

The 16th International Scientific Conference
eLearning and Software for Education
Bucharest, April 23-24, 2020
10.12753/2066-026X-20-052

STAY AWAY-STAY AWAKE: A RESEARCH STUDY WITH UNIVERSITY STUDENTS

Nazime TUNCAY, PhD., Ayşe BULUT, PhD.
Cyprus Health and Social Sciences University, Güzelyurt, Cyprus
nazime.tuncay@gmail.com, draysebulut@gmail.com

***Abstract:** Social media is an unavoidable part of our life and its referred as an “integral” in many studies since it is compliment of life. Sometimes students’ stay awake all night for playing social media games or they get overinvolved in the social media life that they forget their real-life responsibilities. Is social media an escape from real life? Is it really the reason of our students’ staying awake? Does social media make students sleep or make them stay awake. What are the possible causes of sleeping problems that our students are facing these days? This research study is delivered to university students for the purpose of finding Social Media Addiction and Sleep Problem statistics of students by testing 7 hypotheses. To collect data SurveyMonkey questionnaires are sent to students via WhatsApp and interviews were delivered. The study consists of all the students in the university, so it is an unique study in this meaning. For statistics IBM SPSS Statistics 25 and IBM SPSS AMOS 26 Graphics is used. Demographic Information, Social Media Frequent User Statistics, Social Media Addiction and Sleeping Problem Statistics, Sleep Problem Frequencies, Sleep Problem & Addiction Interview Results, Stay Away-Stay Awake Model: What happens when students stay AWAKE are given in the paper. Nonetheless, there is a relation between Sleep Problem and Social Media Addiction. Students’ social media usage as shown in the Stay Away- Stay Awake model.*

***Keywords:** Sleeping problems; stay away model; social media addiction; university students.*

I. INTRODUCTION

In 21st century students are born in technology as digital natives and they share nearly everything on social media and they are using it every time and everywhere. Too much time on social media like Facebook, WhatsApp, Twitter or Instagram is spent. They forget the time passing while using it and they get so involved that they want to know more and more while surfing through internet. Students may choose using social media for different purposes and at different periods of time. Some people get on social media only at specific periods of the day, such as when they wake up or go to sleep [15]. Social media is not only used for entertainment purposes but also for educational purposes. More students are using internet they are addicted to it [5]. Smartphone addiction is one of the most important addiction problems of people. It may cause students staying awake late at night and not having good sleep. Sleep is important for students’ academic and physical health. Sleep problem may affect quality of life [13]. Bowler & Bourke (2019) found that students (age between 18-23 years old) use Facebook before going to sleep. In the research, they also reported that the content of the material viewed on computer screens before trying to sleep results in sleep disturbance [2].

By the widespread of internet use and social media, gaming addiction and gambling addiction become also a problem among students as well as all the other people. Zheng et al. (2016) pointed to consideration of the adverse effect of Internet use like inappropriate time and place. There are lots of negative effects of internet and social media [15]. On the other hand, Jaques et al. (2015) discussed many positive effects of internet and social media use for undergraduate students and found that

physiological, behavioural, phone and mobility data can all be used successfully to model happiness [9]. Also, Ekinci et al. results in the excessive and uncontrolled internet use have negative impact on students sleep habits [3]. Most of educational communication is now online, therefore most of the leisure and entertainment of students' is provided by the internet and video games, and many students find mobile phones have become an essential part of our connectivity and educational organisation [8].

Addiction is important problem in all human being's life, but may be very serve in students' life. These are sure to influence students mind, make them stay awake and have sleep problems [12]. Sufficient sleep quality and quantity are important for health and wellbeing and impaired sleep makes individuals more vulnerable to both psychological and physiological threats [11]. The strong association between social media use and sleep disturbance has clinical implications in health of students [12]. Social media addiction influences daily internet usage, and indirectly led to depression amongst adolescents [10]. Smartphone addiction could be treated like alcohol, something that is best managed in adulthood, with limitations beforehand. Otherwise we may come across to bigger problems [4] of smartphone addictions. Griffiths (2005, 2013) indicated that there are many reasons of addictive attitudes [6, 7]. Some are measured with special methods but what is more interesting is when one really knows that they are addicted. Social media can be very useful in students' life if they can control the time that they spent on it, otherwise it makes them awake in the midnight and away from the school activities. Social media addiction can be an important problem and it may result in sleep problems and problematic sleep habits [3]. Researchers are more interested with students who are aware of their addiction condition. Aim of this study is to find out the relation of this.

