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Goldilocks is online

A year or so ago, there was a startling article by Jean Twenge in *The Atlantic*, asking, *Have Smartphones Destroyed a Generation?* (Twenge, 2017a).

There is a cynical rule of thumb which says, *any question in a headline can be answered in the negative* (Betteridge, 2009), but Twenge's article was based on her recent book, which was wide, deep, and scholarly, and associated the rise of smartphones with an increase in depression among young women, and I know from bitter experience that academics don't get the last say on a headline.

Many other commentaries have linked a rise in emotional health problems in young people to the rise of Internet use (including risks from online (cyber) bullying, 'sexting' and grooming) (Twenge & Campbell, 2018; O'Keeffe & Clarke-Pearson, 2011; Palmer *et al.*, 2016; Kelly *et al.*, 2018).

However, even if it can be firmly shown that adolescent emotional health is in decline (Collishaw, 2015; Keskin, 2015; Mental Health Foundation, 2016; Hagell, 2009; Potrebni, Wiium & Lundegård, 2017; NHS, 2018) it is difficult to distinguish processes of cause and effect (does poor wellbeing prompt more social media use?) and also to rule out confounding individual factors like disturbed sleep, or wider factors like social class and the effects of austerity (British Psychological Society, 2018; Etchells *et al.*, 2017; Twenge, 2017b; Cavanagh, 2017; Etchells, 2019).

So, also in 2017, Przybylski and Weinstein (2017) published a large-scale analysis of the UK Government's *What About Youth?* (WAY) data set, finding that the highest wellbeing scores were found for modest amounts of time spent online. Lots of online time was associated with poorer wellbeing, but those who spent no time online also had lower wellbeing scores than those spending a bit of time online. The results suggest

that a middling amount of involvement with social media might be most desirable – neither too little, nor too much, but just right – as Goldilocks might have concluded.

The WAY sample was a postal self-report study of 15-year-olds, and produced oddly low figures for smoking, but it was large, nationwide, carefully designed, and the authors did their best to control for confounding effects, so I don't see any reasons there for rejecting the idea. In fact, I was interested recently to explore it with a large sample of young people from a SHEU study in one local authority, and found that Goldilocks is online there too: the highest average wellbeing scores (SWEMWBS, Stewart-Brown *et al.*, 2009) are seen for those spending modest amounts of time online (see page 45). Indeed, Twenge (2017c) found much the same.

It's not so easy to rule out confounding factors in our data sets. The same 'humped' pattern is seen if we select from the sample just those students who live with both parents at home. We also see the same pattern in different deprivation quintiles, although some of the samples become rather small and thereby wobbly.

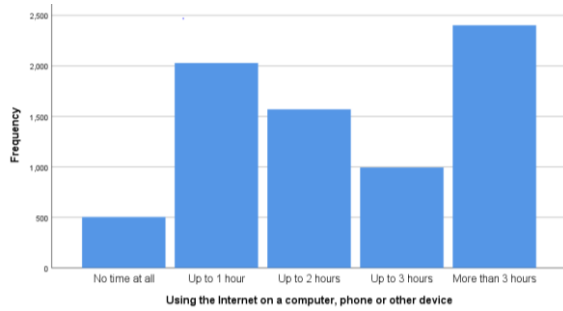
In any event, the direct contribution of online time to mental ill-health often appears slight at worst (Przybylski, 2019; Przybylski & Weinstein, 2017; Young Minds and Ecorys, 2016; Orben, & Przybylski, 2019; Orben, Dienlin & Przybylski, 2019); the difference between the highest and lowest mean scores on the chart (p.45) is about 2 points in 20. It's even possible to analyse the same data sets as Twenge and find a much more sanguine picture (Orben & Przybylski, 2019b).

It must also be recognised that there are opportunities provided by the Internet as well as risks (Centre for Mental Health, 2018), and there are several studies linking online activity to positive outcomes (for example, Education Policy Institute, 2017).

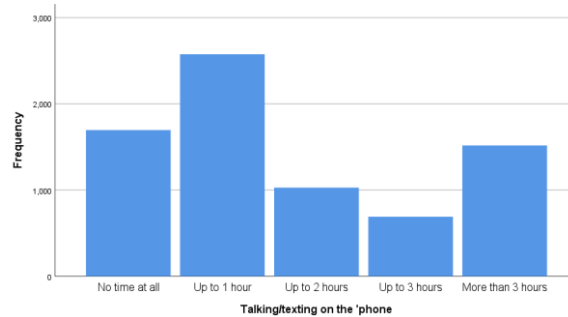
There is little doubt that, across the country, accessible mental health care services are insufficient to meet the needs of adolescents (Gunnell, 2018; Pulse, 2018; Pulse, 2019), particularly of those living in poverty (Children's Society, 2016), and this may be a more useful focus for attention than worrying about 'screen time' as such.

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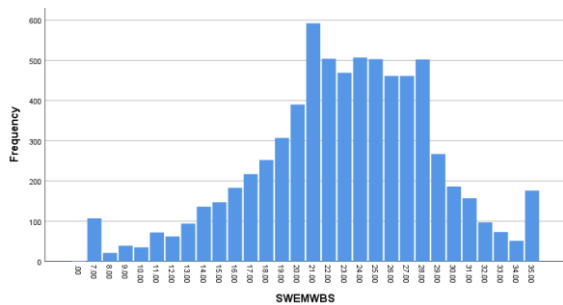
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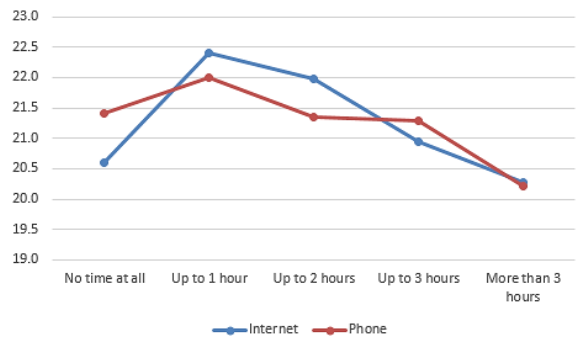
Time spent last night on the Internet among Year 10 females in one local authority, 2018 (N=7498)



Time spent last night on the phone among Year 10 females in one local authority, 2018 (N=7509)



Wellbeing scores (SWEMWBS) of Year 10 females in one local authority, 2018 (N=7069)



Mean wellbeing scores (SWEMWBS) of Year 10 females in one local authority, 2018, by time spent the previous evening on the Internet (on any device) or using a 'phone' (for talking/texting). (N=7027). Differences in both sets of wellbeing results significant at $p < 0.001$ using ANOVA ($F=46.6$, $F=43.5$).

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