

Abstract

Background: Children spent more time on screen during the COVID-19 lockdowns. Psychological effects of increased screen time in children with ADHD during the lockdowns are unknown.

Objectives: This study aimed to investigate the relationship between screen time and attention deficit hyperactivity disorder (ADHD) symptoms aggravation in children and adolescents during the COVID-19 lockdown in Thailand.

Methods: This prospective cohort study included children and adolescents with ADHD aged 7 to 16 years and their parents. ADHD symptoms were assessed by the Swanson, Nolan, and Pelham IV scale (SNAP-IV) Thai version. Parents completed a screen time use questionnaire and the SNAP-IV Thai version during (October 2021-May 2022) and after (May 2022-September 2022) the COVID-19 lockdown. The factors associated with increased ADHD symptoms were evaluated by multiple linear regression analysis.

Results: Of the 90 participants enrolled, mean age was 11.31 ± 2.29 years and 74.4% were male. 64.4% was in primary school and 35.6% was in secondary school. The Pearson's Correlation Coefficient indicated that total screen time correlated with increased ADHD symptoms (inattention: $r=0.386$, hyperactivity/impulsivity: $r=0.261$). The multiple linear regression revealed recreational screen time related to increased ADHD symptoms, whereas internet-based studying time did not. There was no significant difference in the amounts of screen time for recreational as well as ADHD symptoms between the period during and after the lockdown.

Conclusion: Increasing recreational screen time associated with worsening ADHD symptoms. Screen time reduction is a simple intervention that may have a positive effect on ADHD symptoms. Parental guidance for appropriate screen time uses as well as promoting alternative activities may benefit children and adolescents with ADHD.

Keywords: Attention deficit hyperactivity disorder (ADHD), COVID-19 lockdown, internet-based study, oppositional behaviors, screen time