

## Model Structure of Social Network Addiction among Male and Female Students

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### Abstract

**Introduction:** Most of the people have at least one smartphone, spending most of their time, approximately 20 hours a week, on their smartphone. The main purpose of the current research was to study model structure of social network addiction among male and female students.

**Method:** In terms of purpose, the research is practical and in terms of data collection method is descriptive based on survey. In spite of various social networks, only two, Telegram and Instagram, have been chosen. The statistical population of the study were 5196 students studying in Azad Islamic University, Garmsar Branch. Student form of Social media addiction scale (SMAS-SF) and demographic information questionnaire were applied to all the research participants.

**Results:** Among 397 subjects, 114 individuals, 28.7% used only Telegram, 72 individuals used only Instagram and 211 of them use both Telegram and Instagram. Comparing the means shows that Internet addiction among male students was higher than female ones ( $p < 0.05$ ). The results of ANOVA showed the highest social network addiction is among the age groups 25 years and younger, and the lowest mean is for the age group 41 years and older.

**Conclusion:** According to the results of the research, it can be concluded that among the students of the sample, the rate of addiction to social networks is higher than average, and the necessary interventions should be provided to solve this problem.

**Declaration of Interest:** None

**Keywords:** Social addiction, Telegram, Instagram, Students.

## **Introduction**

According to a report published by OF Company, in 2016, 93% of British people have at least one smartphone, spending most of their time, approximately 20 hours a week, on their smartphone (1). Compared to other electronic devices such as laptops, computers and tablets, the usage of cell phones has been growing more and more. Therefore, currently, many internet-related services are provided by smartphones, such as web browsing, communicating, banking, gaming and social networking (2). Innovations are taking place rapidly in the field of information technologies and are being introduced via numerous social media and networking websites (3). Today, social media is a powerful communication tool, with social networks being one of the most dominant ways that we now communicate (4). A social networking service is an online platform that people use to build social networks or social relationships with other people who share similar personal or career interests, activities, backgrounds, or real-life connections (5). In fact, social media is a broad concept that has emerged due to the emergence of new communication networks, such as the Internet and cell phones. Social media helps to change a passive listener of content into an active content producer, and make communications easier by providing some applications for various cell phones and operating systems (6). Social media platforms like Facebook supports group interaction toward establishing communities and creating and exchanging content. Basically, social networks are on the basis of public participation (7). Social networking websites have become a global phenomenon. For example, Facebook has hundreds of millions of users (6). These websites have brought about the possibility of communicating in social life for their users by building a friendly environment. In Iran, the growing

trend of technology has also integrated people's actual lives with the virtual world (8). Smartphone addiction is a common issue among adults in all over the world. The level of interest and usage of Iranian users in social networks to obtain information and news indicates Iranian media are not succeeded in satisfying Iranian users. (9). Therefore, people use social media more than what has been expected and offer both adverse and productive features to the community and the influence of social media and social networking sites have had a significant impact on user behavior (10). However, despite all privileges of the social networks, they have caused adverse consequences and many challenges in people's lives, that is, today, especially in our society, these networks are becoming a threat, which calls for expert methods to recognize such threats and proceed to reduce or eliminate them (11). On the other hand, despite the privileges and advantages of using social networks in the last decade, new concerns about its use and probable impact on the various dimensions of human life are on increase day by day. Exceedingly making use of social and longtime living in cyberspace causes them to gain a form of false affiliation, which is extremely difficult to quit (12).

