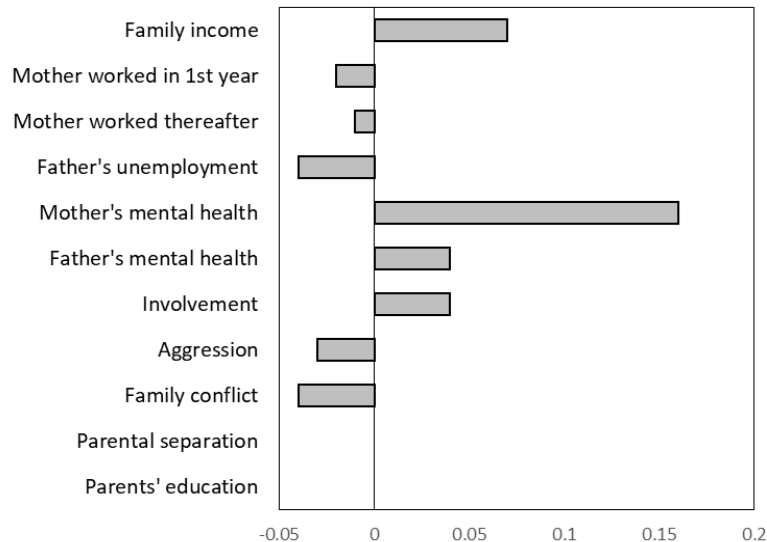
Trends in UK children's (aged 10 to 15) happiness

- Happiness with overall life in 2020-21 notably lower compared to 2009-10, and reflecting declines both during and before the pandemic.
- Decreases in happiness regarding friends, appearance, school, and schoolwork.
- Female happiness lower than males.
- Most children scoring above midpoint but a small percentage are 'unhappy', particularly with appearance, which saw the largest proportion of children scoring below the midpoint.



2.7 Family background & child wellbeing

How Child Emotional Health is Affected by Family Background, standardised effects



Relevance:

When choosing 'controls' for a regression, it is important to consider the aspects which are most important for wellbeing, to the extent to which they are feasible to measure.

Avon Longitudinal Study of Children (ALSPAC)

Note: A child's emotional health is measured by the Short Mood and Feelings Questionnaire (SMFQ), completed by mother and child.

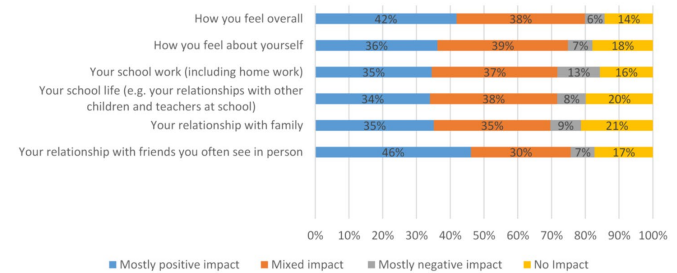
Source: Clark et al. (2018)

2.8 Children's life online and wellbeing

Report from Children's Society (2020):

- **Children are relatively happy with their life online.**
Children were asked to rate their happiness with seven aspects of online life. Scores ranged from 7.4 for *amount of time you can spend online* to 8.0 for *things that you do online* suggesting most children were relatively happy (Figure 2).
- **6-7% of children reported that their life online had a mainly negative impact on how they feel overall and how they feel about themselves (priority for OSA)**
- However, **most children reported either a mostly positive or mixed impact** (i.e. a mix of positives and negatives) on other aspects of life (Figure 1).

Figure 1: Children's (aged 10 to 17) responses to question 'What impact if any do you think your life online has on the following...'



Source: TCS household panel survey, wave 19, April-June 2020 (weighted).

Figure 2: Children's (aged 10 to 17) mean scores (on a scale of 0 to 10) when asked 'How happy are you...'



Source: TCS household panel survey, wave 19, April-June 2020 (weighted)

2.8 Online Life and WB: State of Research

Review of reviews on social media use and wellbeing

(NOTE this is general research on 'online life'- not a focus on specific harms):

Primarily cross-sectional evidence available

Over-reliance on evidence based on **time** spent on social media at the expense of more fine grained measures such as **content**, purpose or type of communication partners

Over-reliance on self reports rather than **objective data** (log-based data through screen time apps)

Wellbeing and ill-being measures tell us different things and should not be collapsed in findings

Importance of understanding **heterogeneous populations** of (social media) users

Measuring online wellbeing: no consistent measure

[Social media use and well-being: What we know and what we need to know - ScienceDirect \(2022\)](#)

[Measuring Online Wellbeing: A Scoping Review of Subjective Wellbeing Measures - PMC \(nih.gov\)](#)

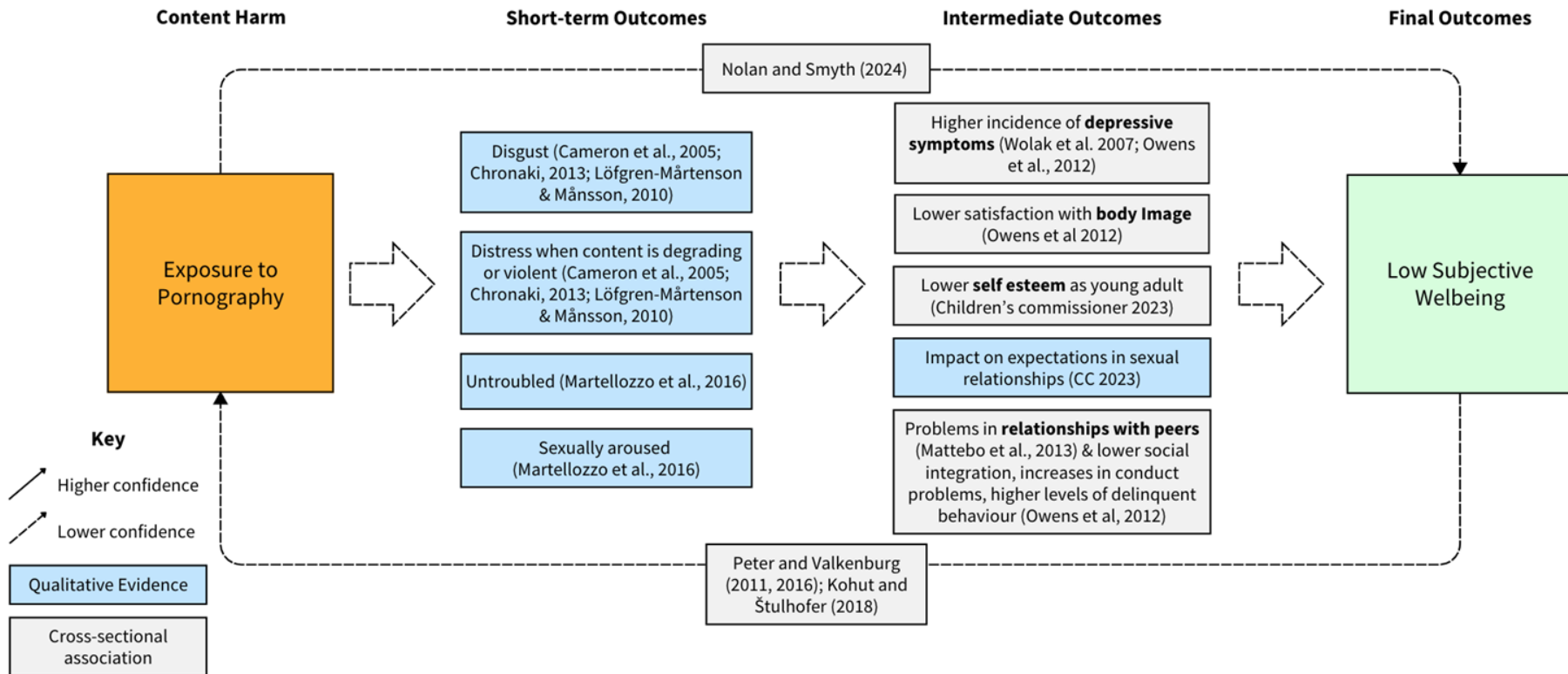
2.9 Online Harms and Wellbeing

- There are clear [theoretical and in some cases evidenced] links between certain online harms and wellbeing
- Many areas have incomplete or missing evidence
- Much of the evidence is **associations / correlations, rather than causal evidence**
- Evidence is in some cases momentary, in other cases longer term
- There is a scarcity of research on the cumulative impact of exposure, both across and within online harms
- Resulting impacts likely to depend on starting wellbeing /vulnerability, with a spectrum of vulnerability

The following slides outline the pathways in which exposure to online harms affect wellbeing.

1. Exposure to Pornography

There is little quantitative research on the **causal** effects of viewing pornography on children/adolescent subjective wellbeing. There are many papers on the correlation, which suggest a bidirectional relationship, or the reverse relationship (Peter and Valkenburg, 2011, 2016; Kohut and Štulhofer, 2018). Nolan and Smyth's (2024) study removes some of the selection effects, to draw out causality, but not all. There are also several short-term and intermediate outcomes which mediate the relationship between exposure to pornographic content and subjective wellbeing.

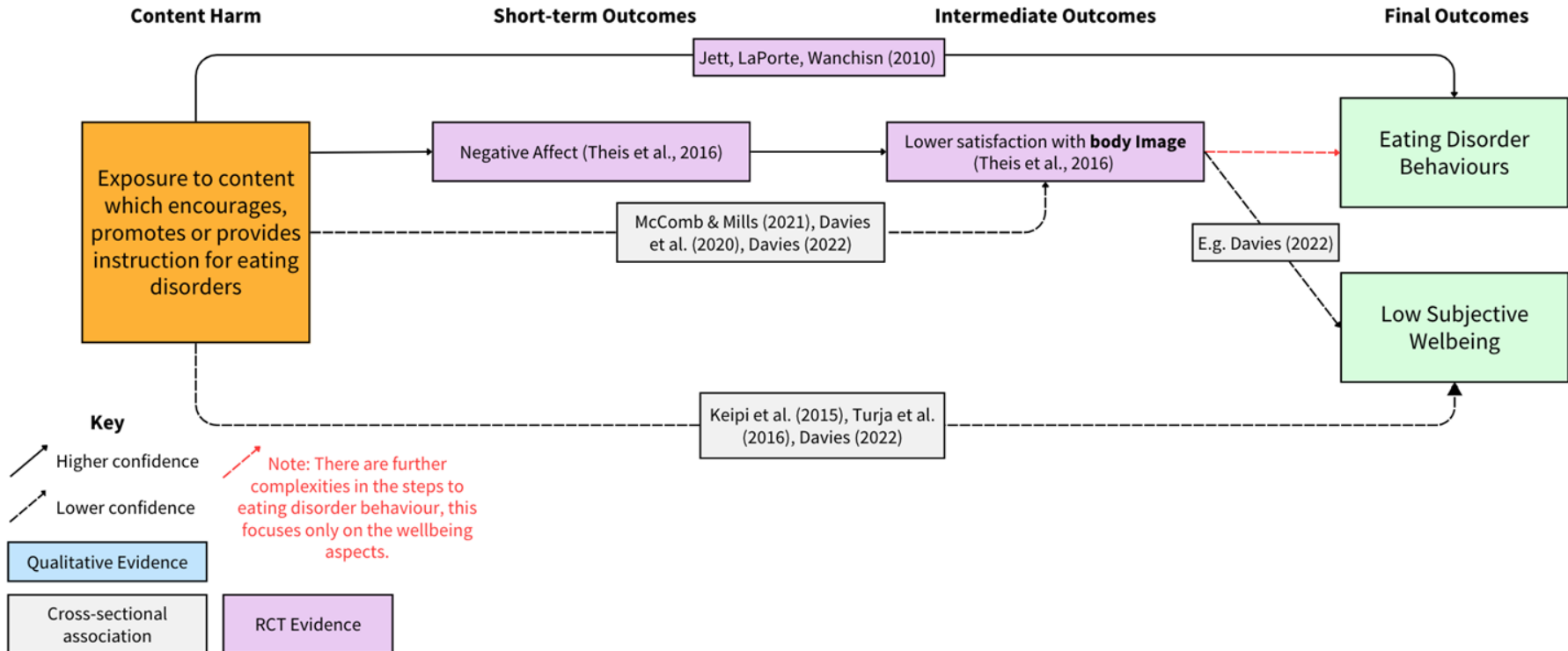


2.9.1 Pornographic content: Hypotheses

Hypothesis	Current evidence
Exposure to pornography has short term / momentary impacts on wellbeing	Evidence available, mostly qualitative Momentary measures may be less relevant predictor for long term impacts on behaviours and wellbeing
Exposure to pornography impacts domain-specific wellbeing or determinants of longer term wellbeing such as certain behaviours, relationships with peers, behaviours, and body image	Initial causal evidence of exposure and lower wellbeing, mainly cross-sectional
Exposure to pornography reduces long-term wellbeing	Initial cross-sectional evidence available
OSA improves wellbeing through a reduction in exposure to pornography	Challenges to draw out causal evidence of OSA as a whole
Wider context: those with lower wellbeing are more likely to access content	Initial evidence

