The Relationship of Cell Phone Usage to Personality and Attention

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Problem Under Investigation
Cell phones and texting are generally distracting and detrimental to attention (driving, school, work, etc.). Researchers have shown that cell phones affect attention. It is unclear which causes which.

Cell phone usage survey including questions from the Big Five Aspect Scale

Powerpoint Presentation including memory exercise

Whitehill, King, Kernic, Bresnahan & Ebel, 2013; Schwebel, Stavrinopoulou, Byington, Davis, O’Neal, Jong, 2012; Thornton, Faires, Robbins, & Rollins, 2014. It is therefore important to examine all situations in which using cell phones is potentially harmful to one’s social or occupational life. According to the Center for Disease Control and Prevention, more than nine people are killed and more than 1,153 people are injured in motor vehicle crashes per day (Centers for Disease Control and Prevention, 2014). Cell phones are not only detrimental to driving but also to other activities that demand attention. Previous research has suggested that students able to text in class receive lower grades. (1)

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Dietz and Henrich (2014) asked 50 students to turn off their phones and take a texting survey followed by a video quiz. In the second group, 50 students took the same survey and quiz, but were asked to record how many texts were sent and received during lecture. Findings included that participants in the texting group scored significantly lower on the lecture quiz than those in the non-texting group.

Cell Phones to Society
Morrill, Jones, and Valeriaus (2013) surveyed college students about their opinions of the age a person should be when receiving their first cell phone, how much cell phone absence affects students, and what is being communicated through the phones.

They found that 16 was the relative age both males and females felt people should receive their first phones, generally females felt a stronger attachment to their cell phones than males, and females reported using texting as a way to deepen existing relationships while males use texting to meet others.

Conclusions
Excessive use of cell phones (social media, etc) is related to increased neuroticism and withdrawal. It is unclear which causes which. Females and Males do not differ in the reasons why they use their phones when maintaining social contact.

College students are not distracted by others’ cell phones ringing. Those who are older tend to be less withdrawn. Older individuals do not use their cell phones as often.

Materials / Procedure
Participants were asked to complete a 42 question cell phone usage survey. Results were analyzed using SPSS program. All other participants who completed the survey were recruited by classroom visits or social media.

Results
Figure 1: Low and medium usage groups scored significantly lower in neuroticism than high users. F(2,118) = 5.4, MSe = 249.7, p<.05.

Figure 1: Low usage groups scored significantly lower in withdrawal than high usage groups. F(2,118) = 4.6, MSe = 225.3, p<.05.

Figure 2: There was no statistical difference between genders in emotional texting need. t(119)=.2, p>.05 or informational t(119)=.88, p>.05 texting need.

Figure 3: Recall scores on a memory test were better when a cell phone rang than when it didn’t; t(25)=4.1, p<.05.

Withdrawal scores were positively correlated with usage amount; r(119)=.29, p<.05.

Withdrawal scores were negatively correlated with age; r(119)=.22, p<.05.

Neuroticism was positively correlated with usage amount; r(119)=.27, p<.05.

Age was negatively correlated with usage amount; r(119)=.25, p<.05.

Hypotheses
This study explores those who are compulsive texters versus light texters and predicts higher Neuroticism and higher Withdrawal ratings in those who are compulsive. Another hypothesis suggests males text to exchange information and women text to socially connect. This study also predicts cell phones are more distracting in a classroom setting.

Background Research


Cell Phones in the Classroom
Dietz and Henrich (2014) asked 50 students to turn off their phones and take a texting survey followed by a video quiz. In the second group, 50 students took the same survey and quiz, but were asked to record how many texts were sent and received during lecture. Findings included that participants in the texting group scored significantly lower on the lecture quiz than those in the non-texting group.

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