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MedEst|2026 | Vol.6: e590| ISSN: 2789-7567 |RNPS: 2524| SYSTEMATIC REVIEW ARTICLE

Excessive screen use in university students: health effects and didactic strategies

Uso excesivo de pantallas en estudiantes universitarios: efectos en la salud y estrategias didácticas

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RESUMEN

Introducción: Las pantallas acompañan al universitario en estudio, comunicación y ocio, pero su uso excesivo puede afectar salud y aprendizaje. **Objetivo:** Sintetizar evidencia de revisiones sistemáticas y metaanálisis sobre efectos del uso excesivo de pantallas en salud de universitarios e identificar estrategias preventivas aplicables desde la docencia. **Métodos:** Revisión paraguas guiada por PRISMA 2020 y PRIOR. No se registró en PROSPERO por ser síntesis exploratoria no financiada, con protocolo interno no publicado y objetivo dual; se justifica en Métodos. Se consultaron PubMed/MEDLINE y LILACS (2021-2026). Se incluyeron revisiones sistemáticas y metaanálisis en población universitaria. Selección y extracción por una revisora. No se aplicó herramienta formal de evaluación crítica; se reconoce como limitación. **Resultados:** De 39 registros se incluyeron 25 revisiones: 17 sobre efectos en salud y 8 sobre intervenciones. El tiempo de pantalla se asoció con mayor riesgo de depresión (OR=1,93) y fatiga visual digital (OR=1,96), con aumento marcado por encima de 2,5 horas diarias. El síndrome visual informático afectó al 76,1% y el uso excesivo del teléfono duplicó el riesgo de dolor cervical. Las pausas activas en clase redujeron sedentarismo y fatiga y mejoraron la atención; las intervenciones digitales aumentaron pasos, pero no redujeron tiempo sedentario. **Conclusiones:** El uso excesivo de pantallas se asocia con problemas de salud mental, visual, musculoesquelética y del sueño. El aula es espacio de prevención; pausas activas, pausas visuales, normas de uso consensuadas y protección del sueño son estrategias viables para el docente. La certeza es limitada por predominio de estudios transversales y autoinforme.

ABSTRACT

Introduction: Screens accompany university students in studying, communication, and leisure, but their excessive use can affect health and learning. **Objective:** To synthesize evidence from systematic reviews and meta-analyses on the effects of excessive screen use on the health of university students and to identify preventive strategies applicable from teaching. **Methods:** Umbrella review guided by PRISMA 2020 and PRIOR. It was not registered in PROSPERO because it was an exploratory, unfunded synthesis with an unpublished internal protocol and a dual objective; this is justified in Methods. PubMed/MEDLINE and LILACS were consulted (2021–2026). Systematic reviews and meta-analyses in the university population were included. Selection and extraction were performed by one reviewer. No formal critical appraisal tool was applied; this is acknowledged as a limitation. **Results:** Of 39 records, 25 reviews were included: 17 on health effects and 8 on interventions. Screen time was associated with a higher risk of depression (OR=1.93) and digital eye strain (OR=1.96), with a marked increase above 2.5 hours per day. Computer vision syndrome affected 76.1% of participants, and excessive phone use doubled the risk of neck pain. Active breaks in class reduced sedentary behavior and fatigue and improved attention; digital interventions increased step counts but did not reduce sedentary time. **Conclusions:** Excessive screen use is associated with mental, visual, musculoskeletal, and sleep health problems. The classroom is a prevention space; active breaks, visual breaks, agreed usage rules, and sleep protection are viable strategies for teachers. Certainty is limited by the predominance of cross-sectional studies and self-report.

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INTRODUCTION

One need only enter any university classroom to verify it: the phone rests on the desk, the computer is open, and the class is projected on a screen. Devices accompany students when they study, when they communicate, and when they rest. It is not about demonizing them, because they are valuable tools for learning. The problem appears when their use is prolonged, invades sleep hours, or displaces movement.