2. Exposure to content which encourages, promotes or provides instruction for eating disorders

Evidence shows consistent negative associations between pro-eating disorder content exposure and SWB (Keipi et al., 2015; Turja et al., 2016; Davies, 2022) as well as RCT evidence of disordered eating behaviours (Jett, LaPorte & Wanchisn, 2010). There is also a link between images promoting unrealistic body ideals and lower life satisfaction (McComb & Mills, 2021; Davies et al. 2020; Davies, 2022), moderated by negative affect (Theis et al., 2016). No evidence to date of a reverse relationship between exposure to pro-eating disorder content and SWB, although evidence of co-morbidity of eating disorders and clinical depression and anxiety (Fitzsimmons-Craft et al., 2020).



2.9.2 Pro-ED Content: Hypotheses

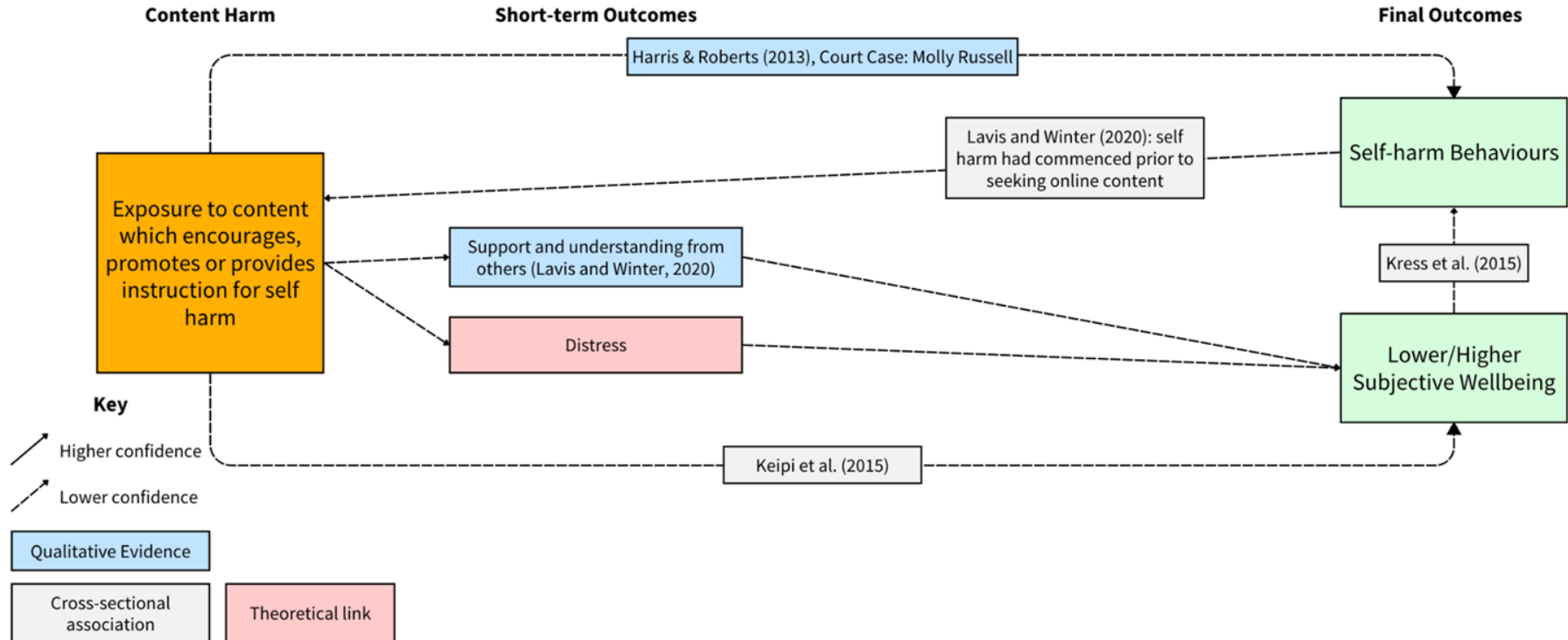
Hypothesis	Current evidence
Exposure to eating disorders content reduces body confidence / satisfaction with body image (i) in the moment and (ii) longer term Frequency of exposure is relevant	Initial cross-sectional evidence Momentary measures less relevant by themselves but frequency could impact on longer term wellbeing
Exposure to eating disorders content reduces evaluative wellbeing (i) in the moment and (ii) longer term Frequency of exposure is relevant	Initial cross-sectional evidence Momentary measures less relevant by themselves but frequency could impact on longer term wellbeing
Specific content can <u>reduce</u> this impact or is more or less damaging	Initial evidence, would benefit from further exploration. Could help to inform scope of content which is managed
OSA improves wellbeing through a reduction in exposure to pro-ED content	Challenges to draw out causal evidence of OSA as a whole
Wider context: Those with lower wellbeing are more likely to access content	Co-morbidity with mental health conditions which in turn are linked to wellbeing

Relevant, but outside scope of wellbeing evaluation:

- Exposure to content reduces over time (1)
- Exposure to eating disorders content leads to increased proportions of young people with eating disorders (2)

3. Exposure to content which encourages, promotes or provides instruction for self-harm

Lower wellbeing and/or mental health conditions are likely to be determinants for seeking out and exposure to self-harm content, but specific content which does not encourage may provide short term support and relief (Lavis & Winter, 2020). Case(s) have shown that exposure may lead to increased self harm behaviours and even suicide (Harris & Roberts, 2013), Molly Russell inquest). Lower SWB has been found to associate with exposure to pro-self-harm content, even when controlling for social networking site (SNS) activity and online and offline victimization (Keipi et al., 2015). Lastly, Kress et al. (2015) finds that college students with higher levels of life satisfaction and a sense of purpose are less likely to engage in NSSI.



2.9.3 Pro-Self Harm Content: Hypotheses

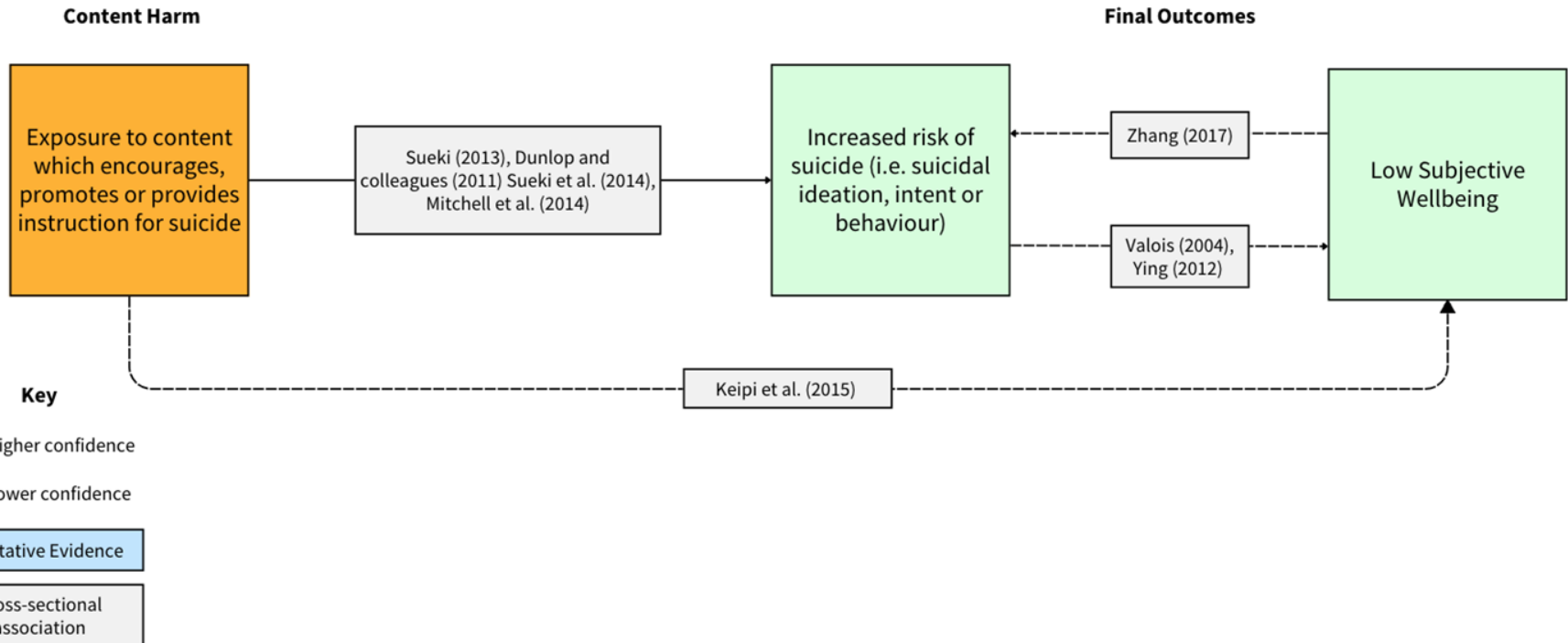
Hypothesis	Current evidence
Exposure to content reduces wellbeing in the moment and evaluative wellbeing, even where behaviours are not impacted	Momentary measures less relevant by themselves but frequency could impact on longer term wellbeing
Specific content can reduce this impact or is more or less damaging	Impact on self-harming out of scope of review Understanding of specific content could help to inform scope of content which is managed
OSA improves wellbeing through a reduction in exposure to self-harm content	Challenges to draw out causal evidence of OSA as a whole
Wider context: Those with lower wellbeing are more likely to access content	Cross-sectional evidence, as well as co-morbidity with mental health conditions, which in turn are linked with lower wellbeing

Relevant, but outside scope of wellbeing review:

- Exposure to content reduces over time (1) (due to OSA)
- Exposure to content leads to increased proportions of young people self-harming (2)

4. Exposure to content which encourages, promotes or provides instruction for suicide

As is the case for pro-self harm content, lower SWB has been found to be associated with exposure to pro-suicide content, even when controlling for social networking site (SNS) activity and online and offline victimization (Keipi et al. 2015). Furthermore, a recent systematic review reveals that exposure to pro-suicide content has been found to increase the risk of suicide, through ideation, intent or behaviours (McTernan & Ryan, 2020), and Valois (2004) and Ying (2012) show that this increased risk is associated with lower life satisfaction. Conversely, lower life satisfaction has been found to increase the risk of suicide, specifically intent, as Zhang (2017) concludes.



