



Problematic use of online social networks: the case of mexican students

Uso problemático de las redes sociales online: el caso de los estudiantes mexicanos

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Abstract

Social networks are one of the most relevant means of communication and leisure among the youngest. But, despite an abundance of benefits, there are also risks that must be analyzed. In this research, the risk to be analyzed is the addiction to social media among young Mexican people. For the development of the analysis, 17,600 young people responded a questionnaire based on an adaptation of Sahin's Social Media Addiction Scale - Student Form (SMAS-SF). Among the results, it needs to be highlighted the little awareness that young people have of their addiction to social networks. Any reflection on this aspect needs to consider the limited perception presented by the sample and the fact that this study measured the self-perception of young students regarding OSM.

Keywords: Addiction, youth, social media, students, teacher, perception.

Resumen

Las redes sociales constituyen una de las vías de comunicación y ocio más relevantes entre los jóvenes. Pero, a pesar de presentar multitud de beneficios, también encontramos riesgos que debemos analizar. En la investigación se analiza uno de los riesgos como es la adicción a las redes sociales que presentan los jóvenes mexicanos. Para el desarrollo del análisis se realizó un cuestionario a 17 600 jóvenes, basada en la adaptación de la Forma de estudiante de escala de adicción a las redes sociales (SMAS-SF) de Sahin. Entre los resultados destaca la poca conciencia que presentan los jóvenes en su percepción como adictos en relación con las redes sociales. Aspecto sobre el que se debe reflexionar tomando en consideración las limitaciones de percepción que presenta la muestra y el hecho de que el presente estudio midió las autopercepciones de los estudiantes jóvenes con respecto a la RR.SS.

Descriptores: Adicción, joven, medios sociales, estudiante, docente, percepción.

1. Introduction and state of the art

1.1 Online Social Media and Addiction

Online Social Media (OSM) are one of the most important media outlets where today's youth connect with peers, and for that reason, some may consider it to be a passing vogue. However, unlike any other communication outlet in the history of humanity, Social Media have shown a superior capacity for attracting millions of users worldwide in a very short period of time and in such a "little" space as the small screen (García and Fernández, 2016).

Considering that there are different definitions regarding social networks and their functions, it is generally considered a space where people interact, share information, communicate, and thus create communities, indicating that social media have always existed in one form or another, but the Internet has given communication a sense of immediacy and extension. It is no longer about having a relatively limited personal network, on the contrary, the current social media use the benefits of the internet to create a huge social "swarm" for people to interact (Fuentes *et al.*, 2015).

Unlike face-to-face social networks, Online Social Media (OSM) are characterized by different features: absence of physical or personal contact where there may be no relationship between the identity of the individual in the offline (real) world and the online (virtual) world, OSM pave the way for social interaction to those who would otherwise have difficulties maintaining social interaction in the real world, the ability for simultaneous communication among a large number of people, and the ease to break or suspend relationships or contact (Musial and Kasienko, 2013). Such characteristics have contributed to the transformation of the traditional concept of friendship "It is no longer used only for a close, known and trusted

individual, but can be used for people who barely know each other" (Llamas and Pagador, 2014; Sabariego, 2012).

In any case, it is misleading to think that it is the volume of people and interactions what makes OSM significant, when it is rather the creation of a whole new model for communication and relationships.

There is a diversity of type within social networks, depending on its degree of openness, its theme, and whether they are managed or not, etc. Social Media in recent times has obtained a certain level of presence in educational fields. The uses of OSM in education include collaborative work environments, alternative way of communication, language learning, platform or LMS (Learning Management System) for virtual training, and for the tutoring and counseling of students and parents (Túñez and Sixto, 2012; Esquivel and Rojas, 2014; Cruz, 2016; Fuentes *et al.*, 2015).

Concerning the objective of this study, the first thing to acknowledge is that its use is spreading mainly among youths. A recently conducted study in Spain (Orange, 2018) indicates active use of OSM starts at age 14, the most active users are between the ages of 16 and 24. In Mexico, the sample of our research corresponds to the percentages of active use with percentages higher than the international mean (Islas and Carranza, 2011).

There is a variety of factors involved in the increase and incorporation of OSM, including the rising tendency in which adolescents are acquiring mobile devices (Garcia-Oliva and Fernández, 2016; Gértrudiz *et al.*, 2017). In Spain, 45.90% of parents say their children received their first smartphones at the age of 14 (Orange, 2018), and 93.2% of children say it is their preferred means for accessing the Internet.

Information shows that OSM is being actively adopted among younger populations, nowadays being a method of communication and interaction, an extension to relationships, a means to find and request information, an element for leisure, and an aid for the coexistence



and creation of new forms of communication (García-Oliva and Fernández, 2016; Orange, 2018; Gértrudiz *et al.*, 2017; Bastarrechea, 2017).

Because of all these possible uses, side effects are appearing among youths as a result of their use and their intrinsic communication characteristics: anonymity, ease and speed of access, disinhibition, affordability, and absence of physical contact (Fuentes *et al.*, 2015; Griffiths, 2015); also, the great amount of time exposed to them. All these elements have produced what some authors already consider an addiction to OSM.

The significance that these devices are acquiring is having a strong impact on the social identity of teenagers, who are the main users (Renau *et al.*, 2013). "Identity is an essential aspect in the development of adolescents and its construction ends with the configuration of a solid and stable personality over time, which aspires to a good coupling between the ideal of life for the individual and the society in which he/she lives" (Arab and Diaz, 2015, p. 8).

For Basteiro *et al.* (2013), OSM addiction, declines with a person's age, and the characteristics of physical and psychological immaturity among juveniles linked with heavy use of OSM may have more negative repercussions on them than on adults, therefore, the interest in its analysis and reflection. As Diaz (2014, p. 54) points out: "On a psychological level, the addiction of certain technological applications can be related to emotional instability, depression, anxiety, irritability, affective impoverishment, decreased judgment and difficulties in coping with everyday problems."

1.2 Addiction to Social Media

The use of digital technologies, both abusive and problematic, is leading to the development of analysis, concern, research, the study of OSM addiction, and its consequences. A large number of studies have specifically focused on the abusive use of the internet, and its association with physical-biological, social and family problems

(Echeberúa, 2012; Fernández Villa *et al.*, 2015; Young, 2015). The research on the addiction to Internet began in 1996 with a study of more than 600 cases of frequent internet users who exhibited clinical signs of addiction measured through an adapted version of the criteria of the "Diagnostic and Statistical Manual of Mental Disorders - DSM-IV" for the pathological game (Young, 2015).

For Chóliz and Marco (2012), Internet addiction is observed in a person displaying the following behavior: 1) Tolerance: an increase in the time the person must be connected, 2) Abstinence, you feel discomfort when the connection is interrupted, 3) the medium is used more than originally intended, 4) Desire to stop using the Internet, but not be able to carry such action out, 5) Excessive use of time in Internet-related activities, 6) Leaving other activities behind in order to use the internet longer, and 7) Using the Internet despite knowing of its harmful effects.

Different studies have shown that addiction to this technology has consequences, such as: difficulties in cognitive flexibility (Dong *et al.*, 2013), decision making problems (D'Hondt *et al.*, 2015), increased levels of anxiety, forgetting the performance of certain activities (Chóliz and Marco, 2012), in the development of working memory (Dong, 2012), and difficulty concentrating (Rücker *et al.*, 2015).

Not only has the research on the consequences of abuse focused on the Internet, but also on a variety of technologies, including Information and Communication Technologies (ICT) in general (García-Oliva *et al.*, 2017; Gairin and Mercader, 2018), online games (Bertrán and Chamarro, 2016; Martín *et al.*, 2017), video games (González *et al.*, 2015; Espejo *et al.*, 2018), mobile phones (Gaspar and Cuesta, 2015; Ruiz, 2016; Polo *et al.*, 2017), and of course OSM.

The abusive use of OSM has originated a line of work called "Addiction to online social media networks", which can be categorized as a particular type of Internet addiction (Sahin, 2018). But before



analyzing it, we will discuss the term addiction itself and the variations connected to OSM.

As different authors point out (Basteiro *et al.*, 2013; Echeberúa, 2012) the term addiction has been associated with drugs and substance consumption. It is defined in the Diagnostic and Statistical Manual of Mental Disorders (APA, 2013) as the abuse and dependence on any type of psychoactive substance. However, other researchers sustain that the development of an addictive process can occur without the use of psychoactive substances. Thus, it could be defined as a compulsive and excessive use that causes a deterioration in an individual's daily routine thus leading to an addictive behavior (Watters *et al.*, 2013).

Not every author agrees that the abusive use of the Internet and social media should be considered an addiction. They claim that an addiction to technology is often confused with an addiction to behavior. As a result, they consider that it is better to differentiate true addictions, excesses, and transitory problems from an abusive, problematic, inadequate or intensive exposure to technology (Kuss *et al.*, 2014; Carbonell, 2014; Carbonell and Obrset, 2015; Pontes *et al.*, 2015). Carbonell (2014) specifically criticizes the idea of addiction to information and communication technologies as being more of a social construct that has gained popularity rather than a hard reality, an addiction of secondary nature, which can be confused with a dependence on technology, and it may be only a hobby or habit rather than a psychological disorder. These authors also argue that it is not an addiction since it is not included in the "DSM-5 Diagnostic Criteria Reference Guide" (APA, 2013).

Independently of the stance we choose to take, we cannot ignore that abusive use of technologies brings negative consequences, generating potential problems in a person's life, specifically in vulnerable groups such as teenagers (Chóliz and Marco, 2012). Through the search of instruments to aid in its diagnosis, the scales of self-perception, usually denominated as

"Social Media Addiction Test (SMAT)" have been gaining ground progressively (Basteiro *et al.*, 2013; Escurra and Salas, 2014; Tutgun-Ünal and Deniz, 2015; Banyai, 2017; Simó *et al.*, 2017) one of which was elaborated by Sahin (2018), which will be the one used for the present study.

The application of these scales has provided a reference of the degree of addiction or abusive use that the adolescents have. Sahin (2018) points to the fact that people who spend too much time on technology have the desire of instant notifications, which can cause virtual tolerance, virtual communication, and virtual problems.

In Echeberúa (2012) and Echeberúa and De Corral (2010) we see that not only social media can trap adolescents by distancing them from personal contact, but also produce social isolation, and distort reality. It can also produce withdrawal symptoms when they do not have access to them, including sleep deprivation and poor performance in other activities such as academic tasks. Basteiro *et al.* (2013) point to the existence of a positive linear relationship between neuroticism, extraversion and depressive symptomatology in relation to the abuse of OSM. Llamas and Pagador (2014) suggest that abuse favors adolescent confusion between the real and virtual world. This addiction has been connected to other variables, such as low self-esteem, depression, and poor social skills (Herrera *et al.*, 2010), as well as health problems (migraines, lumbar pain, overweight or obesity, insufficient rest), psychological aspects (risk of eating or mental disorders, depression), family problems and discrimination (Fernández-Villa, 2015).

In conclusion, some adolescents are aware of their addiction, and are taking measures to overcome it (Fuentes *et al.*, 2015), but some others are not aware of its existence (Marín *et al.*, 2015).

2. Methods

2.1 Study Objective

The objectives being pursued in this research are stated in the following terms:



- a) To recognize the degree of addiction that Mexican youth have toward OSM, measured by adapting the Sahin scale (2018) called "Social Media Addiction Scale-Student Form" (SMAS-SF) to a Mexican context.
- b) To analyze the degree of addiction that Mexican youth have toward OSM.
- c) To analyze whether the gender of the student is related to the addiction to OSM.

2.2 Research sample

The study is exploratory, consisting of 17600 students registered in the public high school system (Mexican Public Education Secretariat) and a baccalaureate school in Mexico City. It was conducted face to face of which 5451 were men and 12149 women. Most students were "under 20 years" ($f = 41011$, 23.3%) and "between 20 and 25 years" ($f = 2710$, 15.40%). Regarding the frequency with which they used RSOs, the vast majority ($f = 8241$, 46.82%) indicated that they used it "several times a day", followed by those who used it "at least once a day" ($f = 4132$, 23.48%), "two or three times a week" ($f = 1847$, 10.49%), "several times a week" ($f = 1847$, 10.49%), and "less than once a week" ($f = 138$, 7.84%). The data shows the following number of hours used by RSOs per week, the highest percentage was found "between 1-5 hours" (32.05%), followed by those who used them "between 5-10 hours" (22.64%), "less than 1 hour" (15.61%), and "between 15-20 hours" (7.27%).

No student indicated to use them "more than 25 hours."

The sample is non-probabilistic, also called convenience or causal, which is determined by the ease of access that the researcher has to the subjects that make up the sample.

2.3 Instruments

The instrument used is an adaptation to the context Mexican adolescents, from the one elaborated by Sahin (2018) called "Social Media Addiction Scale-Student Form" (SMAS-SF). The scale implemented a Likert-type construction and 5 response options; the procedure used can be observed in the work of Valencia and Cabero (2019).

Note only that the internal consistency index obtained for the global scale was .926, and for the factors of: .836 ("Satisfaction for being connected to the RSO"), .827 ("Problems"), .826 ("Obsession for being informed"), and .797 ("Need to be connected").

Reliability according to different authors (Nunally and Bernstein, 1994; Mateo, 2012), can be considered high or very high.

The administration of the scale was done online.

3. Results

The first data presented will be the means and standard deviations obtained for each of the factors, and for the different items that make them up (Table 1).

Table 1

Mean and standard deviations

Satisfaction for being connected on online social media($m=2,32 - dt=0,75$)	Temas negativos relacionados al uso de las redes sociales ($m=2,13 - dt=0,76$)
4. I see social media as an escape from the real world ($m=2.34-s.d.=1.08$).	15. I pass over my homework because I spend much time on social media. ($m=2.20-s.d.=1.08$).
5. A life without social media becomes meaningless for me. ($m=2.12- s.d.=1.10$).	16. I feel bad if I am obliged to decrease the time I spend on social media. ($m=2.21- s.d.=1.09$).



Satisfacción por estar conectado en las redes sociales (m=2,32 – s.d.=0,75)	Temas negativos relacionados al uso de las redes sociales (m=2,13 – s.d.=0,76)
6. I prefer to use social media even there are somebody around me. (m=2.31– s.d.=1.06).	17. I feel unhappy when I am not on social media. (m=2.31– s.d.=1.14).
7. I have physical problems because of social media use. (m=1.96– s.d.=1.02).	19. I use social media so frequently that I fall afoul of my family. (m=1.85– s.d.=0.92).
8. I express myself better to the people with whom I get in contact on social media. (m=2.51– s.d.=1.18).	21. I do not even notice that I am hungry and thirsty when I am on social media. (m=1.91– s.d.=1.04).
9. I am as I want to seem on social media. (m=2.24– s.d.=1.09).	22. I notice that my productivity has diminished due to social media. (m=2.54– s.d.=1.18).
10. I usually prefer to communicate with people via social media. (m=2.54– s.d.=1.12).	23. I have physical problems because of social media use. (m=2.00– s.d.=1.02).
11. Even my family frown upon, I cannot give up using social media. (m=2.62– s.d.=1.23).	
12. I prefer virtual communication on social media to going out. (m=2.28– s.d.=1.02).	
Obsession for being informed (m=2.89 – s.d.=0.79)	Need/obsession to be connected (m=2.83 – s.d.=0.78)
20. The mysterious world of social media always captivates me. (m=2.55– s.d.=1.00).	1. I am eager to go on social media. (m=2.98– s.d.=1.07).
25. I like using social media to keep informed about what happens. (m=3.28– s.d.=1.15).	2. I look for internet connectivity everywhere so as to go on social media. (m=2.89– s.d.=1.15).
26. I surf on social media to keep informed about what social media groups share. (m=3.02– s.d.=1.08).	3. Going on social media is the first thing I do when I wake up in the morning. (m=2.60– s.d.=1.20).
27. I spend more time on social media to see some special announcements (e.g. birthdays). (m=2.68– s.d.=1.11).	12. I want to spend time on social media when I am alone. (m=3.12– s.d.=1.16).
28. Keeping informed about the things related to my courses (e.g. homework, activities) makes me always stay on social media. (m=3.00– s.d.=1.11).	14. Social media activities lay hold on my everyday life. (m=2.45– s.d.=1.07).
29. I am always active on social media to be instantly informed about what my kith and kin share. (m=2.79– s.d.=1.15).	18. Being on social media excites me. (m=2.94– s.d.=1.07).

The data shows that the adolescents surveyed do not perceive different aspects related to OSM as problematic, since only in two items (26. “I surf on social media to keep informed about what social media groups share” and 27. “I spend more time on social media to see some special announcements (e.g. birthdays.)” the average score is 3. At the same time, the results show that in a large volume of items, the average score is below central value of 2.5: 5. “A life without social media becomes meaningless for me.” (2.12), 7. “I prefer the friendships on social media to the friendships in the real life.” (1.96), 9. “I am as I want to seem on social media” (2.24), 13. “I prefer virtual communication on social

media to going out.” (2.28), 14. “Social media activities lay hold on my everyday life.” (2.45), 15. “I pass over my homework because I spend much time on social media.” (2.20), 16. “I feel bad if I am obliged to decrease the time I spend on social media.” (2.21), 17. “I feel unhappy when I’m not connected on social media.” (2.31), 19. “I use social media so frequently that I fall afoul of my family.” (1.85), 21. “I do not even notice that I am hungry and thirsty when I am on social media.” (1.91), 22. “I notice that my productivity has diminished due to social media.” (2.41), and 23. “I have physical problems because of social media use.” (2.00).



However, because of the low standard deviations obtained it can be said that there has been a certain homogeneity in the responses offered by the respondents.

A fact that also reinforces what is being discussed in this study, is that the average and standard deviation obtained in the overall instrument was 2.50 and 0.63, respectively. These results indicate a perception of non-addiction to the OSM by the respondents.

Regarding the means and standard deviations reached in each of the factors, in Table 2, the items that constituted each one are presented, in the previous study carried out and the means and typical deviations reached.

This is also confirmed when contemplating the average scores of the factors that do not denote a perception of being trapped by the OSM. That is because they do not show a high level of obsession to connect and to be informed through OSM, nor do they consider that its use had led to problematic situations such as avoiding family or friends, or affecting their performance, or developing a physical problem. They did not express particularly high levels of satisfaction derived from being connected.

Regarding the existence of gender-differentiated responses, Table 2 shows the means and standard deviations reached in both each of the factors and the instrument.

Table 2

Averages and typical deviations according to the gender of the respondents

	G	M	S.D
Satisfaction for being connected on Online Social media	M	2,35	,754
	W	2,30	,740
Problems	M	2,15	,760
	W	2,11	,768
Obsession for being informed	M	2,84	,790
	W	2,93	,783
Need/obsession to be connected	M	2,81	,800
	W	2,85	,755
Total	M	2,50	,635
	W	2,51	,621

As the data points out, the differences are not very significant, but for its contrast we formulate the hypotheses that we present below.

Null hypothesis (H0): There are no significant differences among young people according to gender in the responses offered to the adaptation of the questionnaire "Social Media Addiction Scale-Student Form" (SMAS-SF) (2018), with an alpha risk of error of 0.05.