II. METHODS

The data is obtained in two ways: From online questionnaire which is prepared by using SurveyMonkey.com and from the 100 one-to-one interviews with the students. Online questionnaires sent via WhatsApp Groups to 500 university students in Cyprus. 316 students answered the questionnaire. There were 184 females and 132 males in our study. 150 dentistry department, 22 physiotherapy and rehabilitation, 21 child developments, 65 psychology, 30 coaching training, 6 recreation, 6 sports management, 16 nutrition and dietetics. 225 students were from Turkey, 65 from Cyprus and 26 from other countries. 118 first year students, 88 second year students, 80 third year students, 30 fourth year students. Aim of this research is to find relation between Social Media Addicted students and students who have Sleep Problem.

Sleep problem is considered in 4 dimensions: Talking in Sleep, Grinding in Sleep, Sleepy in Course and Nightmare. Some examples from the online questionnaire are:

1. How many hours should a student sleep? a)2-3 hours b) 4-5 hours c) 6-7 hours d)more than 7 hours
2. Have you ever slept during course a)Very Often b)Often c)Sometimes d)Rare e)Very Rare f) Never
3. How often do you use Facebook? a)More than 4 hours, b)2-3 hours c)1-2 hours, d)Less than 1 Hour, e)Never

Some examples from the one-to-one interviews are:

1. Why do you use Social Media?
2. When do you prefer using Social Media?
3. Does social media help your sleep?

III. RESULTS

Results are represented in 7 sections: *Demographic studies, social media frequent user statistics, social media and sleep problem, the most common sleep problems, types of addiction and sleeping problem, the most common sleeping problem, types of addiction and sleep problem, interview*

results: social media behaviours, interview results: social media behaviours and stay away – stay awake model.

3.1. Demographic statistics

In this section, distribution of students who have attained to the courses are given. Table 1 shows distribution of students according to the departments. 46.8% of the students are from Dentistry Faculty and 20.3% of the students are from Psychology.

Number	Department	Frequency(n)	Percentage(%)
1	<i>Dentistry Faculty</i>	148	46.8
2	<i>Child Development</i>	21	6.6
3	<i>Coaching Education</i>	20	6.3
4	<i>Nutrition and Dietetics</i>	16	5.1
5	<i>Physical therapy and rehabilitation</i>	20	6.3
6	<i>Psychology</i>	64	20.3
7	<i>Recreation</i>	6	1.9
8	<i>Sports management</i>	21	6.6

Table no. 1. Distribution according to departments

Table 2 shows age statistics of students. According to these statistics 89.9% of students are ages between 18-22; 7.6% of students are between 23-27.

	Frequency(n)	Percent(%)
<i>18-22</i>	284	89.9
<i>23-27</i>	24	7.6
<i>28-32</i>	5	1.6
<i>33-37</i>	2	0.6
<i>38-42</i>	1	0.3
<i>Total</i>	316	100.0

Table no. 2. Distribution according to age

Table 3 shows statistics between Female and Male students. According to this; 58.2% of the students were Female and 41.8 of the students are from Male.

	Frequency(n)	Percent(%)
<i>Female</i>	184	58.2
<i>Male</i>	132	41.8
<i>Total</i>	316	100.0

Table no. 3. Distribution according to sex

3.2. Social media frequent user statistics

“Frequent Social Media Users” refer the students who use social media more than 4 hours in a day. The figure 2 illustrates the statistics of social media frequent users. According to the data obtained from the students. The most commonly used social media are WhatsApp (n=198), Instagram (n=190) and YouTube (n=140).

