

**Supplementary Table S1:** Search terms and number of articles found.

Source	Search terms	Found (Y/N)	Number of articles
PubMed	smartphone AND "cognition,"	Y	376
Ovid MEDLINE	smartphone AND "cognition,"	Y	0
Cochrane Library	smartphone AND "cognition,"	Y	3
Embase	smartphone AND "cognition,"	Y	4528
PsycINFO	smartphone AND "cognition,"	Y	380
SPORTDiscus	smartphone AND "cognition,"	Y	
CINAHL	smartphone AND "cognition,"	Y	
Web of Science			121
Scopus	smartphone AND "cognition,"	Y	758
ProQuest	smartphone AND "cognition."	Y	146

Y: Yes, N: No

**Supplementary Table S2:** NIH quality assessment tool analysis of the included studies.

Title	Year	Authors	Was the research question or objective in this paper clearly stated and appropriate?	Were eligibility/selection criteria for the study population prespecified and clearly described?	Were the participants in the study representative of those who would be eligible for the test/service/intervention in the general or clinical population of interest?	Were all the subjects selected or recruited from the same or similar populations (including the same time period)?	Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	Was a sample size justification, power description, or variance and effect estimates provided?	Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?	Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	Was the exposure (s) assessed more than once over time?	Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	Were the assessors of exposure/risk blinded to the case or control status of participants?	Was the loss to follow-up after baseline 20% or less? Were those lost to follow-up accounted for in the analysis?		
Active and passive bedtime social technology use related to daytime sleepiness and sleep	2017	Mastin <i>et al.</i>	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	
Smartphone addiction among university Students <sup>SM</sup> during the post-covid-19 era: The role of emotional intelligence and future anxiety	2023	Zhang	YES	YES	YES	NO	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES
Potential pathways of association from green space to smartphone addiction	2023	Li <i>et al.</i>	YES	YES	YES	NO	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES
Digital danger in our pockets: Effect of smartphone overuse on mental fatigue and cognitive flexibility	2023	Yasin <i>et al.</i>	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES
Association between impulsivity and cognitive capacity decrease is mediated by smartphone addiction, academic procrastination, bedtime procrastination, sleep insufficiency and daytime fatigue among medical students: A path analysis	2023	Hamvai <i>et al.</i>	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	N/A	YES	YES	YES	YES
COVID-19 victimization experience and university students' smartphone addiction: The mediating role of emotional intelligence	2023	Chen and Zhang	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	N/A	YES	YES	YES	YES
The association of smartphone addiction, sleep quality and perceived stress amongst Jordanian dental students	2022	Sanusi <i>et al.</i>	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES
Relationships between smartphone addiction and smartphone usage types, depression, Attention deficit hyperactivity disorder, Stress, interpersonal problems, and parenting attitude with middle school students	2021	Hong <i>et al.</i>	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES
A comparative study on cognitive, emotional, and social functioning in adolescents with and without smartphone addiction	2021	Mohita and Halder	YES	YES	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES

N/A: Not applicable