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Reducing Smartphone Overuse through Behavioural Nudges

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Abstract

We identified smartphone usage patterns predicting overuse and developed an intervention to reduce these effects. In Study 1, 54 undergraduate students reported their daily screen time and the reasons for their smartphone use. A cluster analysis revealed two usage patterns: as a tool (e.g., for directions), and to socialize or pass time. Only the latter pattern correlated with daily phone use ($r=.35$). In Study 2, 28 pilot participants underwent a two-week-long behavioural intervention involving disabling non-essential notifications and keeping their phone out of reach when not in use. All participants complied with these guidelines, leading to a 1.2 hours/day reduction in usage (4h to 2.8h), a decrease in smartphone addiction scores to normal levels, and a 30% decrease of scores on the Beck Depression Inventory-II (10.1 to 7). We explore potential cognitive benefits of the intervention on memory and attention (measured by Operational Span and Sustained Attention to Response tasks).