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ARGUMENT REVIEW

WHY WE SHOULD STOP TALKING ABOUT SCREEN TIME

LAURI HIETAJÄRVI

Summary

- Research findings do not support the idea that spending time with media would directly affect the wellbeing or health of children or young people.
- The discussion on screen time shifts the responsibility for the impacts of the media on the individual and diverts attention from the role and operating principles of the producers of technology and media services.

In which area is there still a lack of knowledge?

- While a lot of research is available, a considerable share of it is poor in terms of quality and value of evidence.
- There is a lack of objective, i.e. measured, information about the actual time people spend consuming media.

Recommendation

- The examination of media use and experiences related to media requires the introduction of concepts more precise than merely the time spent in front of a screen.
- Instead of placing the responsibility and blame on individuals, i.e. media users, we should divert our focus on the producers of media services.

FOR A LONG TIME BY NOW, screen time and recommendations concerning an appropriate time spent using devices have been hot topics of discussions among parents, educators and others working with children and young people, resembling a moral panic. The definition of screen time has been broad: screen time is typically considered to refer to the time spent on digital technology outside school hours. For years, screen time recommendations have followed the

easy-to-remember recommendations published by the American Academy of Pediatrics (AAP) several years ago: no screen time for children under two years old and no more than two hours per day for those over two. These recommendations were never founded on research knowledge, and have indeed been later modified. Adapted versions have emerged alongside the AAP recommendations. What these recommendations have in common is their aim to find a balance between

media use and the other aspects essential to the well-being and development of children and young people. What does the most recent research evidence tell us about screen time, and why is it high time we should stop talking about screen time?

There seems to be a common misconception that the effects of screen time have not been sufficiently studied. There is actually a lot of research on the topic: several hundreds of original studies, dozens of reviews and, within the past year, already several overviews of reviews. The current knowledge is, therefore, based on summaries compiled of hundreds of studies. The results of the reviews of high scientific quality do nonetheless invariably indicate that a significant share of research generally concerned with screen time or the effects of media is of poor quality in terms of methodology and has poor weight of evidence. Perhaps due to the fact that this is both a topic that touches upon the daily lives of many people and one that is sure to attract some media attention, the published studies have included histrionics, publication bias, lack of transparency, selective reporting, and other practices that undermine the reliability of research. As a result, a large share of the research related to screen time is not credible.

PSYCHOLOGICAL WELLBEING

Despite the above shortcomings, the most recent research knowledge indicates that there is a primarily negative relation between screen time and the psychological wellbeing of children and young people; however, this relation is negligibly small and probably follows an inverted U curve—indicating that very little or too much media use is connected with poorer wellbeing^{1, 2}. On average, the limit for screen time outside work or school hours indicating excessive media use

appears to be set at 5–7 hours on weekdays³ and more on weekends. The results appear to be the same even if we replace screen time with some other variable, such as time spent on social media⁴ or gaming⁵. The strength of the relation between screen time and wellbeing is illustrated by the fact that a comparison of screen time and other explanatory factors picked from the same data sets reveals that the negative relation between screen time and people’s wellbeing is at the same level as eating potatoes and less substantial than wearing spectacles⁶. Meanwhile, social media appears to have a greater positive relation to social wellbeing and social relationships⁷. As the majority of studies on the topic are questionnaire surveys using a cross-sectional setting, i.e. the survey responses have been given at the same time, nothing can be said about causal relationships. Nevertheless, the most recent studies⁸ indicate that the time spent on social media either hardly affects a person’s wellbeing or the relationship is reversed in that challenges in wellbeing, such as experiencing symptoms of depression, predict an increase in social media use. Meanwhile, spending time worrying about screen time is prone to have a negative impact on wellbeing⁹.

HEALTH BEHAVIOUR

In addition to psychological wellbeing, concern has been raised in connection with young people’s physical activity and sleeping habits. The time spent in front of a screen has been presumed to reduce the time spent exercising or sleeping, and this view has been partly used to explain the possible link between screen time and wellbeing. However, scientific evidence does not particularly support this concern. While the impacts of screen time have been examined by equating it with sedentary behaviour, the result is the same: on average,

1 Pathological, problematic, obsessive or addiction-like media consumption is a specific marginal phenomenon, which is discussed in the evidence summary *Digital media, addiction and wellbeing* (p. 50).

