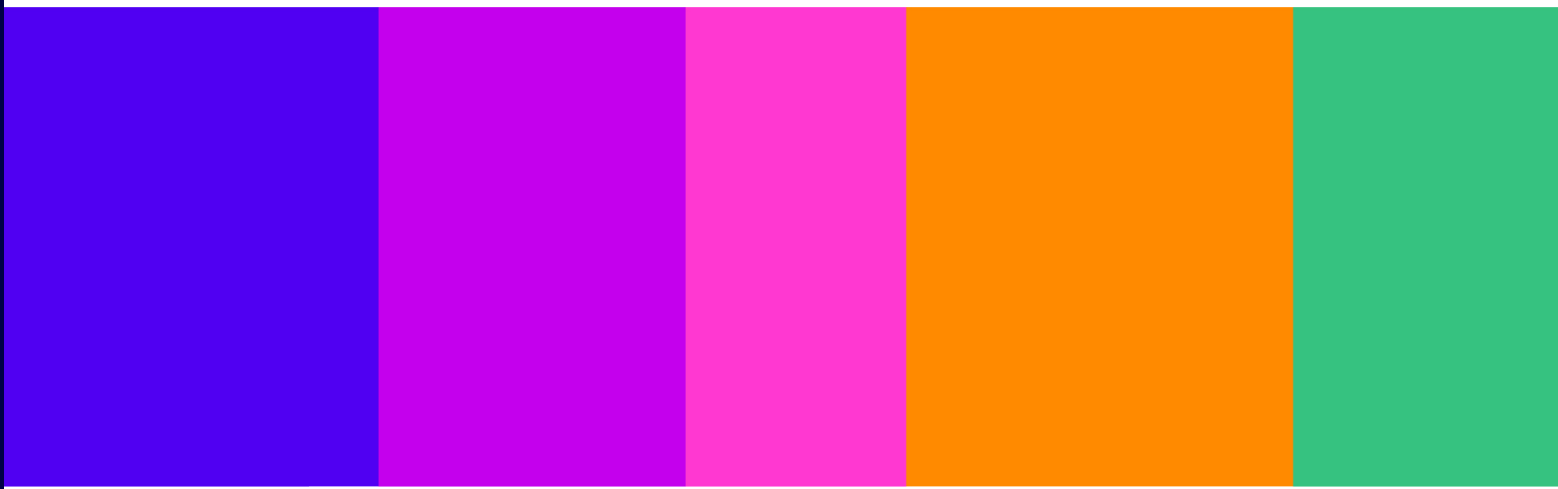


A feasibility study of using Wellbeing metrics to evaluate outcomes in Online Safety

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Ofcom is committed to encouraging debate on all aspects of media and communications regulation and to creating rigorous evidence to support its decision-making. One of the ways we do this is through publishing a series of discussion papers, extending across economics and other disciplines. The research aims to make substantial contributions to our knowledge and to generate a wider debate on the themes covered.

Acknowledgement

We thank State of Life for their insightful feedback and comments on this paper, which summarises the research we commissioned from them and contextualises it within our broader evaluation work. Their full report is available alongside this publication.

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In this paper we are presenting a view on the use of wellbeing metrics in the evaluation of Ofcom's online safety regime. In setting out this view we are not suggesting that using these methods are Ofcom's finalised view.