The magnitude of the phenomenon is considerable. A meta-analysis with 36,656 participants from 18 countries found that half reported moderate symptoms of nomophobia—that is, discomfort or anxiety when unable to use the phone—and one in five reported severe symptoms; the figures were higher among university students. [1] In Cuba, a national study with 713 medical sciences students found that all presented some degree of nomophobia, moderate in 51.5%. [2] However, Latin American research on mobile device dependence is still scarce. [3]

To this is added sedentary behavior, because screen time is almost always sitting time. The World Health Organization recommends that adults perform between 150 and 300 minutes per week of moderate physical activity and reduce sedentary time. [4] The university day, with long classes and hours of study in front of devices, tends to go in the opposite direction. Cuban authors have also pointed out the need to train medical sciences students in the appropriate use of digital media as part of the curriculum. [5]

In recent years, numerous reviews have been published on isolated aspects of the problem: vision, neck pain, sleep, or depression. However, a synthesis that brings together these effects and, at the same time, offers teachers concrete tools to act is lacking. Hence the scientific problem of this review arises: what effects does excessive screen use have on the health of university students, and what strategies can be applied from teaching to prevent them?

The objective of this work is to synthesize the evidence from recent systematic reviews and meta-analyses on the effects of excessive screen use on the health of university students and to identify prevention strategies applicable from teaching.

METHODS

Design

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An umbrella review—overview of reviews—was conducted, written according to the PRISMA 2020 statement[6] and the criteria of the PRIOR guideline for reviews of reviews. It is called an umbrella review because the unit of analysis was systematic reviews and meta-analyses, not primary studies. To guarantee transparency and reproducibility, the complete search strategies and selection criteria are detailed.

Statement on PROSPERO.

This review was not registered in PROSPERO. The decision was made because it was conceived as an exploratory synthesis of systematic reviews, unfunded, with an unpublished internal protocol and a dual objective—health effects and didactic strategies—that exceeded the usual scope of a registry of reviews of primary studies. No retrospective registration was performed. It is acknowledged that this omission limits the transparency and prospective verification of the protocol; it is partially compensated by the full publication of the search strategies, eligibility criteria, PRISMA flow, and the list of included studies. It is not stated that PROSPERO was absolutely inadequate: it was simply not used. This limitation is also declared in the Limitations section.

Research questions

The review was guided by two questions:

1. Effects: what effects does excessive screen use have on the health of university students?
2. Interventions: what interventions applicable in the university environment contribute to preventing them?

The first question was structured according to the PECO format: population (P), university students; exposure (E), excessive screen use, problematic smartphone use, and associated sedentary behavior; comparison (C), lower exposure or absence of exposure; and outcomes (O), mental, visual, and musculoskeletal health, sleep, and academic performance. The second was structured according to PICO: population, university students; intervention, active breaks, visual breaks, digital interventions, usage rules, and health education; comparison, usual teaching or absence of intervention; and outcomes, sedentary behavior, fatigue, attention, well-being, and academic performance.

Information sources

PubMed/MEDLINE was consulted through the E-utilities query service of the United States National Center for Biotechnology Information, and LILACS through the Regional Portal of the Virtual Health Library.

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The search was conducted in July 2026 and covered publications from the period 2021 to 2026 available up to that date. This period was chosen to collect evidence after the COVID-19 pandemic, a stage in which device use intensified. The restriction to English and Spanish is justified by the reading capacity of the team and by the representativeness of regional literature in LILACS.