2.9.4 Pro-Suicide Content: Hypotheses

Hypothesis	Current evidence
Exposure to pro-suicide content increases the risk of suicide (i.e. suicidal ideation, intent, and behaviours) which, in turn, reduces evaluative wellbeing	Initial cross-sectional evidence available
Exposure to pro-suicide content directly reduces evaluative wellbeing	Initial cross-sectional evidence available
OSA improves wellbeing through a reduction in exposure to suicide content	Challenges to draw out causal evidence of OSA as a whole

Relevant, but outside scope of wellbeing review:

- Exposure to content reduces over time (1) (due to OSA)
- Exposure to content leads to increased proportions of young people engaging in suicidal behaviours (2)

2.10 Wider priority content

Focus of the review was for primary priority content, but we have extended this to bullying (priority content) since there are wellbeing links. These are likely to hold for abusive content and content which incites hatred.

We have not explored the wellbeing link with content which depicts real / realistic serious violence, but there are likely to be relevant links.

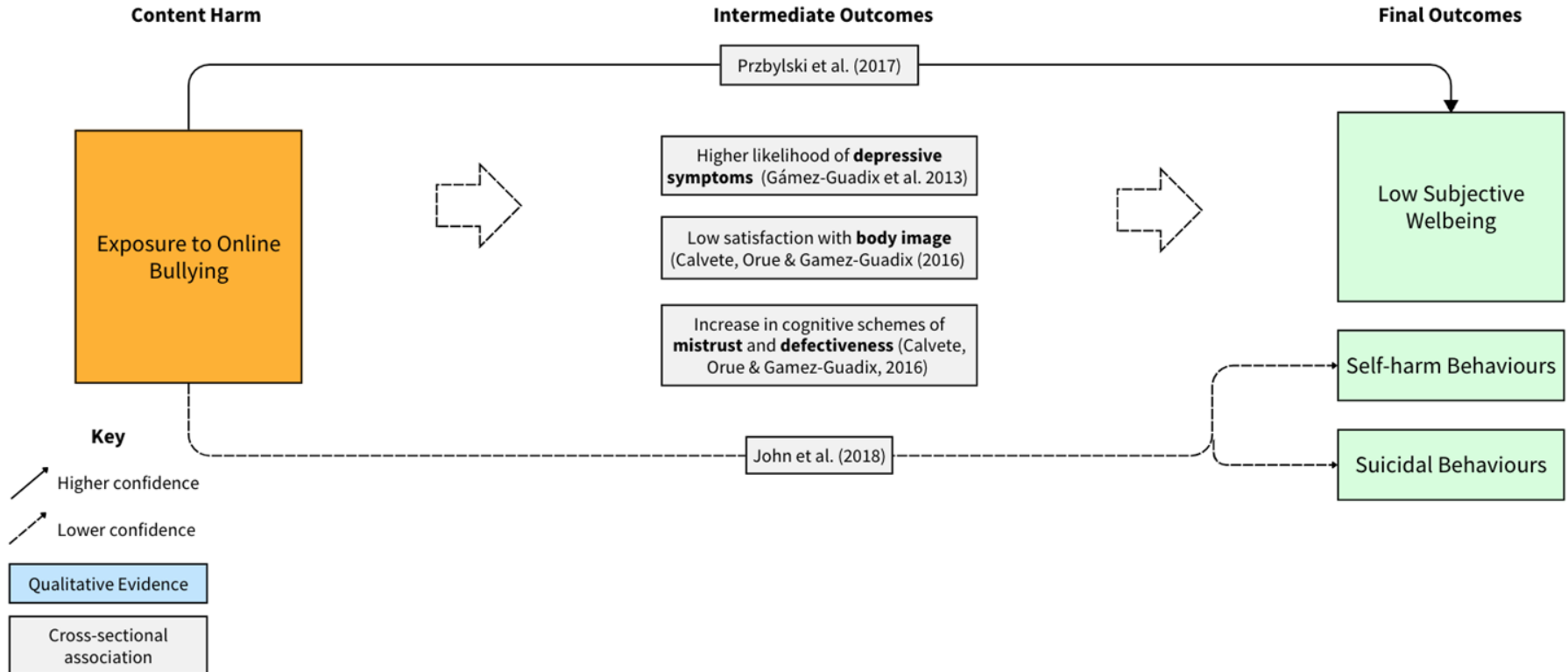
Wellbeing hypotheses are not considered relevant for:

- **Instructions for stunts.** Wellbeing may be increased ‘in the moment’, decreased if stunt results in physical injury, but the more relevant outcome is the count of stunts.
- **Instructions for physically harmful substances.** Wellbeing may be decreased if results in physical injury, but the more relevant outcome is the behaviour.

Priority Content
Abusive
Incites hatred
Serious violence
Bullying
Depicts real/realistic serious violence
Stunts
Physically harmful substances

5. Exposure to online bullying

Cyberbullying is associated with poorer mental well-being (Przybylski et al., 2017). It also increases the likelihood of depressive symptoms in victims both in cross-sectional and longitudinal studies (Gómez-Guadix et al., 2013) and body image (for girls), mistrust and defectiveness (Calvete, Orue & Gamez-Guadix, 2016). There is also an association between cyberbullying, self harm and suicidal behaviours (John et al., 2018).



2.10.1 Bullying content: Hypotheses

Hypothesis	Current evidence
Exposure to content (bullying, abusive, incites hatred) reduces wellbeing in the moment and evaluative wellbeing	Evidence for bullying explored Momentary measures less relevant by themselves but frequency could impact on longer term wellbeing
Specific content can be supportive and reduce impact (example from pro-ED studies)	Have not researched in depth, outside of scope of current review
OSA improves wellbeing through reduction in exposure to bullying content	Challenges to draw out causal evidence of OSA as a whole
Wider context: those with lower wellbeing more likely to create and publish content; more likely to be exposed to bullying content	Initial evidence

Relevant, but outside scope of wellbeing review:

- Exposure to content reduces over time (1)

2.11 Online Safety and Wellbeing: overall Hypotheses

To evaluate the **longitudinal impact over time** of the implementation of safety improvements to online services (partly due to the OSA).

Hypothesis	Evidence
Exposure (for all and / or specific content types) decreases over time	(forthcoming: Ofcom tracker survey)
Domain-specific wellbeing and determinants of wellbeing improve over time (e.g. feelings of safety online)	For children, no current tracking of subjective wellbeing, alongside sufficient detail of exposure, feelings of safety online, and wider intermediate outcomes or feelings. Although evidence would not be causal, adding subjective wellbeing and intermediate measures to understand trend over time would help to understand the changing context, trends and associations.
Wellbeing improves over time for those who feel safer online and are less exposed to content	

2.12 Online Safety and Wellbeing: Takeaways

(more detail in evaluation methods)

Ethical considerations for majority of content if trials were to be used

Simulations could be used where OSA reduces exposure to material, but challenges of drawing out causality for the OSA impact on exposure

There are evidence gaps. Adding subjective wellbeing and intermediate measures would add to evidence base to draw out more information on context even where not causal. Data on trends can still give us useful information, even where not causal

Momentary measures make causal evidence more feasible, to draw link to longer term wellbeing

Importance of separating heterogeneous groups

Importance of separating wellbeing and ill-being (mental health) measures

3. Measurement

Measuring children's wellbeing effectively in the OSA evaluation



Back to contents, click [here](#)

3.1 Selecting child wellbeing measures

Objective: Identify suitable wellbeing measures for Ofcom's online safety evaluations.

Methodology: Systematic review of 90+ measures from What Works Centre for Wellbeing metrics bank.

Criteria included: Inclusion in national surveys for baseline comparisons. High validity with UK-specific psychometric data.

Outcome: Compiled ratings for all 90+ measures in Excel format. Identified four "high" rated measures as top candidates for online safety wellbeing evaluation.



3.2 Four recommended measures

1. The 'ONS4'



Aspect	Assessment
Measure Description	Assess personal well-being using four measures (often referred to as the ONS4), capturing three types of wellbeing: evaluative, eudemonic and affective experience.
Subjective Wellbeing Approach	Life Satisfaction: Overall, how satisfied are you with your life nowadays? Worthwhile: Overall, to what extent do you feel that the things you do in your life are worthwhile? Happiness: Overall, how happy did you feel yesterday? Anxiety: On a scale where 0 is "not at all anxious" and 10 is "completely anxious", overall, how anxious did you feel yesterday?
Availability and Benchmarking	Available in major national surveys including Understanding Society and Understanding Society Youth.
Advantages for OSA	Suitable for children above age 10, covering most of the OSA target group. Enable monitoring of cohorts into adulthood. Consider for 'programmatic' evaluation to monitor trends. Availability in large, representative data facilitates benchmarking and econometric analysis. Headline rather than domain-specific. Amongst the most common in large, nationally representative surveys, facilitating evaluation of trends or baselining and comparator groups. High validity and use.
Drawbacks for OSA	Inappropriate for use below age 10. Headline metric only, not useful to drill down into specific domains and understand wellbeing drivers in detail.

3.2 Four recommended measures

2. Strengths and Difficulties Questionnaire

The logo for the Strengths and Difficulties Questionnaire (SDQ) consists of the letters 'SDQ' in a large, black, serif font, enclosed within a white rectangular box with a thin grey border.

Aspect	Assessment
Measure Description	Strengths and Difficulties Questionnaire (SDQ): Emotional and behavioural (mental health) screening questionnaire for 3–16 year olds. Assesses the extent to which mental health problems have impacted aspects of a child's life. Teacher/parent and child self-report versions available.
Subjective Wellbeing Approach	25 items on five subscales: emotional problems, conduct problems, hyperactivity/inattention, peer relationships, prosocial behaviour, plus an overall total score of difficulties (excluding prosocial score).
Availability and Benchmarking	Freely available (no cost). Available in national level cohort studies.
Advantages for OSA	Subscales afford more detailed understanding than ONS4, e.g., on emotional changes such as being tense, nervous, stressed, upset, sad, depressed, or bored. Well-validated measure, performing well compared to other established measures of child psychopathology. Routinely used in evaluation, e.g., in the Children and Young People's Improving Access to Psychological Therapies (IAPT) programme and the NSPCC's Family SMILES evaluation.
Drawbacks for OSA	Most suited for detailed, intervention-level analysis.

3.2 Four recommended measures

3. Warwick Edinburgh Mental Wellbeing Scale

WEMWBS

Aspect	Assessment
Measure Description	Warwick Edinburgh Mental Wellbeing Scale (WEMWBS): 14-item measure that assesses positive mental wellbeing. Responses on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Total scores range from 14 to 70.
Subjective Wellbeing Approach	Affective. Positively worded, in relation to emotions.
Availability and Benchmarking	Free (registration required). Available in national level cohort studies.
Advantages for OSA	Valid for 13+ years, general population. Well established and widely used for intervention-level evaluation. As with SDQ, multi-item measures like WEMWBS could facilitate a more detailed analysis of children's emotional state and how it might be affected by online safety.
Drawbacks for OSA	Not validated for use with children under age 13. Most suited for detailed, intervention-level analysis.

3.2 Four recommended measures

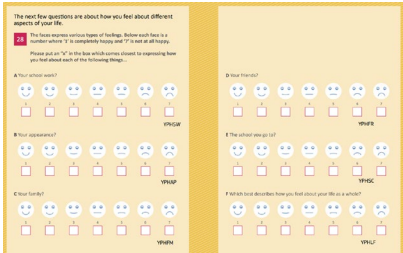
4. Good Childhood Index

**The
Children's
Society**

Aspect	Assessment
Measure Description	Good Childhood Index (GCI): 10-item index of subjective well-being for children aged 8+. Covers main aspects of children's lives, including those identified by children themselves: Family; Friends; Health; Appearance; Time Use; The Future; Home; Money and Possessions; School; Amount of Choice.
Subjective Wellbeing Approach	Not explicitly stated.
Availability and Benchmarking	Collected annually by the Children's Society, reported in the Good Childhood Report (GCR).
Advantages for OSA	Statistically robust annual reporting, which may enable before and after OSA implementation monitoring of trends in high-level programmatic evaluation. By covering multiple domains, this provides more detailed trend data than ONS4.
Drawbacks for OSA	It is unclear to what extent wellbeing in each aspect of children's lives is driven by online life. The Index has not been adopted in an intervention-level evaluation, so it may be more appropriate to use ONS4, SDQ, WEMWBS, or online-specific questions.

