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Problematic Short-Form Video Use, Instant Gratification, Impulsivity, and Psychological Distress Among Slovak University Students

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Abstract

This quantitative cross-sectional study investigates the relationships between problematic short-form video use, impulsivity, the tendency toward instant gratification, and psychological distress (depression, anxiety, stress) among Slovak university students specializing in media and communication—a group expected to exhibit above-average media literacy. Data were collected from 338 students using validated psychological instruments (SVA scale, Delay Discounting Tasks, NCIS, DASS-21). Results showed that problematic consumption is moderately prevalent, with significant associations with higher impulsivity (especially self-control deficits) and increased psychological distress, supporting the view of digital video platforms as potential maladaptive coping tools. Surprisingly, even among these digitally proficient students, higher media literacy and daily exposure to digital content did not serve as protective factors—problematic use and its psychological correlates were present to a similar degree as described in general youth populations. Platform differences were minor, although TikTok users showed more homogeneous risk profiles. The study underscores the importance of focusing on personality factors rather than presumed digital competences in digital wellbeing and prevention strategies. Limitations regarding sample homogeneity and the self-report method are acknowledged, and further research with more diverse groups and objective behavioral measures is recommended.

Keywords: short-form video addiction, instant gratification, impulsivity, psychological distress

1. Introduction

The impact of digital media, particularly short-form video platforms such as TikTok and Instagram, on the psyche of young people is currently the subject of increasing debate. These platforms, which take up an increasing amount of users' free time, offer easy access to content that can evoke immediate emotional responses and rewards. Addiction to these platforms, impulsive behavior, a preference for instant gratification and mental health issues such as depression, anxiety and stress are phenomena that are increasingly intertwined and which affect the younger generation.

The association between screen time and symptoms of mental health problems among young people is not a new phenomenon (e.g. Boers et al., 2019; Hu et al., 2021; Li et al., 2022; Francisquini et al., 2024; Čábyová & Krajčovič, 2024). While in the past the focus was on television and subsequent research responded to the exponential growth of platforms such as Facebook and Instagram, today the short-form video format is increasingly coming to the forefront of research, particularly in relation to TikTok and Instagram Reels.

A common feature of short-form videos is the high degree of immersion, the loss of temporal orientation and excessive consumption, which can lead to addiction symptoms, especially among young people. This phenomenon has become the subject of research in recent years. Short, emotionally stimulating and rapidly changing videos are said to stimulate the dopamine pathways and evoke feelings of reward (Qin et al., 2022).

Theoretical concepts such as the “attention economy” (Davenport & Beck, 2001) explain how digital platforms are designed to capture and retain users’ attention, often reinforcing compulsive behavior. Short-form videos, in particular, promote repeated reward-seeking and reduce users’ ability to regulate the time spent online—features that are characteristic of behavioral addictions. Although “short-form video addiction” is not formally recognized as a clinical

diagnosis in either the DSM-5 or ICD-11, it is increasingly discussed in the literature as a form of problematic media use. This phenomenon is typically assessed through screening tools that capture addiction-like symptoms—such as loss of control, withdrawal, and functional impairment—which are interpreted as existing on a continuum rather than as part of a discrete clinical disorder (Al-Leimon et al., 2025). These symptoms align with the World Health Organization's broader definition of addiction, which includes craving, withdrawal syndrome, increased tolerance, and continued use despite negative consequences (World Health Organization, 2004). Furthermore, excessive use of social media may engage neurobiological mechanisms similar to those involved in substance addiction (Wadsley & Ihssen, 2023), further underscoring its relevance as a behavioral health concern. This reflects a broader shift in digital media research toward dimensional models of media overuse, where severity is measured along a spectrum of self-reported difficulties rather than by strict diagnostic thresholds.

At the same time, it is important to note that not all platforms have the same addictive potential: "Users may exhibit problematic use on a particular platform and not have the same maladaptive response on the broader category of social media" (Smith & Short, 2022). TikTok and Instagram Reels, which constantly generate new and virtually endless content, are problematic in this sense. In such environments, the line between excessive use and addiction is very thin. While excessive consumption does not always lead to a deterioration in quality of life, addiction is a more serious problem, as the person is unable to reduce their behavior on their own. However, in the case of short-form videos, both forms are potentially problematic. We therefore agree with Caponnetto et al.'s assertion that TikTok has a "dual nature": "a powerful tool for cultural exchange and personal expression, but also potentially addictive and psychologically disruptive" (Caponnetto et al., 2025), despite the fact that TikTok also has several positive aspects, as demonstrated in the study by Yang et al. (2024), who describe the platform as a tool for fostering health-protective behavior.

The group most prone to problematic use of short-form videos are young people aged 18–24 and 25–34, who also represent the largest audience (Statista, 2025a, Statista, 2024a). However, it should be noted that many such surveys start with respondents aged 18 and older, so the group of users under the age of 18 is significantly underrepresented in the surveys. However, we know from other surveys that users aged 4 to 18 in the US spend 132 minutes a day on TikTok and 89 minutes on Instagram (Statista, 2024b), while in the UK it is 134 minutes on TikTok and 49 minutes on Instagram (Statista, 2025b). Young people are therefore the most vulnerable group. Another reason is not least the correlation between age and self-control, which is lower in younger people than in adults (Castrellon et al., 2024; Kim et al., 2022). It is therefore evident that this group is particularly susceptible to developing an unhealthy relationship with watching short-form videos, as also demonstrated by Tang and Zhang (2024), who highlight the excessive use of TikTok specifically among university students.

In our research, we chose this target group to include even more receptive young people - students of media and communication studies, who are almost constantly exposed to social media due to their interests and the focus of their studies. Even if we do not take their media focus into account, excessive social media use among university students has been shown to be positively related to academic procrastination (Rozgonjuk et al., 2018; Anwar et al., 2022; Xie et al., 2023).

Given this context, the present study aims to investigate the psychological correlates of short-form video addiction, with a specific focus on impulsivity, the preference for instant gratification, and psychological distress. These constructs have been independently linked to problematic digital media use (Schulz van Endert & Mohr, 2022; Zhu & Fong, 2025; Li et al., 2025), yet their relevance to short-form video platforms remains underexamined. Drawing on models of behavioral addiction and delay discounting, we assume that impulsive individuals with lower self-control are more likely to seek fast, emotionally engaging content and are also more vulnerable to the reinforcing cycles of algorithm-driven platforms. Emotional vulnerability—particularly symptoms of depression, anxiety, and stress—may further amplify these tendencies by motivating escapist behaviors.