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1. Overview

- 1.1 Ofcom is the United Kingdom’s (UK) communications regulator, overseeing sectors including fixed line and mobile telecoms, the airwaves on which wireless devices operate, post and TV and radio broadcasting. We have regulated video-sharing platforms (VSPs) since November 2020 and were formally appointed as the online safety regulator in October 2023.
- 1.2 The new Online Safety Act (OSA) and existing VSP regulation place duties on relevant online services to protect their users from illegal content and children from certain harmful content. While there are some differences between the rules and scope of the OSA and the VSP regulation, both regulations require services to take appropriate and proportionate online safety measures reflecting the size, nature, and risks associated with their service.
- 1.3 Understanding and being able to demonstrate the impact which Ofcom’s regulations will have on regulated services, users, and other industry stakeholders will be key for Ofcom to make effective and transparent policy decisions in Online Safety (OS). Our evaluation work includes assessing whether our interventions are leading to changes in services’ systems and processes, and a safer online life for users, particularly children. It will also help us understand any unintended consequences that need mitigation. We intend to measure the impact of the OS regulation by using a variety of metrics and methods.
- 1.4 As part of our work to scope which metrics we should be tracking to understand outcomes in OS, we considered wellbeing metrics. Wellbeing refers to a state of being healthy, happy, and comfortable, both physically and mentally. We commissioned expert advice from [State of Life \(SoL\)](#),¹ with a focus on whether we could use and track wellbeing metrics over time to understand changes in the extent that children are having better experiences online.

Key insights from the SoL report

- Used properly, wellbeing metrics could be instrumental to OS evaluation, complementing other metrics.
- Ofcom should focus on using the ‘ONS4’ life satisfaction question and existing ‘domain-specific’ questions² that connect wellbeing to online activity and safety in user surveys.
- Ofcom could add wellbeing questions to their own tracker surveys and other primary data collections. Collaborating with organisations like The Children’s Society or Government departments could support contextual analysis and could be used to establish counterfactuals for evaluation.
- At the programme level, Ofcom should monitor wellbeing trends before, during, and after the OSA’s phased rollout, despite challenges in establishing causality.
- Randomised control trials (RCTs) could help Ofcom establish causality in certain cases, but can be better suited to investigating short-term wellbeing changes and would require careful ethical

¹ State of Life specialise in helping other organisations to measure and demonstrate social value. They have expertise in using wellbeing data and are named advisors on the 2021 HM Treasury Wellbeing Guidance.

² The ‘ONS4’ life satisfaction question is “Overall, how satisfied are you with your life nowadays?”. ‘Domain-specific’ questions ask individuals about their satisfaction and happiness in relation to their online experiences, or some element of these experiences.

planning. Other methods that may be feasible include differences-in-differences, interrupted time-series analysis, simulations, and ecological momentary assessments.

- 1.5 This document first contextualises the SoL report within our broader evaluation work, then summarises SoL's key findings, and discusses next steps. Alongside this summary, we are publishing [SoL's full report](#). We hope this summary and the full report will encourage engagement and discussion on how to measure the impact of regulatory interventions in OS, particularly about the role which may be played by subjective wellbeing.

2. Background

Evaluating the impact of the OSA

- 2.1 Evaluation is a commonly used approach for the systematic assessment of the design, implementation, and outcomes of an intervention, such as a policy or regulation. Evaluation tells us whether an intervention is achieving or has achieved its objectives; how effective it is at achieving its objectives; and its overall impact, including unintended consequences. These lessons can inform any changes to the intervention, as well as future policies or regulation, and demonstrate best practice.³
- 2.2 As Ofcom breaks new ground with the regulation of online safety, it is important that it does so using evidence that can support policy decisions and inform prioritisation of our efforts and engagement with regulated services. Evaluation is also a tool for transparency and accountability, as it can help increase trust in, and the credibility of, Ofcom's decisions, by informing the public about the outcome and value of the policies that Ofcom puts in place.
- 2.3 Our evaluation work will include assessing whether Ofcom's interventions are leading to changes in services' systems and processes, and a safer online life for users, particularly children. It will also help us understand any unintended consequences that need mitigation.
- 2.4 Given the breadth and the depth of the OSA, our evaluation strategy will cover several key strands of work. These include assessing the overall impact of the introduction of the OSA in priority areas, as set out in [Ofcom's approach to implementing the Online Safety Act](#). We want to evaluate 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. To do this, we will engage directly with a sample of services and are also planning to use a business survey to reach out to a larger group of services. We will also track whether users are having better experiences online, using evidence from our own research, such as [Ofcom's Online Experiences Tracker](#), and from Ofcom's partners in government, law enforcement and civil society.
- 2.5 It is also important that Ofcom understands the impact of its policies in specific areas. This could include, for example, the impact of regulation on businesses' costs, particularly for small and micro businesses.
- 2.6 Additionally, we want to understand the impact of discrete changes made by regulated services on safety outcomes, and will work with services to incentivise them to embed evaluation into their product development. Our Economics Discussion Paper [Evaluating online safety measures](#) sets out how a widely used evaluation framework could be applied to assess the impact and effectiveness of online services safety measures. Examples of Ofcom's work in this area are our Economics Discussion Papers assessing the [changes that Twitch, the video sharing platform, made to its content classification labelling](#) in 2023 and the [effectiveness of potential VSP content warnings and reporting features](#).