3.3 Domain-specific Wellbeing Measures

Our literature and data review revealed survey questions that specifically relate to wellbeing around online safety and Ofcom's priority harms. Ofcom may be able to use and adapt these questions, complementing the overall wellbeing measures reviewed earlier.

Domain	Question	Age Group	Sources	Note
Satisfaction with various life domains	 <p>The next few questions are about how you feel about different aspects of your life. The faces represent various types of feelings. Below each face is a number where 1 is happiest/least upset and 5 is least happy/most upset. Please put an 'X' in the box which comes closest to expressing how you feel about each of the following things.</p> <p>A) How do you feel about your life? (1-5)</p> <p>B) How do you feel about your school? (1-5)</p> <p>C) How do you feel about your appearance? (1-5)</p> <p>D) How do you feel about your friends? (1-5)</p> <p>E) How do you feel about your family? (1-5)</p> <p>F) How do you feel about your life as a whole? (1-5)</p>	10-15	Understanding Society Youth Survey	Cognitive testing not yet been done. “How do you feel about life as a whole” with happiness could be considered equivalent (enough) to life satisfaction, with appropriate uncertainty. Satisfaction with appearance often used as a measure of body image (see Chng & Sani, 2017)
Affective response to bullying and sexual content	Thinking of the last time (1) someone treated you in a hurtful or nasty way online, and (2) you have seen sexual images, how did you feel? “I was not upset”, “I was a little upset”, “I was fairly upset”, “I was very upset”	9-16	EU Kids Online 2020	Could be asked in the same way for other types of content (e.g. eating disorder, suicide, self harm)
Anxiety, nervousness and worry	How I feel about myself. Responses are (1) Most of the time, (2) Some of the time, (3) Hardly ever/never: “I feel nervous or anxious”, “I worry a lot”, “I can't make my worries go away”, “I'm afraid bad things might happen”, “My worries affect my life”.	School-aged children (11-16+)	Cybersurvey 2021	Retrieved from survey report - questionnaire documentation not available online.

3.3 Domain-specific Wellbeing Measures

Domain	Question	Age Group	Sources	Note
Perceptions of online safety	Agree or disagree: <i>"I feel safe when.... using my phone, tablet, laptop, or other devices."</i>	11/ 12+ (School year 7+)	Children's Society survey 2023	General online safety using devices
	5-point agree to disagree likert scale: <i>"I feel safe using social media"</i>	11-25	NHS MHCYP	Only considers social media, not other content
Perceived impact of being online on various domains	What impact if any do you think your life online has on the following: <i>"How you feel overall", "How you feel about yourself", "Your school work", "Your school life", "Your relationship with your family", "Your relationship with friends you see often in person".</i>	10-17	Children's Society Survey 2020	"How you feel about yourself" measure for self-esteem
Happiness with various aspects of online life	How happy are you...: <i>"With the things that you do online", "With your safety online", "with your life online", "That the things you see online are appropriate for someone your age", "with your relationships with other people online (including how others respond to you online)", "With the way you come across/are seen by others online", "with the amount of time you can spend online"</i>	10-17	Children's Society Survey 2020	Most relevant: "...with your safety online?" "that the things you see online are appropriate for someone your age?"

“

[The] GSR recommends conducting a formal risk assessment when there is 'more than minimal' risk to participants, particularly when the research involves vulnerable groups (such as children, offenders, or disabled individuals) or addresses socially sensitive topics like mental health.

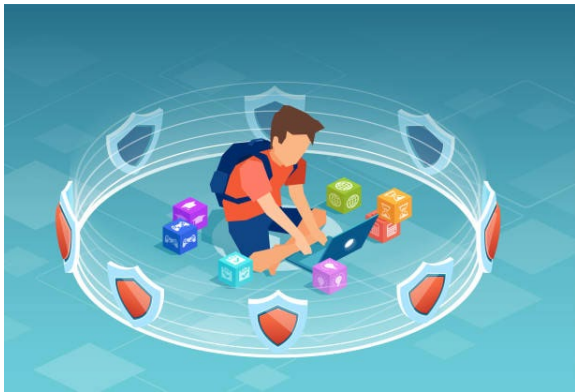
H.M. Treasury (2020) | Magenta Book

<https://www.gov.uk/government/publications/the-magenta-book>

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3.4 Ethical considerations

Wellbeing questions in the OSA evaluation will delve into personal areas, probing feelings of happiness and the perceived value of online activities. This may elicit discomfort for some, and possible distress for younger children and other vulnerable groups.



Best practice in any OSA wellbeing evaluation may include:

- Clearly communicating the purpose of wellbeing questions to respondent.
- Reassuring children that all answers are valid, and that responses will not impact their access to digital platforms or services.
- Preparing questioner to approach participant reactions with empathy.
- Ensuring findings are communicated back to participants in age-appropriate manner.

Further advice available from What Works Centre for Wellbeing's microsite [Measuring Wellbeing](#), which directs to Oxfam's [practical guide](#) on research ethics for vulnerable populations.

3.5 Measurement Recommendations

Based on the above, our main recommendations are:

1. If space for questions is limited (in Ofcom trackers), **prioritise the ONS4 question(s) especially on life satisfaction from age 10**. See slide 46 for wording. LS has not been tested for below age 10.*
2. Next, select some domain-specific questions around how people feel in relation to their online life and risks of harm.
3. As a third priority, use multi-item measures like SDQ or WEMWEBS add value, recognising limits in single-item measures.

And most importantly, ‘first, do no harm’ - make sure the risks involved in wellbeing measurement are assessed and mitigated, at the more detailed level of evaluation design and implementation.

[OECD \(2013\):](#)

*“[subjective wellbeing is **not**] proposed as the single all-encompassing measure of people’s well-being, with all other aspects having only instrumental value in achieving this. On the contrary, this definition is explicitly consistent with approaches that conceive of people’s well-being as a **collection of different aspects, each of them having intrinsic value**. In measuring overall human well-being then, subjective well-being should be **placed alongside measures of non-subjective outcomes**, such as income, **health**, knowledge and skills, **safety**, environmental quality and **social connections**.”*

***Note:** There is no single evaluative measure of wellbeing which has been validated and tested with under 10 year olds. If under 10 is an important group, happiness may be a more understandable term than satisfaction, for example with wording from the Usoc Youth Survey: “How do you feel about life overall”, 1-7 with labels of happiness, **but this question has not been tested/validated with under 10s**. For under 10s, focusing on specific time points and specific aspects of life may be more understandable.

3.5 Measurement Recommendations

Harms for which wellbeing measures are most relevant and useful. There is evidence on the link with wellbeing and primary priority content: pornography; pro-eating disorder content; pro-self harm content; pro-suicide content. There are also links with priority content such as online bullying.

We recommend that wellbeing is relevant to measure alongside measures of the behaviours themselves, and where possible alongside clinical measures of mental ill health.

4. Data Review



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4.1 How can existing data be used?

Existing primary and secondary data on children's online safety and wellbeing can be leveraged by Ofcom for a variety of purposes, including:

- Using the sources as they are for data analysis and hypothesis testing.
- Learning from or replicating relevant survey questions.
- Establishing a baseline or counterfactual for comparing future changes in wellbeing to.
- Potentially collaborating with institutions collecting the data to exploit further (e.g. adding relevant survey questions to measure wellbeing and/or online safety).

This section provides a review of datasets of interest, including national surveys, online-specific surveys, and Ofcom tracker surveys.



4.1.1 Understanding Society Youth Survey

Understanding Society (UKHLS) is a comprehensive household panel survey aimed at understanding various aspects of people's lives. The first wave of the survey (2009/10) interviewed around **40,000 households** from across the UK who have been followed up annually since then. There are currently **14 waves of survey data** available. It is representative of the UK population and includes a separate 'youth questionnaire' for **young people aged 10-15**.

The Data: The youth questionnaire measures a wide range of factors affecting children, including home and school life, health and wellbeing, and online experiences, among many others.

- Two measures of subjective wellbeing in the young people survey:
 - **SDQ** section, asked in every other wave (1,3,5,...,13), and
 - **Satisfaction with different aspects of life**, on a 7-point smiley face assessment scale, asked in every wave (1,2,3,...,14). These include school work, appearance, family, friends, school they go to, and their life as a whole.
- Whilst there are various questions asking about online experiences, only two questions relate to **online safety**:
 - How often they get bullied, asked in wave 13, and
 - Whether they have any close friends that they've never met in person, asked in waves 12 and 13.

4.1.1 Understanding Society Youth Survey

Strengths:

- Sample is highly representative of the UK
- The survey is considered the gold standard of panel surveys
- Two great measures of wellbeing

Limitations

- Poor measures of online content harms
- Only asks children ages 10-15 - no questions for children 8-10

What could Ofcom do with this data?

- Partner up and ask more harm-specific questions
- Use the wellbeing-related questions for replication in own surveys

4.1.2 The Children's Society Survey

The Children's Society Survey has conducted annual online surveys with children, and their parents and carers, since 2010. These surveys collect data on **children's overall and domain-specific wellbeing**, and each survey includes an extra module on a different theme relevant to children's lives. In 2020, the Children's Society introduced a new section of questions to try to draw out **young people's perspectives of their experiences online**. Around **2000 young people, aged 10 - 17**, responded to the survey.

The Data: Whilst the survey data and documentation isn't openly available, research reports by The Children's Society reveal the questions asked to children regarding their wellbeing and online experiences. The annual surveys contain a short questionnaire developed by the Children's Society to feed into their ' Good Childhood Index', which measures various aspects of children's wellbeing. These include: (1) the **ONS4** questions, (2) a five-item measure of **overall life satisfaction**, based on Huebner's Student Life Satisfaction Scale, and (3) a ten **domain-specific measures of happiness** (with their relationships, home, health, appearance etc.).

The online experiences module added to wave 19 of the survey measured:

- Young people's perceptions of the impact that their life online has on their relationships, school life and how they feel about themselves, measured on a 4-point scale ranging from no impact to mostly positive impact.
- How happy they are with aspects of being online, including their safety online and whether they think the things they see online are appropriate for someone their age, measured on a 0-10 scale.
- Their views on what they do online and their use of digital devices, measured on a 5-point likert scale.

4.1.2 The Children's Society Survey

Strengths:

- Comprehensive measures of SWB
- Great measures of online-specific measures of wellbeing

Limitations

- Poor measures of specific online content harms - only a general question on whether respondents think the things they see online are appropriate for their age
- Only 1 wave of online-specific data
- Data and documentation not openly accessible
- Only asks children aged 10-15, not 8-10

What to do with this data?

- Partner up and ask more harm-specific questions
- Use the wellbeing-related questions for replication in own surveys
- Use as a baseline/counterfactual

4.1.3 NHS MHCYP Survey

Since 2020 (wave 1), The NHS has conducted an annual longitudinal survey to assess the **Mental Health of Children and Young People (MHCYP)** in England. The original survey was piloted in 2017 (wave 0), and **1,203 children and young people, aged 11-25**, have taken part in all five waves. The survey serves as England's Official Statistics into CYP mental health and aims to collect comprehensive data on various aspects of mental health, subjective wellbeing and the factors that affect both, including online activities. The data is weighted to be representative of all children and young people in England and is openly-accessible on the UK data service.

The Data: Both the children's (aged 11-16) and young people's (aged 17-25) questionnaires present four statements regarding experience with social media, and asks respondents to answer on a 5-point agree-disagree likert scale:

- "The number of likes, comments, shares I get on social media has an impact on my mood"
- "In general, I spend more time on social media than I mean to"
- "I have been bullied online"
- "I feel safe using social media".

The questionnaires also ask whether the respondent has been bullied online in the last 12 months, and if so, how often.