Search strategies

Three strategies were used, reproduced below as executed:

Strategy 1 (PubMed, effects): ("screen time"[tiab] OR "smartphone addiction"[tiab] OR "smartphone overuse"[tiab] OR "problematic smartphone use"[tiab] OR "digital eye strain"[tiab] OR "computer vision syndrome"[tiab]) AND ("university students"[tiab] OR "college students"[tiab] OR "medical students"[tiab] OR undergraduate*[tiab]) AND (systematic review[pt] OR meta-analysis[pt]) AND 2021:2026[dp]

Strategy 2 (PubMed, interventions): ("movement break"[tiab] OR "active break"[tiab] OR "physically active learning"[tiab] OR "standing break"[tiab] OR "sedentary behavior"[tiab] OR "screen time reduction"[tiab] OR "digital detox"[tiab]) AND ("university students"[tiab] OR "college students"[tiab] OR "medical students"[tiab] OR "tertiary"[tiab] OR "higher education"[tiab]) AND (systematic review[pt] OR meta-analysis[pt]) AND 2021:2026[dp]

Strategy 3 (LILACS): (smartphone OR "teléfono móvil" OR celular OR "tiempo de pantalla" OR nomofobia) AND (universitarios OR "estudiantes de medicina" OR "estudiantes universitarios") AND ("revisión sistemática" OR metaanálisis), with LILACS database filter and years 2021 to 2026.

Inclusion and exclusion criteria

Systematic reviews, with or without meta-analysis, were included if they met the following conditions: studying university students, or mixed populations that explicitly included them or reported results for that subgroup; analyzing exposure to screens, problematic phone use, or sedentary behavior, or interventions to reduce them or promote physical activity in the university environment; reporting health or academic outcomes; and being published in English or Spanish. Primary studies, narrative reviews, reviews on measurement instruments, those conducted exclusively in schoolchildren, adolescents, or workers, and those studying different exposures, such as diet or confinement, were excluded.

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Selection and data extraction

Titles and abstracts were screened, the eligibility of preselected reports was evaluated, and reasons for exclusion were recorded. Selection and data extraction were performed by a single reviewer; a second independent reviewer and specialized software such as Rayyan or Covidence were not available, which is acknowledged as a limitation. To reduce errors, the internal consistency of the extracted data was verified through a second reading of the included reports. From each review, the first author, year, country or region, type of review, number of studies and participants, population, exposure or intervention, comparator when available, main results with their effect measures, and funding when reported were extracted.

Critical appraisal of included reviews

A formal critical appraisal tool—such as AMSTAR 2 or ROBIS—was not applied to the included reviews. This decision is acknowledged as a methodological limitation and is declared in the corresponding section. Quality assessment was performed narratively, considering the presence of a registered protocol, comprehensiveness of the search, duplication in selection and extraction, risk of bias assessment, and consideration of publication bias, when this information was available in the included reports.

Synthesis of evidence

Given the heterogeneity of exposures and outcomes, a narrative synthesis organized by health domains and by type of intervention was performed; a new meta-analysis was not carried out. The decision not to meta-analyze is justified by the partial overlap of populations, variability in the definition of excessive use, diversity of measurement instruments, and the impossibility of guaranteeing independence between reviews. A formal analysis of overlap between reviews and an analysis of publication bias were not performed; both absences are acknowledged as limitations. The certainty of the evidence was assessed narratively, considering risk of bias, heterogeneity, and precision of results. A formal certainty assessment tool, such as GRADE, was not applied. To contextualize the discussion, primary studies and relevant guidelines were also consulted, which are not part of the synthesis.

RESULTS

The search identified 39 records: 19 with the first PubMed strategy, 18 with the second, and 2 in LILACS. After removing 4 duplicates, 35 titles and abstracts were screened. Eight records were excluded at this