³ See section 2.5 and pages 11-12, HM Treasury, 2022. [The Green book, Central Government Guidance on Appraisal and Evaluation](#). [Accessed 25 September 2024].

Why wellbeing is relevant to OS evaluation

- 2.7 As we want to ensure that our interventions work to deliver a safer life online, it is important for our evaluation work to track metrics that capture users' online experiences, both positive and negative. Examples of metrics in this category would be how often children are exposed to harmful content and the impact of being online on an individual's wellbeing.
- 2.8 As already noted, wellbeing refers to a state of being healthy, happy, and comfortable, both physically and mentally. It encompasses a sense of contentment and satisfaction with life, as well as a positive outlook on one's experiences. One way of measuring this is through subjective wellbeing (SWB), where individuals are asked about their feelings regarding various aspects of their lives. SWB could be used for tracking users' online experiences, allowing users to share how their online lives impact them.
- 2.9 The key objective of the OSA is to deliver a safer life online for users in the UK through better online experiences. This may translate into improved mental health and wellbeing outcomes of users of online services, particularly young people, compared to what would occur in the absence of the OSA. Tracking wellbeing can help us assess how effectively Ofcom is achieving this outcome and identify ways to enhance our efforts.
- 2.10 Like with offline experiences, similar online experiences can affect individuals differently. Wellbeing can capture this diversity while also accounting for positive online experiences.
- 2.11 One challenge of using wellbeing metrics to evaluate the impact of the OS regime is that many factors influence an individual's wellbeing and it is difficult to disentangle the contribution of any one factor. As will be discussed further, using domain-specific questions, such as "What impact, if any, do you think your life online has on how you feel overall?", and causal inference techniques can provide insights into the impact of users' online experience on their wellbeing.

Why we commissioned external advice

- 2.12 We wanted to understand the feasibility of using wellbeing metrics for evaluation in online safety. Specifically, we asked SoL whether SWB would be appropriate for evaluation of the online safety regime; which SWB metrics could be most suitable (particularly for children); whether there are existing surveys from third party organisations that could be useful for Ofcom's OS evaluation; and which evaluation methodologies would be feasible and most useful. We asked SoL to primarily focus on understanding whether we can track changes in children's wellbeing over time and capture the wellbeing impact of reducing exposure to harmful content - such as pornography, suicide, self-harm, and eating disorders - which may result from the OSA.
- 2.13 SoL produced a report answering these questions, which Ofcom has published alongside this Economics Discussion Paper. We summarise SoL's key findings in the next section.

3. A summary of State of Life's report

The findings of the research on child wellbeing and exposure to harmful content online

- 3.1 SoL reviewed the existing literature on the links between exposure to harmful content online and wellbeing. They reported the following:
- a) There are clear theoretical and, in some cases, empirical links between exposure to certain harmful, online content and wellbeing.
 - b) Most empirical evidence shows that individuals who are exposed to harmful content online have lower wellbeing, but the research does not clarify whether exposure to these harms causes lower wellbeing. Lower wellbeing can be a precursor to being exposed to harms, as individuals with lower wellbeing are more likely to encounter harmful material online.
 - c) Current research often focuses on short-term changes in wellbeing and is largely centred on adults.
 - d) There is also limited research on how exposure to different forms of harmful content online interact with each other, or how repeated exposure to harmful content, affects wellbeing. Current research often focuses on whether individuals are exposed to a singular harm, but not on the history of exposure or the number of other online harms the individual is exposed to. Exploring this broader relationship will be important in assessing Ofcom's work in online safety, as we seek to reduce exposure to many types of online harm over the long term.
 - e) Work done by Ofcom in this field would likely add considerably to the literature, benefiting the wider UK Government, academic, and international understanding of online experiences and their long-term relationships with wellbeing, particularly for children.
- 3.2 Overall, current empirical research on the relationship between exposure to online harms and wellbeing is limited, often focussing on adults. In contrast, there is a paucity of evidence on this relationship as experienced by children. By incorporating SWB into online safety evaluation, Ofcom could significantly enhance understanding of the long-term relationship between online harms and children's wellbeing.