Subjective wellbeing data is collected comprehensively using the **SDQ** and **WEMWBS** questionnaires.

4.1.3 NHS MHCYP Survey

Strengths:

- Very comprehensive measures of SWB
- Longitudinal panel - if using the survey data to analyse as is, one would have the ability to control for fixed effects

Limitations

- Limited online safety measures - online regarding perceptions of online safety and exposure to online bullying
- Only covers England - excludes Wales, Northern Ireland and Scotland

What to do with this data?

- Use as is for data analysis and hypothesis testing
- Use the wellbeing-related questions for replication in own surveys
- Use as a baseline/counterfactual

4.1.4 Ofcom's Online Experiences Tracker

Ofcom's Online Experiences Tracker is a quantitative study aimed at understanding and monitoring internet users' attitudes and behaviours online, as well as their experiences of potential harms, over time. The survey was first run in 2021, built on the previous 'Pilot Online Harms Survey', and the most recent wave (4) was completed in July 2023. The sample consisted of 14,181 participants aged 13 to 84, nationally representative of UK internet users based on age, gender, region and socio-economic group.

The Data: The survey asks different questions depending on the age of the participant. Children aged 13-17 are asked various online harm-specific questions: (1) whether they came across any content online that made them feel uncomfortable, upset or negative, (2) what they've seen or experienced (from a list of 43 types of harmful content), (3) how frequently they've experienced or seen the most recent harm and (4) to what extent it bothered and/or offended them.

The latter question can capture the individual's **momentary 'affective' response** to experiencing online content. Additionally, children are also asked four **wellbeing-related questions**:

- Whether they can share their opinions and have a voice online more easily or effectively than offline
- whether they feel more free to be themselves online
- whether they feel they have a good balance between online and offline life
- whether being online has an overall positive effect on their mental health

Responses are given on a five-point agree/disagree Likert scale.

4.1.4 Ofcom's Online Experiences Tracker

Strengths:

- Contains measures of subjective experiences of witnessing harmful content
- Easy to update/augment as run by Ofcom

Limitations

- Whilst capturing the general effects of being online on wellbeing, the survey doesn't ask any further questions to measure subjective wellbeing
- Repeated cross-section so cannot draw out any causal effects

What to do with this data?

- Augment to include wellbeing questions in the experience harms section

4.1.5 Ofcom CML Tracker

Ofcom's 'Children's Media Lives' is a qualitative cohort study that “tracks the media behaviours, experiences and attitudes of a group of children” over time. The first wave commenced in 2014 and there are currently **21 child participants, aged eight to 17**, from around the UK. The study consists of three parts: an initial exploratory interview with children and parents, various recordings of media activities, and a follow-up interview. The **exploratory interview** aims to understand children's media behaviours and their perspectives (as well as their parent's) on their media lives. Some of the topics explored include content, preferences, and behaviours, media literacy, and online health and wellbeing.

The Data: Within the '**online interaction and concerns**' module, there are several open-ended interview questions concerned with exposure to harmful content and online wellbeing. Children are asked whether they have seen people being nasty to each other on social media, including themselves, and if so, one follow up question was how they deal with it. This measure could be used to identify those exposed to bullying or abusive content. They are also asked whether they've seen anything online recently that worries them, where the researcher prompts the participant with “age-appropriate stimulus of harmful content” (e.g. for ages 13+, self-harm content or unrealistic body images).

If they have seen harmful content, follow-up questions include what they saw specifically, and how it made them feel (i.e. any negative emotions). These follow-up questions can elicit children's emotional wellbeing regarding the bullying, abusive and other harmful content they experience.

4.1.5 Ofcom CML Tracker

Strengths:

- Comprehensive online safety questions
- Longitudinal cohort - can track changes over time
- Includes children from age 8 (where most other studies look at children 10+)
- Qualitative study can complement other quantitative studies they have and also provide deeper insight

Limitations

- Very small sample size
- Only qualitative, makes it difficult to analyse, and time-consuming to add extra open-ended questions

What to do with this data?

- Augment to include wellbeing questions in the experience harms section

4.1.6 Ofcom COBA Tracker

Ofcom's Children's Online Behaviours and Attitudes (COBA) study is one of three tracker studies that monitors children's and parents' media use, attitudes and literacy over time. Two waves of the survey were administered in 2021 and in 2022, and one wave in 2023, which were delivered via online panels to a sample of around 3000 children aged 8-17 and parents of children aged 3-17 per wave.

The Data: Children aged 8 to 17 years old are asked a variety of questions related to their subjective experiences using digital media and the internet. Some are **wellbeing-related**, such as:

- Using these sorts of apps or sites makes me feel happy
- Using these sorts of apps or sites helps me feel closer to my friends
- I feel safe using these sorts of apps or sites
- People are mean or unkind to each other on these sorts of apps or sites
- There is pressure to be popular on these sorts of apps or sites
- Do you use websites, apps or other online services to help you with any of these things?

Whilst there are measures of parents' attitudes towards their child's media use and experiences, there are no explicit questions on exposure to harmful content. Nor are there from children.

4.1.6 Ofcom COBA Tracker

Strengths:

- If analysing the data as is, the panel nature of the survey provides the ability to remove selection effects that would otherwise not be captured in a repeated cross-sectional study

Limitations

- No explicit measure of subjective wellbeing, only wellbeing-related questions
- No relevant measures regarding exposure to harmful content

What to do with this data?

- Augment to include wellbeing questions in the experience harms section

4.1.7 EU Kids Online Survey 2020

The EU Kids Online project is a research initiative funded by the European Commission that aims to enhance knowledge about children's online experiences across Europe. Their 2020 cross-sectional survey is a key component of the project, which was designed to gather empirical data on children's internet use, including their online activities, exposure to online risks, digital skills, and parental mediation practices. Over **25,000 children, aged 9 to 16**, from **19 EU countries** participated in the survey between autumn 2017 and summer 2019.

The Data: The EU Kids Online survey has a highly comprehensive list of questions on how safe respondents feel on the internet, experiences of cyberbullying and any harms they've experienced, as well as exposure to harmful, sexual, and inappropriate content. Some key questions include:

- In the past year, have you seen online content or online discussions where people talk about or show any ways of physically harming or hurting themselves, ways of committing suicide, (3) ways to be very thin, etc.
- Have any of these things happened to you in the last year: Nasty or hurtful messages were sent to me, I was left out or excluded from a group or activity on the internet, etc.?

Furthermore, follow-up questions are also asked to ascertain the immediate affective response to being exposed to certain harmful content, including the extent to which they were upset by bullying content and/or sexual content. In addition to these **short-term affective wellbeing** measures, the **cantril ladder** is used to measure children's overall wellbeing.

4.1.7 EU Kids Online Survey 2020

Strengths:

- Very large sample size
- Extremely comprehensive online safety questions
- Good wellbeing measures

Limitations

- Doesn't include the UK - the survey was first conducted in 2010, with the UK participating, however the second survey 10 years later did not include the UK, following Brexit. Consequently, the data from 2010 is available on the UK data service, but the 2020 data is not openly-accessible.

What to do with this data?

- Use the wellbeing-related questions for replication in their own surveys
- Use as is for data analysis and hypothesis testing, but with the caveat that this isn't applicable to the UK context
- Partner up with EU Commission to include the UK back into the next survey

4.1.8 The CyberSurvey

The CyberSurvey by YouthWorks is an annual repeated cross-sectional survey which measures UK school children's (aged 11 and up) views on their digital lives. Over 53,000 students have participated in the survey to date, with 1,347 participating in the most recent reported wave (2021).

The Data: Whilst the survey data and documentation isn't openly available, research reports by YouthWorks reveal the questions asked to children regarding their wellbeing and online experiences. Whilst life satisfaction isn't measured directly, there are several questions that aim to capture both positive and negative wellbeing indicators, including:

- Positive wellbeing: how frequently the respondent (1) feels happy, (2) concentrates well, (3) feels positive about things, (4) is proud of things they do, (5) feels there are some good things about me, (6) overall, is happy with themself.
- Negative wellbeing: how frequently the respondent (1) feels tired for no reason, (2) has sleep problems, (3) forgets to eat, (4) can't sit still, (5) feels it's too much effort to do anything, (6) finds it hard to make decisions, (7) gets irritable and angry easily, (8) sees that people notice they're not OK.
- Anxiety: how frequently the respondent (1) feels nervous or anxious, (2) worries a lot, (3) can't make their worries go away, (4) is afraid bad things might happen, (5) worries affect their life.

The CyberSurvey also tracks exposure to particular harmful content, including cyberbullying content, content which pressures to bulk up or be too thin, content talking about suicide, content encouraging self-harm, unsought nude images or videos, very violent content, racist views etc.

4.1.8 The CyberSurvey

Strengths:

- Only survey identified to include wellbeing measures and exposure to online harms amongst the young UK population.
- Longitudinal study since 2008.
- Includes questions on respondents' vulnerabilities (i.e. “factors which might put young people at risk online or cause them to experience the internet differently from their non-vulnerable peers” - see pg. 5 [here](#)).

Limitations

- Wellbeing questions aren't standard and information on the validity of the measures is **unknown**.
- Limited information available given closed access data and documentation.
- Unknown whether the survey is continuing.

What to do with this data?

- We reached out to YouthWorks to get more information on the survey, yet received no response. We recommend Ofcom follow up again to better understand the quality of the data (e.g. what exact questions are being asked, how data is recorded), and whether the survey is still continuing annually.

4.2 Summary

Study	Study Design	Sample Size and Age	Location/ Context	Open- Access?	Frequency of data collection	Aspect of online safety covered (if any)	Wellbeing Measures
Understanding Society - Youth Questionnaire	Longitudinal Panel	Any children aged 10-15 from 40,000 households	UK	Yes - Available on UK Data Service	Annually since 2009	Online bullying	SDQ, Life satisfaction, Domain-specific satisfaction with life
The Children's Society Survey (wave 19, 2020)	Cross-sectional	2000 children, aged 10 to 17	UK	No - Data and documentation not openly- accessible	Wellbeing data collected annually but online experience data collected once (in 2020)	Overall age-appropriateness of content, perceived online safety	ONS4, Student Life Satisfaction Scale, Domain-specific happiness with life,
NHS Mental Health of Children and Young People (MHCYP)	Longitudinal Panel	1,203 children (aged 11-16) and young people (aged 17-25) were in all 5 waves	England	Yes - Available on the UK Data Service	Wave 0: 2017, Wave 1: 2020, Wave 2: 2021, Wave 3: 2022, Wave 4: 2023	Online bullying, perceived online safety	SDQ, WEMWBS
Ofcom's Children's Media Lives Tracker	Qualitative cohort study	21 children, aged 8-17	UK	Yes	Annually since 2014	Some online content harms, bullying content	Open-ended affective wellbeing questions
Ofcom's Children's Online Behaviour and Attitudes (COBA) Tracker	Repeated cross-section	3000+ participants per wave (parents of children aged 3-17, and children aged 8-17)	UK	Yes	Two waves in 2021 and in 2022, one wave in 2023 (similar trackers used since 2005)	Wellbeing-related questions regarding general online use and safety	
Ofcom's Online Experiences Tracker	Repeated cross-section.	14,000 participants, ~1000 of which are children aged 13-17	UK	Yes	Wave 1: 2021, Wave 2: 2022, Wave 4: 2023, data from 3 recalled due to survey issue	All online content harms, online safety	Affective responses to viewing content, wellbeing- related questions regarding online use and safety
EU Kids Online Survey 2020	Cross-section	25,101 children aged 9-16	19 EU countries (not UK)	No - Data not openly-accessible but questionnaire available	Wave 1: 2010 Wave 2: 2017-2019	All online content harms	Cantril Ladder, Affective responses to viewing content
The CyberSurvey 2021	Repeated cross-section	1,347 students aged 11 to 16+	Participating schools in the UK	No - Data and documentation not openly- accessible	Annually since 2008	All online content harms	Positive wellbeing (happiness, self-respect), negative wellbeing (anxiety, energy issues)

4.3 Recommendations

- **Augment Ofcom tracker surveys** with validated child wellbeing measures identified in Section 3 (i.e. ONS4, SDQ, WEMWBS, Good Childhood Index & domain-specific measures). These can all be found in the national datasets reviewed.
- **Use the national survey datasets (i.e. Understanding Society, NHS MHCYP, Children's Society) to establish a counterfactual** for comparing future changes in child wellbeing to. The choice of dataset depends on which measures are selected to include in tracker surveys:
 - ONS4 & Good Childhood Index = The Children's Society
 - SDQ & WEMWBS = NHS MHCYP
 - Satisfaction with various life domains = Understanding Society Youth
- Access permitting, **analyse the EU Kids Online data** to test the hypothesis that exposure to harmful content affects wellbeing, but with the caveat that this may not be generalised to the UK context.
 - **Reach out to YouthWorks** to get a better understanding of the CyberSurvey and, access permitting, use the data for hypothesis testing.
- **Partner up with The Children's Society** to include specific measures on exposure to harmful content in their survey.