The ever-increasing growth of cell phones has caused some side effects. Cyberspace addiction is defined as excessive use of the Internet or irrational and morbid use of cyberspace (10). Social network addiction refers to a wide range of behavioral problems and motivational control over the use of them (12). Social network addiction is considered as obsessive behavior, as a desire to own a relationship, or probably, as an expression or reflection of particular relations or as the need satisfaction (11). Social network addiction is a phenomenon with several features: this addiction is a kind of obsessive disorder that is similar to the pathological conditions to some extent. In fact, a social network addict is someone

who has the symptoms of early fatigue, loneliness, depression, etc. (13). The social network addiction is considered a psychological disorder (14). Internet addiction disorder and other forms of digital media overuse are generally defined as the compulsive use of social media platforms that results in significant impairment in an individual's function in various life domains over a prolonged period (15). Another issue dealing with the expansion of social networks in human societies is the modern individualism development (13). In fact, by increasing local social interaction with a powerful global community, the power of tradition and values has greatly reduced (14). Therefore, the rules and regulations, which previously helped families with their choices, have been weakened, and forced families to actively create their own identities; it is because the rapid change in the norms governing the family causes to happen the process of changing identities and different types of new lifestyles (13). The effects of such addiction are represented in the excessive use of cell phones in people, which make other activities such as education, driving, social activities and even sleep problematic (16). However, many people do not realize that smartphone addiction a serious issue impacting negatively on one's thoughts, behaviors, tendencies, emotions, and feelings. In particular, this addiction can cause depression, loneliness, anxiety and sleep disorders (17).

Disorders such as internet addiction, depression, social isolation, identity disorder, lack of emotions and self-confidence are the common abnormalities of using social networks. The main reason of social network users is communication, which enables them to communicate with a lot of people just in a little time, and, in many cases, lead to the excessive use and interest, particularly, among adolescents and young people that might threaten their psychological health (18). To put it simply, the intricacy of social relationships

as well as the ever-increasing number of communication tools, including social networks, have led to the change in the family relationships and transform it from face to face or telephone communication to a complicated and indirect ones (16). So that people do not correctly identify each other in such communication, which may end up with virtual crime and abuse. What can cause damages in society is people's tendency toward each of damages (17).

Some researchers believe that compared to other traditional forms of addiction, Internet addiction, especially social network ones in the last few years, is not considered a substance addiction, and thus, it is known as a behavioral one (19). Excessive use may lead to negative and addictive results particularly in teenagers and youngsters. Such technological affinities are the ones including any other behavioral addiction. While trying to stop such dependency on technological tools, there could be found some involuntary behavioral interference, lack of interest in other activities, and physical and psychological symptoms (20). Findings from studies show that the majority of students surveyed had a high degree of social media use (21). In addition, the severity of addiction among male students was higher than that of female ones. Besides, the severity of addiction in undergraduate students was higher than that of graduate ones. As Liu & Ma (22) research shown, social network addiction causes stress, fatigue and depression and the continuity of the addiction has a direct impact on job exhaustion. According to other studies, those who are addicted to the social network and the Internet are exhausted, lonely, self-conscious and depressed, and have a tendency to different types of addictions (23). Also, there is a positive and significant relationship between addiction to online games, internet shopping, cybersex, social networks (cyber relations) with a positive attitude towards delinquent behaviors (24).

Therefore, the more increase in using the Internet in the above-mentioned items, the more increase in the positive attitude toward delinquency. Moreover, in terms of computer addiction and cybersex, a positive attitude towards delinquency in girls and boys differ greatly, and mean is higher among the boys. Accordingly, and considering the harms of social network addiction in adolescents and students and its negative impact on various dimensions of performance, including behavioral, social, educational and emotional, the present study was to study to study model structure of social network addiction among male and female students.

### Methods

In terms of purpose as well as the data collection method, this study was a descriptive based on survey. In spite of different types of social networks, in this research, only two social platforms, Telegram and Instagram, were chosen. According to the National Study of The Iranian Students Polling Agency, social network has become a constant application in Iranian smartphones, no matter whether social networks are used to communicate with friends or acquaintances or to run a business. In the meantime, Telegram has achieved widespread popularity among Iranian users, compared to other social networks. In fact, although Telegram has been blocked since 2018 by Iranian government, it has remained the most popular social network among the Iranian. According to the results of current study, by the end of March 2019, more than 35 million people had used social networks and 6 out of 10 Iranian people have already joined Telegram, which is 58.4% of Iranians. However, before the filtering in April 2017, the percentage of Iranian joining Telegram was even higher, over 60%. That is to say, contrary to Telegraph blocker's belief, its filtering has not affected its use. Apparently, some governmental institutions and IRIB have restarted their activities on this social

