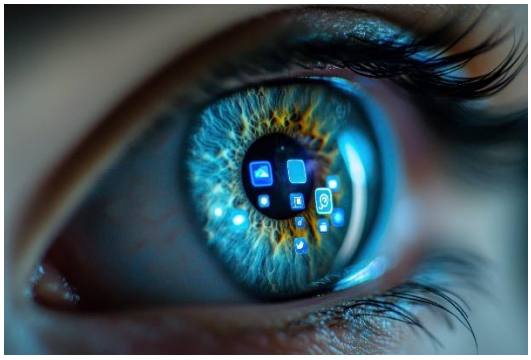
Calling for an Evidence-based Approach to Screen-time Thresholds in 2025

iADDICT - Rafe Clayton (Univ. of Leeds), Carmen Clayton (Leeds Trinity Univ.), Richard James (Univ. of Nottingham), James Wolffsohn (Aston Univ.) and Amy Sheppard (Aston Univ.)

This policy brief proposes the need for a thorough multi-disciplinary investigation into the definitions, causes and cultural impacts of excessive digital screen use in the UK.

Overview

Recently there has been a steep rise in total screen use in the UK as digital displays have become increasingly integral to our work and leisure (Ofcom, 2022). Post coronavirus pandemic, 50% of UK adults now look at screens for a combined total of 11 hours or more a day (Clayton et al., 2022). Of particular concern as highlighted by our 2022 study (New Uses of Screens in Post-Lockdown Britain – Univ. of Leeds), 59% of people reported negative impacts on their health from looking at screens, with younger people, women, minority ethnic people and higher social grades being impacted most. Adults overwhelmingly want clear guidance in relation to screen-time and expect guidelines. They feel out of control, compelled to use screens to excess and many have reported feeling addicted (Dragano and Lunau, 2020; Clayton and Clayton, 2022). However, due to an absence of evidence, and misleading definitions, no national guidelines on screen limits for adults and parents (as role models to children) currently exist (Dickson et al., 2019). The purpose of this policy brief is to instigate transformative cultural discussion and research, leading to an expansion of knowledge that will help people of all backgrounds and identities understand and regulate their screen-time better, working towards the establishment of a nuanced set of national screen-time guidelines.



Negative Impacts of Screen-time

Most adults understand the benefits of using screens, but our research shows it is difficult for them to be able to recognise when screens begin to disadvantage them, and when utility of screen use may become disutility. Many wait for the onset of physical or psychological symptoms before self-regulating their behaviour.

• Physical health impacts reported include: Eyestrain, headaches, dry eyes, lethargy, stiffness, body pain from posture, worsening eyesight, neck pain, finger problems, repetitive strain, fatigue, putting on weight, lack of exercise, less time outdoors, wrist pain, back ache, shoulder pain, lack of fresh air.

• Mental health impacts reported include: Addiction, dysregulated use, less motivation, mood swings, no social interaction, reclusiveness, dependency on screens, habitual use, arguing online, jealousy of others, depressing/negative content, vicarious living, feeling unproductive, guilt, toxic people

online, social anxiety, hard to switch off, irritability, losing attention span.

We estimate that if each affected person has just one related GP appointment, then the approximate cost to the NHS in appointments alone could be £990 million. As digital technology permeates multiple aspects of our lives, many people find themselves facing increasing work and social pressure to use screens more, which may place all people, but particularly vulnerable groups at further risk. Cultural industries stakeholders have argued that economic necessities have driven digitalisation, leading society into its current state; others have argued that big tech companies are driving digital dependency for profit. Through the Government's digital strategy, we anticipate that people will be using technology and screens even more in the future.

A Need for Guidance

The Chief Medical Officer's advice in 2019 was that adults should be setting the example of appropriate screen use for children, however with half of UK adults currently looking at screens for 11 hours or more each day and digital eyestrain impacting around 76% of the population (Wolffsohn et al., 2023), what examples are being set to the next generation? The impacts of screen-time on children is a hotly contested area in British society, with politicians, educationalists and parents (House of Commons Education Committee 2024) arguing that harms are occurring and that these need addressing; whilst conversely some academics are countering this narrative through arguments that research has yet to provide consistent evidence that harms are measurable. Such research has at times been interpreted by the press to mean that screen use is not harmful; which we argue exacerbates excessive behaviours and therefore potential harms. To resolve this conflict in perception, we need to understand why previous academic studies may have been unsuccessful in identifying thresholds, and why public concerns, remain unsupported by research. Harmful screen use has been identified by isolated studies within the global academy, however, we propose that it is now time to generate a robust evidence base demonstrating the measurable extent to which harms may be taking place through new multidisciplinary research.

