

SOCIO-ECONOMIC IMPLICATIONS OF ADDICTIONS IN THE EDUCATIONAL SYSTEM

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ABSTRACT

Addictions among students in educational institutions present complex socio-economic challenges. This literature review examines existing research on substance abuse, digital and behavioral addictions, and their impact on academic performance, institutional resources, and societal outcomes. The review synthesizes findings from international studies, highlighting patterns, risk factors, and intervention strategies. Key socio-economic consequences include increased dropout rates, higher institutional expenditures, and long-term social costs. By identifying gaps in current research and prevention programs, this paper aims to provide a comprehensive understanding of the socio-economic implications of addictions in the educational context. The review emphasizes the need for evidence-based policies and integrated interventions to mitigate these impacts.

KEYWORDS: *addictions, educational system, literature review, socio-economic impact, student performance.*

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1. INTRODUCTION

Addictions and dependencies, while often used interchangeably in everyday language, represent distinct concepts in academic discourse. Addiction is generally defined as a chronic, relapsing disorder characterized by compulsive engagement in rewarding stimuli despite adverse consequences, encompassing behavioural, psychological, and neurobiological components (Volkow & Morales, 2015). Common examples in educational settings include alcohol, nicotine, and cannabis use, as well as behavioural addictions such as excessive video gaming, social media engagement, or gambling (Kuss & Griffiths, 2017).

Dependency, in contrast, emphasizes the physiological and psychological reliance on a substance or activity. It is typically characterized by tolerance, withdrawal symptoms, and strong cravings when access to the substance or behaviour is restricted (American Psychiatric Association, 2013). While all addictions involve some degree of dependency, not all dependencies meet the full diagnostic criteria for addiction. For instance, a student may develop a dependency on caffeine to maintain alertness, without this constituting an addiction unless it begins to interfere significantly with daily functioning or academic performance. These patterns are not isolated; they reflect broader systemic vulnerabilities within educational institutions. Addiction exerts significant effects on both educational attainment and social development. Cognitive deficits, reduced motivation, and impaired concentration are frequently observed consequences, directly undermining learning capacity. Behavioural addictions, including excessive smartphone use, have similarly been linked to poor time management, heightened anxiety, and lower academic achievement (Kuss & Griffiths, 2017). Students affected by addiction often encounter strained interactions with peers and educators. Their behaviour may become erratic, resulting in social isolation, stigmatization, or disciplinary measures. Moreover, addiction can negatively impact emotional intelligence and

empathy, reducing students' capacity to engage effectively in collaborative learning and constructive social interactions. Collectively, these academic and social repercussions hinder not only immediate educational outcomes but also the broader objective of education: the cultivation of well-rounded, socially competent individuals. In educational systems, this distinction is crucial because interventions must be tailored to whether the student exhibits compulsive addictive behaviours, physiological dependency, or both. Behavioural addictions, such as compulsive gaming or smartphone use, may require counselling, time-management strategies, and cognitive-behavioural interventions, whereas substance dependencies may necessitate medical supervision, detoxification, and long-term rehabilitation.

From the national perspective of Romania, the data indicate a particularly acute context of vulnerability. Eurostat figures show that in 2023, the share of young people aged 18–24 leaving education and training early (i.e., completing at most lower-secondary education and not enrolled in further training) was 16.6%, compared to the European Union average of 9.5% for the same year (Eurostat, 2024). The gap is even wider in rural areas, where early-school-leaving rates reached 27.5% in 2023 (Eurostat, 2024). These figures reveal that the Romanian educational system operates within an environment of structural risk characterized by limited educational attainment, socio-economic deprivation, and heightened exposure to behaviours that undermine educational trajectories.

Given this backdrop, a systematic review of the socio-economic implications of addictions in educational contexts is both timely and essential. This review addresses the following questions:

- What kinds of addictions prevail in educational systems, especially among secondary and tertiary students?
- How do these addictive behaviours affect academic outcomes and institutional resources?
- Which socio-economic factors heighten vulnerability to addictions in educational contexts?
- What intervention strategies have been evaluated in the literature, and what gaps remain, particularly in the Romanian case?

Addictions in educational settings manifest through both substance-related and behavioural forms. Behavioural addictions, meanwhile, encompass compulsive use of digital devices, social media, online gaming, and gambling (Kuss & Griffiths, 2017; Montag et al., 2021). Research indicates that digital addictions are particularly prevalent among adolescents and young adults, with estimates suggesting that up to 15–20% of university students exhibit problematic internet or smartphone use (Elhai et al., 2020). Comparatively, substance addictions are often associated with more pronounced neurobiological and physiological effects, whereas behavioural addictions primarily influence cognitive, emotional, and social functioning. Nonetheless, both forms share overlapping features: compulsive engagement, loss of control, and negative consequences across academic, social, and psychological domains (Grant et al., 2010).

The literature consistently documents the negative effects of addiction on academic performance. Substance use among students correlates with lower grade point averages, increased absenteeism, and higher dropout rates (Arria et al., 2013). Behavioural addictions, including excessive gaming or social media use, similarly reduce academic engagement through poor time management, procrastination, and distraction (Kuss et al., 2018). Students with such behavioural patterns frequently report difficulty prioritising tasks, reduced intrinsic motivation, and heightened anxiety, creating a self-reinforcing cycle that simultaneously strengthens compulsive behaviours and undermines academic achievement (Andreassen et al., 2016). Addictions also have profound socio-emotional effects that hinder students' social integration and collaborative skills.