network. The average number of Telegram channels increased to 1.73 billion in the last month of 2018. Also, the average number of visitors was 1.28 billion in that month. Despite repeated threatening for filtering, Instagram has achieved popularity as the second popular social network in Iran. Before filtering its hardline competitor, Telegram, was able to absorb 18 percent of Iranian users, to rise 32 percent in June 2018, and even to maintain that trend in October. However, its users dropped to 2% in March last year according to The Iranian Students Polling Agency. The statistical population of this study were 5196 individuals, all students studying in the second semester of 2018-2019 in Azad Islamic University. Based on the Morgan Determining sample size, for such a population (361), we had to increase the confidence level, so the questionnaire collection was increased with 15% and reached 415 questionnaires and finally, 397 questionnaires were completely returned to the researcher.

### Measurement

**Social Media Addiction Scale Student Form (SMAS-SF):** The tool used in this research was Social Media Addiction Scale Student Form (SMAS-SF) (10). SMAS-SF is a questionnaire for the evaluation of social media addiction. This questionnaire has 29 items that are scored on a Likert scale from 1-5. This tool has 4 subscales including Virtual tolerance, Virtual communication, Virtual problem, and Virtual information.

In the research, software SPSS16 and AMOS21 t-Test, and ANOVA have been used to answer the research questions.

### Ethical recommendation

Within the implementation of the research, we have followed the Code of Ethics approved by the Deputy of Research and Technology of Iran Ministry of Science, Research, and Technology. Based on the

mentioned code, we attempted to apply the ethical principles of integrity, impartiality, trust and privacy of respondents. According to Iran Constitution, using social networks such as Telegram and Instagram is prohibited, so all questionnaires have been tried without identification information of the respondents. Therefore, completed questionnaires were secretly reserved for researchers. Meanwhile, the results of the study indicated despite the intense governmental monitoring, making use of social networks is really high and the addiction status of social networking is higher than the average. Accordingly, researchers, based on Code of Ethics, are obliged to declare all the figures and facts without any interference.

**Results**

According to the results, out of 397 subjects, 261 were female and 136 were male, and 127 were 25 years old or

younger and 127 were 26-40 years old and 63 were over 41 years of age. Among 397 subjects, 114 persons, 28.7% use only Telegram, 72 persons use only Instagram and 211 of them use both Telegram and Instagram. 106 spend at least one hour per day, 253 people spend 2-4 hours a day, and 38 people spend more than 5 hours a day on the social networks.

The validity of SMAS-SF was construct, confirmed with HMO = 0.965 and p-value = 0.001. In order to determine the reliability of the research tool, the Persian-translated questionnaire was presented to the population and, finally, the reliability of the questionnaire in this study was obtained from the table 1. The reliability of Cronbach's alpha reported from 0.78 to 0.90 for components and a total score of SMAS-SF.