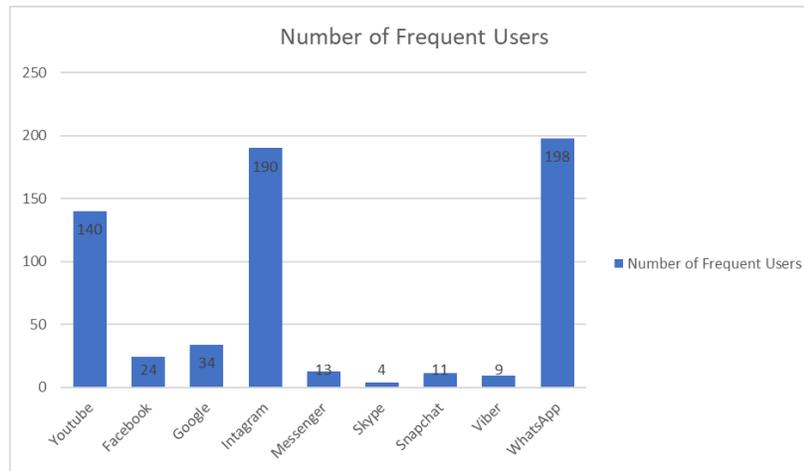


Figure no. 1. Social media usage statistics

In the bar chart, 34 students reported that they are *frequent users* of Google, 24 students reported that they are *frequent users* of Facebook, 13 students reported that they are *frequent users* of Messenger, 11 students reported that they are *frequent users* of Snapchat, 9 students reported that they are *frequent users* of Viber and 4 students reported that they are *frequent users* of Skype.

3.3. Social media addiction and sleeping problem

Figure 3 shows the relationship between students' social media usage hours and their sleeping problems. It is clearly seen that in the table the more students use social media, the more they have sleeping problems. Students who use social media more than 6 hours have more sleeping problems. Is this a coincidence or is this a fact?

Sleep Problems	Frequency (n)	Percentage (%)
Difficulty Waking Up	105	21
Being Sleepy in Course	97	19.4
Difficulty in Sleeping	87	17.4
Slept at Course	49	9.8
Nightmare	39	7.8
Teeth Grinding in Sleep	34	6.8
Speaking in Sleep	31	6.2
Need Medicine for Sleep	16	3.2

Table no. 4. Social media addiction and sleeping problem

3.4. The most common sleep problems

Table 2 shows the frequencies and percentages of sleep problems of students. The most common problem that students reported is "Difficulty Waking Up" (n=105, p=21%). the second common problem is "Being Sleepy in Course" (n=97, p=19.4%) and the third common problem is "Difficulty in Sleeping" (n=87, p=17.4%).

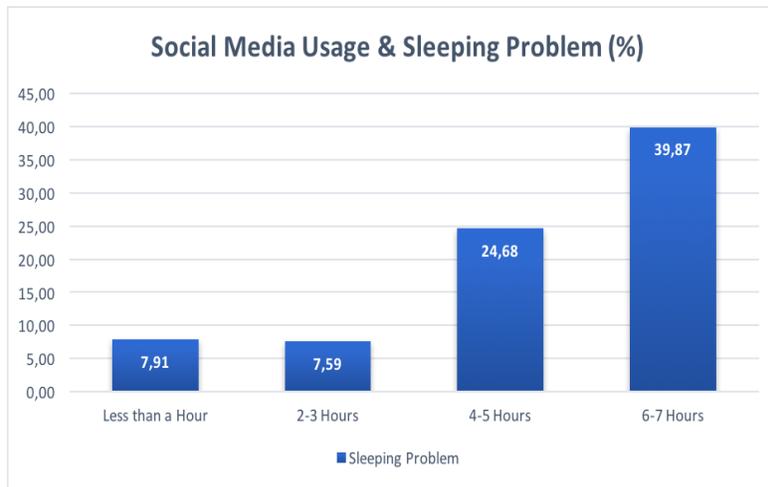


Figure no. 2. Sleep problem statistics

3.5 Types of addiction and sleep problem

Students were asked to describe themselves as addicted or not addicted and according to their answers alcohol addiction, digital game addiction, social media addiction, cigarette addiction and tea/coffee addiction statistics was calculated. Total sleep problem mark is found by adding sleep problem frequencies. The higher the sleep problem mark was interpreted as the higher the sleeping problem. According to these questionnaire results in figure 4 we can see that students who have “Social Media Addiction” have more sleeping problems than the students who have other addiction problems like “Tea/Coffee Addiction”. “Cigarette Addiction”. “Digital Game Addiction” and “Alcohol Addiction”.