Is wellbeing suitable for evaluation of the online safety regime?

- 3.3 We asked SoL to examine whether SWB metrics were suitable for assessing online experiences. Their advice was as follows:
- a) Wellbeing can complement other metrics in OS evaluation.
 - b) The use of SWB in evaluation is well-established in academia and within the UK Government. HM Treasury's Green Book includes [guidance on incorporating wellbeing](#)

[into policy appraisal](#). Notably, several Government policies have had their wellbeing impact evaluated.⁴

- c) Meanwhile, HM [Treasury's Magenta Book](#) advises using health and wellbeing metrics for evaluation when a public health intervention involves significant investment, potential risk, novelty, political scrutiny, or uncertain effectiveness. Since the OSA shares similar objectives to a public health intervention and meets at least some of these criteria, using wellbeing metrics in evaluating its impact is in line with HM Treasury recommendations.
- d) A feature of wellbeing is adaption. This refers to the tendency for individuals' wellbeing to change after environmental changes, such as the impact of policy, before returning to pre-change levels. Tracking SWB metrics over time can tell us whether individuals' wellbeing adapts to changes brought about by the OS regime. This could help Ofcom determine the regime's long-term impact, especially when compared to static measures.

3.4 Therefore, SoL argued that SWB metrics could be instrumental in the evidence base assessing whether users are having better online experiences and the impact of the OS regime. Given the alignment with established criteria and the ability to assess lasting positive impacts, incorporating SWB metrics into Ofcom's OS evaluation programme can provide valuable insights into how interventions aimed at reducing exposure to online harms impact internet users.

Which SWB metrics are most suitable for OS evaluation?

3.5 There are different ways of measuring SWB. We asked SoL which SWB metrics would be most suitable for evaluating the OS regime, particularly for use with children.

3.6 SoL explained that there are momentary and evaluative metrics of wellbeing. Momentary metrics measure how someone feels at a certain point-in-time and tend to be better for measuring short-term impacts, whereas evaluative wellbeing metrics measure an individual's assessment of how their life is going and tend to be better for measuring more long-term impacts.

3.7 They recommended the following:

- a) When evaluating OS policies, long-term impacts (evaluative wellbeing) are more relevant than short-term impacts (momentary metrics). Nonetheless, in certain circumstances Ofcom may wish to evaluate short-term wellbeing impacts, as they can make causal research more feasible, and are more relevant when investigating the impact of frequent activities or behaviours.
- b) Many wellbeing metrics already exist, and Ofcom should avoid creating new metrics for OS evaluation.
- c) Ofcom should primarily focus surveys on the "Life Satisfaction"⁵ question from the ONS4, which is an evaluative metric.⁶ This question has been validated for those over age 10 and has been used extensively in surveys with nationally representative samples.

⁴ For example, [The National Citizenship Service](#); [broadband investment](#); [active labour market policies](#); [hosting the Olympics](#); and [the Levelling Up initiative](#).

⁵ "Overall, how satisfied are you with your life nowadays?"

⁶ The ONS4 is a set of four SWB metrics created by the Office of National Statistics (ONS). They are used in many surveys both internal and external to the ONS.