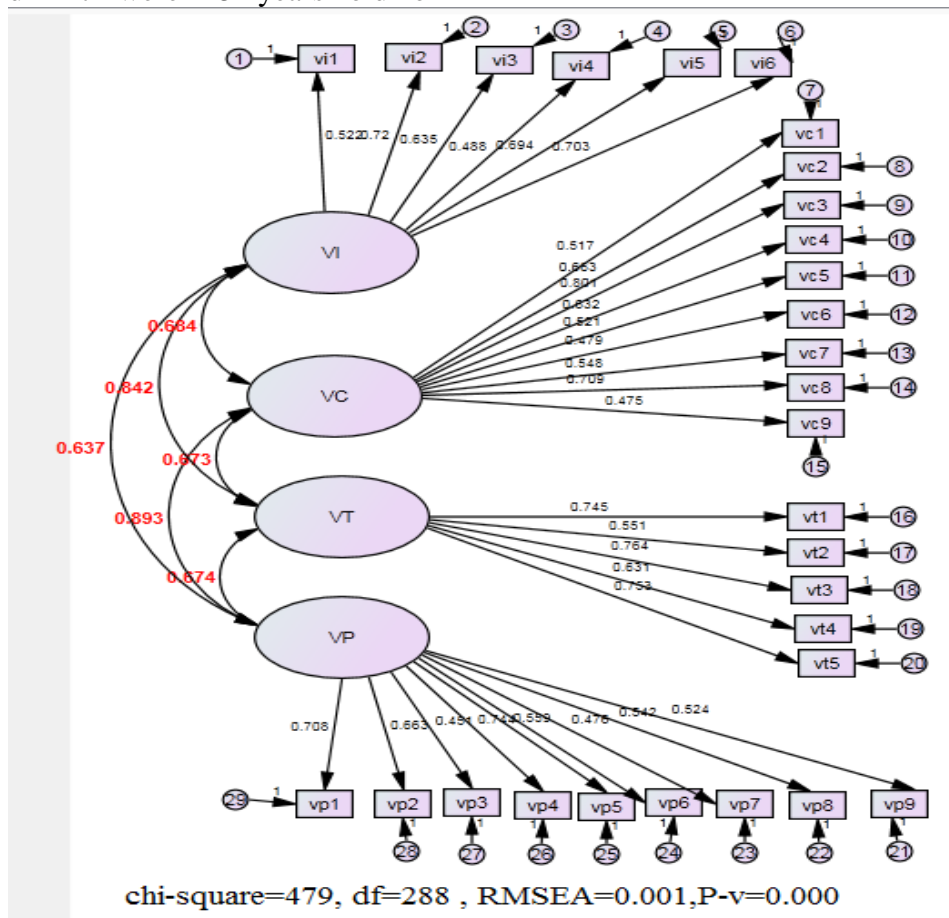


Figure 1. First-level confirmatory factor analysis correlation diagram (standardized)

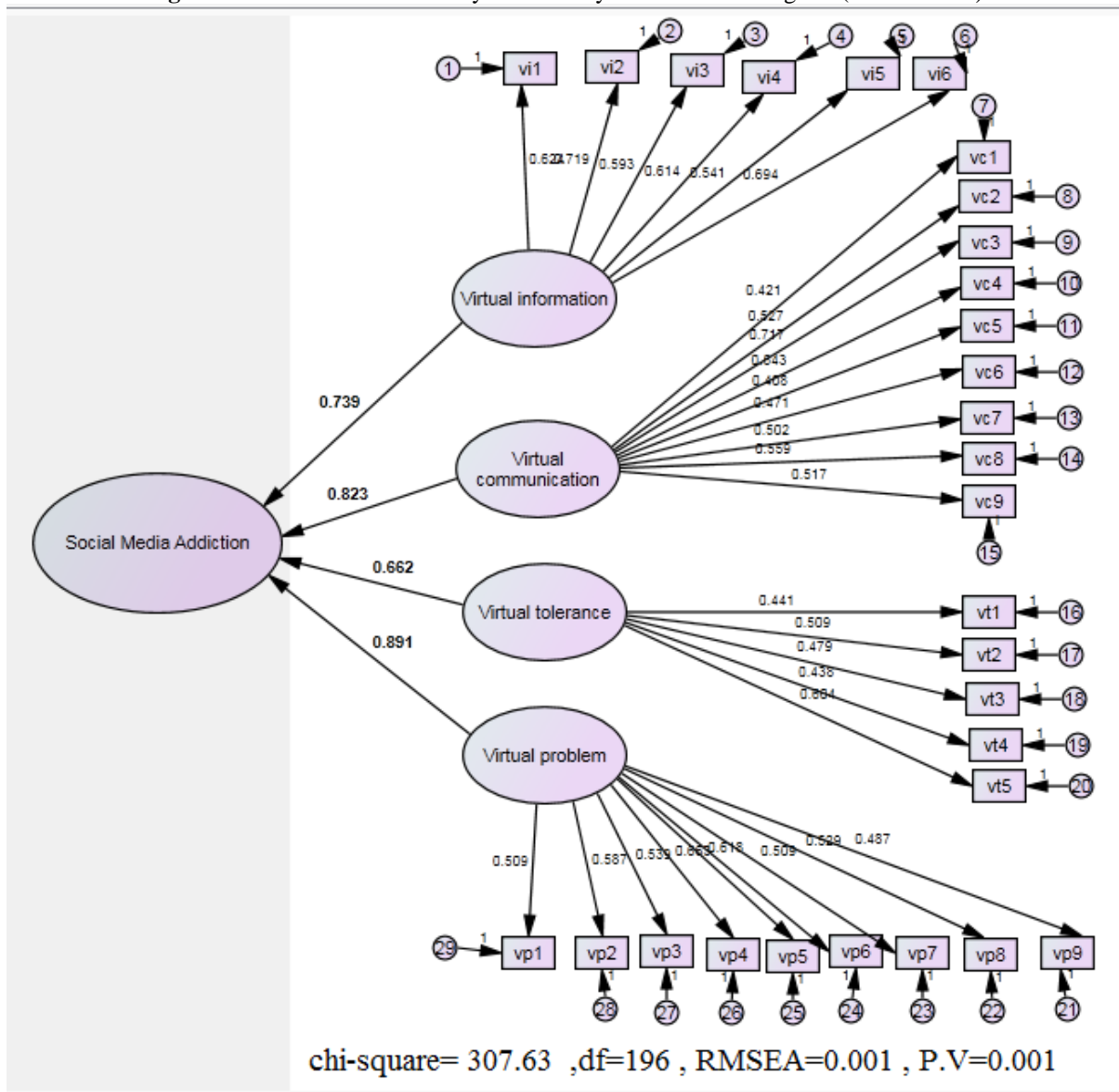


Figure 2. Second-level confirmatory factor analysis correlation diagram (standardized)

The results of the first and second confirmatory factor analyses indicated that the main components of social network addiction are VT and VC, VP and VI. In fact, the highest Fit Indices belongs to VP, 0.89, and the second position of the component is VC with Fit Indices 0.82, third place is VI with Fit Indices, 0.74, and fourth and last position is VT with Fit Indices, 0.66.

The results of table 1. Showed that the t-test at the confidence level of 99% and the freedom degree of 396 and the significant

level of 0.0001 indicated that Internet addiction among the subjects in the VT, VC, VP, and VI component is higher than the average. The significant level of the two group shows there exists a significant difference between male and female students' addiction to the Internet. Comparing the means shows that Internet addiction among male students (mean 116.294) is higher than female ones (mean 114.356).

**Table 1.** The results of the t-test at component of Internet addiction

Variable	Mean	SD	t	df	P value	Mean Difference
virtual tolerance	19.5113	2.49302	36.056	396	0.001	4.51134
virtual communication	35.4937	3.76226	44.982	396	0.001	8.49370
virtual problem	35.8917	2.84815	62.204	396	0.001	8.89169
virtual information	24.1234	2.54602	47.921	396	0.001	6.12343

mean volume of social network addiction is different at different age groups.

Table 2 results revealed the results of ANOVA at the confidence level of 99% (according to the table 2) show that the

**Table 2.** The results of ANOVA to analyze difference among age groups at social network addiction

variable	M	SD	SS	df	MS	F	P value
25 years and less than	116.550	7.23705	1725.747	2	862.873	14.018	0.001
26 to 40 years	114,716	8.11319	24252.092	394	61.554		
41 years and more	110,603	9.13084	25977.839	396			
Total	115,020	8.09942					

According to Scheffe's multiple tests at table 3, there is no difference, in rate of social network addiction, between the age group of 25 and younger, and the age group of 26 to 40 years old. However, there is a significant difference in the mean of social network addiction between these two groups and age group of 41 or older.

