

Relación entre autovaloración de consumo de internet y puntuación de adicción a internet en una muestra universitaria

Relationship between consumer self-assessment of internet and scoring of addiction to the internet in a university sample

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Resumen

Con la generalización del acceso a internet se han observado algunos casos de un uso desmedido del mismo. En general, la realización de cualquier actividad de forma excesiva puede derivar en una adicción, afectando gravemente a la vida cotidiana de las personas. El objetivo de esta investigación es analizar la relación entre el nivel de riesgo estimado por el test de Young, con la autopercepción de interferencia del uso de Internet en la vida cotidiana en una muestra universitaria.

Participaron 323 alumnos de la titulación de Pedagogía de la Universidad de Málaga (España). Se analizó la correlación entre la puntuación del alumnado en el test con la contestación que dieron a dos ítems sobre autopercepción de interferencia del uso de internet. Los resultados mostraron una alta relación entre la autopercepción y las puntuaciones del test.

Palabras clave: Test de Adicción de Internet, autopercepción de adicción de internet, adicción a internet, correlación, PSPP.

Abstract

With the spread of internet access there have been some cases of excessive use of it. In general, the performance of any excessive activity can lead to an addiction, seriously affecting people's daily life. The objective of this research is to analyze the relationship between the level of risk estimated Young's test, with the self-perception of Internet use inference in everyday life in a college sample. 323 students participated in the degree of Pedagogy of Universidad de Málaga (Spain). We analyzed the correlation between the scores of students in the test with the answer given to two items on self-perception of interference internet use. The results showed a high correlation between self-perception and test scores.

Key words: Internet Addiction Test, self-rated Internet addiction, Internet addiction, correlation, PSPP.

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Introduction

Internet addiction is a relatively recent phenomenon that has appeared in developed countries in recent decades. Its appearance has coincided with the generalization of Internet access by citizens.

Although there is no unanimous definition in the scientific community about what is meant by internet addiction, it could be defined as the use of the services offered by the internet to the point that the person experiences dysfunctional consequences in social, psychological or physiological aspects. Within this concept, the idea of loss of control experienced by the person over addictive behavior should be highlighted (Echeburúa & De Corral, 2010). Therefore, Internet addiction would imply the person's inability to avoid excessive connection to the Internet at times when they have no obligation to be connected, that is, apart from work or academic tasks that require using the Internet.

Until now, Internet addiction is not considered a pathology or psychological dysfunction by reference organizations, such as the American Psychiatric Association or the World Health Organization. However, different researchers have long pointed out the existence of symptoms and effects that justify speaking of a psychosocial dysfunction due to Internet use. Among these effects would be the alteration of sleep, mood, guilt, and above all, negative interference in social life (Young, 1996; Davis, 2001; Estallo, 2001; Widyanto and McMurrin, 2004).

To assess Internet addiction, various instruments have been developed in different media. Among them is Young's Internet Addiction Test (1998). It is an inventory of 20 items with a 5-option Likert-type response scale. The author of the test established eight diagnostic criteria inspired by substance addictions: sleep deprivation due to being connected, not attending important activities, receiving complaints from someone close to you, constantly thinking about the Internet, trying to reduce connection time without success, lying about connection time, social isolation, and feeling abnormally elated or uplifted when connected. Despite being an instrument that is quite present in the consulted literature, it has received some criticism regarding its psychometric characteristics, both in terms of consistency and in aspects related to its concurrent validity and structural validity (Widyanto and McMurrin, 2004; Huang, Qian, Zhong and Tao, 2007). It is also possible to use online instruments, such as the Online Cognitive Scale by Davis, Flett and Besser (2002). It is a test implemented as a web application, which is presented with a Likert-type scale of 36 items and 7 response options. For these authors, a basic criterion for diagnosing addiction is the substitution of the social environment for the virtual environment of the network. Other instruments are the Internet Stress Survey by Orma (1996), the Pathological Internet Use Scale by Morahan-Martin and Schumacher (2000) or the PRI scale by De Gracia, Vigo, Fernández and Marco (2002).

Some of the studies reviewed in the literature have reported that part of the people

surveyed claimed to experience loss of control over the Internet, or have been warned by people close to them about said loss of control, an excessive increase in connection time, etc. (Egger and Rautenberg, 1996; Muñoz-Rivas, Fernández, Gámez-Guadix, 2010). Based on these results, it could be suspected that people who suffer from situations of internet addiction are aware of it, and that therefore, a direct question, together with a sincere answer, could make it clear.

Based on the above, this research aimed to analyze the possible relationship between Internet addiction scores obtained through an instrument such as Young's Internet Addiction Test (TAI) (opus cit.) and data from of two items, one of which asks about the self-perception of having Internet addiction problems, and the other about having received warnings from the immediate social environment. The initial research hypothesis was that there was a significant relationship between the scores obtained on the TAI and the two indicated items, in a sample of Pedagogy students from the University of Malaga (Spain).

Method

The sample consisted of 323 students of the degree and degree in Pedagogy at the University of Malaga. A questionnaire was administered that included basic sociodemographic questions (age, sex and number of people who live together in the habitual residence), questions about connection habits (hours per day, place of habitual connection and habitual computer equipment), the TAI test items, as well as a dichotomous item on the appreciation of internet interference in daily life and another on warnings received by the immediate environment (Annex I).

As indicated above, Young's (1998) Internet Addiction Test (IAT) is made up of 20 items that are answered according to a five-point Likert-type scale. The items cover different aspects of daily life that can be affected by the use of the Internet. The author suggests that a score of 20 to 39 points would indicate that the person has full control over Internet use. A score between 40 and 69 points would indicate a situation of possible problems

with the use of the Internet. It would be a risk zone for the person to fall into dependence on the Internet. Lastly, a score above 70 points would indicate that the person has clear problems with internet use. Apart from the theoretical architecture of eight dimensions that articulated the construction of the test (Young, opus cit.) Widyanto and McMurrin (opus cit.) found a six-dimensional structure: the wisdom of thoughts linked to being connected to the internet (factor 1), excessive use (factor 2), negligence at work (factor 3), “anticipating” connecting to the Internet or checking email before doing other things (factor 4), lack of control (factor 5), and interference in the social life (factor 6) (Annex I).

In the analysis of the data, the direct scores of the respondents to the TAI test were calculated. These scores were also interpreted, assigning each person to a category (no problems, risk and addiction). Subsequently, the test scores were correlated with the responses to the Internet addiction self-assessment items. For these analyses, the PSPP Ver., 0.78 program (Plaff, Darrington, Stover, and Hakan, 2011) was used.

Results

The participating sample was finally made up of 77.37% women and 22.33% men, with a mean age of 22.33 years, with the minimum being 17 years and the maximum being 55 years. 26% of the respondents shared a home with less than 3 people, while 69.72% of the participants lived with 3, 4 or 5 other people. Only 4.20% reside with more than 5 people on a regular basis.

Just over half of the respondents were connected to the internet for less than 2 hours (51.38%). Secondly, 37.61% of the sample claimed to connect between 2 and 5 hours and only 7.34% said they were connected to the Internet for more than 5 hours a day. The predominant place to connect was the usual residence (97.25%), combining it with access to the university center in second place (37%).

Most of the respondents used desktop computers (77.33%) and laptops (46.74%) to connect regularly to the Internet. He also highlighted that 35.29% used a smartphone to stay connected.

The average direct score of those surveyed in the TAI test was 37.35 points, with a standard deviation of 10.40 points, with a range between 20 and 79 points out of the 100 maximum possible points. The classification of the scores according to the indications of interpretation of the test, showed that 1.35% of the sample could be considered addicted to the Internet, compared to 35.17% who would be in the intermediate zone and the majority (63.30% of the participants) who did not present any type of problem of lack of control.

Regarding the 6 factors underlying the questionnaire according to Widyanto and McMurrin (opus cit.), the mean results indicated in Table 1 were observed.