2 Odgers & Jensen, 2020; Orben, 2020; Stiglic & Viner, 2019

3 Przybylski & Weinstein, 2019; Przybylski et al., 2019

4 Orben, 2020

5 Ferguson, 2015

6 Orben & Przybylski, 2019

7 Appel, Marker & Gnambs, 2019; Orben, 2020

8 Puukko et al., 2020; Coyne et al., 2020; Heffer et al., 2019; Stavrova & Denissen, 2020

9 Shaw et al., 2020

there is only a minor relation¹⁰. An extensive study carried out in Finland also indicates that time spent on media does not seem to reduce engagement in other recreational activities¹¹.

Even though there is moderately reliable knowledge of the link between screen time and overweight and poorer than average eating habits¹², research shows that screen time is not the cause of sedentary behaviours and unhealthy lifestyles but rather a part of these. For instance, the measures aimed at reducing the screen time of young people do not appear to increase physical activity on their own¹³. The causes of sedentary or other unhealthy behaviours are more complicated, but may have some common denominators with screen time. Lower socioeconomic status contributes to explaining the more substantial screen time and unhealthy eating habits of children of day-care age¹⁴ and the lower physical activity of 15–16-year-olds and higher amounts of screen time among girls¹⁵. While many reviews noted that there was a minor relation between substantial screen time and less time spent sleeping¹⁶, the quality of the studies used as references in these reviews was so poor that the results are unreliable. Indeed, newer, high-quality original studies have argued that even though more screen time has been repeatedly found to be related to less sleep, the scale at which this occurs is infinitesimal: increasing screen time by one hour is correlated with a 3–9-minute reduction in sleep¹⁷.

In the context of school performance, average results also repeat the pattern that has emerged in research on human wellbeing: Screen time is not strongly connected to school performance¹⁸, and neither is the time spent on social media¹⁹ or gaming²⁰. This also applies to eating disorders or risky behaviour²¹.

WHY DOES THE RESEARCH ON SCREEN TIME NOT CORRESPOND TO EVERYDAY EXPERIENCES?

Quite a lot of studies are already available on the effects of screen time, and the research indicates that there is no cause for alarm related to screen times. The benefits of digital media far outweigh their disadvantages, also in the context of children and young people. Why, then, does this not seem to align with people's everyday experiences? Screen time has been known to cause worries, irritation and conflicts in families. People are outraged by their own and others' media consumption, and instructions on a balanced media diet are offered similarly as with physical activity and eating. Why is there a mismatch between research and everyday experiences? Here are a few reasons:

- 1. There is a lot of research available, but its quality is poor.** Screen time has been mostly studied by asking respondents to assess their average screen time during a specific period of time, such as on weekdays and weekends or to fill out a questionnaire. However, the results obtained using these methods do not respond to the findings obtained when genuinely measuring media use²². This means that we do not have particularly thorough knowledge of the actual amount of screen time or how this is linked to other factors.
- 2. Screen time does not exist as a separate entity.** Considering screen time or the media as separate variables with isolated impacts is an example of common faulty reasoning. Users create their own screen time in an interaction with media content.

10 Rodriguez-Ayllon et al., 2019

11 Kaarakainen & Saikkonen, 2019

12 Fang et al., 2019; Stiglic & Viner, 2019

13 Throuvala et al., 2020

14 Lehto et al., 2018

15 Männikkö et al., 2020

16 Carter et al., 2016, Stiglic & Viner, 2019

17 Orben & Przybylski, 2020, Przybylski, 2019

18 Adelantado-Renau et al., 2019

19 Appel, Marker & Gnams, 2019

20 Ferguson, 2015

21 Stiglic & Viner, 2019

22 Ellis, 2019

In their everyday contexts, people encounter media as it is, as part of their lives. These situations and the media content vary. In low-quality research, the media experience has been reduced into minutes self-reported by the users even though each screen experience is different. While a two-hour session spent in front of a screen is bound to contain a vast amount of different media experiences, some of them beneficial, some harmful, and the majority probably trivial, research on screen time will reduce all of this into a single variable. From the individual's perspective, the reasons for using media, the consumed content and the situations in which the media is used are more essential than time.