Since this question has not been validated for those under 10, a replacement question should be used for children below this age. As yet, there is no consensus on a single evaluative metric for those below 10. The happiness⁷ question from the ONS4 has been used for children below 10 in a nationally representative sample and the evaluative measure from the Understanding Society Youth Survey⁸ may have more appropriate wording, but these have not specifically been validated for this age group. These metrics could act as headline metrics to track the overall impact of the OS regime. If sample sizes are large enough, subgroup trends - such as those most at risk of exposure to online harms – could also tell us about the OS regime’s impact.

- d) To complement the general life satisfaction and happiness metrics, Ofcom could use domain-specific metrics asking individuals specifically about their satisfaction and happiness in relation to their online experiences, or some element of these experiences.⁹ This would allow Ofcom to track specific aspects of individuals’ wellbeing that might change as a result of the OS regime.
- e) If there is space in the survey questionnaire, Ofcom could track multi-item metrics like the Strengths and Difficulty Questionnaire (SDQ) or the Warwick Edinburgh Mental Wellbeing Scale (WEMWEBS).¹⁰ These metrics provide a more detailed and holistic view of children’s wellbeing, by aggregating multiple questions, and could facilitate a more detailed analysis of children’s emotional state and how it might be affected by changes in the regulation of online safety.

3.8 In summary, SoL suggested that Ofcom should focus on existing evaluative metrics, such as the ONS4 “Life Satisfaction” question, and incorporate domain-specific measures of wellbeing related to online life wherever possible.

How can Ofcom take advantage of existing surveys?

3.9 SoL reviewed existing surveys of children and young people (aged between 8 and 25) that contain information on wellbeing or online experiences, advising us on how we could use or learn from them. They reported that:

- a) Two surveys have measured both wellbeing and exposure to harmful content in children. However, there are limitations to both for Ofcom’s purposes: the [EU Kids Online Survey 2020](#) does not include children in the UK, and [The CyberSurvey](#) uses atypical wellbeing questions whose validity is uncertain. There are also doubts about the continuation of *The CyberSurvey*, which could impact on its usefulness. Despite these limitations, these datasets could be valuable for testing hypotheses about the relationships between exposure to online harms and children’s wellbeing. Ofcom could consider contacting the organisers of the surveys about using their datasets or to explore potential collaborations for future surveys.
- b) Many other surveys measure either wellbeing or children’s exposure to harmful content online, but not necessarily simultaneously in the same survey. These datasets could be used to establish a counterfactual for comparing future changes.

⁷ “Overall, how happy did you feel yesterday?”

⁸ “How do you feel about life overall?”, with responses forming a scale between ‘happy’ and ‘not at all happy’.

⁹ State of Life highlighted many possible questions of this type, such as “How happy are you with your safety online?”

¹⁰ Both of these metrics have been thoroughly tested and widely used with children. However, they are relatively long in structure, comprising of 25 and 14 questions respectively.

- c) Ofcom will need to create new data to track both wellbeing and children’s exposure to harmful content online in the UK. This could be achieved by augmenting Ofcom’s tracker surveys with validated child wellbeing metrics or by partnering up with external agencies who survey child wellbeing, such as [The Children’s Society](#), to include specific questions about exposure to harmful content to their surveys.
 - d) Whenever Ofcom collects data on child wellbeing and exposure to online harms, it should ensure the ethicality of the data collection process. SoL recommends conducting risk assessments of including SWB questions in surveys of children.
- 3.10 In conclusion, SoL’s review of existing youth surveys highlighted some potential value and uses of these existing surveys, despite their limitations. SoL advised that to track child wellbeing alongside exposure to harmful content, Ofcom will need to generate new data. This could be achieved either by incorporating wellbeing metrics into its own child trackers or by collaborating with existing surveyors of child wellbeing.

Which evaluation methods would be most useful?

