

# Social Media Usage, Anxiety Disorder, Depression, and Sleep Quality During Semesters And Covid-19 Lockdown Among High School Students

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## Abstract

**Introduction** Adequate sleep associated with better attention, mental and physical health, learning, memory, emotional regulation, and quality of life. Adolescents with more social media (SM) usage experienced poorer sleep quality and higher levels of anxiety and depression. We investigated the association between SM usage and sleep quality and evaluate the factors related to poor sleep quality eg. time spend on social media, anxiety, depression, and risky behaviors.

**Methods** 219 Female adolescents were voluntarily recruited in the private school and completed all self-administered electronic questionnaires at baseline (final examination in second semester), 3 months (school break in Covid-19 lockdown), and 6 months (school reopening with new normal behaviors). The questionnaires consisted of demographic data, pattern of SM usage, Pittsburgh sleep quality index (PSQI), screening questionnaire for depression-Thai version (Q9), and Screen for Child Anxiety Related Disorders (SCARED)-Thai version. The analysis by using the Cochran's Q test, correlation coefficient, and binary logistic regression were done.

**Results** Mean age was 14.52 ( $\pm 1.59$  SD) with average GPA 3.24 (range 1.45-4.00). There was significant positive correlation between PSQI scores and total duration of SM usage at baseline ( $r=0.14$ ,  $p<0.05$ ) and 6 months ( $r=0.20$ ,  $p<0.05$ ). Anxiety, depression, and self-perception of poor sleep significantly related with poor sleep quality during three periods. After adjusted with those factors, depression, and self-reported poor sleep were only significant factors for poor sleep quality.

**Conclusion** Poor-sleep adolescents were associated with SM usage, depression, and anxiety. Health guidance of time-limit SM usage should be implemented for Thai students in order to improve sleep-related outcomes.

**Keywords:** social media; sleep quality; anxiety, depression; Risky behavior

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