5. Methods



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5.1 Approach to methods review

Preceding sections examine methodologies for evaluating the impacts of the OSA on wellbeing. Drawn directly from the **Magenta Book** (HMT, 2020).

This is an initial judgement to help guide Ofcom's thinking. While beyond this project's scope, a more detailed assessment would be recommended (and something State of Life would be equipped to support).

For in-depth evaluation of each method, **see Annex A** where we address each of the aspects opposite. For brevity, following slides summarise our assessment of the general feasibility of each method, for the OSA.



Method description: operational definition for each approach.

Implementation in OSA/wellbeing context: how we imagine the method might be applied.

Feasibility considerations: limitations, practical challenges, ethical concerns.

Data requirements: types and quality of data required, their availability, or the feasibility of their collection.

Robustness: reliability and validity in measuring wellbeing impacts.

Cost/resources: financial and other.

Recommendation: based on 1-6 above, our judgement on overall feasibility as part of any OSA wellbeing evaluation.

5.2 Process/impact evaluation methods

We consider all of the Magenta Book’s list of six “generic” methods to be potentially feasible. Deliberative and observational methods are in ‘Amber’ due to the more significant resources required.

Method	Summary	Feasibility_Rating
Surveys and Polling	Feasible; already central to OSA strategy and some surveys could be extended to measuring wellbeing.	Green
Interviews and Focus Groups	Valuable for a more nuanced understanding of online harm and wellbeing, complementing quantitative data.	Green
Case Studies	Feasible; provides valuable narratives and policy insight, e.g. on particular service providers that are meeting Codes of Practice and the impacts this is having on individuals experiences.	Green
Output or Performance Monitoring	Feasible; MI useful for tracking mental illness, may be more challenging for subjective wellbeing.	Green
Consultative/Deliberative Methods	Depth and range of perspectives; enriches understanding but resource-intensive, possibly limiting practical feasibility.	Amber
Qualitative Observational Studies	Provides rich contextual insight but resource intensive.	Amber

5.3 (Quasi-)Experimental methods

Of the eight techniques listed in the Magenta Book, we think practical challenges limit the ability to identify any statistically significant changes in wellbeing and (crucially) attribute these specifically to OSA intervention.

Method	Summary	Feasibility_Rating
Randomized Controlled Trials (RCTs)	Unfeasible for OSA programmatic evaluation, but there may be opportunities to implement with some service providers.	Amber
Difference in Differences (DiD)	Unfeasible at national level without suitable comparators. May be possible in targeted scenarios, e.g. by comparing wellbeing changes across different service providers.	Amber
Interrupted Time Series Analysis (ITSA)	Provides contextual data at programmatic level. Not viable as a method to attribute wellbeing impacts to OSA intervention.	Amber
Timing of Events	Unfeasible with existing data; principles of this method does however highlight the importance duration/hazard modelling given wellbeing adaptation.	Red
Propensity Score Matching (PSM)	Likely unfeasible due to lack of suitable data.	Red
Instrumental Variables (IV)	Unfeasible due to lack of suitable instruments for the OSA intervention.	Red
Synthetic Control	Likely unfeasible due to lack of suitable data.	Red
Regression Discontinuity Design (RDD)	In principle could evaluate wellbeing impacts for groups either side of age 18 threshold; in practice unlikely to be feasible.	Red

See next page for our conclusions.

5.3 (Quasi-)Experimental methods

Ofcom indicated interest in monitoring trends in key wellbeing measures before and after the enactment of the OSA, a process known as Interrupted Time-Series Analysis (**ITSA**) in the Magenta Book. We assigned this an **Amber** rating for its potential uses at programmatic level, albeit with notable limitations.

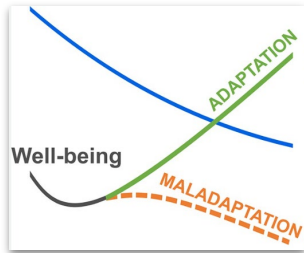
1. Phased OSA implementation complicates the establishment of a clear before-and-after comparison.
2. Variation in compliance timing among service providers — with some adopting measures in advance and others falling short of full adherence to the Codes of Practice — also muddies the interpretative waters.
3. Factors relating to online safety account for a small fraction of overall wellbeing making it challenging to discern any direct impacts of the OSA on child wellbeing.

Subgroups may experience different levels of exposure to online harm, suggesting the potential for defining ‘treated’ and ‘control’ groups to examine the differential effects of the OSA. (**DiD**) The groups do not have to be equal (as in a regular RCT) but should be following a common trend beforehand.

Combining **Randomised Controlled Trials (RCTs)** and Difference in Differences (DiD) approaches might offer the most viable path, but only in certain contexts, and can be better suited for understanding short-term momentary wellbeing changes. These strategies require meticulous ethical considerations, particularly when randomisation could increase the control group's exposure to online harm. Yet, if service providers, trialling ways to restrict harmful content, were to concurrently gather wellbeing data, robust analyses could be achieved.

5.4 Timing of wellbeing evaluation

Duration of wellbeing effects is a crucial consideration: from immediate responses to long-term life changes. Two methods assessed for their potential in the OSA evaluation context.



Method	Summary	Feasibility_Rating
Simulations	Feasible; recommended for long-term view beyond evaluation period.	Green
Ecological Momentary Assessment (EMA)	Powerful for immediate effects but requires careful ethical planning.	Green

Simulations: Classified as "theory-based" in Magenta Book. Offers insights into long-term wellbeing impacts after study period. E.g. using secondary evidence to assist in estimating longer-term life satisfaction changes, leading to preliminary wellbeing life-year (WELLBY) estimation.

Ecological Momentary Assessment (EMA): Highlighted in Magenta Book supplementary on health and wellbeing evaluation (OHID, 2018). Could offer insight into 'affective' wellbeing related to exposure to harmful content. Leverages real time (cost-effective) digital platforms for gathering momentary data.

5.5 Methods recommendations

OSA evaluation challenges apply more broadly than wellbeing, especially if we focus on quantitative impact evaluation.

It may be that wellbeing outcomes are more feasible to assess than some clinical health outcomes, where Ofcom will rely on evaluation partners in the health and care sectors, and access to sensitive personal data.

Ofcom use the tracker surveys to look at outcomes before/after the OSA phased introduction, then the same advantages and limitations of this approach would apply to a range of outcomes that are monitored in this way. We would still recommend collecting subjective wellbeing information through the trackers, but this might be best described as ‘monitoring’ rather than ‘evaluation’.

Wellbeing measurement could be useful as part of qualitative and process evaluation, including through deeper dives on specific interventions or service changes, focus groups etc.

RCTs and difference-in-difference could be feasible.

Regression-based methods are less feasible because of small sample sizes, especially for children and those most at risk, or suffering online harms.

There are precedents for momentary wellbeing assessments and for simulating longer-term wellbeing impacts, both of which are worth considering.

6. Value for Money Evaluation



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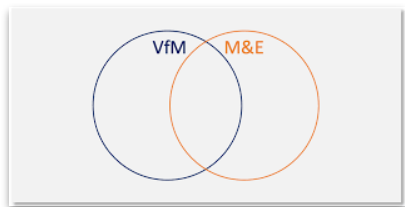
A great deal of today's project evaluation is devoted more to finding out about the outcomes, rather than valuing them...The subsequent Cost Benefit Analysis is typically seen as a relatively straightforward tailpiece to such exercises.

O'Donnell *et al.* (2014) | Wellbeing and Policy

<https://cep.lse.ac.uk/new/publications/abstract.asp?index=7288>

”

6.1 The need for VfM evaluation



Design: CBA often mistakenly regarded as a straightforward addition rather than a complex, integral component of evaluation.

Importance: VfM evaluation could be crucial in determining whether the OSA justifies its ~£2.5 billion cost. Pertinent given public commitment to OSA Post Implementation Review, future Impact Assessments, Business Cases for OSA-related expenditure.



Health and wellbeing approaches: Effective methods for capturing social value of OSA using either objective health-related metrics and/or subjective wellbeing measurement.

Beyond project scope but we briefly consider potential for a Green Book compliant economic evaluation of the OSB...

6.2 Health-related VfM evaluation

If we think of OSA as a public health intervention, then various approaches are suitable for assessing some social values associated with online safety.

Unit values for public health and safety intervention:

- Value of a Statistical Life Year (SLY)
- Value of a Prevented Fatality (VPF)
- Quality-Adjusted Life Years (QALYs)

Typically probabilistic, risk-based approach, necessitating estimates of how OSA interventions i) mitigate different online safety risks, and ii) impact on length or quality of life.



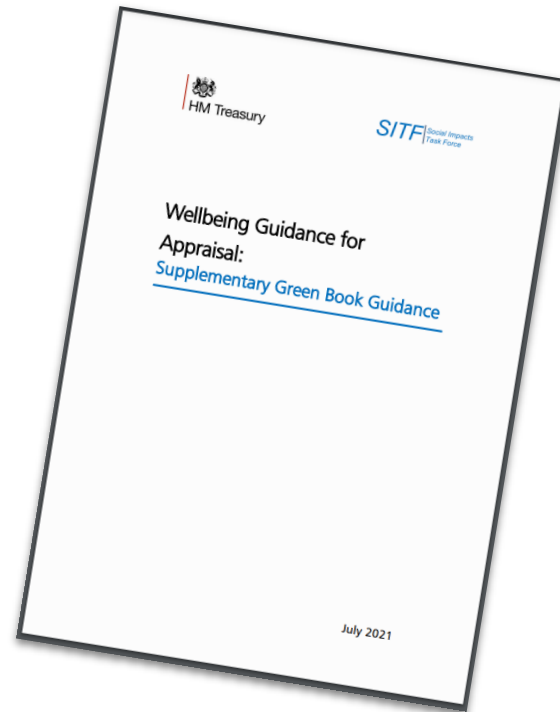
6.3 Wellbeing-related VfM evaluation

Wellbeing-adjusted life years (WELLBYs): One WELLBY equates to a one-unit improvement on the ONS ten-point life satisfaction scale, for one year.

Green Book: recommends monetary value of £13,000 per WELLBY, ranging from £10,000 to £16,000 (2019 prices).

OSA application: could encompass wider array of social impacts, over and above clinical health risks. E.g., where the OSA limits lower-level wellbeing effects from viewing harmful content.

NB: Also possible to translate other child wellbeing metrics into £ WELLBYs including ONS4, WEMWBS, or the SDQ.

