

Chapter 9

Addicting Content, Blue Light, and Curtailed Sleep: The ABCs of Social Media Use and Sleep

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ABSTRACT

Sleep is essential for physical and mental wellbeing, but many adults and adolescents do not get the recommended amount of sleep. Recently, studies have identified technology use as having negative impacts on sleep. This is concerning given that mobile technologies have permeated the lives of today's young adults and adolescents. First, the effects of social media use, both throughout the day and before bedtime, on sleep quantity and quality are synthesized. Second, the mechanisms through which social media use disrupts sleep, namely that 1) social media use displaces time spent sleeping, 2) that the content on social media is stimulating, and 3) that the blue light emitted by digital devices suppresses the production of melatonin, decreasing sleepiness are discussed. Third, the research designs and methods that were employed are explored. Fourth, future research directions are proposed. Finally, tips to improve sleep in the digital age are provided.

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INTRODUCTION

Sleep is essential for physical and mental wellbeing. Not getting enough sleep is associated with a host of negative outcomes such as cardiovascular disease, obesity, diabetes, breast cancer, increased symptoms of depression, anxiety, and paranoia, impaired emotional empathy (i.e., the ability to experience emotions when observing others), memory, and cognition (Beihl et al., 2009; Chee & Chuah, 2007; Gangwisch et al., 2005; Guadagni, Burles, Ferrara, & Iaria, 2014; Haus & Smolensky, 2013; Hoevenaar-Blom et al., 2010; Kahn-Greene et al., 2007; Nishiura et al., 2010). Sleep deprivation also increases the risk of accidents on the road and in the workplace (Swanson et al., 2011; Williamson & Feyer, 2000). According to the National Sleep Foundation and the American Academy of Pediatrics, adolescents need 8-10 hours of sleep and adults need 7-9 hours per night, but nearly half of adolescents and one third of adults do not get the recommended amount (American Academy of Pediatrics, 2016; Liu et al., 2016; National Sleep Foundation, 2006; National Sleep Foundation, 2016). Concerns about sleep have increased in recent years, as the percentage of adults who do not get enough sleep has gone up (Knutson, Van Cauter, Rathouz, DeLeire, & Lauderdale, 2010). Given the prevalence of sleep deprivation and the severe consequences associated with it, addressing factors that affect sleep is crucial.

Several review articles have identified links between youths' electronic media use (e.g., watching television, using computers, playing electronic games, using mobile devices) and sleep (Carter, Rees, & Hale, 2016; Cain & Gradisar, 2013; Hale & Guan, 2015). Most studies that were included found that electronic media use was associated with reduced sleep and poor quality sleep. In the years since these reviews were published, many researchers have turned their attention to understanding the impacts of social media use on sleep quantity and quality, as social media has become pervasive among adolescents and young adults. In 2010, 72% of adolescents and 73% of young adults used social media. Those numbers have continued to rise and by 2018, 80% of adolescents had their own accounts and 88% of young adults used social media (Lauricella et al., 2016; Pew Research Center, 2015; Smith & Anderson, 2018). In 2015, 24% of adolescents reported going online almost constantly (Lenhart, 2015). In only three years, that number had nearly doubled to 45% of teens (Anderson & Jiang, 2018).

Social media platforms provide a never-ending stream of content for users, which may make putting down devices difficult. Currently, the most popular social media platforms among adolescents and young adults in the United States are Facebook, Instagram, Snapchat, Twitter, and YouTube (Anderson & Jiang, 2018; Perrin & Anderson, 2019). On these platforms, users can share messages, images, and videos with a group of friends or followers and can browse, comment, and like content posted

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