Alternative hypothesis (H1): there are significant differences among young people according to gender in the answers offered to the adaptation of the questionnaire "Social Media

Addiction Scale-Student Form" (SMAS-SF) (2018), with an alpha risk of error of 0.05.

To do this, we will apply the student t test for independent samples, although we must point out that the Levene test (Mateo, 2012) was initially obtained to analyze the equality of the variances. In Table 3 we present the t values reached for each item, for each factor and the overall nature of the instrument, and its significance for 603 degrees of freedom.



Table 3

*Student's T for the analysis of gender significance (** = significant at 0.01)*

	Test Levene		t de student	
	F	Sig.	t	Sig.
Satisfaction for being connected on online social media	0,005	0,945	0,744	0,457
Problems	0,121	0,728	0,620	0,535
Obsession for being informed	0,003	0,955	-1,421	0,156
Need/obsession to be connected	3,044	0,082	-0,587	0,557
Total	0,102	0,750	-0,064	0,949

Based on the data, the different H0 formulated should not be generally rejected, therefore, it can be indicated that there are no significant differences among young people according to gender in the answers offered to the adaptation of the questionnaire "Social Media Addiction Scale-Student Form" (SMAS-SF), with a level of significance of $p \leq 0.05$. Rejection only occurred in one item ("I usually prefer to communicate with people via social media"), and in this case the differences are favorable to men over women.

4. Discussion and conclusions

The present study, which sought to determine if Mexican youths could be considered addicted to OSM, shows data stating that students do not perceive themselves addicted to OSM, which coincides with other authors and in different contexts (Marín *et al.*, 2015; Levene, 1960). Comments are also related to the conclusion of Kuss *et al.* (2014), Carbonell (2014), Carbonell and Oberst (2015) and Pontes, Szabo and Griffiths (2015), who point to behavior maintained by the youth and adolescents in OSM, which cannot be considered as addiction to a behavior, but rather an excess and abuse of use, something our data does not confirm, since the features of addiction cannot be found as indicated in scientific literature (Urresti *et al.*, 2015), as shown by the fact that in the "Satisfaction for being connected to the network" the average score was 2.32.

The results indicate that the idea of young people spending an excess time in OSM, and as a result having repercussions such as forgetting to perform academic tasks and problems with performance, have not been confirmed in the study, because the answers of the students do not confirm it ("15. I pass over my homework because I spend much time on social media -2.20" and "22. I notice that my productivity has diminished due to social media -2.41") which agrees with the findings obtained by Tuñez and Sixto (2012) and Marín *et al.* (Sabariego, 2012). Nor have there been any reported findings that its use affects the upheaval of his/her familiar or social life ("11. Even my family frown upon, I cannot give up using social media -2,62" and "19. I use social media so frequently that I fall afoul of my family -1.85", a finding that coincides with the comments made by Caldevilla (2010).

Unlike the author of the test that we have adapted (2018), we have not found the need identified by the author of the need that people addicted to OSM have to receive notifications constantly. As can be seen, the average score in the factor "Obsession for being informed" was 2.89, which does not suggest a tension in the respondents to receive information constantly.

As for the hypotheses of whether there were significant gender differences in the perception of students related to their addiction to OSM, no such differences have been obtained, neither in the different items of the questionnaire, nor in the four factors identified. In this



sense, our findings coincide with the results of other authors (Basteiro *et al.*, 2013; Fernández-Villa, 2015; Ruiz, 2016).

The findings should be considered within the limitations of the study, particularly the characteristics of the sample and the fact of working with students that do not have the self-perception of being addicted to OSM.

The latter leads to the proposal of future lines of research: replicate the study with different sample criteria and context; compare findings with those obtained in other scales of addiction; compare the perceptions shown by the students to OSM addiction, with their teachers and parents can perceive of them; and to analyze the possibilities to determine OSM addiction using other.

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