Towards Establishing Thresholds

It is a common theme in arts and humanities research to discuss 'displacement theory' in relation to the opportunities that are lost by parents and children when engaging in screen-time away from what are perceived as 'healthier' physical interactions (Rosen, 2019). Many practices that were once undertaken away from electronic devices are now often screen based (BFiL, 2021). Due to the complexities of screen behaviours (James and Tunney, 2017), which fall across multiple academic disciplines and the interweaving of social and cultural practices related to digital device use, it has been impossible for individual studies in the past to investigate how different social circumstances may affect phenomena that leads to excessive screen use. Furthermore, excessive screen use is difficult to define through the lens of a single discipline. For example, if a person is spending 8 hours in a day gaming, binge watching, or scrolling on their phone, is this a physical, psychological, cultural or social concern? Would any such occurrence result from a physical, psychological, cultural or social cause? From the perspective of a single discipline, we cannot know. When understanding if harms are taking place in this scenario, we need to understand if thresholds have been passed in terms of physical, psychological, cultural and social risks. In order to understand all thresholds and the point at which screen utility becomes disutility, this can only be addressed by looking through an multidisciplinary lens.

No Single Discipline has all the Answers

Academics recognise that comprehensive and robust multidisciplinary research must be undertaken to broaden our understanding of the definitions, causes and consequences of excessive digital screen use (Kaye et al., 2020), although the identification of which disciplines should be utilised has not yet been forthcoming. This policy brief proposes that academics can make significant strides toward achieving this goal by promoting combined research from the domains of sociology, communication studies, psychology and ophthalmology, in order to build upon the well-established literature that recognises the harms caused by inactivity and a sedentary lifestyle (Stiglic and Viner, 2019).

Screen-time sits within a complex mesh of individual, social and cultural factors, and as a result, clinicians see the problems of excessive screen use as cultural rather than medical. While there is an emerging body of high-quality studies in scientific fields, research on screen-time suffers from the lack of integrated approach with social sciences, which makes the evidence collected so far inadequate in terms of guiding policy. Often research in this field, excludes arts and humanities research where the benefits of increasing digitalisation are most often highlighted, which we feel is a flaw of previous studies. A multidisciplinary approach, unified by a shared goals, ideas, information, data, perspectives, literatures, and theories (Graff, 2015) will provide the breadth of research needed to respond to such a complex issue as screen-time. Furthermore, the accumulation of multidisciplinary research outputs will result in an outcome that is more than the sum of the individual parts (Wilson and Pirrie, 1999).

Cultural Significance

The absence of literature in this field needs addressing, since without appropriate research, the UK Government have found themselves unable to intervene in the unhealthy practices associated with excessive screen use (CMO, 2019). We have found through our investigations that the public expects Government intervention, yet the definition of excessive use is currently undetermined and the evidence base is weak (Kaye et al., 2020) leading to an absence of guidance. Activities considered to be positive for health, such as socialising, exercise and sleep, are known to be displaced by screen use, and so the potential impacts on quality of life and on the economy from establishing guidance are significant (Rosen, 2019). By increasing knowledge about the definitions and impacts of excessive screen-time, we are supporting individuals and communities who are calling for social change and a cessation to the constant exposure to screens that the average UK citizen experiences. There is an opportunity for the UK to provide leadership internationally, since increases in screen-time are a global concern. Our proposal is to generate functional evidence needed by policy makers to help adults understand better where the thresholds for screen use may be for themselves and their children. By investigating the causes and consequences of screen use, we call for the first time, to establish definitions of what ‘excess’ is in relation to current cultural phenomena, stratified by risk factors and fully acknowledging the heterogeneity of the British population.

Summary

Despite over thirty years of screen based research, there have been no multi-disciplinary studies investigating the evidence based causes and impacts of screen-time. Our recommendation is to generate much needed quantitative and qualitative insights into the ways in which an emerging UK culture, increasingly centred on digital screen use may be negatively affecting people’s lives (Ofcom, 2022). In particular, we seek to challenge existing and emerging inequalities that may

be exacerbated by excessive screen use (Clayton et al., 2022).

Following discussions with policy makers including very recent parliamentary consultations, we know that this research is urgently required in order to provide guidance to not only the most vulnerable sections of society, but also to those who are leading successful and productive lives. As such, the benefits of new multidisciplinary research for parents, clinicians, carers and service providers are clear. Changes in behaviours and practices are what lead to cultural transformation, however policy makers require evidence based guidance. Only by drilling down into the qualitative lived experiences of individuals are we able to really understand how dose-response type quantitative data relating to thresholds can be understood and integrated within the complex social lives of the population.

