

The relationship between trait anxiety and trait depression on cellphone dependency, and its implications on task performance

Taylor Braile,
Karen Akin & Dr. Katie Garrison
The University of Alabama

BACKGROUND

Several studies have found a cellphone being accessible to a user to directly inhibit their abilities to learn, focus, and socialize.¹ The current study assessed relationships between trait anxiety, trait depression and cellphone dependency, and how these traits influence how impairing a cellphone's presence will be on task performance. We predict that self-reported levels of trait anxiety and trait depression will be positively correlated with cellphone dependency, and that all three traits will be negatively correlated with task performance, specifically when one's cellphone is in plain view.

METHODS

- Entry-level psychology course students (ages 18-22) came into a 30-minute laboratory session.
- They completed questionnaires assessing trait anxiety and trait depression; and cellphone use, attachment, and addiction.
- Then they completed a writing task under one of three between-subjects conditions:
 1. Cellphone present ($n = 161$)
 2. Cellphone not present, salient ($n = 149$)
 3. Cellphone not present, not salient ($n = 175$)

RESULTS

Correlations among traits

- Trait anxiety scores were found to be moderately correlated to cellphone addiction ($r = .29, p < .001$; Figure 1)
- Trait depression scores were found to be moderately correlated to cellphone addiction ($r = .27, p < .001$; Figure 2)
- Trait anxiety scores were found to be positively correlated with hours spent using one's cellphone ($r = .15, p = .001$) per day
- Trait depression scores were found to be positively correlated with hours spent using one's cellphone ($r = .25, p = .001$) per day

Relationships with task performance

- Writing task performance was operationalized as the number of words written, and the number of errors
- Trait anxiety, depression, and cellphone addiction did not relate to word count or errors on the writing task, and the relationships between these traits and writing task performance did not depend on cellphone condition (i.e., whether the cellphone was present or absent).

CONCLUSIONS

- The results indicate a positive correlation between trait anxiety, trait depression, and cellphone addiction and problematic use. Previous research has shown cellphone addiction and problematic use to negatively affect a variety of skills and tasks.
- Whether the cellphone was present or absent did not influence the relationship between trait anxiety, depression, or cellphone addiction on task performance.
- Future research could tease apart the causal directions between trait anxiety and depression on the one hand, and problematic cellphone use/addiction.

REFERENCES

- Mendoza, J. S., Pody, B. C., Lee, S., Kim, M., & McDonough, I. M. (2018). The effect of cellphones on attention and learning: The influences of time, distraction, and nomophobia. *Computers in Human Behavior, 86*, 52-60.
- King, A. L. S., Valenca, A. M., Silva, A. C. O., Baczynski, T., Carvalho, M. R., & Nardi, A. E. (2013). Nomophobia: Dependency on virtual environments or social phobia? *Computers in human behavior, 29*(1), 140-144.
- Çağan, Ö., Ünsal, A., & Çelik, N. (2014). Evaluation of college students' the level of addiction to cellular phone and investigation on the relationship between the addiction and the level of depression. *Procedia - Social and Behavioral Sciences, 114*, 831-839. <https://doi.org/10.1016/j.sbspro.2013.12.793>
- Jenaro, C., Flores, N., Gómez-Vela, M., González-Gil, F., & Caballo, C. (2007). Problematic internet and cell-phone use: Psychological, behavioral, and health correlates. *Addiction Research & Theory, 15*(3), 309-320. <https://doi.org/10.1080/16066350701350247>