1.1 Instant Gratification and Short-Form Video Consumption

The concept of instant gratification, also known as delay discounting, refers to the tendency of individuals to favor immediate but smaller rewards over delayed but more valuable rewards (Kirby et al., 1999). In the context of social media use, particularly among young people, this phenomenon manifests itself in favoring short-form videos that provide immediate emotional and stimulating gratification over activities with long-term benefits. This type of decision-making is closely related to impulsivity and weakened self-regulation, especially in a digital environment designed to maximize attention and time spent on the platform (Schulz van Endert & Mohr, 2022). Short-form videos are adapted using algorithms that recommend content not based on social connections (friends, geolocation), but through so-called data attraction models that analyze previous user behavior (Liang, 2022). The aim of these algorithms is to maximize engagement, i.e. the time a user spends on the platform.

Su et al. (2021) point out that personalized content on platforms such as TikTok activates stronger dopamine pathways

in the brain, which increases the risk of addictive behavior. This “reward cycle” is similar to mechanisms known from behavioral addictions, where immediate gratification is not only a reinforcing element but also a way to cope with negative emotions. Our research is based on the so-called magnitude effect — the hypothesis that impulsivity manifests not only in monetary rewards (which we measure), but also in social rewards such as likes, comments and followers, which are an integral part of the user experience of short-form videos.

1.2 Consumer Impulsivity in Social Media Environments

Impulsive behavior goes beyond the boundaries of decision making and is strongly reflected in consumer behavior. Sharma et al. (2011) distinguish three dimensions of consumer impulsivity: prudence, hedonism and self-control. The most important in the context of social media is the hedonistic component, which represents the desire for immediate pleasure and sensory gratification. In the digital environment, this need is satisfied by short-form videos – often in the form of user-generated content (UGC). Such content is perceived as more authentic, credible and emotionally engaging, which increases the likelihood of impulsive decisions (SK Agency, 2024). According to Adobe Express (2024), up to 51% of respondents stated that TikTok has the greatest influence on impulsive purchases, with almost 25% of them making a purchase within three minutes of watching a video.

Young people, as so-called digital natives (Prensky, 2001), naturally have greater trust in recommendations from the online environment and reviews on social networks rather than from traditional advertising (Valeza & Soriano, 2024). In addition, a significant proportion of short-form video content is linked to affiliate marketing and influencers promoting products that are naturally integrated into the videos. This mix of advertising and entertainment is very effective — informal recommendations strongly influence cognitive and emotional decision-making processes. The link between consumer impulsivity and addictive behavior is mediated by several psychological mechanisms – notably fear of missing out (FOMO) and the dopamine loop that occurs in the state of 'flow' (Biswas et al., 2024; Quin et al., 2022). These factors form a dangerous combination in which impulsivity not only encourages impulsive buying but also excessive use of social media.

1.3 Psychological Distress and Excessive Media Consumption

With the increasing use of digital media, there is also growing concern about their impact on mental health. Many studies show that increased consumption of social media content correlates with higher levels of depression, anxiety and stress (Lin et al., 2016; Shannon et al., 2022; Francisquini et al., 2024; Li et al., 2022).

Short-form videos often show idealized images of life — beauty, success and wealth — which can trigger feelings of failure, dissatisfaction and stress in susceptible individuals. Furthermore, these platforms are designed to constantly provide new stimuli and activate the dopamine pathways in the brain. The results can be addiction and impaired emotional regulation as well as reduced self-esteem (Kuss & Griffiths, 2017).

Current data shows worrying trends: according to Rothwell (2023), young people spend an average of 4.8–5.8 hours per day on social media, with children spending an average of up to 2 hours per day on TikTok (Qustodio, 2024). The total daily screen time of Generation Z reaches 9 hours (Duarte, 2025). In this context, it is not surprising that the incidence of symptoms such as depression, anxiety and chronic stress is increasing among young users. If we combine these symptoms with the previously described mechanisms of instant gratification and impulsivity, a complex picture emerges in which short-form videos are not just entertainment, but a potential trigger for psychological stress that requires professional attention and preventive measures.

1.4 Hypothesis Development

Based on theoretical findings and previous research, the aim of this study was to investigate the extent to which psychological characteristics - in particular impulsivity and the tendency towards instant gratification - are associated with problematic consumption or addiction to short-form videos. A further aim was to examine whether this potentially addictive behavior is associated with increased levels of psychological distress, particularly symptoms of depression, anxiety and stress.

The study assumes that short-form videos represent a form of digital behavior that combines high stimulation potential (thanks to algorithmic personalization and immediate rewarding feedback) with low behavioral distress (Qin et al., 2022; Zhu & Fong, 2025). Such an environment is particularly risky for young people who tend to be impulsive and have weaker self-regulation (Castrellon et al., 2024; Kim et al., 2022). In line with the delay-discounting model, we assume that a preference for immediate reward (even in a social context, such as likes or followers) can promote the development of addictive behavior. We also draw on the behavioral addiction framework based on neuropsychological theories of dopamine reinforcement (Su et al., 2021; Qin et al., 2022).

Based on theoretical assumptions and previous empirical findings, the following hypotheses were formulated:

According to Schulz van Endert and Mohr (2022), individuals who prefer immediate rewards over delayed rewards are more likely to engage in addictive behavior in the online environment. As short-form videos offer quick gratification with minimal effort, it is likely that this form of content appeals to those who exhibit higher levels of delay discounting.

- H1: Preference for instant gratification (as measured by Delay Discounting) correlates positively with short-form video problematic consumption.

Research by Sharma et al. (2011) shows that impulsivity as a personality trait is closely related to addictive behavior associated with consumption. Also, a study by Zhu and Fong (2025) showed that individuals with lower self-control are more prone to problematic consumption of short-form videos. Impulsive people with low self-control are more likely to succumb to immediate stimuli and make quick decisions without considering the consequences. Therefore, they are more likely to excessively watch short-form videos that offer immediate, emotionally charged stimuli.

- H2: There is a positive correlation between impulsivity and short-form video problematic consumption.
- H3: There is a negative correlation between self-control and short-form video problematic consumption.