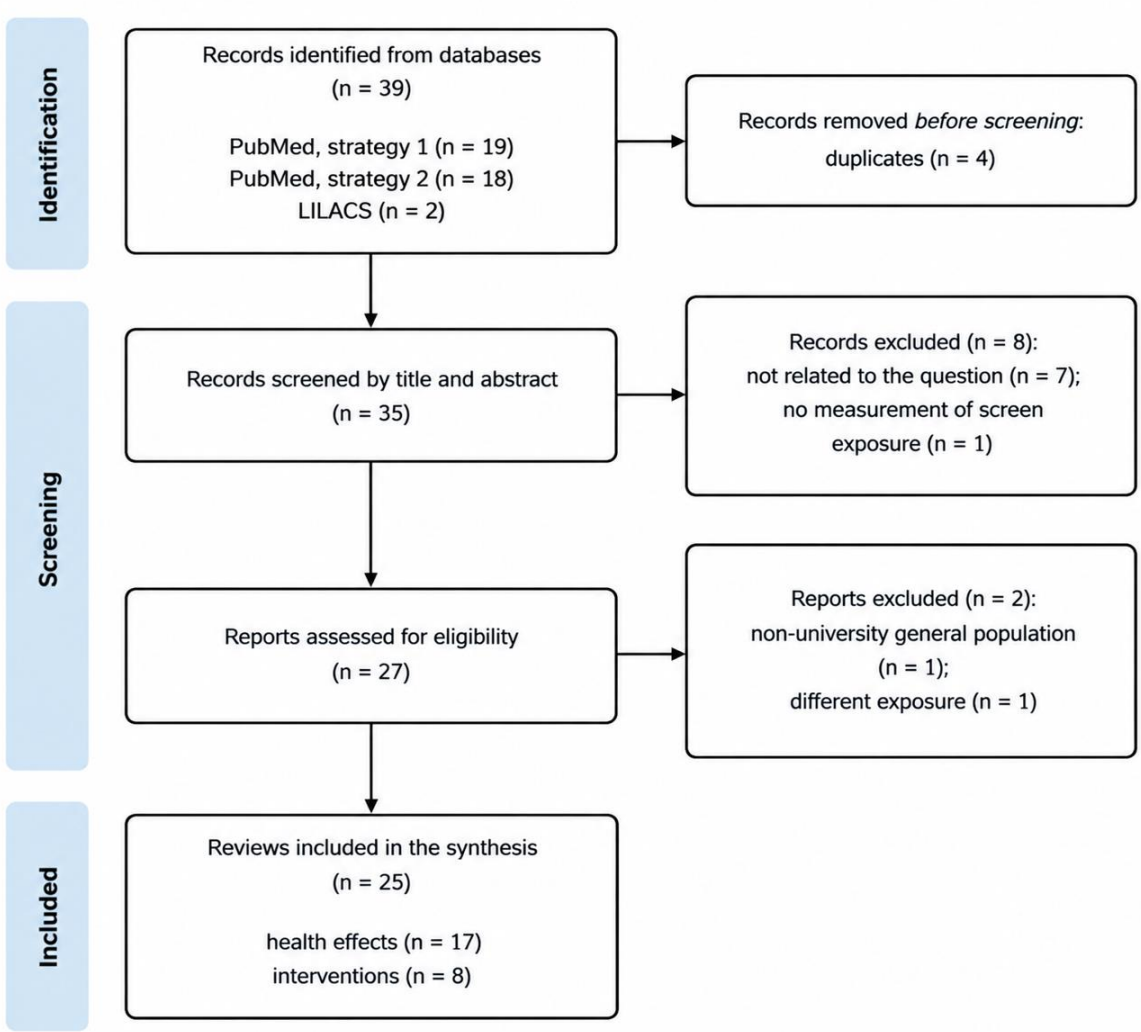
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phase: 7 for not being related to the research question—measurement instruments, diet, active video games, evaluation methodology, teaching staff, depression in the general population, and self-esteem in adolescents—and 1 for not measuring screen exposure.

Twenty-seven reports were evaluated to determine their eligibility, and 2 were excluded: one conducted in a non-university general population and another that studied a different exposure. Finally, 25 reviews were included (Figure 1).

Fig. 1. Flow diagram of study selection, according to the PRISMA 2020 statement.



Source: Prepared by the author.

Characteristics of the included reviews

The 25 reviews were published between 2022 and 2026: 5 in 2022, 4 in 2023, 5 in 2024, 4 in 2025, and 7 in 2026. Fourteen included meta-

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analyses and 11 performed a qualitative synthesis. Seventeen reviews analyzed the effects of screen use on health or academic performance, and eight evaluated interventions. The largest review gathered 72 studies that, together, totaled 71,633 university students. Table 1 presents the characteristics of each review, identified with a code (R1 to R25) that is used throughout the rest of this section.

