You've Been Warned:
Pictorial Warning Labels Increase Motivation for Improving Digital Habits

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Introduction

Anti-smoking campaigns show health warnings on cigarette packs to be effective; even better outcomes are found when graphic pictures of consequent lung damage accompany these warning labels (Fong, et al., 2009).
Can graphic and written warnings on the consequences of unhealthy digital habits affect desire to change these habits?

Methods

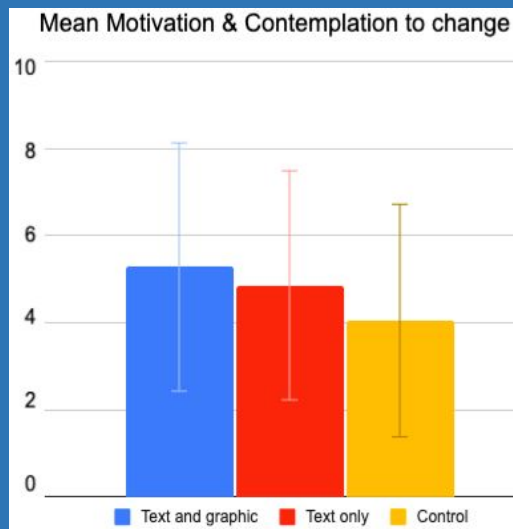**Participants**. N=231 adults from MTurk.
Experimental conditions. In this preregistered study, participants were randomly assigned to one of three conditions: text and graphic digital warnings, text only digital warnings, and text and graphic control warnings on unrelated content (DUI).
Measures. We measured motivation to change (a single question motivation measure; Boardman, et al., 2015) and contemplation to change (a measure anchored in the stages of the transtheoretical model; modified from Biener, et al., 1991). A combined variable of 'motivation and contemplation' was used in analysis.

Warning labels about unhealthy digital habits **increase motivation** to **change behavior**

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Mean Motivation & Contemplation to change
(Text and graphic — blue; Text only — red; Control — yellow)

Did you know... that heavy digital device use may make you more anxious and unhappy?
TIP Try setting goals to limit screen time, especially time spent on social media.

Did you know... that if you're constantly distracted by your phone when doing homework you may take longer to finish assignments, remember less, and earn lower grades?
TIP Try putting your phone where you can't see it while you're working.

Did you know... that getting distracted by your phone and ignoring people close to you may make your relationships less rewarding?
TIP When talking to other people, try to engage less often with your phone.

Did you know... that using your phone right before bed, or waking up to check your phone, may make it harder to get a good night's sleep and stay focused and alert the next day?
**TIP** Try limiting your phone use right before bed and at night.

Results

A one-way ANOVA showed an omnibus effect of condition on motivation and contemplation to change one's behavior, $F(2, 228) = 4.12$, $p = .017$.
People across the combined text, $M(SD) = 4.86(2.63)$ and graphic warning labels $M(SD) = 5.28(2.85)$ conditions were more motivated to improve their digital habits than control participants, $M(SD) = 4.05(2.67)$ $t(228) = 2.69$, $p = .008$.
Examining the effectiveness of including graphics with the warning, compared to just text, we found similar results: people in the graphic labels condition were significantly more motivated to change than those in the control, $d = .45$, $p_{bonf,} = .015$, while the text only warning condition was not, $d = .30$, $p_{bonf,} = .30$.

Discussion

To motivate change in digital habits, exposure to written warnings of health consequences proved effective; including pictorial content trended in the direction of improving effectiveness of labels; future studies should further explore the impact of graphics on warning labels.
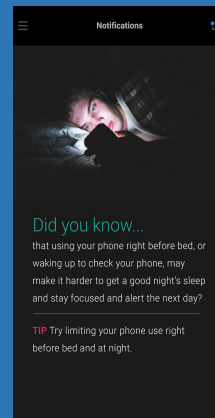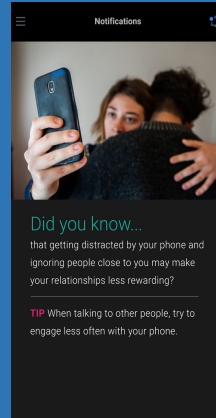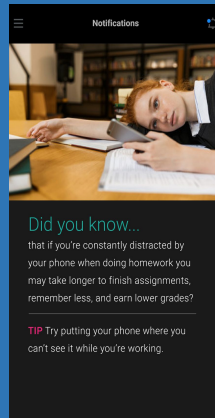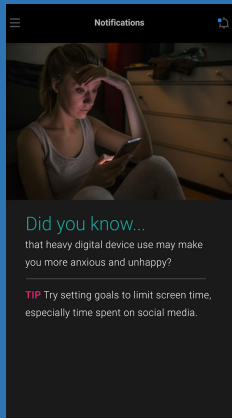
Learn more about the project here: