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Comparison of the Prevalence of addiction internet in Brazilian University Students: Online cognition scale versus internet addiction test

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Received Date: Oct 14, 2019 / Accepted Date: Nov 04, 2019 / Published Date: Nov 06, 2019 Abstract

Introduction: Some internet users lose the ability to control the duration and / or frequency of their use, leading to the phenomenon of internet addiction. In Brazil, there is no data about the prevalence of this phenomenon.

Aim: To estimate and compare the prevalence of Internet addiction among university students in the health area.

Method: A comparison of the prevalence was evaluated among undergraduate students from the health area of the University of Pernambuco, Brazil. Three instruments were applied: the Portuguese (Brazil) versions of the Internet Addiction Test, the Online Cognition Scale and a questionnaire characterizing socio-demographic and habits of use from Internet. The data were submitted to bivariate statistical tests, test of association for categorical variables and analysis of linear growth trend.

Results: At the end of the study, 359 students participated in the study, 75.5% women with a mean age of 19.49 years (± 2.33 years). According to Internet Addiction Test, 44.28% of the sample had Internet Addiction, with a higher prevalence in males (51.1%). Concerning Online Cognition Scale, the prevalence of the disorder was 62.9%, higher in females (65.7%). This prevalence rates obtained were higher when compared to previous studies, which may be related to the variety of instruments.

Conclusion: The prevalence of Internet Addiction in the sample studied varied according to the instrument used. There was also a significant linear trend between the weekly connection time and the severity of the addiction to the internet.

Keywords: Internet; Addictive Behavior; Prevalence; Cross-Sectional Studies



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Introduction

Since the 1990s, the phenomenon of Internet Addiction (IA) is discussed and described in the world scientific literature [1]. It can be characterized by an inability to control the duration and/or frequency of Internet use. Such a disability leads to excessive use of the Internet or its functionalities, thus causing negative consequences, such as: decreased income at work and academic activities; debts; marital and interpersonal relationships problems; among others [2]. The prevalence of IA varies between 0.3% and 37.9% in the general population, being more prevalent among men [1]. This variation in the prevalence rate can be explained by the variety of instruments used to identify this phenomenon, since it is estimated that there are more than 48 instruments of measures for the disorder [3].

To illustrate this variation, a study was proposed to estimate the prevalence of the disorder in six Asian countries (China, Hong Kong, Japan, South Korea, Malaysia and Philippines) through the application of two instruments (the Internet Addiction Test - IAT - and the Chinese Internet Addiction Scale -CIAS) in a sample of 5,366 adolescents between 12-18 years of age. There was a disparity between prevalences depending on the instrument. It is important to note that, considering CIAS, the prevalence of IA was six times higher in Malaysian adolescents than when assessed by IAT (2.40% vs. 14.10%) [4].

The IAT is the most validated and the most used instrument, being, however, also the most criticized [5]. The criticism refers to the lack of rigorous and systematic psychometric research [6], lack of a solidly constructed theoretical perspective [7] and the problem of construct validity suggested by variation of the factorial structure of the instrument between one and six factors [3,8,9]. On the other hand, there is also another instrument used to identify individuals with IA, the Online Cognition Scale (OCS) [10]. It presents strong evidence of construct validity, has a solid theoretical foundation and is an instrument that has the most studied psychometric qualities [11]. This scale is derived from the cognitive behavioral model - a model whose argument is that maladaptive cognitions (misrepresentations) about internet use are a proximal and sufficient cause for the onset and maintenance of the IA - [12].

In order to assess the IA, university students are often studied, since they are one of the most vulnerable groups to develop the phenomenon [2]. Among these, a subgroup has received attention: the health area ones. In this subgroup, the prevalence of IA varies between 16.8% and 58.87% [2,13-15]. In addition, it is valid to state that IA has correlated with poor academic performance, insomnia, low self-esteem, and symptoms of anxiety and depression [2,14]. Nath et al. (2016) studied AI in 188 Indian medical students and found that the presence of this disorder leads to a worse academic performance when compared to students in whom it is absent. In view of these findings, it is recommended that this addiction should be extensively understood in this group, requiring a careful psychiatric evaluation, with solid psychometric instruments and with strong theoretical assumptions.