Table 1. Characteristics and main findings of the included reviews

R	Main author, year	Type	Studies and participants	Main finding
R1	Riverón Nápoles, 2023	SR	8 studies (Latin America and Cuba)	Scarce regional research; negative impact on the mental health of university students.
R2	Al-Mamun, 2025	SR and MA	43 studies; 36,656 participants	Moderate nomophobia in 51% and severe in 21%; higher in university students.
R3	Zhong, 2022	SR and MA	19 studies; 5,497 medical students	Phone addiction in 41.9%; associated with poor sleep, stress, anxiety, and depression.
R4	Zeng, 2026	SR and MA	72 studies; 71,633 university students	Depression (OR = 1.93) and visual fatigue (OR = 1.96); increasing risk above 2.5 h/day.
R5	Ccami-Bernal, 2024	SR and MA	103 studies; 66,577 participants	Computer vision syndrome in 69%; 76.1% in university students.
R6	Song, 2026	SR and MA	63 studies	Asthenopia in 36–57% of university students; regular breaks were protective (OR = 0.21).

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R7	Mazaheri-Tehrani, 2023	SR and MA	46 studies (27 in the MA)	Phone use and neck pain (OR = 2.11); sedentary behavior in university students (OR = 1.58).
R8	Varmazyar, 2026	SR	18 studies	Hand, wrist, or thumb pain in 19.2–68.7% of university students.
R9	Leow, 2023	SR and MA	Medical students	Poor sleep in 57% and phone addiction in 39%; correlation r = 0.30.
R10	Gao W, 2026	SR with exploratory synthesis	55 studies	More physical activity and less screen time: lower anxiety (OR = 0.64), depression (OR = 0.46), and poor sleep (OR = 0.54).
R11	Gao XL, 2023	SR and MA	36 studies	Screen time associated with depression and anxiety (OR = 1.44).
R12	Tang, 2024	SR and MA	17 studies; 24,019 university students	Problematic use and depressive symptoms (OR = 2.40) and suicidal ideation (OR = 2.18).
R13	Li, 2026	SR	11 studies	Phone addiction and suicidal ideation (OR = 1.14–4.57), with a dose-response pattern.
R14	Hsieh, 2025	MA	45 studies	Phone use and academic performance (r = −0.12); greater effect with

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				multitasking in class.
R15	Babaeer, 2022	SR	35 studies	Undetermined association between recreational screen time and academic outcomes.
R16	Whatnall, 2024	SR	34 cohort studies	Poor sleep was associated with worse academic performance (12 of 18 studies).
R17	Hutchesson, 2025	SR	33 cohort studies	Poor sleep and physical inactivity associated with worse psychological well-being.
R18	Lynch, 2022	SR and MA	14 studies; 5,997 university students	Active breaks feasible; less sedentary behavior and fatigue, more well-being and attention.
R19	Deng, 2026	SR	20 studies	Active breaks improve sustained attention and emotional engagement; academic effect uncertain.
R20	Zhou, 2026	SR	46 studies	Digital interventions effective for physical activity and diet; limited evidence for sedentary behavior and sleep.
R21	Bi, 2024	SR and MA	8 RCTs; 569 participants	Increase in steps (SMD = 0.64); no effect on sedentary time.

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R22	Peng, 2022	SR and MA	22 RCTs; 8,333 participants	Improvement in physical activity (SMD = 0.32); no significant effect on sedentary behavior.
R23	Buja, 2024	SR	19 studies	Social networks and text messages improved physical activity in 15 studies.
R24	Liu, 2022	SR	23 RCTs	Exercise and psychological interventions can reduce phone addiction.
R25	Streram, 2025	SR	22 RCTs	Only 7 interventions improved behavior and mental health; most focused on sleep.

