Effects of a Smartphone Addiction/Overuse Intervention Program among University Students: A Systematic Review and Meta-Analysis

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Purpose

- To evaluate the effectiveness of smartphone addiction intervention among university students.

Methods

- Selection of studies: PICOTS-SD (Participants, Intervention, Comparisons, Outcomes, Timing of outcome measurement, Settings, Study Design)
- Search procedures
  - Articles identified through database search (n=24,210): PubMed (n=7,220), Embase (n=2,314), CINAHL (n=3,324), NDSL (n=36), ODbis (n=39), National Assembly Library (n=12), KIAS (n=3), KoreaMed (n=4), KMbase (n=3), KoreaMed (n=4), National Assembly Library (n=12), KIAS (n=3)
  - Articles removed after duplication (n=22)
  - Articles screened on the basis of title and abstract (n=14), Articles excluded for the following reasons: Same as journal (n=4)
  - Articles included in qualitative synthesis (n=10), Articles excluded for the following reasons: No control group (n=1), Insufficient data (n=1), No smartphone addiction (n=2)

Flow diagram of study selection process

Quality Assessment: RoBANS (The Risk of Bias Assessment Tool for Non-Randomize Studies) - target group selection, confounding variables, exposure measurement, blind assessment, incomplete outcome data, and selective outcome reports, and the low/high/uncertain risk of skewness of each of these areas were evaluated.

Results

- Smartphone addiction intervention significantly reduced smartphone addiction among university students (standardized mean differences = -8.43; 95% CI=-10.98, -0.61).

Conclusions

- Smartphone addiction intervention has an effect on improving smartphone addiction.
- Limit of study: the small number of articles
- Further studies are required to evaluate the effects of smartphone addiction intervention on depression, self-control, and anxiety.