Several studies (e.g. Lin et al., 2016) indicate that the use of social media can serve as a means of coping with negative feelings. Individuals suffering from depressive symptoms, anxiety or stress may seek out short-form videos as a form of escape or quick emotional relief. In such cases, watching this type of content can become a maladaptive coping strategy that increases the risk of developing addictive behavior. A similar issue was observed in the context of stress induced by the global pandemic, where the intensity of social media use was directly linked to perceived COVID-19 stress (Sun et al., 2023). This view is supported by recent findings from a cross-lagged panel network analysis, which identified tension and subjective anxious affect as the strongest emotional predictors of short-form video addiction, with withdrawal and relapse symptoms being primarily driven by prior negative emotional states (Li et al., 2025).

- H4: There is a positive correlation between levels of depression, anxiety and stress and short-form video problematic consumption.

Short-form videos provide rapid and intense rewards, making them especially attractive to individuals with low self-regulation, high impulsivity, or a strong preference for instant gratification. At the same time, they may serve as a maladaptive coping strategy for those experiencing psychological distress. The relationships between these psychological predispositions and platform-specific affordances creates a dynamic in which instant gratification, emotional escape, and poor self-regulation converge to increase the risk of developing problematic video consumption habits. Therefore, the four constructs—impulsivity, instant gratification, psychological distress, and short-form video addiction—are not isolated, but form an interconnected framework reflecting both trait-based vulnerability and situational reactivity.

2. Methodology

2.1 Research Design

The study uses a quantitative research design with a cross-sectional design and aims to identify relationships between short-form video problematic consumption, impulsivity, preference for instant gratification and psychological discomfort (depression, anxiety, stress). The data was collected using an online questionnaire containing standardized psychological scales and additional demographic data. A questionnaire-based approach was chosen due to the ethical and practical limitations of the research: it is non-invasive, allows for respondent anonymity, and enables efficient data collection within a student population. In line with the aim of the study—to explore relationships between the main variables (impulsivity, problematic use of short-form videos, and psychological distress)—we employed standardized psychological scales suitable for statistical correlation analysis at the group level. The results are therefore not intended to identify individuals at risk but to test the validity of theoretical associations. To the extent possible, internal triangulation was applied through the use of multiple scales and a combination of subjective and objective indicators. Despite these efforts, we acknowledge the absence of behavioral or qualitative components as a relevant methodological limitation, which we recommend addressing in future research.

The research was a correlational study without experimental intervention. As an exploratory element, the differences between users of different social media (TikTok, Instagram, YouTube) were also analyzed. Given the aim and nature of the study, univariate and bivariate descriptive statistics, the Wilcoxon test for paired samples and correlation analyses were used.

2.2 Sampling Procedure

The sample was obtained through purposive sampling. The research target group consisted of students from the Faculty of Mass Media Communication at University of Ss. Cyril and Methodius in Trnava, Slovakia, focusing on their active participation in social media – either as consumers, content creators or respondents with a high frequency of using short-form videos.

The age range of participants was centered on the 18–25 age group, with the vast majority being 19–23 years old. The selection of this particular group was based on the assumption that this is the population group with the highest frequency of intensive use of short-form videos, and which is at the same time a potentially vulnerable group in terms of the impact of digital behavior on mental well-being (e.g. Nazari et al., 2023; Shannon et al., 2024). The respondents are students enrolled in the study programs of Mass Media Communication and Marketing Communication, in their 1st to 5th year of full-time university study. Given the focus of their academic training, active presence on social media is essential, as most media and marketing production in the European context—particularly in Slovakia—is primarily oriented toward digital platforms and social networks. We therefore believe that these students are significantly more prone to developing an unhealthy relationship with social media use, especially with platforms that offer endless, personalized streams of entertaining videos, whose immersive flow can easily capture and retain their attention.

The data collection took place between November 2024 and January 2025 via an anonymous online questionnaire created with Google Forms. The respondents were recruited in person through lecturers during compulsory lectures across all years of full-time study (1st to 5th year) in the study programs of Mass Media Communication and Marketing Communication. Each respondent was approached only once in order to prevent duplicate questionnaire submissions. As the data collection was conducted in phases, each phase was followed by a quality check of the completed questionnaires and a random check to ensure that the respondents understood the questions and interpreted them correctly.

Before the survey began, respondents were informed about the aims of the research, the voluntary nature of participation and anonymity. Consent to data processing was made dependent on confirmation of informed consent on the introductory page of the questionnaire. The research was approved by the faculty management, and ethical approval for the research is included in the attachments to this article. Data collection took place without the intervention of the researcher, which minimized researcher bias and promoted the naturalness of responses. Completing the questionnaire took on average around 12–20 minutes.

In this study, TikTok, Instagram Reels, and YouTube Shorts were chosen solely because they represent the most widely used channels for consuming short-form video content. Our interest lies in the format—short, algorithmically recommended clips—rather than in platform-specific features.

2.4 Research Sample

The research sample consisted of 338 students from the Faculty of Mass Media Communication, of which 26% were from the Department of Marketing Communication and 74% from the Department of Mass Media Communication. The average age of the respondents was 21.23 years (SD = 1.59). The research sample comprised 110 men and 228 women, with 67% of the participants being women. The total number of students in these study programs is 906, meaning that 37.3% of students in these study programs completed the questionnaire.

Respondents answered the question of which platform they use most often to watch short-form videos. The most frequently mentioned platform was Instagram (50.9% of participants), followed by TikTok (42.4%), with the remaining percentage split between YouTube and Facebook. One respondent stated that they did not watch videos at all as they had noticed symptoms of addiction and had made a conscious decision to stop this activity.

Participants provided a subjective estimate of the time they spend on social media each day, as well as the actual time recorded by their mobile device data. The estimated time averaged 2 hours and 5 minutes (minimum 0:00, maximum 6:30; SD = 1:11), while the actual time recorded averaged 2 hours and 9 minutes (minimum 0:00, maximum 12:00; SD = 1:35). A comparison of these two values with the Wilcoxon test for paired samples showed that the actual time was lower than the subjective estimate in 144 cases, in 148 cases the actual time was higher than the estimated time and in 46 cases the values were identical.

2.5 Measurement

The questionnaire began with questions on basic information – gender and age. This was followed by questions about the preferred platform for watching short-form videos (TikTok, Instagram, Facebook, YouTube, others...). Participants were asked to estimate the amount of time they spend watching short-form videos each day and then to indicate the actual daily average for the last week on their mobile phone.