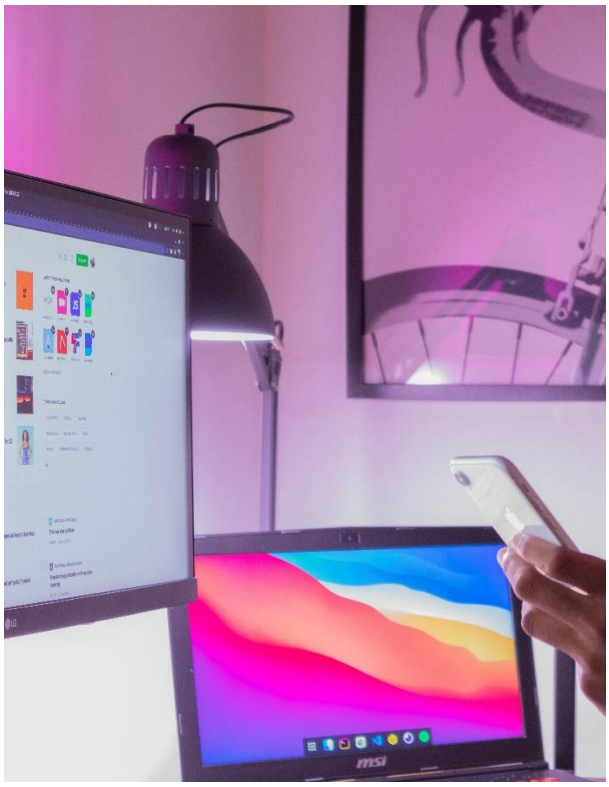


Photo 1 by Oksana, Licensed by Adobe Stock

Photo 2 by Nubelson Fernandes on Unsplash Licensed under Creative Commons (CC-BY 4.0).

Authors

iADDICT - **i**nterdisciplinary **A**ction on **D**igital **D**evice **I**mmersive **C**onditions **T**eam

Rafe Clayton is Senior Lecturer in Media and Communication at the University of Leeds. Email: R.M.Clayton@leeds.ac.uk

Carmen Clayton is Professor of Family and Cultural Dynamics at Leeds Trinity University. Email: C.Clayton@leedstrinity.ac.uk

Richard James is Assistant Professor of Psychology at the University of Nottingham. Email: Richard.James4@nottingham.ac.uk

James Wolffsohn is Professor of Optometry at Aston University. Email: J.S.W.Wolffsohn@aston.ac.uk

Amy Sheppard is Reader in Optometry at Aston University. Email: A.Sheppard@aston.ac.uk

References

BFiL/British Families in Lockdown Study. (2020). British families in lockdown study: Initial findings.

Clayton, R. and Clayton, C. (2022). 'UK screen use in 2022: A need for guidance'. Report. Policy Briefs (9).

Clayton, R., Clayton, C., Potter, M., Al-Azri, S. and Mogeh, I. (2022). New uses of screens in post-lockdown Britain - Study report and findings.

CMO/Chief Medical Officer. (2019). UK Chief Medical Officers' advice for parents and carers on Children and Young People's screen and social media use.

Dickson, K., Richardson, M., Kwan, I. , MacDowall, W., Burchett, H., Stansfield, C., Brunton, G., Sutcliffe, K., Thomas, J. (2019). Screen-based activities and children and young people's mental health and psychosocial wellbeing: a systematic map of reviews.

Dragano, N., and Lunau, T. (2020). Technostress at work and mental health: concepts and research results. Current Opinion in Psychiatry, 33(4), 407–413.

Graff, H.J. (2015). Undisciplining knowledge: Interdisciplinarity in the twentieth century. Baltimore: Johns Hopkins University Press.

House of Commons Education Committee, (2024). Screen time: impacts on education and wellbeing: Fourth report.

James, R. J. E., & Tunney, R. J. (2017). The need for a behavioural analysis of behavioural addictions. Clinical Psychology Review, 52, 69-76.

Kaye, L., Orben, A., Ellis, D., Hunter, S., Houghton, S. (2020). The conceptual and methodological mayhem of "screen time". International Journal of Environmental Research and Public Health, 17(10), 3661.

Ofcom, (2022). Children and parents: media use and attitudes report. Children and parents: media use and attitudes report 2022.

Rosen, B. (2019). How to utilize the research about children and screen time. Clinical Science Insights, January 2019. csi-ben-rosen-research-children-screen-time-dec-2018.pdf.

Stiglic, N., and Viner, R. M. (2019). Effects of screentime on the health and well-being of children and adolescents: a systematic review of reviews. BMJ open, 9(1), e023191.

Wilson, V. and Pirrie, A. (1999) Developing professional competence: Lessons from the emergency room. Studies in Higher Education, 24, 2, 211–224.

Wolffsohn, J.S. et al.,(2023). TFOS Lifestyle: Impact of the digital environment on the ocular surface. The Ocular Surface, 28, 213–252.