Table 1. Descriptive values of the direct scores in the TAI components.

Factor	Media	d.t.	C.V. %	Min. (min)	Max. (max)
1 (saliencia)	7.73	2.78	35.9%	5 (5)	20 (25)
2 (uso)	10.08	3.16	31.3%	5 (5)	22 (25)
3 (trabajo)	5.64	1.88	33.3%	3 (3)	12 (15)
4 (anticipación)	4.97	1.49	29.9%	2 (2)	9 (10)
5 (control)	5.95	2.57	43.2%	3 (3)	14 (15)
6 (social)	3.40	1.13	33.2%	2 (2)	8 (10)

(The minimum and maximum possible scores have been indicated in parentheses)

Before the item "Do you consider that the use you make of the Internet interferes with your daily life?" 28.35% responded affirmatively. Likewise, 15.27% of those surveyed also indicated that their social environment had warned them about the excessive use of

technology (e.g. “Has someone in your environment told you that you have a problem with technology because it seems that you can live without it? ”). The contingency coefficient between both items was 0.233 (Chi-square= 17.39; g.l.= 1; p< .0001).

The relationship between the values obtained in the TAI test and the personal appreciation item obtained a contingency coefficient of 0.385 (Chi-square= 55.964; g.l.= 2; p< .0001), while the contingency coefficient (CC) with the item of warnings from the environment was 0.272 (Chi-square=25.756; g.l.: 2; p<.0001).

The relationships between the components of the TAI test with the appreciation and warning items were analyzed (the results are shown in Table 2). No significant differences were found between the sociodemographic characteristics of the sample and the connection habits. Likewise, no differences were found between these sociodemographic characteristics and the TAI test, nor with its components. On the contrary, significant differences were found between the components of the TAI and the appreciation and warning variables (see Annex II).

Table 2. List of TAI components and appreciation and warning items.

Variable	Factor	C.C.	Chi-cuad	g.l.	Sig.	Media SI	Media NO
Apreciación	1	.37	51.65	14	.0001	9.4	7.07
	2	.43	69.47	16	.0001	12.37	9.2
	3	.38	53.55	9	.0001	6.75	5.14
	4	.23	17.92	7	.01	5.34	4.82
	5	.40	61.47	10	.0001	7.52	5.29
	6	.27	26.06	6	.0001	3.85	3.20
Advertencias	1	.35	44.24	14	.0001	9.44	7.42
	2	.41	63.09	16	.0001	12.78	9.58

	3	.24	19.91	9	.0001	6.43	5.45
	4	.19	11.63	7	.11	5.27	4.92
	5	.41	64.62	10	.0001	8.37	5.49
	6	.21	15.56	6	.02	3.78	3.31

Conclusions

The participating sample is made up exclusively of university students, and therefore I can say, with a high cultural level. This characteristic prevents a generalization of the results to the entire population. However, the results obtained can be considered as a good guide to what is happening in the social group that is being most influenced by Internet resources, which are young people. It stands out in this segment of the Spanish population, that access to the Internet is done from computers and from their habitual residences. Note the great practical absence of tablets, used only marginally. In relation to the connection time, it must be valued as an average time, coinciding with the data obtained by recent studies (Muñoz-Rivas, Fernández, Gámez-Guadix, 2010). The same happens with the place of connection, where the habitual residence becomes the preferred connection site, a space that can be considered a priori as safe, comfortable and without frequent interruptions.

When information on connection time is collected in the research consulted in the literature, the idea arises that currently students and a large part of labor sectors are obliged to be connected to the Internet to carry out their work. For this reason, voluntary connection time (for leisure, for example) should be separated from mandatory dedication time due to work or study. In this sense, Internet addiction has similarities to eating disorders such as bulimia. In this type of abnormal behavior linked to food, it must be taken into account that the person cannot stop eating food. For this reason, diagnosis and therapeutic intervention distinguish between a correct diet and an abnormal diet. In the same way, the use of the internet should differentiate:

- Internet use for dedication needs (work or academic). In this sense, it could be considered that there are also indicators of possible addiction in this area, such as, for example, repeatedly checking email.
- Use not required by the usual dedication. Basic indicators such as loss of control and interference in daily activities are suggested in this research.