In Brazil, country that has the fifth largest number of Internet users in the world - behind only the United States, Japan, India and China [17] - and who is the world leader in the number of hours spent in domestic connection, we also see conditions to increase the number of users, which represents a fertile ground for these problems with addiction to the Internet and its functionalities. However, even with this worrisome scenario for IA, there is no data about the prevalence of the disorder in Brazil. Thus, the objective of this study was to estimate and compare the prevalence of IA in a sample of Brazilian university students in the health area through the Portuguese versions (Brazil) of the Online Cognition Scale (OCS-BR) and of the Internet Addiction Test (IAT-BR).

Materials and Methods

This is а cross-sectional, descriptive, observational study with a quantitative approach. The population of this study was composed of undergraduate students from the health area regularly enrolled in the Institute of Biological Sciences of the University of Pernambuco (ICB/UPE), located in the city of Recife, Pernambuco, Brazil. The sample was composed by students of Nursing, Medicine, Dentistry, Biological Sciences and Physical Education. The sample size was calculated using the statistical software R version 3.4.3, using the following parameters: internet addiction prevalence of 36.9% [2], Confidence Interval of 95% (CI95%), absolute precision of 5% and level of significance of 5%. The minimum sample size, plus 20% to correct possible losses, was 354 individuals. The sampling process was for convenience and was among the 885 students regularly enrolled in the ICB/UPE, with 382 students participating in the study. Twenty-three participants were excluded from the sample due to inadequate completion of the data collection instruments. Three data collection instruments were applied to the sample: the IAT-BR, the OCS-BR and a questionnaire of socio-demographic characteristics habits of Internet use.

The OCS was developed, originally in English, by Davis; Flett; Besser [10] with the aim of measuring IA. The instrument consists of 36 items grouped into four dimensions: loneliness/ decreased depression, impulse control. distraction and social comfort. This instrument is self-administered, answered on a like-Likert scale, varying the possible responses from 1 (totally disagree) to 7 (totally agree). The cutoff point of this scale to be considered internet addicted is ≥ 78 for females and ≥ 92 for males. The instrument was initially validated in a sample of Canadian university students, presenting Cronbach's alpha satisfactory for the instrument as a whole ($\alpha = 0.94$) and for each of the dimensions: social comfort ($\alpha = 0.87$), solitude / depression ($\alpha = 0.77$), decreased impulse control ($\alpha = 0.84$) and distraction ($\alpha =$ 0.81) [18]. The OCS was translated into Portuguese by Silva et al. [19], who verified in parallel good semantic equivalence and a good degree of comprehensibility by the target population and validated for the Brazilian population by same authors [20].

The IAT, in turn, was developed by the North American psychologist Kimberly Young, and later, had its psychometric properties studied by Widyanto and McMurran [21]. It consists of a self-administered instrument with 20 questions answered on a Likert scale ranging from 0 (never) to 5 (always), with scores ranging from zero to 100 points, with a cut-off point of \geq 31 to be considered addicted to the internet. It was translated into Portuguese (Brazil) by Conti et al. [22] in a study that showed good indicators of semantic equivalence, verbal comprehension and Cronbach's alpha of 0.83. Finally, a selfadministered questionnaire on the sociodemographic characterization and habits of internet use elaborated by the authors of the study, composed of multiple choice questions, was applied to questions such as age, sex, race/skin color, marital status, schoolarity, income monthly access, internet access, source and place of access, purpose of internet use, weekly connection time to the internet, most frequently used features, time spent connected



to these features and reasons that lead the individual to use these.

The instruments were applied during the class period, collectively. Firstly, the researchers obtained the consent of the professors for application, then explained to the students the purpose of the work and the filling of the collection instruments. After the explanations, the questionnaires were distributed to those who consented to participate. The average filling time was 15 minutes.

Statistical analysis was performed using statistical software Statistical Package for the Social Sciences (SPSS) version 21.0. The descriptive analysis of the categorical data was performed through absolute and relative frequency and numerical data by mean, median and standard deviation (SD). Before the bivariate statistical tests were carried out, the assumptions of normality and homoscedasticity were checked by the Kolmogorov-Smirnov and Levene tests, respectively. It is assumed that, the data present adherence to normality and homogeneity of the variance when p > 0.05. After analyzing the assumptions, t-Student, ANOVA, Kruskal-Wallis, and Mann-Whitney tests were performed. For all statistically significant bivariate hypothesis tests, the respective effect sizes (r) were calculated. According to Cohen [23,24], effect sizes can be small, medium or large: r≤0.10 (small effect), r > 0.30 < 0.50 (moderate effect) and > 0.50(effect great). The chi-square test (γ^2) was also used to test association between categorical variables. The analysis of the linear tendency verified the hypothesis that the more hours the individual remains connected to the internet the higher the score obtained in the OCS and the IAT was tested by a ANOVA with polynomial contrasts. The level of statistical significance for all tests was set at 5% (p < 0.05).