2.5.1 Short-form Video Addiction Scale (SVA)

The Short-form Video Addiction Scale which was developed by Zhang et al. (2019), is based on behavioral signs of problematic short-form video consumption among university students. The scale reflects selected symptoms of addiction as outlined by the World Health Organization (2004), specifically: functional impairment, neglect of basic needs, social impairment, withdrawal symptoms, loss of control, and relapse (e.g., “I have attempted to spend less time on this short-form video app but have not succeeded.”). The scale consists of six items rated on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree), with the total score calculated as the sum of all item responses. A higher total score

indicates a greater number of self-reported symptoms related to short-form video addiction. The authors of the original version report good reliability and validity in the group of Chinese university students (Cronbach's alpha = 0.899; Liu et al., 2021). In our Slovak student sample, the internal consistency of the scale was Cronbach's alpha = 0.772.

2.5.2 Instant Gratification Measure

The tendency towards instant gratification was operationalized with the delay-discounting paradigm, which captures the preference between a smaller immediate reward and a larger delayed reward. We measured this concept using four dichotomous items inspired by research in the field of time discounting (Bačová & Šrol, 2021). For each item, participants chose between option "A" (immediate reward) and option "B" (delayed reward). An example is: A: You will receive €10 today. B: You will receive €20 in one week. The answers were coded as follows: Choice of option A (immediate reward) as 1, choice of option B (delayed reward) as 0.

Psychometric analysis using a dichotomous IRT model showed that the items covered different levels of tendency towards immediate reward, with the infit and outfit indicators being within an acceptable range (0.75–1.1) in all cases. Although the reliability of the shortened scale naturally has a lower internal consistency (Person Reliability = 0.413), we consider it acceptable given the exploratory nature of the research and the deliberately concise form of measurement. While maintaining conceptual validity, it can provide sufficiently informative data, with the items used being based on established experimental delay-discounting paradigms (e.g. Kirby et al., 1999), which support their content validity. For this reason, we created a composite score that was used in correlation analyses as an indicator of the tendency for immediate gratification. The final score was the sum of the choices for Option A. A higher score therefore indicates a higher degree of discounting of future rewards, i.e. a lower ability to defer reward, which is a behavioral manifestation of instant gratification.

2.5.3 New Consumer Impulsiveness Scale (NCIS)

Impulsivity in consumer behavior was measured using the New Consumer Impulsiveness Scale (Sharma et al., 2011). This is a self-assessment scale that measures impulsive buying tendencies, susceptibility to instant gratification and a lack of self-control in decision-making. Respondents indicated their agreement with the individual statements on a 5-point Likert scale (1 - strongly disagree, 5 - strongly agree). The scale consists of three subscales: prudence – the tendency to think before acting and resist impulsive decisions (e.g. „I plan everything in advance.“)**;** self-indulgence – the tendency to seek pleasure and immediate gratification (e.g. „ I like to indulge myself.“); self-control – the ability to regulate impulses and control the urge to buy (e.g. „ I find it difficult to concentrate “). The self-control dimension is reverse-scored when analyzed independently but retained in its original direction when aggregated into the overall impulsivity score (CIS) to ensure consistent interpretation of higher impulsivity levels. The authors report a high internal consistency of the scale (Cronbach's alpha in the range of 0.75–0.89) and a three-factor structure validated by confirmatory factor analysis in different cultural settings. In our study, the internal consistency coefficients ranged from 0.712 to 0.895 across individual subscales, with the total scale reaching an overall Cronbach's alpha of 0.88, indicating strong reliability within our sample.

2.5.4 Depression, Anxiety and Stress Scale – 21 (DASS-21)

Mental distress was assessed in the study using a shortened version of the DASS-21 scale (Lovibond & Lovibond, 1995), which was adapted for the Slovak environment by Hajdúk and Boleková (2015). This scale measures three dimensions of negative emotional experience: depression (feelings of sadness, hopelessness and low motivation), anxiety (physical symptoms of fear and panic) and stress (tension, irritability and difficulties in coping with stress). The questionnaire contains 21 items — seven for each dimension — and respondents rate them on a 4-point Likert scale (0 — does not apply to me at all, 3 — applies to me completely). The DASS-21 has a high internal consistency (depression = 0.88, anxiety = 0.82, stress = 0.90) and a confirmed three-factor structure. In our study, the overall reliability of the scale was Cronbach's alpha = 0.937.

3. Results

3.1 Univariate Description

When analyzing problematic short-form video consumption (SVA), respondents reached on average about 45% of the maximum score, indicating a mild to moderate level of problematic use. The instrument is a screening tool and does not provide a clinical diagnosis; "addiction" here refers to behavioral patterns of excessive and potentially harmful use.

Instant gratification (IG) reached about 36% of its maximum, suggesting a relatively low tendency to prefer immediate rewards in this context. In contrast, impulsive behavior (CIS) averaged 65% of its maximum, indicating a medium level of impulsivity. Within this construct, scores were highest for self-indulgence (72%) and prudence (67%), while self-control was lower (55%), which together suggests stronger inclinations toward pleasure-seeking and weaker impulse regulation.

Emotional distress (DASS) averaged 39% of the maximum, reflecting mild to moderate levels of depression, anxiety, and stress overall. Subdimensions of DASS confirmed that all three negative states were present at comparable levels, again pointing to a moderate but widespread psychological burden in the sample.