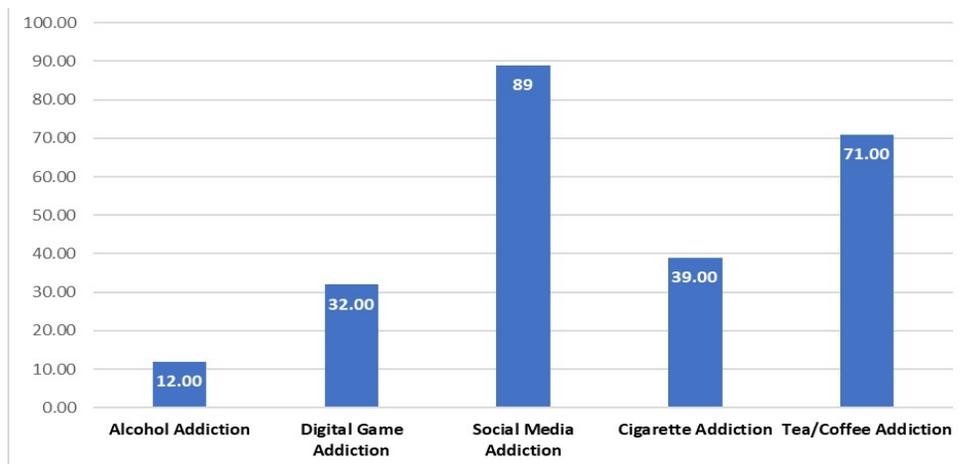


Figure no. 3. Types of addiction and sleep problem

3.6 Interview results: Social media behaviours

As a result of interviews we found that 90% participants “start using Social Media as soon as they wake up”; 88% “check their Social Media Messages before going to sleep”; 70% of “Social Media makes them sleepy”; 65% of “Social Media is like a therapy to them”; 60% “Bad news on Social Media upsets them”; 58% of “Social Media offers more than realistic life can offer”; 56% “Social Media is like a magazine”; 50% “They don’t like people sharing food on Social Media because they have limited budget to buy”; 48% “ don’t feel lonely when they are connected on Social Media”; 45% of them said“ Social Media communication is costless which is great! (table 5).

Social Media Behaviours	Percent (%)
• I start using Social Media as soon as I wake up	90
• I check my Social Media Messages before going to sleep	88
• Social Media makes me sleepy	70
• Social Media is like a therapy to me	65
• Bad news on Social Media upsets me	60
• Social media offers more than realistic life can offer	58
• Social Media is like a magazine	56
• I don't like people sharing food on social media while I have limited budget to buy	50
• Social Media distracts me from life activities	50
• I don't feel lonely when I am connected on Social Media	48
• Social Media communication is costless which is great!	45
• Social Media makes me awake	40
• Social Media makes me sleepy	36
• Depending on the Social Media news my mood changes	24

Table no. 5. Social media behaviours

Out of 100 students. 40% of them reported that Social Media makes them Awake. and 36% of them said that Social Media makes them sleepy. What is more 24% of them said that it depends what is on the Social Media that day. 50% of them complained that Social Media distracted them from their everyday life activities.

3.7 Stay Away – Stay Awake Model

Proposed model in table 6 is drawn in IBM SPSS AMOS 26 Graphics and the correlations among variables are calculated. The relations which are not significant like are deleted. There is a negative relationship between Digital Media Addiction and Addictive Behaviour ($p=0.027$), a positive relationship between Social Media Addiction and Digital Media Addiction ($p<0.01$). Also, there is a positive relationship between Social Media Addiction and Addictive Behaviour ($p<0.01$). There is a positive relationship between Stay Awake and Social Media Addiction ($p<0.01$). These are shown in table 6.