Ethical aspects

This study followed Resolution n. 466/2012 of the Brazilian National Health Council for research on human beings. All participants signed an Informed Consent Term (ICT). The present study was approved by the Ethics and Research Committee of the Federal University of São Paulo (UNIFESP), under CAAE n. 10900712.0.0000.5505 and Opinion n. 173.337/12.

Results

In the end, 359 individuals remained, of which 271 (75.5%) were women, with a mean age of 19.49 years (SD = 2.33 years). It was observed that 100% of the sample had Internet access, 138 (38.4%) reported spending between 10 and 20 hours a week connected to the Internet, 221 (61.6%) said surfing the internet to pass the time, 23 (6.4%) spend more than 40 hours a week connected to social networks (Table 1).

| Table 1: Frequency of the sociodemographic characteristics and habits of internet use. | | | | | |
|---|-----|------|--|--|--|
| Variable | Ν | % | | | |
| Sex | | | | | |
| Female | 88 | 24.5 | | | |
| Male | 271 | 75.5 | | | |
| Turn in which you study | | | | | |
| Day-integral | 356 | 99.2 | | | |
| Daytime | 2 | 0.6 | | | |
| Daytime-Evening | 1 | 0.3 | | | |
| Skin color | | | | | |
| White | 167 | 46.5 | | | |
| Black | 22 | 6.1 | | | |
| Brown/Mulatto | 163 | 45.4 | | | |



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| Yellow | 4 | 1.1 |
|---|-----|------|
| Indigenous | 3 | 0.8 |
| Marital Status | | |
| Single | 343 | 95.5 |
| Married | 5 | 1.4 |
| Widower | 3 | 0.8 |
| Divorced | 1 | 0.3 |
| Stable union | 7 | 1.9 |
| Schooling | | |
| Incomplete high school | 1 | 0.3 |
| Complete high school | 4 | 1.1 |
| Incomplete Higher Education | 350 | 97.5 |
| Full Higher Education | 2 | 0.6 |
| Postgraduate studies | 2 | 0.6 |
| Family income | | 0.0 |
| Up to 3 minimum salaries (SL) | 105 | 29.2 |
| More than 3 and up to 10 SL | 155 | 43.2 |
| More than 10 and up to 20 SL | 53 | 14.8 |
| More than 20 and up to 30 SL | 30 | 8.4 |
| More than 30 SL | 16 | 4 5 |
| Location of Access | 10 | ч.5 |
| House | 345 | 96.1 |
| Iob | 45 | 12.5 |
| Educational institution | 242 | 67.4 |
| Weekly connection time | 242 | 07.4 |
| Up to 10 hours | 114 | 31.8 |
| Potween 10 and 20 hours | 114 | 28.4 |
| Between 10 and 20 hours | 130 | 12.2 |
| More then 40 hours | 20 | 0 |
| Internet use to maintain nonconal relationshing | 29 | 0 |
| Voc | 152 | 126 |
| I es | 135 | 42.0 |
| Not | 200 | 57.4 |
| Voc | 221 | 61.6 |
| I es | 129 | 28.4 |
| | 158 | 38.4 |
| Internet use to find information | 225 | 02.2 |
| Tes Net | 335 | 93.3 |
| | 24 | 0./ |
| Internet use for convenience | 240 | (()) |
| Y es | 240 | 00.9 |
| | 119 | 55.1 |
| Internet use for entertainment | | 70 |
| Yes | 262 | 73 |
| Not | 97 | 27 |



OCS-BR scores ranged from 36 (minimum) to 207 (maximum), with a mean of 94.98 (SD = 32.34) and a median of 91. For the IAT-BR, scores ranged from 0 (minimum) and 68 (maximum), with a mean of 28.89 (SD = \pm 13.74) and a median of 29.