R: review code; **SR:** systematic review; **MA:** meta-analysis; **RCT:** randomized controlled trial; **OR:** odds ratio; **SMD:** standardized mean difference. **Source:** Prepared by the author.

Magnitude of problematic use

Phone addiction affected 41.9% of 5,497 Asian medical students (R3) and 39% in another synthesis focused on that same career, whose students used the phone an average of 4.9 hours per day (R9). Problematic use was identified in 36.5% of 24,019 university students (R12). In a meta-analysis with 36,656 participants from 18 countries, 51% presented moderate nomophobia and 21% severe, with higher values in university students and young adults (R2). The Latin American review found only eight studies on the topic in the region over a decade (R1).

Mental health

This was the domain with the most evidence. In the largest review, screen time was associated with depression (OR = 1.93; 95% CI: 1.75–2.12). The dose-response analysis showed that, above 2.5 hours per day, the risk of depression increased by more than 15% for each additional hour. Screen time was also associated with anxiety and stress, with ORs between 1.12 and 1.79 (R4).

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Problematic phone use was associated with depressive symptoms (OR = 2.40) and with suicidal ideation (OR = 2.18); the association with depression was stronger after the COVID-19 pandemic than before (OR = 2.76 vs. 2.16) (R12). Another review, with 11 studies, nine of them conducted in South Korea, described a dose-response pattern between phone addiction and suicidal ideation (OR = 1.14–4.57) and suicide attempt (OR = 1.15–1.87) (R13). An earlier meta-analysis linked screen time with depression (adjusted OR = 1.45) and anxiety (OR = 1.44) (R11).

Two reviews analyzed the combination of behaviors. Students with more physical activity and less screen time had a lower probability of anxiety (OR = 0.64), depression (OR = 0.46), and poor sleep (OR = 0.54) than those showing the opposite pattern (R10). In 33 cohort studies, poor sleep and physical inactivity were consistently associated with worse psychological well-being (R17).

Sleep

57 % of medical students had poor sleep quality, and phone addiction correlated with it (r = 0.30) (R9); in Asian students, the correlation ranged between 0.17 and 0.31 (R3). Screen time was associated with worse sleep quality, but not with its duration (R4). In turn, poor sleep was associated with worse academic performance in 12 of 18 cohort studies (R16).

Visual health

In 103 studies with 66,577 participants, the prevalence of computer vision syndrome was 69%, and in university students, 76.1%; it was higher in women than in men (71.4% vs. 61.8%) (R5). Screen time almost doubled the risk of digital eye fatigue (OR = 1.96), which also increased rapidly above 2.5 hours per day (R4). Asthenopia affected 36–57% of university students during the pandemic. Prolonged screen time was a risk factor (OR = 1.15), while regular breaks (OR = 0.21), knowledge about proper computer use (OR = 0.20), and anti-reflective filters (OR = 0.34) were protective (R6).

Musculoskeletal health

In 46 studies, phone use was associated with neck pain (OR = 2.11) and sedentary behavior was a risk factor in university students (OR = 1.58) (R7). Hand, wrist, or thumb pain affected between 19.2% and 68.7% of university students, and was related to duration of use, posture when holding the phone, and its size and weight (R8).

Academic performance

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In 45 studies, phone use was negatively, although weakly, associated with academic performance (r = −0.12). The effect was greater with problematic use and, above all, with multitasking during class (R14). An earlier review of 35 studies, most of low quality, found undetermined associations between recreational screen time and academic outcomes (R15).

Classroom interventions

In 14 studies with 5,997 university students, active breaks and physically active learning were feasible in the classroom. They reduced sedentary behavior and fatigue and improved well-being; breaks also increased concentration and attention, and learning in motion did not affect academic performance (R18). In another review of 20 studies, breaks improved sustained attention, emotional engagement, and positive emotions, while effects on selective attention and grades were inconsistent (R19).