3. Media does not affect everyone in the same way.

There are no two similar screen time experiences. Different people will encounter the same media content differently, and the same person will experience the same content differently in different situations. In fact, the impacts of the media should be examined at the level of individuals with an aim to identify the individual, developmental and situational factors that cause reactions. This is the aim of the Differential Susceptibility to Media Effects model²³, based on which the assumptions made on the potential effects of the media must be adapted to both the media content as well as individual differences, development stages and varying situations. As a result, a specific media experience can be harmful to a specific person in a specific situation, but may have a different effect on a different person or in a different situation.

4. Values and norms are slow to change.

Technology has quickly transformed everyday situations, cityscapes and how we spend time with other people. It is understandable to feel appalled by the sight of a bus full of morning commuters staring at their mobile phones or a young person seemingly frozen in front of a computer. For an outsider, the media use of another person may be confusing and even appear unnatural. However, this does not automatically mean that there is anything dangerous

going on. Many bus passengers use their smart-phones to access the same news articles others read from printed newspapers. There are many situations in which we still lack a common understanding of how devices and screens should be used, and this is prone to cause conflicts. Social norms are still in the process of forming. We should be able to create mutually agreed practices and behavioural models without pathologizing screen time.

WHY SHOULD WE ABANDON THE CONCEPT OF SCREEN TIME?

Media and people are in the process of change and also transforming each other. Nonetheless, it appears unlikely that screen time is beneficial or harmful to people in itself. By contrast, what with all the negativity involved, the discussion on screen time may be harmful, and worrying about screen time is known to cause harm. What makes the discussion on screen time problematic is the way it shifts the responsibility to the individual while diverting attention from the responsibilities of technology and media service producers as well as the principles on which the services are built: how users are manipulated, which user data are collected, and what is done with these data and for what reason. These are societal questions that cannot be solved by determining an appropriate number of hours of screen time. When we talk about digital media, we talk about a massive playing field of economic, political and social interests—thousands of varying choices and situations in which media is used at the individual level. We should abandon the concept of screen time, at least as a concept used in research. As a higher level category, its relation with its subcategories is, at best, fickle. At the same time, we should do away with the concept in more general discussion, instead aiming to address those areas of media use that cause concern at a given situation and whether the responsibility lies with the user or the producer. When we talk about screen time, we cannot know for sure what exactly is meant by it in a given context.

There are other challenges connected to media and wellbeing besides the time spent in front of a screen. The ways in which people use media should also be

23 Valkenburg et al., 2016

examined using more precise concepts in the discussion on people's wellbeing. Even if a person's screen time falls below the maximum time limits, they may find the media experience exhausting for reasons such as constant interruptions. Meanwhile, even if the recommended screen time is exceeded, the media use may have a positive impact. Instead of worrying about negative impacts on wellbeing, it would be beneficial if we aimed to identify and increase potential positive effects.

At the individual level, it is key to focus on strength-

ening media literacy and examining everything that people do when spending time in front of a screen, what conscious and unconscious decisions are made every day, which position media use assumes in people's day-to-day life as a whole, and whether the time spent on media is time well spent. With all its positive and negative fringe phenomena, the media is too big of an entity to be reduced into a discussion on screen times. Talking about screen time does nothing to increase our understanding of it. ■

This argument review is based on the strongest research evidence, but is selectively focused on forming an argument. The argument is a synthesis by the authors. The evidence synthesis method has been described in more detail on page 17.

This evidence synthesis is based on a literature list of international systematic reviews compiled by an information specialist based on a systematic information search and Finnish case studies on the effects of digital media on young people (more detailed description of the information search on p. 20–21). For this synthesis, reviews and studies concerning the time spent using media and the relation of this on human wellbeing or health were systematically selected from the list based on their title and abstract. Sources analysing problematic media use or the contents of media use were excluded from the synthesis. A further criterion for reviews providing evidence included a low risk of bias, i.e. the reviews had to include the quality assessment of the original studies. The criterion applied to Finnish original research was that the research methodology had to be at an at least acceptable level (for the assessment criteria, see p. 15). This synthesis also makes reference to theoretical discussion papers and selectively to the latest high-quality international studies.

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