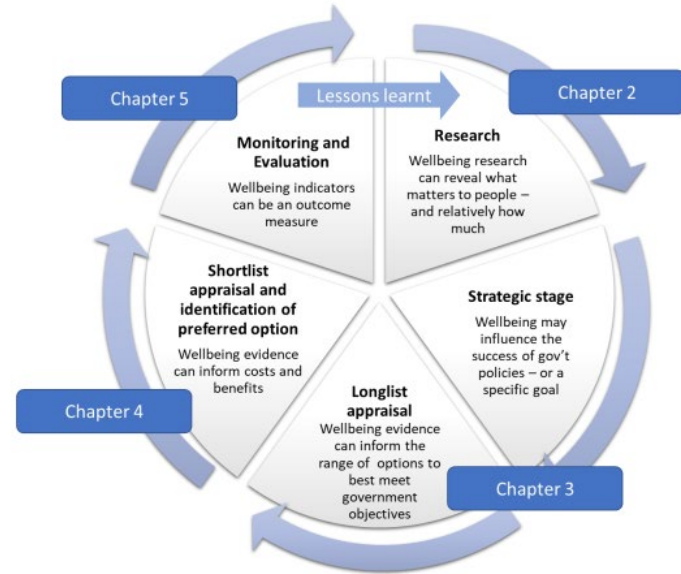


6.4 VfM recommendations

We recommend:

1. 'Design in' the economic component of the OSA evaluation, so that impacts can be a) assigned credible social values and b) compared to costs of intervention. This will connect the evaluation to the 'ROAMEF' cycle - Rationale, Objectives, Appraisal, Monitoring, Evaluation and Feedback (see Figure 1.1. [here](#)).
2. Avoid reliance on public cost savings, since these will not reflect the welfare benefits to the main beneficiaries. Instead consider a combination of WELLBY and QALY approaches, depending on the balance of subjective wellbeing and clinical health outcomes.
3. Since life satisfaction measure lends itself readily to WELLBY measurement, this supports our earlier recommendation to prioritise this measure. However, multi-item measures like SDQ and WEMWEBS can (and have) be assigned credible social values.

Figure 1: Wellbeing in policy development



Source: *Outline of Key Appraisal Steps from The Green Book (HM Treasury, 2020, Box 2 page 6)*, amended to add wellbeing considerations and background research stage

7. Conclusion and Recommendations



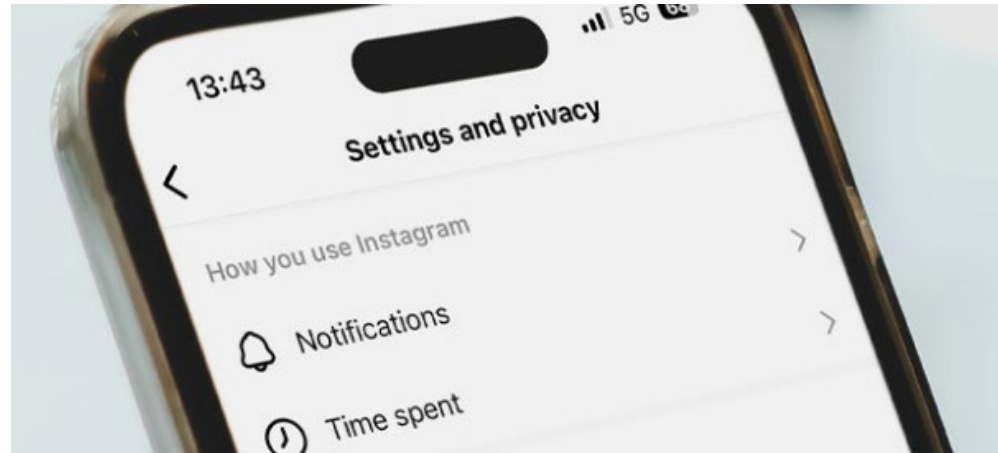
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7.1 Conclusions

This study explored whether and how wellbeing metrics could be used to measure the impacts of harmful content online and the evaluate the impacts of the Online Safety Act, particularly for children.

In the following three slides we map our assessment in sections 1-6 onto the three key areas of interest, as outlines in Ofcom's tender. To recap, these were:

1. **Tracking:** Assess **longitudinal impacts** of safety improvements to online services, partly due to the OSA.
2. **Causal links:** better understand how changes in 'intermediate' outcomes on services reduce harms and improve wellbeing.
3. **Evaluation:** wellbeing impacts of particular interventions made by services, including where these are introduced due to the OSA.



7.2 Longitudinal impacts

Using subjective wellbeing metrics to evaluate the **longitudinal impact over time** of the implementation of safety improvements to online services, partly due to the OSA.

Consistent wellbeing measures (e.g., ONS4, WEBWEBS, SDQ) are already tracked in a number of surveys, but without the depth of further context about online activity, harm exposure and behaviour questions which would allow analysis of the OSA. Those with the depth of questions relating to online safety are lacking evaluative subjective wellbeing questions, and vice versa.

We recommend adding wellbeing question(s) to tracker surveys to enable further exploration. Depending on space in the survey, cost and other constraints, this can be achieved proportionately. First, by prioritising 'single-item' measures such as overall life satisfaction, then by adding questions that relate to mood and feelings specifically in relation to online activity, and then through 'multi-item' child wellbeing scales.

However, changes in the OSA may make the biggest difference to a small proportion of (otherwise) exposed and vulnerable children. It is unclear if the small sample sizes would result in measurable change on average, or what the more general wellbeing impact on children might be. Whilst causal attribution is challenging, this at least provides a way to monitor changes in wellbeing outcomes, and to analyse associations between wellbeing, online activity and other characteristics.

7.3 Intermediate outcomes

To understand how changes in **intermediate outcomes** on services (including but not limited to those made due to the Online Safety Act (OSA)) may reduce harm and improve wellbeing.

There is initial - mainly cross-sectional - evidence linking online harms and wellbeing.

By measuring wellbeing, Ofcom could add considerably to the literature, benefitting not just the OSA but wider UK government, academic and international understanding of online harms and their impacts.

We think subjective wellbeing significantly adds to our understanding of the theories of change, both as a 'final' outcome but also as a 'precursor' (a risk or protective factor explain why some groups are more vulnerable than others and/or impacted more).

7.4 Evaluation

To evaluate the wellbeing impact of **particular interventions** made by services (particularly/including where the intervention has been introduced due to the OSA).

Wellbeing is relevant to measure alongside measures of the behaviours themselves (self-harm, ED, etc) and alongside measures of mental ill health.

Experimental approaches are feasible, where wellbeing metrics are tracked alongside other contextual and behavioural data. Causal evidence could be drawn out with RCTs, using a difference-in-difference method, with appropriate ethical considerations. The challenges again relate to the likely a small proportion of children for whom online safety impacts are greatest, and especially for acute harms - but these challenges relate to RCTs more generally, not wellbeing measurement per se. Ofcom could, therefore, usefully augment any planned RCTs with wellbeing measures.

Measuring wellbeing ‘in the moment’ relevant for frequent activities / behaviours.

Annex A

Evaluation methods review in detail



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Simulation

Aspect	Assessment
Method	Simulation modelling integrates new (primary) and existing (secondary) evidence. It could model how regulatory changes in the OSA impact on various pathways toward wellbeing outcomes, where direct observation and attribution is challenging within the evaluation study period.
Implementation in OSA/wellbeing context	Some impacts of the OSA may be observed on 'intermediate' outcomes within Ofcom's theories of change, for various primary priority and priority outcomes. Ofcom may however require secondary evidence to then estimate longer-term wellbeing impacts. For some outcomes, our literature review may be instructive, or evidence on life satisfaction impacts can be found in a look up table, in the Green Book Wellbeing Guidance for Appraisal.
Feasibility considerations	Will Ofcom or evaluation partners have robust evidence of OSA impacts on intermediate outcomes, which are in turn known to affect life satisfaction?
Data requirements	Refer to the literature review for initial evidence on the links between online safety, mediating outcomes and wellbeing.
Robustness	This approach is standard for 'early intervention' where long-term impacts stretch beyond the evaluation study period. It then enables wellbeing economic evaluation. This does however introduces uncertainty due to the indirect approach of estimating wellbeing impacts.
Cost/resources	Where primary evaluation of intermediate outcomes is completed, linking to secondary evidence of wellbeing impacts can be achieved in-house or outsourced at relatively low cost compared to other evaluation methods.
Recommendation	Feasible and recommended in some form, as the OSA evaluation progresses. Simulation methods could provide a longer-term view of the OSA's impact, beyond the evaluation period. Since online harms have long term impacts, and those justify the cost of intervention to business, this may be useful especially in any impact assessments, business cases or post-implementation reviews.

Randomised Control Trials (RCTs)

Aspect	Assessment
Method	Randomised Control Trials (RCTs) create strong comparison between groups receiving an intervention and those that do not, achieved by random assignment, ensuring bias is minimised.
Implementation in OSA/wellbeing context	Implementing RCTs is clearly unfeasible at 'programmatic' level with the universal application of the OSA. Legal and ethical barriers prevent withholding regulations from a control group. There may however be options for randomisation at intervention level.
Feasibility considerations	Are there components of the OSA where legal or ethical issues for conducting RCTs are reduced, making this approach more feasible?
Data requirements	Primary data collection is required, which involves detailed planning and execution.
Robustness	Highly robust as RCTs provide strong evidence of causality. However, replicating findings across multiple RCTs is ideal for confirming results.
Cost/resources	Significant time and financial investment is required, potentially amounting to hundreds of thousands to millions of pounds depending on the study's scale and complexity.
Recommendation	Whilst theoretically offering a robust method for assessing the OSA's wellbeing impact, RCTs are generally not feasible for OSA.

Propensity Score Matching (PSM)

Aspect	Assessment
Method	Propensity Score Matching (PSM) is a statistical technique that constructs a counterfactual group to estimate the impact of an intervention, matching based on the likelihood of being treated.
Implementation in OSA/wellbeing context	Challenges in implementing PSM include identifying an 'untreated' group for OSA. In principle, this might be feasible around certain age thresholds, such as over/under 18, to assess changes in wellbeing pre and post-intervention.
Feasibility considerations	Is there pre-intervention data to estimate propensity scores? Can age be accurately identified, and are the sample sizes large enough for effective matching on other characteristics? Are datasets rich in necessary confounders?
Data requirements	High requirements for detailed and large sample size data, which may limit PSM as a viable option, particularly when such data must include both online activity, risk exposure and wellbeing measures.
Robustness	While PSM offers a valuable alternative when RCTs are not feasible, its validity heavily relies on the 'unconfoundedness' assumption, which may not hold in complex settings like the OSA.
Cost/resources	Significant in terms of both time and money due to the requirements for data collection, processing, and analysis. Costs will vary based on data availability and matching process complexity.
Recommendation	Currently considered unfeasible due to the lack of available rich, comparable longitudinal data for online activity and wellbeing, especially among children.

Timing of Events

Aspect	Assessment
Method	Timing of Events, known as duration modelling or mixed proportional hazard models, focuses on the timing of events or transitions, such as the duration before a specific event occurs or the state duration.
Implementation in OSA/wellbeing context	Exploration would focus on whether the OSA's interventions alter wellbeing or mental health indicators over time and for how long, specifically evaluating transitions across clinical thresholds potentially triggered by online harms.
Feasibility considerations	Is there adequate data available to accurately model the timing of intervention impacts and outcomes? Can all influencing factors be accounted for, and how dependent are changes in wellbeing indicators on the OSA's interventions?
Data requirements	Necessitates comprehensive datasets with demographic information, timing of intervention participation, and wellbeing indicator changes. Access to longitudinal data and reliable wellbeing measures is crucial.
Robustness	Addresses the timing and duration of OSA effects on mental health effectively, yet results' reliability hinges on data availability, which may be limited or challenging to collect in context.
Cost/resources	Highly resource-intensive in terms of data collection, validation, and analysis, potentially requiring new, primary data which could lead to prohibitive expenses.
Recommendation	Generally unfeasible with existing data. However, this method highlights a significant challenge in the OSA evaluation that needs to be addressed: demonstrating the duration of online harm impacts is crucial, yet difficult without methods that intergrate some form of duration modelling.