Regarding the scores obtained in the TAI test, it is observed that the sample group presents low levels of addiction, with a low-medium score. However, there is a considerable number of people in the sample who are in a risk area. At the same time, the percentage of people who consider that they have a problem is low-medium (a third of the sample), a situation consistent with the level obtained in the test. The same trend pattern is presented in relation to the TAI components. All the factors (use, negligence, anticipation, lack of control and social) present medium levels, except for the first (salience) where low levels are observed. The relationship between the test and the perception of problems is significant.

- These relationships are transferred to the components, so that the factors that are most closely related to the question of self-perception of risk and the question of warnings from the environment are the use factor (factor 2) and the lack of control factor (factor 5). For its part, the low relationship with social aspects stands out (factor 6), which contradicts the proposal by Davis, Flett and Besser (2002) that a basic diagnostic criterion is the substitution of social space for virtual space. However, it must be clarified that these authors must be interpreted according to the year of their publication, years in which social networks (twitter, tuenti, etc.) had not yet been developed. Currently, the network has become another support for social development. In this sense, the Internet does not eliminate social relationships, it only changes or even expands the support on which to develop them. For this reason, the items on interference with social life could become obsolete for diagnosing Internet dependence in the immediate future.

- In summary, Internet addiction appears to be a function of excessive use rather than time, as well as a function of loss of control. At present, it would not be based on the absence of face-to-face social relationships (in the physical space).
- On the other hand, it has been observed that a direct question to the person about the self-consideration of having problems with the Internet is significantly related to the levels of addiction according to the TAI test. This result is consistent with previous studies, such as those by Egger and Rautenberg (1996). Therefore, a simple question could function as a sufficient guiding criterion to assess the presence of addiction. In this sense, it must be taken into account that addictions to substances are characterized by the denial of the addict to suffer from it (Bach and Freixa, 1983) therefore:
 - Or, Internet addiction has a different psychophysiological correlate to substance addictions.
 - Either Internet addiction is not really an addiction (which would go against numerous studies).
 - Or else, what the tests measure, such as the TAI itself, does not have sufficient construct validity, which coincides with the criticisms of some studies (Huang et al., opus cit.).
- These and other doubts suggest that future research should, among other issues, address the following research objectives:
 - Delve into the nosological entity of internet addiction.
 - Determine the criterion or criteria that allow a differential diagnosis of internet addiction.
 - Elucidate the problem of construct validity, developing new diagnostic instruments.

Annex I. Questionnaire

- 1.- Age * ____
- 2.- Sex *
 - •Men
 - •Woman
- 3.- Number of people with whom you share your habitual residence *
 - • 2 or less
 - • 3 - 5
 - • 6 - 8
 - • 9 11
 - •12 or more
- 4.Indicate what electronic equipment you usually use (at least three times a week or for more than 10 hours a week) *
 - PC (computer)
 - Laptop
 - Netbook (micro notebook)
 - iPad or tablet
 - smartphone
 - Others
- 5.How many hours a day do you connect to the internet for non-work or study purposes? *
 - Never
 - Less than 2 hours

- Between 2 and 5 hours
- More than 5 hours
- 6.From where do you normally connect to the internet? * You can choose several options
 - Worked
 - Faculty
 - House
 - Cyber
- Public places (squares, shopping malls, etc.)
 - Others

Test de TAI

Any Barely occasionally Often Always

How often are you connected to the internet longer than you had intended?

How often do you abandon the things you have to do at home to spend more time online?

How often do you prefer the "high feelings" of being connected to the internet to the intimacy of your partner, family or friends?

How often do you establish new relationships with people who use the Net?

How often do those who share your life complain about the time you spend online?

How often is your studies or occupation affected by the amount of time you spend online?

How often do you check your email before doing other things?