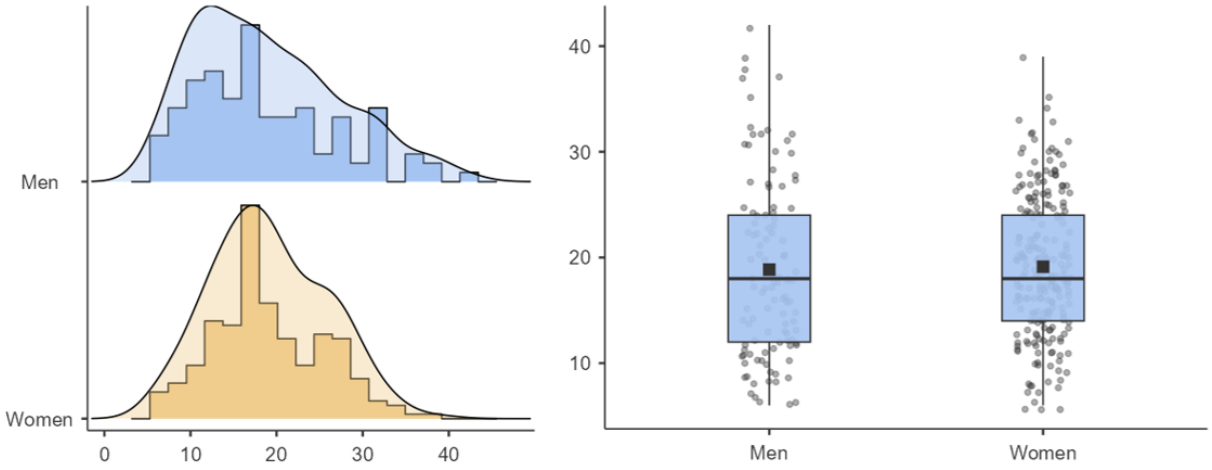
Table 1. Descriptive characteristics of the variables

	Mean	Median	Mode	SD	Min.	Max
Short-form video addiction	19.0	18.0	18.0	7.23	6	42
Instant gratification	1.46	1.00	0.00	1.30	0	4
Consumer impulsivity	49.1	49.0	48.0	8.62	19	76
CIS – Prudence	18.7	19.0	17.0	3.99	6	28
CIS– Self-indulgence	20.2	21.0	20.0	5.20	5	28
CIS – Self-control	15.5	15.0	14.0	4.79	4	28
DASS	47.1	44.0	18.0	28.5	0	120
Depression	15.6	15.0	19.0	9.22	0	41
Anxiety	17.0	16.0	10.0	10.1	0	41
Stress	14.5	13.0	10.0	9.97	0	39

Note. CIS – Consumer impulsivity; DASS – depression, anxiety stress

3.2 Bivariate Description

An analysis of the differences between men and women in short-form video addiction score (SVA) showed that women have higher average scores for short-form video problematic consumption when compared to men. The average score for women was 19.1, while for men it was 18.9. This difference is negligible and proved to be statistically insignificant in the inferential statistics.



Regarding the differences between the users of the various platforms (TikTok, Instagram, YouTube), it was found that there were no statistically significant differences in the average values between the groups in terms of short-form video addiction (SVA). Data for Facebook users was not included in the comparison due to the small number of respondents (N=3). However, Levene's test was significant, meaning that the homogeneity of variances was not confirmed – different platforms have a different spread in the intensity of short-form video problematic consumption. TikTok had a narrower distribution of values (lower variance) with a slightly higher average, which could indicate a compact group of more risk-taking users. Instagram and YouTube had a wider spread, which could indicate greater diversity in the intensity of use.

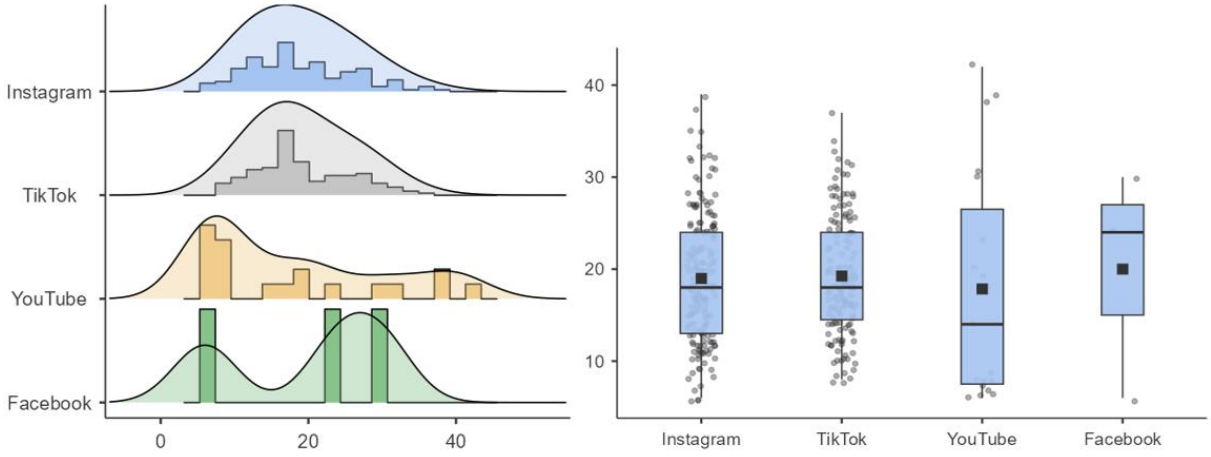


Figure 2. Histograms and Boxplots of Short-form video addiction by platform usage

With regard to the variables impulsivity, depression, anxiety, stress (DASS) and preference for immediate reward, neither the descriptive analysis nor the inferential statistics show significant differences between the platforms. Levene's test was not significant in these cases, which means that the homogeneity of variances was confirmed – the variance of these variables was relatively the same on all platforms. The variability of these psychological characteristics is therefore similar regardless of the preferred platform. Even though there are slight differences in the mean values, the overall range and variability remain stable.

