“Switching on and switching off”

Experimental approaches to understanding the impact of ICT use for occupational psychologists: what we can learn from them?

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Objectives of this paper

- Critically appraise existing *experimental* evidence
  - Cross sectional data can only tell us so much

- What impact does technology use have on individuals?
  - Impact on health and well being?
  - Other outcome measures?

- What are the gaps in our understanding?
Who of you reflects on the why, the how, the where we use technology?

Any self experiments?
Literature search

1. Psychinfo: peer reviewed, journals since 1992 (first publications in the area around then), peer reviewed only, adult populations

2. Protocol: Technology Use OR *phone OR email OR tablet OR Video Game AND Health OR anxiety OR depression OR arousal OR well being AND experiment

3. 199 results! Evaluated: relevant to a) technology use and b) to a work context, and c) of sufficient quality?

4. Three experimental studies, three non-experimental studies, plus one (Clayton et al., 2015) which was not elicited through the search
Results of the evaluation – experimental papers

1. Villani et al: Stress Inoculation Training (SIT): SIT training with phone versus neutral video. Reduced state, trait anxiety and enhanced coping skills in nurses

2. Guimetti et al (2013): experiment where incivility and support where manipulated – communication with supervisor via email. Participants had higher levels of negative affect and lower levels of energy working with the uncivil supervisor than with the supportive supervisor. Additionally, participants performed significantly worse on math tasks and had lower engagement in the uncivil condition than the supportive condition

3. Marin et al. (2012): experiment where 30 women, 30 men exposed to 24 neutral or negative news events. Results show that women more affected – increased stress reactivity and memory for bad news

4. Clayton et al. (2015): the performance of iphone users on cognitive tasks deteriorated when separated from phones; blood pressure, anxiety and heart rate all increased particularly for prolific users
Results of the evaluation – non-experimental papers but still interesting

1. Ohly et al. (2014): surveyed 1714 working individuals, work related smartphone use in evening positively related to detachment, but negatively to positive affect (but unrelated to recovery and to negative affect); autonomous motivation positively related to recovery, detachment and positive affect.

2. Weller et al. (2013): surveyed 1006 young participants about phone use and driving behaviour. Attachment towards phone predicted number of trips in which participants used phone whilst driving, and use of social media whilst driving!

3. Hertel et al. (2008): questionnaire study, compared face to face conversation to email use; extraversion and neuroticism as significant predictors, mediated by social skills and social anxiety.
Implications:

• Technology use affects us physical and mentally – Fact!
• It matters WHY and HOW, and with WHOM we are using technology, and the type of communication
• The content of the information we are presented with matters – gender differences. What other differences are there?
• We need to better understand our complex relationship with technology – how attached are we? Is this a ‘new’ relationship, or displacing something else? The strength of attachment?
• Technology can be an enabler, and rather paradoxically potentially help us manage technology-facilitated stresses better! But further research is needed
Quick questions?

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