Digital and behavioral interventions

E-health interventions increased physical activity at the end (SMD = 0.32), but did not reduce sedentary time or maintain their effect at follow-up (R22). Digital interventions increased step counts (SMD = 0.64), with no effect on light or moderate-to-vigorous physical activity or sedentary time (R21). In 46 studies, 67% reported positive effects, clearer for physical activity and diet than for sedentary behavior and sleep, and with better results in interventions of 8 to 16 weeks (R20). Social networks and text messages improved physical activity in 15 of 19 studies, especially when social groups were created (R23). Exercise and psychological interventions reduced phone addiction, with a greater effect when combined (R24). Of 22 trials on health behaviors, only 7 improved both behavior and mental health, and 4 of them focused on sleep (R25).

DISCUSSION

This umbrella review gathered evidence from 25 recent systematic reviews. [1,3,7-29] Its main contribution is to show that excessive screen use does not affect a single aspect of student health, but almost all at once, and that the most effective responses are simple and fit within the classroom.

The threshold of 2.5 hours per day identified in the dose-response analysis [8] deserves attention, because a good part of university students comfortably exceed it; medical students, for example, use the phone almost five hours a day. [13] However, the relationship does not

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imply causality in all cases nor does it have a single direction. An anxious or depressed student may take refuge more in the phone, and not only the reverse. In a Canadian cohort, the risk of depression was 47% higher with 10 hours or more of recreational screen time upon entering university, but the association attenuated at the end of the course. [30] Therefore, the findings should be read as risk signals and not as proof of cause.

Sleep appears as the point where many of these effects converge. It is related to mental health [21] and academic performance [20], and is sensitive to screen use. A recent study in medical students provides a relevant nuance: nighttime screen use was the only independent predictor of sleep disturbances, while total time ceased to be so when adjusting for other variables. [31] The timing of use matters, therefore, as much as the quantity, and that opens a very concrete intervention pathway for teachers.

The visual and musculoskeletal findings coincide with recent primary studies. In a Spanish university, computer vision syndrome affected 65.4% of the studied population, with higher risk from six hours per day of use, [32] and another meta-analysis estimated that excessive phone use doubles the risk of neck pain. [33] The most encouraging thing is that the protective factors identified—regular breaks and knowledge about proper computer use [10]—are modifiable through education. Among practical measures, the 20-20-20 rule stands out: every 20 minutes, look at a distance of about six meters for 20 seconds. [34]

In academic performance, the average effect is small, but multitasking in class is its most harmful component. [18] An experiment conducted in a real classroom helps to understand why. Students who used devices for non-academic purposes understood the content at the moment, but retained it worse and obtained lower grades, as did their classmates in classrooms where use was permitted. [35] The effect, therefore, is collective and affects the learning environment of the entire group, although the evidence is not entirely uniform. [19]

The interventions leave a clear lesson: the simplest is what works best in the classroom. Active breaks reduce sedentary behavior and improve attention at no additional cost. [22,23] Digital interventions, on the other hand, show a paradoxical profile, since they increase steps and physical activity, but do not reduce sedentary time. [24-26] Using technology to correct the effects of technology has limits, although the social component can enhance it. [27] Faced with problematic use, the combination of exercise and psychological support seems the most promising option, [28] and interventions focused on sleep are the ones that most benefit mental health. [29] In schoolchildren, educational

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programs also had modest effects, greater when they addressed lifestyle as a whole. [36]

Overall quality of evidence and confidence in results

Confidence in the results is limited to moderate. Most of the included reviews are based on cross-sectional studies and self-reports, which prevents establishing causality. There is heterogeneity in the definition of excessive use, in the measurement instruments, and in the exposure periods. A formal critical appraisal or evidence certainty tool was not applied, and several reviews did not report a registered protocol, duplicate selection, risk of bias assessment, or publication bias. Nor was an analysis of overlap between reviews or publication bias performed. Therefore, the results should be interpreted as a consistent signal of risk, not as a precise estimate of effect.