The prevalence of IA in the studied sample, verified by the OCS-BR, was 62.9% (CI95% 52.9-62.9%). In women group, the prevalence was 65.7% (CI95% 1.60-1.72%) and in men group, 54.5% (CI95% 1.43-1.64%). The estimated prevalence of the disorder through the IAT-BR was 44.28% (CI95% 18.9-27.9%), being more prevalent in men (51.1%) (CI95% 0.01-0.11%). There was no significant association between sex and IA, either analyzed by OCS-BR or by IAT-BR, verified by the chi-square test: OCS: χ^2 (1) = 3.53, (p = 0.06); IAT: χ^2 (1) = 2.21, (p = 0.137), respectively.

Table 2 shows the hypothesis tests for OCS-BR and IAT-BR for socio-demographic variables

and habits of Internet use. There was a significant effect of the time the individual remained online weekly and the mean of OCS-BR score, F (4, 354) = 13.271, p <0.001 *, with moderate effect size (r = 0.38). It was also possible to verify a significant linear trend, F (1,354) = 44,872, p < 0.001 *, indicating that the mean of OCS-BR score grows proportionally to the extent that the student remains more connected weekly (Figure 1). Even in the Table 2, considering the IAT-BR, it was also possible to observe that there is a significant effect of the weekly use time of the internet and the average score obtained in IAT-BR, F(4, 354) = 22.490, p < 0.001 *, with moderate effect size (r = 0.47). It was also possible to verify a significant linear trend, F(1,354) = 73,904, p < 0.001 *, indicating that the mean score obtained in the IAT-BR increases proportionally as the student stays connected for more time weekly (Figure 2).



Figure 1: Relationship between weekly internet usage time and Mean of OCS-BR Score.



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| Table 2: Results for OCS-BR and IAT-BR. | | | | | | | | |
|--|-------|--------|-------|--------|-----------------|-------------|--|--|
| | Ν | Mean | SD | Median | CI95% | Р | | |
| Results for OCS | | | | | | | | |
| Sex | | | | | | | | |
| Male | 88 | 97.57 | 35.12 | 95.5 | 90.13 - 105.01 | 0.52* | | |
| Female | 271 | 94.14 | 31.41 | 90 | 90.38 - 97.90 | | | |
| Family Income in Minimum Wages | | | | | | | | |
| Up to 3 | 105 | 91.63 | 29.16 | 88 | 85.98 - 87.27 | 0.658** | | |
| More than 3 up to 10 | 155 | 94.85 | 32.89 | 90 | 89.63 - 100.07 | | | |
| More than 10 to 20 | 53 | 98.45 | 37.23 | 96 | 88.19 - 108.72 | | | |
| More than 20 to 30 | 30 | 99.17 | 28.16 | 98 | 88.65 - 109.68 | | | |
| More than 30 | 16 | 98.88 | 38.04 | 95.5 | 78.60 - 119.15 | | | |
| Weekly internet usage time | | | | | • | - | | |
| Up to 10 hours | 114 | 81.82 | 29.13 | 78.5 | 76.42-87.23 | < 0.001*** | | |
| 11 to 20 hours | 138 | 94.54 | 29.51 | 92.5 | 89.58-99.51 | | | |
| 21 to 30 hours | 44 | 101.02 | 32.33 | 97.5 | 91.19-110.85 | | | |
| 31 to 40 hours | 34 | 112 | 30.14 | 109.5 | 101.54-122.58 | | | |
| More than 40 hours | 29 | 119.59 | 35.6 | 121 | 106.04-133-13 | | | |
| Does internet use interfere with studies and employment? | | | | | | | | |
| Yes | 46 | 116.65 | 34.25 | 111 | 106.48 - 126.83 | < 0.001* | | |
| No | 313 | 91.8 | 30.85 | 88 | 88.36 - 95.23 | | | |
| Results for IAT | | | | | | | | |
| Sex | | | | | | | | |
| Male | 88 | 29.93 | 14.21 | 31.5 | 2.92 - 32.94 | 0.41**** | | |
| Female | 271 | 28.56 | 13.59 | 28 | 26.93 - 30.18 | | | |
| Family Income in Minimum | Wages | | | | • | | | |
| Up to 3 | 105 | 28.24 | 13.6 | 28 | 25.61 - 30.87 | 0.97*** | | |
| More than 3 up to 10 | 155 | 29.34 | 13.74 | 29 | 27.15 - 31.52 | | | |
| More than 10 to 20 | 53 | 28.55 | 15.49 | 29 | 24.28 - 32.82 | | | |
| More than 20 to 30 | 30 | 29.57 | 11.78 | 30 | 25.17 - 33.97 | | | |
| More than 30 | 16 | 28.81 | 13.27 | 31 | 21.74 - 35.89 | | | |
| Weekly internet usage time | | | | | | | | |
| Up to 10 hours | 114 | 21.73 | 12.95 | 20 | 19.32-24.13 | < 0.001*** | | |
| 11 to 20 hours | 138 | 28.82 | 11.92 | 28 | 26.81-30.83 | | | |
| 21 to 30 hours | 44 | 33 | 12 | 34 | 29.17-3.83 | | | |
| 31 to 40 hours | 34 | 36.65 | 8 | 35.5 | 33.86-39.44 | | | |
| More than 40 hours | 29 | 42.1 | 15.28 | 43 | 36.29-47.92 | | | |
| Does internet use interfere with studies and employment? | | | | | | | | |
| Yes | 46 | 41.98 | 11.86 | 41 | 38.45 - 45.5 | < 0.001**** | | |
| Not | 313 | 26.97 | 12.94 | 28 | 25.53 - 28.41 | | | |
| * Mann-Whitney; **Kruskal-Wallis; ***ANOVA; ****T-Student test; OCS = Online Cognition | | | | | | | | |
| Scale; IAT = Internet Addiction Test; SD = standard deviation; CI95% = Confidence Interval of 95%. | | | | | | | | |