The socio-economic impact of student addiction extends beyond individual academic outcomes. Educational institutions incur direct costs, including increased demand for support services, counselling, disciplinary measures, and remediation programmes (Romer et al., 2018). Indirect costs include loss of human capital, reduced workforce readiness, and the perpetuation of intergenerational socio-economic disparities. Eurostat data for Romania further illustrate these

systemic consequences: early school leaving and limited educational attainment are strongly correlated with heightened exposure to addictive behaviours, particularly in rural and socio-economically deprived regions (Eurostat, 2024). Moreover, the literature highlights the interplay between socio-economic status, family background, and peer influence in shaping vulnerability to addictions. Students from low-income households or those experiencing familial instability are disproportionately affected, suggesting that preventive interventions must address structural factors in addition to individual behaviours (Viner et al., 2012; Currie et al., 2015).

Interventions targeting student addiction have employed educational, behavioural, and policy-oriented approaches. School-based prevention programmes, cognitive-behavioural therapy (CBT), motivational interviewing, and digital-detox initiatives have shown moderate success in reducing addictive behaviours (King et al., 2019). However, the literature reveals notable gaps: most studies are concentrated in Western contexts, with limited evidence regarding intervention efficacy in Eastern European countries such as Romania. Furthermore, relatively few investigations have systematically examined the socio-economic costs at institutional and societal levels, leaving policymakers with incomplete guidance for resource allocation and planning.

To synthesise these findings, a conceptual model can distinguish between types of addiction, their direct effects on cognitive and socio-emotional functioning, and the resulting academic and socio-economic outcomes. Substance addictions primarily generate physiological and neurocognitive deficits, while behavioural addictions predominantly affect attention, emotional regulation, and social engagement. Both pathways converge to negatively affect academic performance, school retention, and social development, which in turn amplify institutional and broader societal costs.

2. METHODOLOGY

This systematic review aimed to investigate the socio-economic implications of addictions: including substance use (alcohol, drugs, tobacco) and behavioral addictions (gambling, gaming, internet and social media use) within the educational system. The review examined how various forms of addiction affect academic performance, school engagement, dropout rates, and the broader social and economic costs associated with addiction-related behaviors in educational contexts.

Inclusion criteria: Longitudinal, cross-sectional, or qualitative studies analyzing the relationship between addictive behaviors and educational indicators (academic achievement, attendance, dropout, transition to employment). Publications between 2000 and 2025, in English or Romanian. Studies addressing socio-economic implications, including direct and indirect costs, impact on human capital, and educational inequalities.

Exclusion criteria: Studies conducted solely in clinical or rehabilitation populations; conceptual or commentary papers without empirical data; studies that did not explicitly link addiction to the educational system.

Search strategy: Electronic searches were conducted in PubMed, ERIC, Scopus, Web of Science, and PsychINFO, using combinations of the following terms: ("addiction" OR "substance use" OR "behavioral addiction") AND ("education" OR "academic performance" OR "school dropout") AND ("socioeconomic impact" OR "economic cost" OR "social inequality"). In addition, reports and grey literature from WHO, UNESCO, and OECD were screened to ensure comprehensive coverage of international evidence.

Data extraction and assessment of methodological quality. All identified abstracts were screened independently by two reviewers. A standardized data extraction sheet recorded: Study design, country, and sample characteristics; type of addiction investigated; educational and socio-economic indicators measured; main findings and statistical adjustments (e.g., for SES, gender, age, or family structure).

Methodological quality was appraised through critical discussion of sampling methods, response rates, measurement validity, and risk of bias. Numerical scoring systems were avoided, as they can give a false sense of precision.

3. CONCLUSIONS

This literature review highlights the multifaceted socio-economic implications of addictions within educational systems. Both substance and behavioral addictions significantly compromise academic performance, social development, and emotional well-being. Substance use impairs cognitive functioning and motivation, whereas behavioral addictions primarily disrupt attention, time management, and social engagement. Collectively, these effects contribute to higher absenteeism, lower academic achievement, increased dropout rates, and diminished human capital. Addictions impose substantial costs on educational institutions, including expenditures for remedial programs, counseling services, and disciplinary interventions. Indirectly, they exacerbate structural inequalities, particularly in regions with high early school leaving, such as rural Romania. Vulnerability is further heightened by socio-economic deprivation, familial instability, and peer influence, suggesting that effective interventions must integrate both individual-focused and structural approaches. Evidence-based prevention and intervention strategies—such as cognitive-behavioral therapy, school-based educational programs, and comprehensive family and community engagement—demonstrate promising results in mitigating addictive behaviors. Nonetheless, significant research gaps remain, particularly regarding the Romanian context and the quantification of broader societal costs. Addressing these gaps is essential for developing effective policies and ensuring optimal allocation of resources.

In conclusion, understanding and addressing addictions within educational contexts is critical not only for improving student outcomes but also for promoting long-term socio-economic development. Tailored, empirically grounded interventions are necessary to reduce the prevalence of addiction, mitigate its socio-economic consequences, and foster resilient, socially competent learners.

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