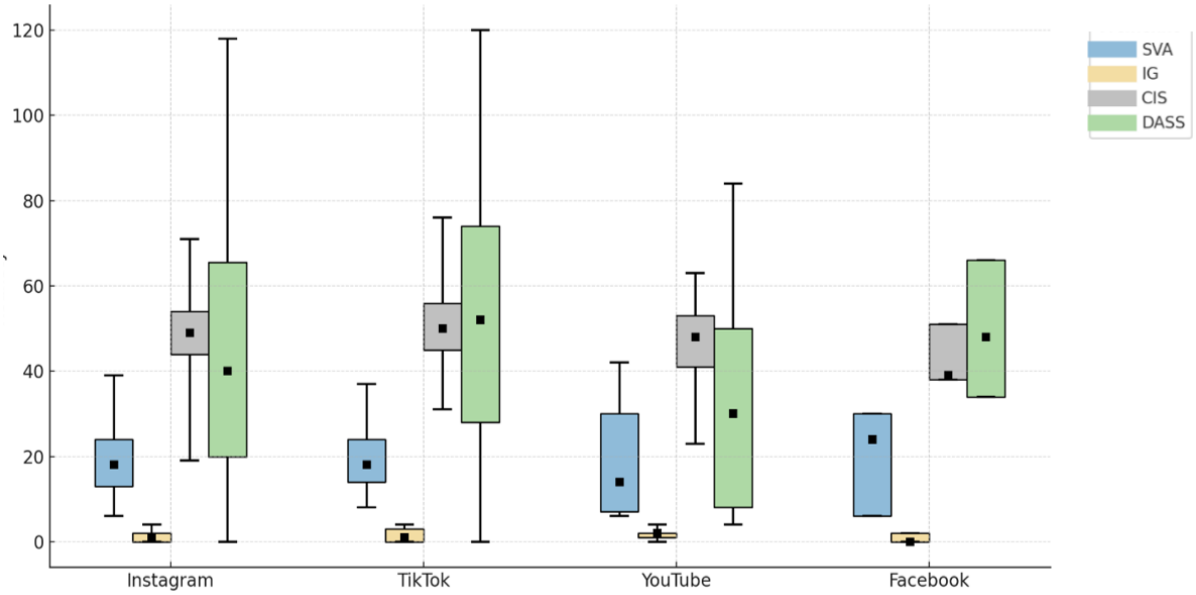


Figure 3. Boxplots of Short-form video addiction (SVA) in comparison with level of Instant gratification (IG) , Impulsivity (CIS) and Depression, anxiety, stress (DASS) by platform usage

3.3 Correlation Analyses

Due to the violation of the assumption of normality of the data distribution (Shapiro-Wilk $p < .001$), Spearman's correlation coefficient was used for all correlation analyses. Based on the results, we found several statistically significant relationships between short-form video addiction (SVA) and psychological variables.

The analysis did not confirm H1, as the correlation between SVA and instant gratification (IG) was very weak and non-significant ($r = 0.051$). By contrast, H2 and H3 were supported: SVA was significantly associated with impulsivity, particularly with lower self-control ($r = 0.341$; $p < .001$), and weakly with the overall CIS score ($r = 0.154$; $p < .01$). In line with H4, SVA also correlated positively with negative emotional states measured by DASS, namely depression ($r = 0.317$), anxiety ($r = 0.306$), and stress ($r = 0.281$; all $p < .001$).

Additional analyses indicated that IG showed no meaningful associations with impulsivity dimensions (prudence $r = -0.045$, self-indulgence $r = -0.084$, self-control $r = 0.063$), and only a weak correlation with the total CIS score ($r =$

0.118). Impulsivity itself was positively related to psychological distress (depression r = 0.210; anxiety r = 0.190; stress r = 0.221), suggesting that higher impulsivity is generally linked to greater vulnerability to negative affect.

Table 2. Correlation matrix of observed variables

	SVA	IGS	CIS	DASS
Instant gratification	0.051	-	-	-
Consumer impulsivity	0.154**	0.118*	-	-
CIS – Prudence	0.011	-0.045	-	0.096
CIS– Self-indulgence	-0.050	0.084	-	0.034
CIS – Self-control	0.341***	0.063	-	0.393***
DASS	0.308***	0.092	0.209***	-
Depression	0.317***	0.086	0.210***	-
Anxiety	0.306***	0.096	0.190***	-
Stress	0.281***	0.087	0.221***	-

Note. * - Sig.<0,05; *** - Sig.<0,001; SVA – Short-form video addiction score; IGS – instant gratification; CIS – Consumer impulsivity; DASS – depression, anxiety, stress

4. Discussion

The research results suggest that short-form videos (SVA) is at a slightly higher level among media and communication students. The average SVA score in our sample was 19 points (out of a maximum of 42), with respondents showing mild to moderate signs of problematic short-form video use. This score indicates a relatively frequent but potentially risky consumption of these formats among young people with high digital engagement.

Interestingly, respondents had a fairly accurate idea of their own social media usage time. A comparison between their subjective estimates and their objectively recorded time, using the Wilcoxon paired test, revealed no statistically significant difference, meaning that participants were aware of their digital habits to some extent. This is confirmed by the qualitative responses of some participants who perceived their digital consumption as problematic and described attempts to regulate it (e.g. consciously limiting video consumption or totally "switching off the app"). Short-form video addiction is therefore not just about unconscious, automatic behavior, but also about a process that young people are aware of to varying degrees and which they sometimes actively try to regulate.

One of the additional aims of the research was to investigate gender differences in the level of problematic consumption to short-form videos (SVA), based on the assumption that females may score higher than males (Park et al., 2023). This assumption is in line with previous studies indicating gender differences in social media use, content preferences, and coping with psychological stress (Hu et al., 2021). From a psychological perspective, it is plausible that women use digital entertainment more frequently as a means of emotion regulation or social exploration, which could lead to their watching short-form videos more often. Descriptive analyses showed that although the women in the sample had slightly higher average SVA scores (M = 19.0; SD = 7.23), the difference was not statistically significant compared to the men. This suggests that gender differences in terms of dependency are minimal, and that gender is unlikely to be a significant predictor of SVA in this group of media and communication students. These findings support the idea that a short-form video problematic consumption or addiction are a cross-gender phenomenon, possibly due to the universal appeal of short-form video formats and their ability to trigger instant gratification mechanisms that are not strictly gender specific. As the sample was made up of media and communication students who are more likely to be exposed to digital content — the gender difference in SVA may be even less pronounced than in the general population. Other psychological factors, such as impulsivity or the need for instant gratification, could play a more important role in the development of SVA than gender.

An important finding of the study is the significant correlation between SVA and psychological predispositions, particularly impulsivity and emotional stress. The strongest positive correlation was observed between SVA and low self-control (r = 0.341), supporting the hypothesis that impulsivity is an important predictor of addictive digital behavior (Sharma et al., 2011). This relationship can be interpreted through the lens of a lack of behavioral inhibition that reduces the ability to resist immediate stimuli. Short-form videos, as a form of quick entertainment with strong reward effects, create an ideal environment for the development of impulsive, compulsive consumption patterns. This connection suggests that individuals with higher impulsivity are more prone to fall into a cycle of excessive consumption where they seek quick and intense rewards. As short-form videos are designed to maximize dopamine reinforcement through brief, entertaining or shocking stimuli, this impulsive response may be even more pronounced.

