



## PREVALENCE OF NOMOPHOBIA AND CYBERLOAFING BEHAVIORS AMONG UNDERGRADUATE STUDENTS

**Thouqan Saleem Yakoub Masadeh<sup>i</sup>**

Associate Professor,  
Department of Curriculum and Instruction,  
College of Education,  
Najran University,  
Saudi Arabia

### **Abstract:**

The main aim of this study was to investigate the levels of nomophobia and cyberloafing among undergraduate students. Participants were 65 undergraduates from the department of English at Najran University. Nomophobia questionnaire (NMP-Q) and the cyberloafing scale were used as main instruments for data collection. The descriptive, inferential and analytical approach was used. Results indicated that undergraduate students had moderate levels of nomophobia and their practice levels of cyberloafing behaviors were somehow high. The most prominent factors that were affecting their nomophobia levels were their inability to keep in touch with their families and friends, anxiety if their families could not contact them once their smartphones are not ready to use, desire to keep checking their smartphones if they could not check them for a while, and battery run out in their smartphones. In accordance with cyberloafing, results showed that posting status updates on social networks, chatting with friends, reading tweets, retweeting the tweets they like, downloading needed applications, and watching videos online were the behaviors that were mostly practiced by the majority of undergraduates.

**Keywords:** nomophobia; cyberloafing; smartphone use; university undergraduates; Najran University

### **1. Introduction**

The 21<sup>st</sup> century is regarded as the century of information and communication technologies where individuals have the opportunity to enhance their capacities and capabilities along with the emergence of various applications, tools and devices (Ozdemir, Cakir, & Hussain, 2018). New technologies have become an integral part of our lives. They are spreading rapidly all over the world. Computer games, e-mail, the

---

<sup>i</sup> Correspondence: email [tmasadeh@yahoo.com](mailto:tmasadeh@yahoo.com)

Internet, cell phones and instant messaging that are all available in smartphones, have been essential parts of our live, mainly the youth (Ak & Yildirim, 2018). Smartphones, as part of these technologies, besides their applications are nowadays playing a key role in social connections, expression, information sharing, and achievement development ([Qutishata](#), [Lazarusa](#), [Razmy](#), & [Packianathan](#), 2020).

Students of today's generation are truly global. They are best described by technology generation where not only has technology affected the fields of entertainment but also the fields of study and communication. They nowadays live in what is called an open book environment and at the same time live the experience of flipped classrooms where teachers are only facilitators. Mobile phones have become a characteristic of students' modern life. The few clicks on the screens of their smartphones have removed borders between countries and cultures (Elfeky & Masadeh, 2016) and shifted communities into post-literate ones using brief texts and tweets. Not only these smartphones have been serving as a way of communication, but they also act as a social network tool, personal organizer, online shopping tool, calendar, alarm clock, and mobile bank. These smartphones can also combine services, such as commutainment, i.e. entertainment and communication, and edutainment, i.e. education and entertainment (Kalaskar, 2015).

Internet connection and smartphones are advantageous for all people nowadays. However, they should consider their demerits like any other modern technologies. Smartphones can provide access to different materials and generate the sense of comfort while connecting to others once the Internet connection is available, but they may also result in anxiety and unhealthy and negative psychological dependency. They can cause behavioral addiction for their users and their losing, forgetting and breaking results in Nomophobia, i.e. **No-mobile-phone phobia** (King, Valença, & Nardi, 2010). Internet connection, on the other hand can lead to cyberloafing, i.e. the use of Internet access and IT equipment for non-business or educational objectives during work or study hours (Aybas & Gungor, 2020). Nomophobia is really the disorder of the 21<sup>st</sup> century connected with new technologies. It refers to discomfort or anxiety caused by being out of contact with a mobile phone or computer. It is the pathologic fear of remaining out of touch with technology (King, Valença & Nardi, 2010). Cyberloafing is any electronically-mediated activity students engaged in during classes that instructors do not consider it class-related such as sending personal e-mail messages, playing online games, visiting deal-of-the-day Web sites, posting status updates on social networks and watching videos online (Gerow, Galluch, & Thatcher, 2010).

