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**Commentary**

# Impact of Digital Media on the Mental Health, Mindfulness, Stress and Sleep of Generation Z

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**Letter to the Editor**

We read the article by Kumar *et al*. with interest. It describes a cross-sectional study on the influence of excessive digital behaviour on depression, anxiety, stress, sleep quality, mindfulness, and Dark Triad personality traits, as well as the effectiveness of a structured digital detox intervention. Four standardized questionnaires (DASS-21, PSQI, MAAS, SD-3) were administered to 200 Gujarati students [1]. The results showed that long screen time and excessive digital consumption cause emotional stress and poor sleep quality, and that increased digital media use is associated with high levels of anxiety, depression, stress, Dark Triad-related behaviours, and reduced mindfulness [1]. Mindfulness was able to reduce the negative effects of digital media [1]. The study is noteworthy, but some aspects warrant discussion.

Firstly, the tests used (DASS-21, PSQI, MAAS, and SD-3) have some limitations. The DASS-21 is a screening instrument that cannot diagnose clinical disorders such as major depression or generalized anxiety disorder [2]. The three subscales (depression, anxiety, stress) are highly correlated and often overlap. The anxiety scale includes somatic symptoms, which is why physical symptoms of illness can artificially inflate the anxiety score. Due to its short form, it lacks the clinical differentiation and depth of information of other scales. Furthermore, it suffers from a Western cultural bias, as norms and cut-off scores were developed in Western, English-speaking countries. The scale is inaccurate in cases of severe illness because it relies on self-reports [2]. The PSQI is susceptible to bias due to self-reporting and memory lapses, does not provide an objective measurement, cannot capture acute changes, can tire respondents, is socially desirable and culturally biased, and can obscure nuanced differences in individual subdomains [3]. The MAAS measures inattention rather than mindfulness, neglects important dimensions of mindfulness, and is not very sensitive to clinical interventions [4]. Individuals with high levels of inattention often lack the self-awareness to recognize that they are acting "automatically." This can lead to response bias, where respondents overestimate their own level of mindfulness. While the MAAS is suitable for examining comparative changes over time or for tracking individual progress, it lacks a standardized diagnostic threshold [4]. Because the DS-3 is compressed, the subscales for Machiavellianism and psychopathy show a high latent correlation [5]. The SD-3 strongly emphasizes the grandiose aspects of narcissism and therefore largely neglects vulnerable or antagonistic facets of this personality trait. It is highly prone to distortion and exhibits a lack of self-awareness. The SD-3 reduces complex, multidimensional clinical concepts to only nine items per trait. It is therefore unsuitable as a valid clinical diagnostic tool for identifying severe personality disorders [5].

Secondly, sleep quality depends not only on screen time but also on numerous other factors. These factors influencing sleep include gender, genetic predisposition, personality type, stress management strategies, comorbidities, sleep habits, exposure to devices that generate electromagnetic radiation, noise, light, vibrations, drafts, insects, pets, earthquakes, bed type, the number of other people in the same room, nighttime light pollution, cell phone towers, relationships with parents and friends, socioeconomic status, local, regional, national, and geopolitical conditions, diet, and the time of the last meal or fluid intake [6]. Before attributing sleep disturbances to excessive digital media use, these factors must be included in the analysis as confounding variables.

Thirdly, digital media captivate individuals and can lead to addiction and dependence. This occurs through personalized content, constant prompts to consume, monitoring of personality traits, purchasing behavior, preferences, and goals, as well as thought control and even the ability to directly spy on individuals through additional features. Because these negative aspects often go unnoticed and individuals are captivated by the positive elements, they generally fail to break free from this dependence. The digital world is structured in such a way that it has become almost impossible not to use it. Bookings for

conferences, meetings, hotels, or restaurants can now only be made digitally. Direct communication is often no longer an option.

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