In addition, moderately positive correlations were found between SVA and negative emotional states — depression (r = 0.317), anxiety (r = 0.306) and stress (r = 0.281) — consistent with the findings of other studies (e.g. Francisquini et al., 2024). These results support the concept of maladaptive coping strategies in which digital media — including short-form videos — are used as a means of temporary emotion regulation. However, short-term escape from negative effects may contribute to long-term escalation of psychological discomfort and create a closed loop of digital dysregulation (Lin et al., 2016; Shannon et al., 2022). This hypothesis is supported by the high average DASS scale scores in the sample (mean 47.1 out of 120), which indicate a noticeable level of psychological distress.

An interesting aspect is the assessment of the tendency to instant gratification (IG), which correlated only very weakly with the SVA (r = 0.051). This could be due to methodological limitations, such as the use of a truncated scale that focuses primarily on hypothetical financial decisions and may not accurately reflect digital behavior. Nonetheless, IG is considered a robust construct in behavioral addiction research as short-form video algorithms, particularly on platforms such as TikTok, are optimized to deliver immediate, personalized reward that directly stimulates instant gratification systems (Castrellon et al., 2024). The study also revealed a correlation between impulsivity and consumer behavior. The correlation between general impulsivity (CIS) and SVA (r = 0.154) indicates a possible overlap between digital habits and consumer behavior. TikTok is one of the most influential platforms influencing impulsive purchasing decisions (Adobe Express, 2024), not only through advertising content, but also through integrated shopping functions and live streams with teleshopping elements (Biswas et al., 2024). This suggests that addictive behavior can extend beyond time spent on the platform and influence young users' financial and consumption decisions.

Given the observed associations between impulsivity, emotional distress and SVA, a hypothesized mediation model could be proposed in which DASS acts as a mediating variable between impulsivity and addictive behavior. In other words, individuals with higher impulsivity may be more prone to experiencing emotional discomfort, which they then attempt to regulate through excessive consumption of short-form videos. Such a model could better explain the dynamics behind the development of digital addiction in vulnerable individuals. Although this relationship has not been tested directly, it remains an important hypothesis for future research, which can potentially be explored through mediation analysis or structural modeling.

Although comparing different platforms was not the primary aim of this study, the results suggest interesting differences that highlight the specific nature of each platform. While TikTok, Instagram Reels, YouTube Shorts and Facebook Videos all rely on short-form video formats, they differ in the way they integrate this feature and in their actual purpose. TikTok is inherently designed exclusively for the consumption of short-form videos, while other platforms offer this format as a complementary feature within a broader range of functionalities (social interaction, text communication, visual sharing).

These differences are also reflected in the data. Although no statistically significant differences were found in the average dependency level (SVA) between platform users, the analysis of variance revealed significant heterogeneity (Levene test: $p < .001$). This variability suggests that the type of dependency could differ not only quantitatively (intensity), but also qualitatively — e.g. in terms of stability, form or psychological profiles of users. The most compact distribution of high SVA values was found among TikTok users. This homogeneous pattern with lower variance and higher mean values could indicate that TikTok systematically attracts and retains a certain type of user, namely those who are more likely to develop addictive behavior (Caponnetto et al., 2025). Similarly, Instagram Reels showed a more stable distribution of higher scores, possibly due to its visually orientated content and "endless scrolling" mechanism. In contrast, YouTube and Facebook showed a wider range, which could be due to different usage by different demographic groups or a lower degree of algorithmic personalization.

From a psychological perspective, TikTok tends to be purely consumption-oriented, and its algorithm is optimized for maximum attention retention (Liang, 2022). This structural feature may contribute not only to higher SVA scores, but also to increased impulsivity and depression — a pattern evident in our sample of TikTok users. In contrast, Instagram offers broader opportunities for social interaction beyond content sharing, potentially leading to a different emotional experience (e.g., a greater emphasis on self-expression and social comparison). Personal predispositions such as impulsivity, the tendency for instant gratification and emotional distress (DASS) appeared to be evenly distributed across users of the different platforms. This suggests that these are overarching traits that are related to personality rather than specific platform effects. Consequently, preventive measures should focus primarily on these psychological predispositions and not only on the technological environment. Despite the lack of significant differences in mean scores, the observed variability in dispersion is potentially important research finding. This qualitative heterogeneity could be due to the presence of different user types. Future studies could use methods such as latent profile analysis or cluster analysis to distinguish groups based on behavioral patterns and psychological characteristics.

Finally, while this study did not directly measure neurobiological correlates of problematic usage, several of the

psychological variables used — including impulsivity and the tendency for instant gratification — may serve as proxies for the functioning of the reward system, which is primarily related to dopaminergic activity (Volkow et al., 2011). Problematic social media usage, as represented by SVA, also involves the repetitive pursuit of rapid, high-intensity reward that reinforces compulsive behavior.

The existing literature shows that TikTok, as characterized by its highly personalized algorithm and intense sensory stimulation, maximizes dopamine responses through the principles of surprise, novelty and immediate reward (Su et al., 2021; Quin et al., 2022; Caponnetto et al., 2025). This "dopaminergic design" may explain not only the higher problematic consumption level among users, but also correlated indicators such as impulsivity and depression, which occurred more frequently among TikTok users in our sample. In this context, SVA can be understood as a form of behavioral addiction involving the dopaminergic system — not as a chemical disorder, but as a pattern of behaviors and tendencies reflecting increased reward sensitivity, low tolerance for delay, and emotional dysregulation (Wadsley & Ihssen, 2023). This interpretation is particularly relevant considering that the project focuses on the dopamine mechanisms associated with digital consumption. Although dopamine activity was only operationalized indirectly, the choice of variables allows for a discussion of the neurobiological aspects of addiction within a behavioral framework.

The results of the research presented confirm that the consumption of short-form videos on social media is a significant phenomenon with potentially problematic consequences for young people's mental health and behavior. The moderate to mild levels of dependency observed among students indicate that this is not a marginal problem. Significant correlations with psychological traits — such as impulsivity, propensity for instant gratification and psychological distress — point to a complex system of interactions between personality predispositions and digital behaviors. These findings emphasize the need for further research and preventative measures that not only target the platforms themselves but also focus on the psychological vulnerability of young users.

4.1 Implication of the Study

The findings of this study carry several important implications for both academic research and applied practice in the context of digital media use and behavioral addictions.

