

Are Smartphones Addictive?

Examining The Cognitive-behavior Model Of Motivation, Leisure Boredom, Extended Self, and Fear Of Missing Out On Possible Smartphone Addiction

Biying Wu-Ouyang, 吳碧影



Does Smartphone Addiction Exist?

Scholars have not reached an agreement on whether smartphone activities are addictive because:

(1) Inconsistent conceptualizations and measurements

Solution: re-structure smartphone addiction

(2) Contradictory results using self-reported data

Solution: use more robust methodology for data collection such as data donation method (Wu-Ouyang and Chan, 2022)

(3) Atheoretical orientation

Solution: apply a theoretical framework to understand people's motivations to phone addiction

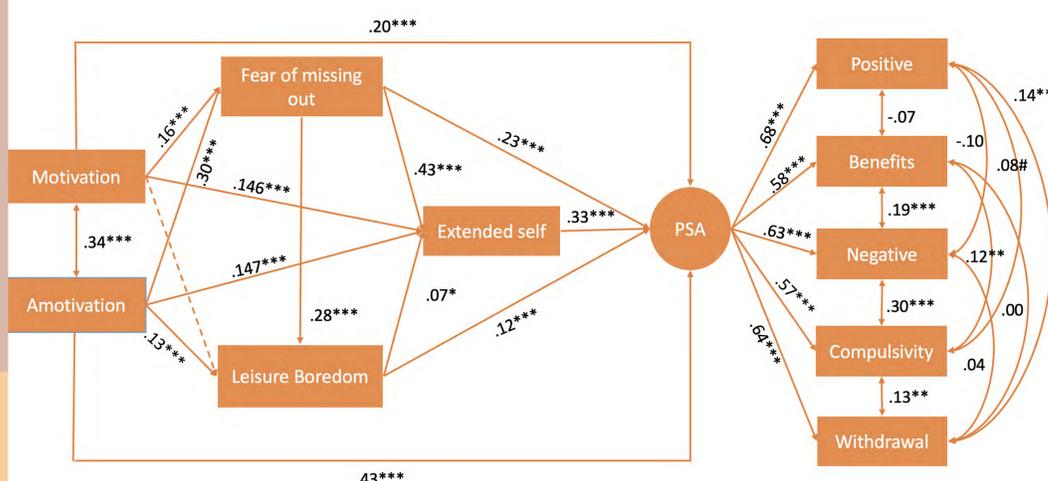
Possible Smartphone Addiction (PSA):

A multidimensional syndrome reserved for people who have a potential **tendency** to smartphone addiction and feel occasional uncontrollable addictive symptoms, including five dimensions.

Positive disposition	An individual's obsessive thoughts about smartphones or using smartphones to facilitate changes in feelings.
Compulsivity	The inability to control, reduce, or cease phone usage behaviors, along with a sense of guilt about their smartphone usage.
Withdrawal	The degree of difficulties of staying away from smartphones.
Perceived social benefits and controls	Individuals' perception of smartphone use as entailing greater social benefits.
Negative outcomes	The mental distraction and physical problems resulting from one's smartphone usage, including attentional lapses, sleep disturbance.

Motivations: Why Do People Get Addicted to Smartphones?

Despite accumulating discussion, only a small number of studies have applied the **cognitive-behavior model of addiction** (CBM, Davis, 2001) as a theoretical basis to examine the underlying mechanisms of smartphone addiction. This study addresses this gap by applying CBM to uncover both the distal (leisure boredom and fear of missing out) and proximal causes (extended self) of smartphone addiction.



Hypothesis

H1	Amotivation ↔ Motivation	.34***	✓
H2a	Boredom → PSA	.13***	✓
H2b	Motivation → Boredom → PSA	NA	✗
	Amotivation → Boredom → PSA	.016**	✓
H3a	FoMo → PSA	.24***	✓
H3b	Motivation → FoMo → PSA	.038***	✓
	Amotivation → FoMo → PSA	.071***	✓
H4	FoMo → Boredom	.29***	✓
H5a	Extended → PSA	.33***	✓
H5b	Motivation → Extended → PSA	.047***	✓
	Amotivation → Extended → PSA	.048***	✓
H6	Motivation → FoMo → Extended → PSA	.017***	✓
	Motivation → Boredom → Extended → PSA	NA	✗
	Motivation → FoMo → Boredom → PSA	.004**	✓
	Motivation → FoMo → Boredom → Extended → PSA	.001*	✓
	Amotivation → FoMo → Extended → PSA	.042***	✓
	Amotivation → Boredom → Extended → PSA	.003#	✗
	Amotivation → FoMo → Boredom → PSA	.011***	✓
	Amotivation → FoMo → Boredom → Extended → PSA	.002*	✓

Methodology and Analysis

- The final sample was recruited by a professional Chinese online research company.
- Quota** sampling was employed on the age and education
- Final participants were 777 from China** across different provinces and cities, and were closely resembled the demographics of people in China.
- CFA was used for PSA, correlation, regression, and Structural equation modelling were used for final analyses.

Conclusion

- H1-H6 ✓ H2b, H6 partially ✗
- This study **empirically** supported CBM and found that smartphone motivations and psychosocial factors (FoMo, Leisure boredom), lead to a cognitive change (extended self), and in turn foster PSA.
- This study **challenged the assumptions of U&G and media dependency theories**, which suggest that audiences are not always active and goal-oriented.
- All the standardized coefficients starting from amotivation were **higher** than that from motivation to all study variables
- Although amotivation leads to higher PSA, they both strongly influence PSA, indicating that when smartphone use becomes excessive **no matter using consciously or unwittingly**, they will be linked to higher FoMo, higher leisure boredom, higher extended self, and finally cause possible addictive behaviors and influence life circumstances.

References

- Wu-Ouyang, B.** (2022). Are Smartphones Addictive? — Examine the Cognitive-Behavior Model of Motivations, Leisure Boredom, Extended Self, and Fear of Missing Out on Possible Smartphone Addiction. *Telematics and Informatics*.
- Wu-Ouyang, B.***, Chan, M (2022). Overestimating or Underestimating Communication Findings? Comparing Self-Reported with Log Mobile Data by Data Donation Method. *Mobile Media & Communication*.



Email: biyingwu@link.cuhk.edu.hk
 Twitter: @BiyingWuOuyang
 ResearchGate(ORCID): Biying Wu-Ouyang
 Website: www.biyingwu.com (QR CODE)