## 2. The Theoretical Framework and Previous Studies

### 2.1 Nomophobia

Nomophobia is one of the modern pathologies that has been born because of the impact that portable technologies have had on society and the dependence generated among citizens, especially towards smartphones ([Guerrero](#), [Belmonte](#), [Rodríguez](#), & [García](#),

2020). Nomophobic tendencies, in turn, can change individuals' daily habits. Negative emotions due to nomophobic tendencies like fear and anxiety especially in young people may affect their school lives and academic achievements. Students could be addicted to the Internet and consequently, have depression, low self-esteem, oversensitivity, guilt and despair (Gezgin & Çakır, 2016). Their sleep pattern is mostly affected by being nomophobic. They for instance, sleep with their mobile phones and wake up at least once during the night to check the messages and notifications. The anxiety of losing contact with others and the feeling of dependence on technology will certainly cause them to be unproductive the next day and have difficulty in learning at university (Rosen, Carrier & Cheever, 2013).

Nomophobia can be so powerful that many people never turn off their phones, even at night or during times that they will not be using their devices. They claim that they do not turn them off because, for instance, they need to keep in touch with family and friends or to be contactable for work reasons. They are even willing to interrupt life activities in order to respond to a call ([Bhattacharya](#), [Bashar](#), [Srivastava](#), & [Singh](#), 2019). Nomophobia is characterized by the fear of feeling generally disconnected or being without a phone because they will not be able to communicate with others and to access information. Therefore, they take their phones everywhere they go, spend many hours per day using their phones, and experience feelings of helplessness when they are separated from their phones (Yildirim & Correia, 2015). Furthermore, using mobile phone very frequently and excessively increases stress, anxiety, and depression and meanwhile decreases grades, life satisfaction and the sense of overall well-being (Lepp, Barkley, & Karpinski, 2014).

Higher levels of nomophobia correspond to higher levels of obsessiveness. Comorbidity with some disorders can cause nomophobia suggesting that people with anxiety and panic disorders may be more likely to develop nomophobia (King, Valença, Silva, Sancassiani, Machado, Nardi, 2014 and Lee, Kim, Mendoza, & McDonough, 2018). Nomophobia can be more common in teens and youth as they are mostly digital natives, i.e. born and brought up in the age of digital technology. Cell phones are often an integral part of their daily life. Their dependence on computers is limited as cell phones are easier and faster to use. Most of college students who belong to this age category spend more than nine hours per day on their cell phones (Roberts, Yaya, & Manolis, 2014). Nevertheless, academic performance may actually improve or not with multitasking on cell phone, depending on the nature of the tasks themselves (Grinols & Rajesh, 2014).

## **2.2 Cyberloafing**

It is true that internet and IT equipment are interesting for employees and students with regard to the many opportunities they create to increase their efficiencies, meanwhile, they are troublesome because of the problem of cyberloafing they create. Cyberloafing is originally defined as the use of Internet access and IT equipment for non-business or non-educational objectives during work or study hours (Aybas & Gungor, 2020). Cyberloafing was initially the concern of business and management studies, but recent developments

in technology and the widespread of smartphones moved it to the main concerns of education (Ragan, Jennings, Massey & Doolittle, 2014). Apart from the fact that cyberloafing is one of the phenomena that adversely affects the efficiency and productivity in learning and teaching activities in all educational settings (Saritepeci, 2019), it also has a negative impact on the learning environment as it causes distraction and affects students' attention and ability to focus (Soh, Yeik, & Lim, 2018). Moreover, using these devices for non-class-related purposes during lessons can be distracting and detrimental to students' academic performance as well as frustrating for instructors (Lim, 2002).

Other researchers believe that cyberloafing is a positive behavior to reduce the employees and students' stress, recharge their energy and increase their work performance and study hours (Baturay and Toker, 2015). Others claim that cyberloafing might lead to foster learning environment, flexibility, and creativity (Blanchard and Henle, 2008). It is widely assumed that utilization of Internet technologies positively affects the learners' outcomes because they provide them with the opportunity to always access the latest learning materials without time and place borders (Masadeh & Elfeky, 2016)). Nevertheless, students may misuse these technologies and use them for non-academic purposes, creating a hindrance to the effective integration of the Internet and ICTs into the learning environment (Yilmaza, Yilmaz, Öztür, Sezer, & Karademir, 2015).