From a theoretical perspective, the results reinforce existing models linking impulsivity and difficulties in emotion regulation to the development of digital addictive behaviors. The observed associations between short-form video addiction (SVA), low self-control, and psychological distress (depression, anxiety, stress) confirm earlier findings highlighting media use as a potential maladaptive coping mechanism. Additionally, the weak association between SVA and instant gratification, despite its theoretical relevance, points to the need for refining the measurement tools used to capture decision-making processes in digital contexts.

The study also contributes to the understanding of platform-specific psychological profiles, suggesting that personalization algorithms—particularly those employed by TikTok—may heighten psychological vulnerability among users with elevated impulsivity or emotional dysregulation. These insights support a more nuanced conceptualization of digital dependence, one that considers not only content and time spent but also the psychological architecture of the user and the technological affordances of the platform.

For educators and mental health professionals, the results emphasize the importance of promoting digital well-being and media literacy, especially among young adults in media and communication programs. Many students may be unaware of the emotional and cognitive drivers behind their media habits. Educational interventions focusing on emotional self-awareness, screen-time regulation, and critical understanding of media algorithms could serve as effective preventive strategies. Empirical evidence further suggests that media literacy, particularly algorithmic awareness, functions as a protective factor against excessive or maladaptive media use. Individuals with higher awareness of how platforms manipulate content delivery appear less vulnerable to problematic engagement. A similar approach was highlighted by Fabio and Iaconis (2024), who, in a sample of university students, demonstrated a correlation between social network addiction and the level of critical thinking. Additionally, emerging research highlights the preventive potential of physical activity as a buffer against the negative psychological consequences of excessive digital use.

Given these findings, academic institutions—especially those involved in media education—may consider integrating topics on media self-regulation, digital resilience, and algorithmic literacy into their curricula. These efforts could be supported by tailored educational tools or workshops designed to help students critically reflect on their usage patterns, identify emotional triggers, and adopt healthier digital habits.

4.2 Limitations and Suggestions for Future Research

While this study provides meaningful insights into the psychological correlates of short-form video problematic consumption among university students, several limitations must be acknowledged. First, the sample consisted exclusively of Slovak students studying media and communication. This homogeneity in demographic and disciplinary

background limits the generalizability of the findings to other populations, particularly across different age groups, academic fields, and cultural contexts. Future studies should consider more diverse and representative samples to test the broader applicability of these results.

Second, the cross-sectional design of the study restricts the ability to infer causality. Although strong associations were found between impulsivity, psychological distress, and short-form video problematic consumption, the direction of these relationships remains uncertain. It is unclear whether impulsivity leads to excessive media use, or whether such use exacerbates impulsive tendencies and emotional instability. Longitudinal research designs would provide more clarity on the temporal and potentially reciprocal nature of these relationships.

Third, the study relied entirely on self-reported data, including a brief version of the delay discounting task to assess instant gratification. While efficient for data collection, such methods are prone to bias and may not adequately capture the behavioral dimensions of impulsivity or reward sensitivity. Future research would benefit from incorporating more robust psychometric instruments or behavioral tasks that can provide more objective assessments of these constructs.

Moreover, the study did not account for potentially influential contextual factors such as socioeconomic status, academic pressure, access to technology, or social support networks. These variables may significantly influence both media use patterns and psychological vulnerability and should be incorporated into future studies to provide a more comprehensive explanatory model.

Finally, the results suggest several promising directions for future research. It would be particularly valuable to investigate the potential mediating role of psychological distress in the relationship between impulsivity and SVA. Further exploration of platform-specific features, such as interface design or content recommendation algorithms, may reveal how certain environments reinforce compulsive media consumption. Additionally, the moderating role of digital resilience, media literacy, and algorithmic awareness deserves greater attention. These psychological and cognitive resources may serve as buffers against the negative effects of algorithmically driven media ecosystems. Qualitative and mixed-methods approaches could further enrich our understanding by capturing the subjective motivations, narratives, and experiences behind users' engagement with short-form video platforms.

5. Conclusions

This study investigated the associations between short-form video addiction (SVA), psychological traits (impulsivity and tendency toward instant gratification), and indicators of psychological distress (depression, anxiety, stress) among Slovak university students in the field of media and communication. The findings demonstrated that SVA is moderately prevalent among students, with significant correlations to lower self-control, emotional impulsivity, and higher levels of psychological distress. These results support the hypothesis that problematic consumption of short-form video content may serve as a maladaptive coping strategy.

Moreover, while no significant differences were found in problematic consumption levels between platforms, the homogeneity of TikTok users in risk profiles suggests platform-specific effects deserve further exploration. The results highlight the relevance of impulsivity – particularly in its self-control dimension – as a critical psychological trait underlying digital addictive behavior.

Although the respondents in our sample were university students specializing in media and marketing—a field where above-average media literacy (Balčytienė, 2025) and daily exposure to digital content can be assumed—the results showed that problematic or excessive consumption of short-form video was present to a moderate degree. These findings indicate that professional engagement with digital environments does not necessarily act as a protective factor against the risks of problematic use. Even among media and communication students, who are expected to navigate digital platforms with increased awareness, significant associations were found between short-form video addiction, lower self-control, increased impulsivity, and psychological distress.

However, these results should be interpreted in light of several limitations—including the self-reported nature of the data, the sample's disciplinary homogeneity, and the correlational study design—which limit both the generalizability and causal inference of the findings. Future research should seek to involve broader and more varied samples, integrate objective behavioral measures, and employ longitudinal or experimental designs to establish causality and refine our understanding of these relationships. Despite these constraints, the present work provides early evidence that even media-trained young people are not immune to the psychological risks of short-form video consumption. These findings advocate for the integration of digital wellbeing education—including self-regulation and critical awareness of platform design—into university curricula and support the need for targeted mental health services addressing digital habits in student populations.

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Authors contributions

Dr. Novanská Škripcová prepared the initial draft of the manuscript. Dr. Novanská Škripcová and Dr. Viteková jointly developed the study design and methodology. Dr. Novanská Škripcová was responsible for data collection and elaborated the theoretical framework. Dr. Viteková performed the analysis of results and prepared the discussion section. Both authors collaboratively formulated the conclusions and were jointly responsible for thorough revision and editing of the manuscript. Both authors have read and approved the final version of the manuscript. Dr. Novanská Škripcová and Dr. Viteková contributed equally to this study.

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Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Obtained.

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The Publication Ethics Committee of the Redfame Publishing.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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No additional data are available.

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