- 3.11 Assuming that we were to use data on SWB to evaluate the impact of the online safety regime on SWB, we asked SoL which methods might be the most useful to employ. They concluded that:
- a) Many generic methodologies such as “surveys and polling”, “interviews and focus groups”, “case studies”, and “output or performance monitoring” are particularly suitable for the online safety context.
 - b) Tracking wellbeing before, during, and after the OSA’s phased rollout, would be useful, as it provides a way to monitor changes in wellbeing outcomes, and to analyse associations between wellbeing, online activity, and other characteristics, and how these relationships change over time.
 - c) Experimental and quasi-experimental methods, which would aim to determine the causal impact of OS interventions on wellbeing, can be challenging in the OS context. Nonetheless, SoL identified three potentially feasible methodologies, albeit with notable limitations: randomised control trials (RCTs); difference-in-differences econometric analysis; and interrupted time series analysis. RCTs may offer the most viable path to causal evidence but are only feasible in certain contexts.¹¹ They also require meticulous ethical considerations and design, and can be better suited for understanding momentary impacts.
 - d) Two alternative methodologies may be useful for understanding wellbeing impacts over differing timescales: *simulations* and *ecological momentary assessment*.
 - i) *Simulations* involve researching how exposure to online harms impacts child wellbeing in the long-term and then using this research to hypothesise the long-term impacts of specific interventions.¹²
 - ii) *Ecological momentary assessment* focuses on immediate wellbeing effects of events. It can involve using technology, such as smartphones, to track high frequency survey

¹¹ For example, when a particular service provider is trialling some alternative ways to reduce exposure to harmful content, that service provider could also gather and analyse wellbeing data.

¹² For example, if there was evidence that continued exposure to pornography causes 12-year-olds, on average, a 3-year-long, one-point decrease in a wellbeing metric; and if a certain platform change was estimated to prevent continued exposure to pornography for 1,000 12-year-old children; one could “simulate” the long-term wellbeing impact of the platform’s change.

data among participants as they go about their lives. Asking children about their momentary wellbeing and online experiences frequently, e.g. daily, could provide Ofcom with valuable information on how children's online experiences impact their day-to-day wellbeing. However, this methodology can be costly and would require careful ethical planning.

- e) Only a relatively small subsample of children may experience large changes in wellbeing due to the OS regime (while larger numbers of children could experience smaller changes). Therefore, if planning to undertake causal analysis of the impact of changes in the OS regime on children's wellbeing, Ofcom will need to ensure it has enough well-targeted data to detect significant changes in child wellbeing.
- f) If the ONS4 life satisfaction question was used in evaluation, Ofcom could include wellbeing in value for money evaluations using the HM Treasury's guidance on how to monetise wellbeing impacts through wellbeing-adjusted life years (WELLBYs).

3.12 In summary, SoL identified several effective evaluation methods using wellbeing metrics to assess the impact of the OS regime. They emphasised the value of tracking wellbeing throughout the OSA's rollout and highlighted the potential contextual value of RCTs, despite inherent challenges. Additionally, alternative approaches such as differences-in-differences, interrupted time-series analysis, simulations, and ecological momentary assessments were deemed feasible. For all methodologies, well-targeted, ethically sound, and cost-effective data collection are crucial.

4. Concluding remarks and next steps

What we are doing

- 4.1 We are publishing this Economics Discussion Paper summarising SoL's report and the full report alongside it to foster engagement and discussion on how to measure the impact of regulatory interventions in OS, with a particular focus on the potential role of SWB metrics.
- 4.2 We are exploring the possibility of incorporating some SWB metrics into Ofcom's new children tracker. This data will be used to monitor changes in children's wellbeing throughout OSA rollout, alongside their experiences of harmful online content. Additionally, we are considering undertaking more in-depth research with smaller groups of children on the interaction between wellbeing and exposure to harms in children.
- 4.3 In line with the recommendation by SoL, we are also engaging with third parties which already collect data on children's SWB and/or their life online.

A1. Responding to this Economic Discussion Paper

How to respond

If you would like to respond to this Economic Discussion paper, you can reply using any of these options:

You can respond by email to edp.responses@ofcom.org.uk. If your response is a large file, or has supporting charts, tables or other data, please email it to edp.responses@ofcom.org.uk, as an attachment in Microsoft Word format, together with the cover sheet.

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- upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.

We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt of a response submitted to us by email.