Cognitive consequences of smartphone presence and separation
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Introduction

- Smartphone proliferation has rapidly increased over the last decade
- **Separation Anxiety Account** (Hartanto & Yang, 2016):
  - Experience a greater feeling of anxiety when separated from devices, which impairs cognition
- **Mere Presence Effect** (Ward et al., 2017):
  - Simply the presence of a smartphone can negatively impact cognitive performance
- Smartphone separation account predicts:
  - Other room < Pocket/bag = desk
- Mere presence effect account predicts:
  - Other room = Pocket/bag > desk

Method

- N = 200 Intro PSY students participated for course credit
- Students were randomly assigned to 3 groups, based on smartphone location:
  - **Desk**: Please put your phone on silent, and place it face down on the desk in the testing room.
  - **Pocket/bag**: Please put your phone on silent, and put it away in your bag or pocket.
  - **Other room**: Please put your phone on silent, and leave it with your belongings in this room.
- Completed a series of computerized tasks and surveys measuring working memory, attention, reasoning, state anxiety, and smartphone addiction

Results

- One-factor ANOVA revealed no significant differences among the smartphone location conditions
- No significant interactions were found between smartphone addiction and performance on any of the tasks

Conclusion

- Our results have implications for daily activities, such as students studying for a later exam – should their smartphone be in a different room (mere presence effect) or nearby (separation anxiety effect) to maximize their cognitive performance?
- Additional replication experiment currently in progress