Meanwhile, as comparing the means shows, the highest rank of social network addiction goes to age groups of 25 and younger (mean: 116.550), age group of 26 to 40 years (mean: 114.716) ranked second and the lowest rank and mean is for age group 41 years old (mean: 110.603).

**Table 3.** The results of Scheffe's tests to analyze difference among age groups at social network addiction

		95% Confidence Interval				
(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
25 years and less than	26 to 40 years	1.83419	.88433	0.118	-.3387	4.0071
	41 years and more	5.94755*	1.12889	0.001	3.1738	8.7213
26 to 40 years	25 years and less than	-1.83419	0.88433	0.118	-4.0071	0.3387
	41 years and more	4.11336*	1.20901	0.003	1.1427	7.0840
41 years and more	25 years and less than	-5.94755*	1.12889	0.001	-8.7213	-3.1738
	26 to 40 years	-4.11336*	1.20901	0.003	-7.0840	-1.1427

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\*. The mean difference is significant at the 0.05 level.

### Discussion

The main purpose of current research was to study the Telegram and Instagram addiction among students of Azad Islamic University, Garmsar Branch. According to the results, among 397 subjects, 114 persons, 28.7% use only Telegram, 72 persons use only Instagram and 211 of them use both Telegram and Instagram. 106 spend at least one hour per day, 253 people spend 2-4 hours a day, and 38 people spend more than 5 hours a day on the social networks. As indicated in the results of current research, 9.6% of respondents spend more than 5 hours a day on social networks, and 63.7% of respondents surf social network pages for at least 2-4 hours a day. Additionally, the results showed the social network addiction was higher than the average. Results of this research, in fact, have been in line with the previous studies (6-8). Pempek et al. (6) have found that students use Facebook approximately 30 min throughout the day as part of their daily routine in the United States of America. Most of them spent more time observing content on Facebook than actually posting. In another study, it has been reported that undergraduate students engaged in social

networking sites and Facebook for 117 minutes and 106 minutes respectively (7). This shows an exponential rise of student's spending time on social networks. Furthermore, in another study was shown that among adolescents in China discovered that 15.6% of respondents were classified as social media addicts (8). Despite the ban on the use of social networks, Iran has ranked the first in using Telegram all over the world, causing serious social and psychological damages for many Iranian people. In addition, since the government has banned such technologies, it has not provided much to prevent these damages. Given that the government is not able to monitor and interfere with the activities in these networks, they consider it as a threat rather than as an opportunity. Accordingly, several strict filtering rules have been applied to them, so the access to them is denied. However, government official statistics and reports (Ispa.ir) show that majority of the Iranian are benefited such networks. Unfortunately, due to the approach in Iran, neither the training program nor essential strategies have been implemented for the correct use of such technologies. In fact, because these social networks have expanded unofficially and underground, people do not know how to



use them properly. Thus, numerous university researchers conducted in Iran show existence of several behavioral and psychological disorders due to the excessive use of social networks (9,13).

The symptoms of social media addiction can be manifested in mood, cognition, physical and emotional reactions, and interpersonal and psychological problems (14). Those who are addicted to using social networks are treated neither as patient nor as a criminal. Therefore, they will never admit to addiction, and regarding the problems encountered by young people and their families are just limited to some university researches. For example, Irani & Rezaei (13) have concluded that the rate of social network addiction was extremely high among some Iranian families, which have caused serious damages, such as inattentiveness of couples to each other and even the expansion of emotional divorce. Also, according to the available evidence, the prolonged use of social media such as Telegram is positively associated with mental health problems such as stress, anxiety, and depression and negatively associated with long-term well-being (15-17). On the other hand, social media addiction has negative consequences for students and certain categories of social media use have been shown to be associated with reduced academic performance (15). For example, the time spent on social media was positively related to depressive symptoms among high school students (23).

