

**One in six adolescent girls has a smartphone addiction,
which may impact their overall well-being.**

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Review & Commentary for Smartphone use and well-being of adolescent girls: a population-based study

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Declarative title: One in six adolescent girls have a smartphone addiction, which may impact on their overall well-being

Commentary on: Kosola S, Mproa S, Holoapaine E. Smartphone use and well-being of adolescent girls: a population-based study. *Arch Dis Child*, 2024; 109: 576–581

Commentary

Implications for practice and research

- Smartphone addiction may contribute to the increase in anxiety disorders in adolescent girls: peer engagement activities and tech free zones may help reduce smartphone use.
- Providing support and advice relating to smartphone use for young people is everyone's responsibility; solely relying on mental health services to address smartphone addiction is not realistic.

Context

The prevalence of anxiety disorders, particularly in adolescent girls, is increasing; smartphone addiction is a potential causal factor. Kosola et al.¹ evaluated the potential correlation between smartphone use, and the mental health and well-being of adolescent girls, particularly anxiety disorders.

Methods

This population based study recruited over a thousand adolescent girls, from 21 socially diverse schools, who completed online validated measures including the Bergen Social Media Addiction Scale, Generalised Anxiety Disorder-7, Body Appreciation Scale and visual analogue scales of current health, mood, tiredness, and loneliness. Participants were also asked to submit screenshots of their smartphone use, used to calculate average daily screen time, and where data was available activities undertaken. Demographic data and self-reported school grades were collected.

Descriptive statistics included frequencies for demographic characteristic and the number of adolescents above the predefined scores for possible smartphone addiction or anxiety. Pearson correlation coefficients and t-test were used to compare groups with possible social media

addiction and no addiction.

Findings

Participants mean age was 16.3 years of age. For the 48% of participants who sent screenshots of their smartphone use, average daily use was 5.8 hours, including 3.9 hours of social media engagement. Based on the Bergen Social Media Addiction Scale and Generalised Anxiety Disorder-7, 16.6% of participants had a social media addiction and 37.2% exceeded the cut-off for possible anxiety disorders. Participants who were likely to have a social media addiction (social media use over 6 hours a day) and a higher risk of generalised anxiety disorder had higher anxiety levels, poorer body image, poorer overall health, lower mood, greater tiredness and greater loneliness. However, comparison between those who did and did not submit screen shots, only showed higher self-reported school grades in the former. Policy makers should advocate for, and work with technology companies to develop, safety standards to protect adolescents from the potential harmful effects of smartphone and social media use.

Commentary

There has been a significant increase in smartphone use, with parallel increases in poor mental health, among young people over the past decade. Estimates suggest 15% -30% of CYP are diagnosed with an anxiety disorder before adulthood,² with the increase greater in girls.^{2,3} Consequently, possible correlations between poor mental health, particularly anxiety disorders, of young people and smartphone addiction have been reported.^{2,3} While many childhood anxiety disorders do not continue into adulthood, they are associated with other mental health disorders such as depression.² In addition, persistent or excessive anxiety can result impact on daily activities, difficulties with concentration, irritability, muscular tension and disturbed sleep^{2,4} While the evidence base is developing, research has been inconclusive about the potential link between smartphone use and poor mental health, mainly because it is unlike smartphone use per se is a potential causal factor but the patterns (how, when, what and why) of smartphone-related behaviour could be.³ Given the potential relationship between smartphone use and health outcomes, Kosola et al.'s¹ evaluation of smartphone use and well-being of adolescent girls is a welcome addition to the evidence base.

While Kosola et al.¹ found that increased social media use, with average of just under 6 hours smartphone and 4 hours social media daily use reported, was associated with poor education attainment and potential for developing anxiety, confounding variables such as socioeconomic

factors and pre-existing mental health disorders limit generalisation to the wider population. Furthermore, accurately establishing smartphone use, and the diversity of online social media platforms and websites created to generate and share information, is a limitation.

While peer engagement activities and tech free zones were suggested as ways to help reduce smartphone use,¹ this may be difficult to achieve because young people who have grown up within the on-line revolution, smartphone use and engaging in social media activities is an indispensable part of daily life.

Acknowledgment – we wish to thank Lois Roberts, 15 years of age for her perspectives on the importance of smartphones for the vast majority of young people.

References (max 6)

¹Kosola S, Mproa S, Holoapaine E. Smartphone use and well-being of adolescent girls: a population-based study *Arch Dis Child*, 2024; 109:576–581.

²Freidl EK, Stroeh OM, et.al. Assessment and Treatment of Anxiety Among Children and Adolescents. *Focus*, 2017; 15: 2; 144–156.

³Sohn SY, Rees P, Wildridge B. et.al. Prevalence of problematic smartphone usage and associated mental health outcomes amongst children and young people: a systematic review, meta-analysis and GRADE of the evidence. *BMC Psychiatry*, 2019; 19; 356.

⁴National Collaborating Centre for Mental Health. *NHS Talking Therapies for anxiety and depression*. 2018/updated 2024. Available at: [https://www.rcpsych.ac.uk/docs/default-source/improving-care/nccmh/iapt/the-nhs-talking-therapies-for-anxiety-and-depression-manual-\(version-7\).pdf?sfvrsn=cadc471b_9](https://www.rcpsych.ac.uk/docs/default-source/improving-care/nccmh/iapt/the-nhs-talking-therapies-for-anxiety-and-depression-manual-(version-7).pdf?sfvrsn=cadc471b_9)

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Competing interests - None