Figure 2: Relationship between weekly internet usage time and Mean of IAT-BR Score.

Respondents who answered affirmatively that their social relationships, employment, career or studies were threatened because of the Internet had a higher median in the OCS (Median = 111), than those that did not have repercussion in their personal relationships, employment or studies because of the Internet (Median = 88). The differences observed in the two groups were significant U = 422.5, p <0.001 *, but a weak effect size of r = -0.23 was observed. When considering IAT-BR. respondents who answered affirmatively that their social relationships, employment, career or studies were threatened because of the Internet had a higher average in this instrument (Median = 41.98; Standard Error - SE = 11.86) than those who did not have repercussions on their personal relationships, employment or studies because of the internet (Median = 26.97; SE = 12.94). The differences observed in the two groups were significant t (357) = 7.41, IC95% [11.02; 18.98], p <0.001*, having a moderate effect size d = 0.36.

Discussion

The objective of this study was to estimate and compare the prevalence of Internet Addiction (IA) in a sample of Brazilian university students in the health area through the Portuguese (Brazil) versions of the Online Cognition Scale (OCS-BR) and of the Internet Addiction Test (IAT-BR). This study found a prevalence of AI in the studied sample of 62.6% according to the OCS-BR and 44.28% by the IAT-BR, results that surpass the studies developed in the general population that estimate the prevalence ranging from 0.3% and 37.9% [1]. It is assumed that this fact occurs as a result of the Brazilian population being the fifth in absolute number of Internet users in the world and the world leader in the number of hours spent in domestic connection [17]. Also, it is accepted that the profile of the sample studied may have influenced this question when compared with studies developed on a population basis. Considering university students, the prevalence has varied between 16.8% and 58.7% [2,13,14]. It was evidenced that the prevalence found by IAT-BR in this study is within the range of variation for the phenomenon in this specific