Despite such academic research, there are no comprehensive informative programs

available to educate families, school and university students about purposeful use of social networks. Statistical surveys of this research also showed that male students use social networks more than female ones. Mazman & Usluel (25) have reported that the use of social networks among boys was higher than that of girls. Previous research has shown that gender-specific inequalities might originate from biological predispositions (e.g. hormones, brain structure), as well as the organization of the hunter-gatherer societies in which humans initially evolved (25). As the confirmatory factor test showed in current research, the highest Fit Indices is for the component VP, 0.89, and the second position goes to component VC, 0.82 and the third place is VI, 0.74 and in the fourth and final position is VT with fit indices 0.66. That is, with the results of the research (Şahin, 2018), where the first rank was related to the component VC and the second rank was for VP.

Despite the ban on the use of social networks, Iran is has ranked the first in using Telegram all over the world, causing serious social and psychological damages for many Iranian people. In addition, since the government has banned such technologies, it has not provided much to prevent these damages. In the end, we suggest to minimize the destructive effects of the ever-increasing use of such technologies, there should be a set of supportive codified laws as well as training programs for families, instead of prohibiting them.

### Social Media Addiction Scale Student Form (SMAS-SF)

**EXPLANATION:** Different states related to social media use on the internet are given below. You are asked to read each expression carefully and put (X) for the expression you deem the most correct for you. Do not skip any item and mark each state please.

		1)Strongly disagree 2)Disagree 3)Neither agree nor disagree 4)Agree 5)Strongly agree				
1	I am eager to go on social media.	1	2	3	4	5
2	I look for internet connectivity everywhere so as to go on social media.	1	2	3	4	5
3	Going on social media is the first thing I do when I wake up in the	1	2	3	4	5

	morning.					
4	I see social media as an escape from the real world.	1	2	3	4	5
5	A life without social media becomes meaningless for me.	1	2	3	4	5
6	I prefer to use social media even there are somebody around me.	1	2	3	4	5
7	I prefer the friendships on social media to the friendships in the real life.	1	2	3	4	5
8	I express myself better to the people with whom I get in contact on social media.	1	2	3	4	5
9	I am as I want to seem on social media.	1	2	3	4	5
10	I usually prefer to communicate with people via social media.	1	2	3	4	5
11	Even my family frown upon, I cannot give up using social media.	1	2	3	4	5
12	I want to spend time on social media when I am alone.	1	2	3	4	5
13	I prefer virtual communication on social media to going out.	1	2	3	4	5
14	Social media activities lay hold on my everyday life.	1	2	3	4	5
15	I pass over my homework because I spend much time on social media.	1	2	3	4	5
16	I feel bad if I am obliged to decrease the time I spend on social media.	1	2	3	4	5
17	I feel unhappy when I am not on social media.	1	2	3	4	5
18	Being on social media excites me.	1	2	3	4	5
19	I use social media so frequently that I fall afoul of my family.	1	2	3	4	5
20	The mysterious world of social media always captivates me.	1	2	3	4	5
21	I do not even notice that I am hungry and thirsty when I am on social media.	1	2	3	4	5
22	I notice that my productivity has diminished due to social media.	1	2	3	4	5
23	I have physical problems because of social media use.	1	2	3	4	5
24	I use social media even when walking on the road in order to be instantly informed about developments.	1	2	3	4	5
25	I like using social media to keep informed about what happens.	1	2	3	4	5
26	I surf on social media to keep informed about what social media groups share.	1	2	3	4	5
27	I spend more time on social media to see some special announcements (e.g. birthdays).	1	2	3	4	5
28	Keeping informed about the things related to my courses (e.g. homework, activities) makes me always stay on social media.	1	2	3	4	5
29	I am always active on social media to be instantly informed about what my kith and kin share.	1	2	3	4	5

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