			Estimate	S.E.	C.R.	P
Digital Media Addiction	<--	Addictive Behaviour	0.744	0.088	-2.212	0.027
Social Media Addiction	<--	Digital Media Addiction	0.331	0.058	5.682	***
Social Media Addiction	<--	Addictive Behaviour	0.385	0.081	4.737	***
Stay Awake	<--	Social Media Addiction	-0.399	0.095	-4.222	***

Table no. 6. Model variable coefficients

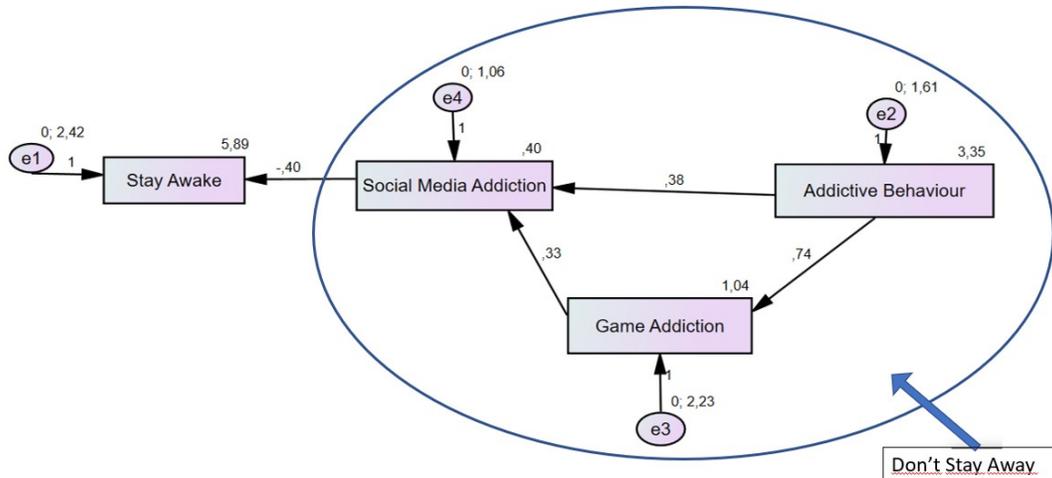


Figure no. 4. Stay Away-Stay Awake

The resulting model is shown in Figure no.4. The insignificant parameters were removed from the proposed model and a valid model was obtained where the variables which are related to each other are shown and the variables in the questionnaire and their correlation coefficients is shown. The structural equation model of the valid model shows a perfect fit and Chi-square values of the valid model ($\chi^2=0.563$; $df=2$, $p=0.755$) and fit indices (RMSEA=0.00; CFI=1.000) show that the model is valid.

IV. DISCUSSION AND CONCLUSIONS

Aim of this research is to find Social Media Addiction and Sleep Problem statistics of students. It is found that most commonly used social media are WhatsApp, Instagram and YouTube. The most common problems that students reported are “Difficulty Waking Up”, “Being Sleepy in Course” and “Difficulty in Sleeping”. Another result show that students who have “Social Media Addiction” and who use social media more than 6 hours have more sleeping problems.

Students are encouraged to use social media not only frequently but also for effective and useful purposes [1]. In this research study, it is found that the most common sleep problem is Difficulty Waking Up and this is related with Frequent Social Media Addiction which is among the most common addiction type of students (table 4).

It is interesting that 88% students report “I check my Social Media Messages before going to sleep” and 90% report “I start using Social Media as soon as I wake up” which shows that social media has an important effect on students sleep. Greater life satisfaction is associated with better sleep quality and longer mean sleep duration [14]. “Stay Away-Stay Awake” model shows that when you don’t stay away, you don’t stay awake.

Social media is being one of the most important communication tool in recent century. However, there are problems that every development brings with it. Social media addiction, like all the other addictions can threaten human health and may lead to a good escape from real life responsibilities. Our findings point out that Social Media Addiction may cause some pathological problems in individuals’ sleep habits. As we know sleep is a physiological requirement like eating and drinking but its problem may cause some problems such as lack of attention insomnia and etc. It is seen that a high percentage of students (90%) are using social media as soon as they wake up and an important percentage of students (80%) said that they are using it before going to sleep. Although low percentage of students (24%) answered that their mood depends on the news on social media. researchers think that this situation is more than they are aware of. There are some cases where