Interrupted Time Series Analysis (ITSA)

Aspect	Assessment
Method	Interrupted Time Series Analysis (ITSA) is a quasi-experimental method assessing the causal effect of interventions through time-series data. Employed at the population level, it's suitable for new legislation impacts like the OSA.
Implementation in OSA/wellbeing context	ITSA could track wellbeing indicator trends before and after the OSA's implementation. Challenges include the Act's staggered rollout and ensuring stability in confounding factors over time, alongside the need for sufficient time-series data.
Feasibility considerations	Are comprehensive time-series data available for wellbeing indicators pre- and post-OSA implementation? Can we ensure other influencing factors remain stable over time?
Data requirements	Typically reliant on administrative data, which is notably absent for wellbeing metrics for children, limiting potential for detecting significant wellbeing changes.
Robustness	Relies heavily on the availability and quality of time-series data, and precise modelling of confounding factors. The lack of a counterfactual complicates attribution of observed changes.
Cost/resources	While generally moderate if leveraging existing data, the true costs may escalate without such resources, coupled with the analytical expertise required for effective ITSA application.
Recommendation	Suitable in providing contextual data at programmatic level, possibly using the Good Childhood Report, Understanding Society Youth or similar. Due to challenges like staggered rollout and lack of appropriate data, ITSA is not viable for assessing the OSA-attributable impacts on wellbeing.

Instrumental Variables (IV)

Aspect	Assessment
Method	Instrumental Variable (IV) uses a different variable, the instrument, to predict treatment and derive an unbiased estimate of the treatment's impact, such as the OSA.
Implementation in OSA/wellbeing context	Identifying a valid instrument for the wellbeing impacts of OSA is challenging and typically cannot be planned in advance.
Feasibility considerations	Can a strongly correlated instrument with the OSA be identified? Are there sufficient data on wellbeing and confounders for robust regression analysis?
Data requirements	Requires longitudinal data covering wellbeing and confounders, which may be unavailable, particularly for children at risk of online harm.
Robustness	IV method can be robust with the correct instrument and data but is complex and requires stringent conditions for validity.
Cost/resources	Generally involves moderate costs for secondary data analysis, but finding a suitable instrument and obtaining relevant data might be challenging.
Recommendation	Unfeasible due to likely lack of suitable instruments.

Synthetic Controls

Aspect	Assessment
Method	Synthetic control constructs a 'clone' of the treatment group from historical data, measuring impact as divergence between the treatment and its synthetic clone.
Implementation in OSA/wellbeing context	Implementing this for the OSA involves identifying at-risk groups and comparing them with a similar 'clone' group not receiving the treatment.
Feasibility considerations	Is it possible to identify a suitable control group unaffected by the OSA, considering its universal application?
Data requirements	Relies on longitudinal data on online safety, which may not be extensively available especially for specific age groups.
Robustness	Provides a relevant comparison point where no suitable control exists but requires extensive data for accurate construction.
Cost/resources	Involves moderate costs when leveraging existing data, but establishing a robust synthetic control may be complex.
Recommendation	Probable unfeasibility due to challenges in finding a suitable control group and data constraints.

Difference-in-difference (DiD)

Aspect	Assessment
Method	DiD could evaluate the impact of the OSA by comparing changes in wellbeing between UK internet users and those from a similar country, without similar safeguarding legislation.
Implementation in OSA/wellbeing context	Assessing parallel trends in wellbeing before OSA implementation; evaluating changes post-intervention to attribute deviations to the Act.
Feasibility considerations	Was there a parallel trend between the groups pre-OSA? Are external factors affecting only one group? Can changes be attributed to the OSA?
Data requirements	Necessitates longitudinal surveys or data capturing wellbeing over time. Requires substantial data before and after OSA's implementation.
Robustness	Depends on the validity of parallel trends and absence of other confounding factors, as well as data quality and comparability.
Cost/resources	Potentially significant costs for new data collection, but may be reduced at a service level with targeted data tracking.
Recommendation	Conceptually straightforward but challenged by the need for suitable comparison groups and high-quality data. Not feasible at a national programmatic level, but possible in targeted scenarios.

Regression Discontinuity Design (RDD)

Aspect	Assessment
Method	RDD could estimate the impact of the OSA using, for example, age as a cutoff to compare wellbeing between those just younger and older than 18.
Implementation in OSA/wellbeing context	Assumes individuals around the age threshold are comparable, excluding their exposure to the OSA.
Feasibility considerations	Are individuals around age 18 similar in respects other than OSA exposure? Is the wellbeing data accurate for these age groups?
Data requirements	Requires detailed records of ages and wellbeing, likely necessitating new surveys or studies around the implementation time.
Robustness	Validity hinges on the comparability of individuals around the cutoff. High-quality data can provide convincing local impact estimates.
Cost/resources	May require extensive primary data collection, leading to significant costs if existing surveys are inadequate.
Recommendation	Challenging due to age-related legal implications and limited utility for broader age groups. Not recommended.

Interviews and Focus Groups

Aspect	Assessment
Method	Engage various stakeholders through interviews and focus groups to understand subjective wellbeing impacts related to the OSA.
Implementation in OSA/wellbeing context	Discussions on experiences with harmful content and bullying, exploring the OSA's effects on online safety and wellbeing.
Feasibility considerations	How to ensure representative and ethical participation? Can findings be directly linked to the OSA's impact?
Data requirements	Necessitates skilled moderators, consent procedures, and support systems for discussing sensitive topics.
Robustness	Provides in-depth insights but subject to selection bias and limited generalisability.
Cost/resources	Significant planning, recruitment, and facilitation expenses; analysis of qualitative data is time-intensive.
Recommendation	Valuable for nuanced understanding of wellbeing impacts, complementing quantitative data for comprehensive evaluation.

Case studies

Aspect	Assessment
Method	In-depth exploration of individual or group experiences of online harm exposure, before and after OSA, focusing on specific wellbeing impacts.
Implementation in OSA/wellbeing context	Analyse detailed experiences with online harms and support received post-OSA.
Feasibility considerations	How to select representative cases? Can a clear link between changes in wellbeing and OSA be established?
Data requirements	Involves interviews, digital logs, diaries, and input from parents or educators; requires consent and ethical approval.
Robustness	Offers rich insights but has limited generalisability; depth over breadth of evidence.
Cost/resources	Resource-intensive with long-term participant engagement and skilled researchers needed.
Recommendation	Provides valuable narratives; findings should be supported by quantitative evidence.

Surveys and polling

Aspect	Assessment
Method	Utilise tracker surveys to collect data on children's subjective wellbeing, focusing on online experiences and exposure to priority harms.
Implementation in OSA/wellbeing context	Gather data on perceptions of online safety and experiences with harmful content post-OSA.
Feasibility considerations	Ensuring age-appropriate questions and reaching a representative sample of affected populations.
Data requirements	Requires robust survey design and access to children through schools, online platforms, or services.
Robustness	Offers broad quantitative insights; depends on question design, sample size, and response rates.
Cost/resources	Varies with survey scope and distribution mode; online surveys can be cost-effective.
Recommendation	Feasible. This could be central to OSA's strategy to measure wellbeing effects, where these questions were added to the Ofcom's tracker surveys. Effective for tracking changes over time but would ideally be combined with other qualitative methods for greater depth of understanding of wellbeing effects.

Output or performance monitoring

Aspect	Assessment
Method	Track metrics reflecting the OSA's objectives, such as reductions in harmful content or bullying instances.
Implementation in OSA/wellbeing context	Monitor changes in online environments and incidences reported by service providers.
Feasibility considerations	Identifying relevant metrics and ensuring their accurate and consistent collection.
Data requirements	Access to data from online platforms and collaboration with MOJ, Home Office, and NHS.
Robustness	Good for tracking specific changes in clinical health outcomes, illegal activity and victims of crime; limitations in capturing broader subjective wellbeing impacts.
Cost/resources	Lower cost than primary research if utilising existing (mainly Government) collections.
Recommendation	Feasible. Useful for tracking as part of OSA programmatic evaluation. More likely to pick up clinical mental illness rather than subjective measures of wellbeing.

Qualitative observational studies

Aspect	Assessment
Method	Observe and document behaviours and interactions within online communities frequented by children, and perhaps focusing on priority harms.
Implementation in OSA/wellbeing context	Identify OSA impacts on online safety and wellbeing through direct observation and user conversations.
Feasibility considerations	Accessing online spaces without altering natural behaviours may be challenging. Ethical concerns with passive observation of potentially harmful activity.
Data requirements	Digital tools for online immersion, ethical observation framework, and expertise in digital ethnography.
Robustness	Rich, contextual insights with limitations in generalisability and potential observer bias.
Cost/resources	Time and resource-intensive requiring long-term engagement and specialised analysis skills.
Recommendation	Offers invaluable context but challenging to implement; best combined with other methods for a rounded view.

Consultative/deliberative methods

Aspect	Assessment
Method	Facilitate structured dialogue with diverse stakeholders to discuss OSA's effectiveness and impact on wellbeing.
Implementation in OSA/wellbeing context	Engage a variety of participants in informed discussions to evaluate OSA's impact on online safety and subjective wellbeing.
Feasibility considerations	Ensuring accessible information and meaningful engagement across different levels of understanding and interest.
Data requirements	Detailed briefing packs, expert analyses, and experienced facilitators who understand the nature of child wellbeing and how to evaluate this through semi-structured dialogue.
Robustness	Provides rich insights but findings are qualitative and depend on participant diversity and representativeness.
Cost/resources	Resource-intensive with significant preparation and facilitation needed; entails costs for materials, participant compensation, and events.
Recommendation	Offers depth and range of perspectives; requires thorough planning and significant resources but enriches understanding of complex issues.

Ecological Momentary Assessment

Aspect	Assessment
Method	Ecological Momentary Assessment (EMA) is a research method that collects real-time data, typically as experiences occur in natural environments. This method leverages digital technology like smartphones and wearable devices to prompt participants to enter data multiple times throughout their day. These prompts can be scheduled randomly, at fixed times, or triggered by specific behaviors or environmental factors identified by the researcher.
Implementation in OSA/wellbeing context	EMA could be implemented to measure the real-time effects of the OSA on wellbeing, specifically regarding their online experiences and exposure to harms. Participants would provide real-time feedback on their experiences and wellbeing through digital devices. One potential focus is inadvertent exposure to harmful content, as deliberate exposure for research purposes would likely be unethical.
Feasibility considerations	Several questions arise when considering the feasibility of this approach: 1. How can we ensure participants' privacy and data security, given the sensitive nature of the collected data? 2. What technological infrastructure is required to support real-time data collection and analysis? 3. Is this viable for studying acute online harms, rather than typical online activity? Are there ethical concerns around measuring momentary wellbeing while potentially exposing participants to harmful content?
Data requirements	Implementing EMA would require a mobile application or digital platform capable of administering prompts. Participants need compatible digital devices.
Robustness	EMA is particularly useful for studying fluctuating phenomena, such as mood, physical activity, social interactions, and symptoms of illness or well-being. It provides a nuanced view of individuals' experiences in their everyday contexts, making it a valuable tool for psychological wellbeing. The richness and immediacy of the data can lead to a deeper understanding of complex behaviors and states, and how these are influenced by individual and environmental factors. EMA aims to minimize recall bias by asking participants to report on their experiences close to the time they happen, rather than relying on retrospective accounts that might be influenced by memory distortion or generalization. However, it may not capture well-being impacts that materialize later or where adaptation occurs.
Cost/resources	Developing or licensing the necessary technology for EMA can be costly, as can participant recruitment and data analysis. However, leveraging existing momentary evaluation mechanisms and service providers may make this more affordable.
Recommendation	EMA potentially offers a powerful tool for understanding the immediate effects of online experiences on children and young people's wellbeing in the context of the OSA. It allows for the collection of nuanced, temporal data that traditional methods may miss. However, successful implementation requires careful and ethical planning around privacy, technology, and participant engagement to ensure meaningful and robust data collection.



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