Night-time screen-based media device use and adolescents' sleep and health-related quality of life

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## Sample

a large cohort of 6616 adolescents from 39 schools in and around London, United Kingdom,

## Implications For Parents About

Parental practices / parental mediation

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Other

# Abstract

Objective: The present study investigates the relationship between night-time screen-based media devices
(SBMD) use, which refers to use within 1 h before sleep, in both lit and dark rooms, and sleep outcomes and
health-related quality of life (HRQoL) among 11 to 12-year-olds.
Methods: We analysed baseline data from a large cohort of 6616 adolescents from 39 schools in and around
London, United Kingdom, participating in the Study of Cognition Adolescents and Mobile Phone (SCAMP).
Adolescents self-reported their use of any SBMD (mobile phone, tablet, laptop, television etc.). Sleep variables
were derived from self-reported weekday and/or weekend bedtime, sleep onset latency (SOL) and wake time.
Sleep quality was assessed using four standardised dimensions from the Swiss Health Survey. HRQoL was estimated
using the KIDSCREEN-10 questionnaire.
Results: Over two-thirds (71.5%) of adolescents reported using at least one SBMD at night-time, and about a
third (32.2%) reported using mobile phones at night-time in darkness. Night-time mobile phone and television
use was associated with higher odds of insufficient sleep duration on weekdays (Odds Ratio, OR=1.82, 95%
Confidence Interval, CI [1.59, 2.07] and OR=1.40, 95% CI [1.23, 1.60], respectively). Adolescents who used
mobile phones in a room with light were more likely to have insufficient sleep (OR=1.32, 95% CI [1.10, 1.60])
and later sleep midpoint (OR=1.64, 95% CI [1.37, 1.95]) on weekends compared to non-users. The magnitude
of these associations was even stronger for those who used mobile phones in darkness for insufficient sleep
duration on weekdays (OR=2.13, 95% CI [1.79, 2.54]) and for later sleep midpoint on weekdays (OR=3.88,
95% CI [3.25, 4.62]) compared to non-users. Night-time use of mobile phones was associated with lower HRQoL
and use in a dark room was associated with even lower KIDSCREEN-10 score (β=–1.18, 95% CI [–1.85, –0.52])
compared to no use.
Conclusions: We found consistent associations between night-time SBMD use and poor sleep outcomes and worse
HRQoL in adolescents. The magnitude of these associations was stronger when SBMD use occurred in a dark
room versus a lit room.

# Outcome

"This study has shown that night-time use of at least one SBMD, and
specifically mobile phones or televisions, was associated with adverse
sleep outcomes, particularly insufficient sleep duration, late midpoint
of sleep, abnormal catch-up sleep, abnormal social jetlag and poor sleep
quality (sleep disturbance) among adolescents. The observed associations
were consistent for sleep outcomes on weekdays and weekends.
Although night-time use of mobile phones or televisions in a room with
the light on was associated with insufficient sleep duration and late
midpoint of sleep, the magnitude of the association was higher when
night-time use of mobile phones or televisions occurred in darkness.
Night-time use of at least one SBMD was also negatively associated with
adolescent HRQoL and this association persisted even after excluding
adolescents who report any disability. Night-time users of mobile
phones in darkness reported worse HRQoL compared to those who did not use mobile phones during night-time." (Mireku et al., 2019: 80).