How often is your productivity or development in the work or academic field

Any Barely occasionally Often Always

affected by the use of the Internet?

How often do you respond defensively or keep your online activities secret?

How often do you block out annoying thoughts about your life with pleasant thoughts about using the internet?

How often do you find yourself thinking about when you're going to be online again?

How often do you think that life without the internet is going to be boring, empty and joyless?

How often do you talk back, yell or act inappropriately if someone interrupts you while you are using the internet?

How often do you lose hours of sleep due to being connected?

How often do you think about the internet when you're offline or fantasize about being online?

How often do you tell yourself "just a few more minutes" when you're online?

How often have you tried to reduce your online time and failed?

How often do you try to hide how long you've been online?

How often do you choose to spend more time online than going out with friends?

How often do you feel depressed, nervous, or tense when you're offline, and do those feelings go away when you're online?

7.- Do you consider that your use of the internet interferes with your daily life? *

Yes

Nope

8.- Has someone close to you told you that you have a problem with technology because it doesn't seem like you can't live without it? *

Yes

Nope

**Annex II. Analysis of variance
TAI factors and personal appreciation item**

Homogeneity of Variances Test

	Estadístico de Levene	g.l. 1	g.l. 2	Significatividad
Factor 1	11.16	1	316	.00
Factor 2	3.05	1	304	.08
Factor 3	3.99	1	315	.05
Factor 4	1.78	1	319	.18
Factor 5	8.72	1	319	.00
Factor 6	3.03	1	318	.08

ANOVA

	Suma de Cuadrados	df	Cuadrado medio	F	Significatividad
Factor 1 Entre Grupos	350.64	1	350.64	52.58	.00
Intra Grupos	2107.46	316	6.67		
Total	2458.09	317			
Factor 2 Entre Grupos	610.20	1	610.20	76.31	.00
Intra Grupos	2430.74	304	8.00		
Total	3040.94	305			
Factor 3 Entre Grupos	165.53	1	165.53	57.12	.00
Intra Grupos	912.79	315	2.90		
Total	1078.32	316			
Factor 4 Entre Grupos	17.85	1	17.85	8.22	.00
Intra Grupos	692.77	319	2.17		
Total	710.62	320			
Factor 5 Entre Grupos	322.85	1	322.85	57.6	.00

	Suma de Cuadrados	df	Cuadrado medio	F	Significatividad
				6	
Intra Grupos	1786.21	319	5.60		
Total	2109.05	320			
Factor 6 Entre Grupos	27.48	1	27.48	23.37	.00
Intra Grupos	374.00	318	1.18		
Total	401.49	319			

TAI factors and environmental warning item

Homogeneity of Variances Test

	Estadístico de Levene	df1	df2	Significatividad
Factor 1	6.17	1	317	.01
Factor 2	1.06	1	305	.30
Factor 3	2.55	1	316	.11
Factor 4	1.18	1	320	.28
Factor 5	4.71	1	320	.03
Factor 6	7.18	1	319	.01

ANOVA

	Suma de Cuadrados	df	Cuadrado medio	F	Significatividad
Factor 1 Entre Grupos	165.87	1	165.87	22.92	.00
Intra Grupos	2293.86	317	7.24		
Total	2459.72	318			
Factor 2 Entre Grupos	401.48	1	401.48	46.39	.00
Intra Grupos	2639.47	305	8.65		
Total	3040.94	306			
Factor 3 Entre Grupos	37.82	1	37.82	11.48	.00
Intra Grupos	1040.66	316	3.29		
Total	1078.48	317			
Factor 4 Entre Grupos	4.97	1	4.97	2.24	.14
Intra Grupos	709.78	320	2.22		
Total	714.75	321			
Factor 5 Entre Grupos	344.62	1	344.62	62.46	.00
Intra Grupos	1765.59	320	5.52		
Total	2110.21	321			
Factor 6 Entre Grupos	8.90	1	8.90	7.23	.01
Intra Grupos	392.97	319	1.23		
Total	401.87	320			

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