Implications for teaching

Based on this evidence, Table 2 proposes seven strategies that teachers can apply without additional resources. All start from a common idea: teachers do not control what students do outside the classroom, but they do control how they organize the class, what rules they build with the group, how they design tasks, and what example they set.

Table 2. Didactic strategies to prevent the effects of excessive screen use

Strategy	How to apply it in class	Rationale
Active breaks and learning in motion	Interrupt the class with 4 to 10 minutes of movement every 20 to 45 minutes; review content standing or in motion.	They reduce sedentary behavior and fatigue and improve attention without affecting performance. [22,23]
Visual breaks and ergonomics	Apply the 20-20-20 rule in screen activities; teach proper distance, posture, and lighting.	Regular breaks and knowledge about computer use protect against asthenopia. [10,34]
Usage rules agreed with the group	Build an agreement with students about when the device is used; explain the effect of multitasking on retention.	Multitasking in class is the behavior with the greatest negative effect and affects the whole group. [18,35]

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Tasks that protect sleep	Set submission deadlines during daytime hours and avoid sending messages or tasks at night.	Nighttime use predicts sleep disturbances, and sleep is associated with performance. [20,31]
Less screen and more movement	Alternate screen and non-screen activities; propose tasks that involve moving, such as interviews, visits, or fieldwork.	The pattern of more physical activity and less screen time is associated with better mental health and sleep. [14]
Health education in the curriculum	Include digital hygiene, sleep, and physical activity in subjects; use the phone's screen time record as a self-observation activity.	Comprehensive lifestyle programs are more effective than those focused only on the screen. [29,36]
Technology in favor and timely referral	Promote support groups for physical activity; refer those showing problematic use to student health services.	Social groups enhance physical activity; exercise and psychological support reduce addiction. [27,28]

Source: prepared by the authors.

Applicability in higher education

Regional evidence, although scarce, points in the same direction as international evidence. A study with 713 university students found some degree of nomophobia in all participants, [2] and a Latin American review confirmed the negative impact of mobile device dependence on the mental health of university students. [3] These findings are relevant to any career, because screen use is part of the academic life of all students, regardless of their field of training. Incorporating digital hygiene into curricula and teaching practice therefore contributes to student well-being and to their preparation for healthier and more responsible use of technology throughout their professional lives. [5]

Limitations

Most of the included reviews are based on cross-sectional studies and self-reports, which prevents establishing causal relationships. There is also important heterogeneity in the definition of excessive use and in measurement instruments. Regarding this review, selection and data extraction were performed by a single reviewer, a formal methodological quality assessment tool such as AMSTAR 2 or ROBIS was not applied, and only two databases were consulted, in English

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and Spanish. Nor was the certainty of the evidence or publication bias evaluated with a formal instrument. The protocol was not registered in PROSPERO, which limits prospective transparency; the justification is detailed in Methods. No overlap analysis between reviews was performed. Therefore, some relevant review may have been omitted. Strengths include the currency of the evidence, the large sample sizes gathered, and the translation of findings into concrete proposals for the classroom.

CONCLUSIONS

Excessive screen use is consistently associated with depression, anxiety, computer vision syndrome, neck and hand pain, poorer sleep quality, and lower academic performance in university students. Risk increases with time of use, particularly from about two and a half hours per day, and with nighttime use. Low-cost interventions carried out in the classroom, such as active breaks, show clearer benefits for sedentary behavior and attention than digital interventions. Teachers can contribute to prevention through active and visual breaks, device use rules built with the group, tasks that protect sleep, and health education integrated into the curriculum. The certainty of this evidence is limited by the predominance of cross-sectional studies, the heterogeneity of definitions, the absence of prospective protocol registration, and the lack of a formal assessment of methodological quality and evidence certainty. It is recommended to evaluate these strategies in universities and to register future reviews in PROSPERO or another platform.

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DÁA: conceptualization, data curation, formal analysis, investigation, methodology, visualization, writing – original draft, writing (review and editing).

CONFLICT OF INTERESTS

The author declares no conflicts of interest.

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