students are awoken or distracted with some surprises on social media. However, the reality seems to lie in the small percentage (24%) of student's answers: "My Mood changes according to the news on Social Media". Although there are many sleeping problem researches in the literature, sleep problems were underestimated and they were under-reported what is more they were under-treated. Therefore, half of affected individuals were not taking any steps to resolve their sleeping problems [11]. Limitations of this study are social media addiction is restricted with students their own answers. There may be lots of other social media addicted students that are not considered. Another limitation is sleep problem is only considered in 4 dimensions talking in sleep, grinding in sleep, sleepy in course and nightmare. Nonetheless, this research study provides a new perspective to sleeping problems by its quantitative and qualitative statistics as well as introducing a stay away- stay awake model. It is recommended to deliver more research studies on non-social media users to find other sleep problems of students. Further studies of researches will be to consider relation between students' academic success and their social media addiction.

Reference Text and Citations

- [1] Aydın, İrem Erdem; Üniversite öğrencilerinin sosyal medya kullanımları üzerine bir araştırma: Anadolu Üniversitesi örneği, *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2016, 35, pp.373-386.
- [2] Bowler, Jenny; Bourke, Patrick; Facebook use and sleep quality: light interacts with socially induced alertness, *Br J Psychol*, 2019, 110, pp.519-529.
- [3] Ekinci, Özalp; Çelik, Tanju; Savaş, Nazan; Toros, Fevziye; Association between internet use and sleep problems in adolescents, *Noro Psikiyatr Ars*, 2014, 51, pp.122-128.
- [4] Ghaemi, S Nassir; Digital depression: a new disease of the millennium?, 2020, *Acta Psychiatr Scand*, Retrieval Date: 29.01.2020, Retrieved from: <https://onlinelibrary.wiley.com/doi/10.1111/acps.13151>, DOI:10.1111/acps.13151.
- [5] Griffiths, Mark, 1998. *Internet addiction: does it really exist?*, Psychology and the Internet: intrapersonal, interpersonal, and transpersonal implications, Academic Press, pp. 61-75.
- [6] Griffiths, Mark; A 'components' model of addiction within a biopsychosocial framework, *Journal of Substance Use*, 2005, 10, pp. 191-197.
- [7] Griffiths, Mark D; Social networking addiction: Emerging themes and issues, *J Addict Res Ther*, 2013, 4, e118. [<http://dx.doi.org/10.4172/2155-6105.1000e118>].
- [8] Howard-Jones, Paul A, 2011. *The impact of digital technologies on human well-being*, Nominet Trust, pp. 98.
- [9] Jaques, N; Taylor, S; Azaria, A; Ghandeharioun, A; Sano, A; Picard, R. 2015, International Conference on Affective Computing and Intelligent Interaction (ACII).
- [10] Kircaburun, Kagan; Effects of gender and personality differences on Twitter Addiction among Turkish undergraduates, *J Educ Prac*, 2016, 7, pp. 33-42.
- [11] Léger, Damien; Poursain, B; Neubauer, David; Uchiyama, Misato; An international survey of sleeping problems in the general population, *Current Medical Research and Opinion*, 2008, 24, pp. 307-317.
- [12] Levenson, Jessica C; Shensa, Ariel; Sidani, Jaime E; Colditz, Jason B; Primack, Brian A; The association between Social Media use and Sleep Disturbance among Young Adults, *Prev Med*, 2016, 85, pp. 36-41.
- [13] Ness, Torunn Emilie Bækø; Saksvik-Lehouillier, Ingvild; The relationships between life satisfaction and sleep quality, sleep duration and variability of sleep in University students, *Journal of European Psychology Students*, 2018, 9, pp. 28-39.
- [14] Stacy, Grau; Susan, Kleiser; Laura, Bright; "Exploring social media addiction among student millennials", *Qualitative Market Research*, 2019, 22(2), pp. 200-216.
- [15] Zheng, Yumei; Wei, Dawei; Li, Junlong; Zhu, Tao; Ning, Huansheng; Internet use and its Impact on Individual Physical Health, *IEEE Access*, 2016, 4, pp. 5135-5142.