population, which was not noticed in relation to the OCS-BR, which presented a higher prevalence. Thus, we believe that the latter is more sensitive to track individuals with the disorder. However, it is important to note that, although the prevalence of AI found by OCS-BR has exceeded the prevalence of IAT-BR, it is believed that this is unrealistic to the detriment of the scarce use of this instrument. thus requiring new studies with the OCS for confirmation of such prevalence, unlike the prevalence of AI estimated through the IAT, which was more extensively studied. Another hypothesis about the validity of the prevalence found by the OCS lies in the psychometric qualities of the instruments, since, while the IAT does not have the psychometric properties (construct validity) studied in the Brazilian population, the OCS-BR was validated [20] in a sample of Brazilian university students. The prevalence of IA by OCS-BR when due to gender was higher in women (65.7%), while in IAT-BR it was more prevalent in men (51.1%). In general, studies on the prevalence of IA show that prevalence is higher in men [1]. However, a study conducted by Leung [25], with 699 Chinese students aged 16 to 24 years, found a higher prevalence in women. Thus, the result obtained by the IAT-BR when due to gender corroborates with literature data [1]. Regarding OCS-BR, we believe that the result found was higher in women, differently from what was suggested in the literature, due to the difference in cut-off according to gender, which is lower in women (78 vs. 92). In this way, the spectrum of screening of the disorder in the female population is increased. Another factor that may have influenced this result is the predominance of women (75.5%) in our sample. In addition, our results illustrate how the prevalence rate of a given phenomenon may vary depending on the instrument used. We observed a difference of 18.62% in the prevalence rate of IA when using OCS-BR and IAT-BR. This situation was already evidenced in the study by Make et al. [4], which found that the prevalence of IA was up to six times greater in the same sample depending on the instrument used. A study by Zhang et al. [15] showed that the pooled prevalence of IA diagnosed by the Chen's Internet Addiction Scale (CIAS) (5.2, CI95% 3.4-8.0%) is significantly lower than Young's Internet Addiction Test (YIAT) (32.2, CI95% 20.9-45.9%) (p < 0.0001). We emphasize that, like our study, the lowest prevalence was estimated through the IAT-BR. We believe that the psychometric weaknesses of this instrument lead to the occurrence of false negatives, due to the possible low IAT sensitivity in the detection and discrimination of the individuals affected by the disorder. In addition, our results also showed a significant association between internet addiction and weekly connection time, as well as other studies [2,13,26]. We also observed an increasing linear trend, indicating that the average score on both instruments grows in proportion to the time the student stays connected weekly, thus increasing the severity of the addiction to the internet. This phenomenon was also found by Chaudhari et al [13], who studied 282 Indian medical students and whose results showed that the greater the average online time, the greater the severity of the addiction (P < 0.001). This fact reinforces the idea of the excess of hours connected online as an indicator of severity, being one of the points that should not be lacking in the evaluation of clinicians, psychiatrists and psychologists during staging of the disorder.

For individuals, those who reported that their social relationships, employment, career or studies were threatened by the Internet, obtained higher scores in both instruments (p <0.05), indicating that when there is negative repercussion, the addiction. It should be noted that such negative repercussions of Internet addiction have been reported since the onset of the phenomenon [26] and that university students are the most vulnerable group to its emergence. Nath et al. [16], in turn, studied the Internet Addiction in 188 medical students and found 40.4% of the sample reporting a worse academic performance due to IA (P < 0.001). In such cases, excessive Internet use would act as a distraction from the real world, increasing procrastination, insomnia and its consequences,



thus affecting the academic performance of these students. It is also worth noting that the statistical tests used in the study demonstrated the same independent result of the instrument used, suggesting that both are able to predict the same differences. Thus, on the one hand we can talk about the predictive validity of both, and, on the other hand, the robustness of the instruments. Even if our results are pioneering for the Brazilian population, caution is needed in the analysis of the results, because some limitations of the study need to be considered. Observing the linear trend between the number of weekly connection hours and the score obtained in the instruments, it is possible to think about the aspect of tolerance, which is characteristic of the addictive disorders and that has its presence in the AI questioned by some [27-30]. However, the cross-sectional nature of the study does not allow us to speak in tolerance, which is a characteristic that needs to be investigated in other studies. Another limitation is that the sample was statistically calculated to estimate the prevalence of the phenomenon and that, although sufficient, is known to be small. Thus, it is up to other studies, with larger samples and the general population, allowing the confirmation of the results. Moreover, the convenience sampling used in this work - has its obvious and very expensive limitations.

Another aspect concerns the two psychometric instruments used to identify individuals with the addiction to the Internet: IAT and OCS. Clearly, searches with Internet addiction preferentially use IAT. However, more guarantees are needed for the psychometric qualities of this instrument, especially with regard to theoretical support, since without it researchers find themselves dependents by satisfactory statistical indicators, that are disconnected from the theory behind the IAT. On the other hand, the OCS has a strong theoretical assumption, the cognitive behavioral model, which has found solid dialogue with the statistical results. Thus, we suggest to readers caution in the choice of instruments.

Conclusion

The prevalence of Internet Addiction in the sample studied varied according to the instrument used, being higher when estimated with the Online Cognition Scale. There was also a significant linear trend between the weekly connection time and the severity of the addiction to the internet.

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