

Digital Addiction

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Abstract Digital technologies such as smartphones and social media occupy a large and growing share of leisure time. While these technologies provide obvious benefits, it is often argued that they can be addictive and harmful. We lay out a model of digital addiction and estimate its parameters using a randomized experiment involving more than 2000 smartphone users. Temporary incentives to reduce smartphone social media use lead to persistent reductions in demand, suggesting that such use is habit forming. Making available a tool to set limits on future use leads to high takeup and substantial reductions in use, suggesting that subjects face self-control problems. Incentivized prediction tasks and behavioural responses imply that subjects are partially naive about both habit formation and self-control. Both the temporary incentive and limit tool treatments lead to significant reductions in signs of addiction as measured on a standard psychometric scale and to improvements in subjective well-being. Looking at these facts through the lens of our structural model implies that the non-rational dimensions of digital addiction increase social media use by approximately 40 minutes per day.