In short, it can be argued that in spite of the advances that research on cyberloafing in education has revealed, its effects on students' performance are still unclear. Such research has offered interesting insights into fields like measuring cyberloafing activity, propensity of cyberloafing in classroom, the demographic and individual factors related to cyberloafing in educational settings, besides the relationship between cyberloafing in the classroom and learning (Wu, Mei, & Ugrin, 2017).

College students are the most rapid adopters of cell phone technology. Much of the research believes that there are associations between not only cell phone use and health but also between such use and their academic achievement, which is partly determined by the nature of the task they are engaged in when using the cell phone (Boumosleh & Jaalouk, 2018). The negative relationship identified between students' cell phone use and academic performance is moderated by the multi tasks that they carry out in the same time. They for example use their smartphones to text, check social networks, listen to music, surf the web, and play games along with studying in class or do homework while they are at home (Becker, Alzahabi, & Hopwood, 2013). Therefore, the present study seeks to study the prevalence of nomophobia factors among university undergraduates as well as their prominent behaviors of cyberloafing during class and lecture times.

In brief, universities, mostly in the time of Coronavirus Pandemic, are to introduce various learning platforms to support E Learning and On-line Learning. They have provided Internet-enabled tools to empower both instructors and students to communicate, to update course materials and grades, to access wireless networks for extra learning materials, and to hold on-line exams. Along with all these advances,

students are thought to have access to more timely, relevant and updated materials. Najran university, as well as universities all over the world has provided its staff and students with a platform called Blackboard where all duties to be carried out by both instructors and students are be done via it. Nevertheless, lack of class engagement, boredom, less attention, and low participation in class activities and discussion may occur because of students' nomophobia and cyberloafing behaviors (Barry, Murphy, & Drew, 2015 and Taneja, Fiore, & Fischer, 2015). Thus, this study aims to determine the levels of Nomophobia among undergraduate students at Najran University, Saudi Arabia. Moreover, it seeks to identify the most common behaviors of cyberloafing they practice. It mainly aims to answer these questions:

- 1) Do undergraduates at Najran University have nomophobia? To what extent?
- 2) What are the most prominent nomophobia factors among undergraduates at Najran University?
- 3) Do undergraduates at Najran University practice cyberloafing?
- 4) What are the most prominent cyberloafing behaviors undergraduates at Najran University usually practice?

### 3. Method

#### 3.1 Research Design

In this study, the quantitative approach was used to investigate the nomophobia levels and cyberloafing behaviors among undergraduates at Najran University and the variables affecting these levels.

#### 3.2 Participants

Participants in this study were (65) undergraduates who were studying at Najran University in the southern region in Saudi Arabia. They were enrolled in Curriculum 334 ( $N=19$ ), Curriculum 432: ( $N=20$ ), and Curriculum 431 ( $N=26$ ) courses provided by the College of Education to students at the English program-education track at the College of Languages and Translation. The study was conducted in the first semester of the academic year 2020–2021. Table 1 shows the demographic distribution of participant students.

**Table 1:** Demographic distribution of participant students

	N	%
<b>University Course</b>		
Curriculum 334	19	29%
Curriculum 432	20	31%
Curriculum 431	26	40%
<b>Total</b>	<b>65</b>	<b>100</b>
<b>Mobile Technology Usage</b>		
Less than 1 year	0	00%
1–2 Years	0	00%
2–3 Years	5	08%

Thouqan Saleem Yakoub Masadeh  
PREVALENCE OF NOMOPHOBIA AND CYBERLOAFING  
BEHAVIORS AMONG UNDERGRADUATE STUDENTS

	3-4 Years	15	23%
	4-5 Years	15	23%
	More than 5 years	30	46%
	<b>Total</b>	<b>65</b>	<b>100%</b>
<b>Daily Social Networks Usage</b>			
	Less than 1 hour	0	00%
	1-2 Hours	3	05%
	2-3 Hours	7	11%
	3-4 Hours	15	23%
	4-5 Hours	25	38%
	More than 5 Hours	15	23%
	<b>Total</b>	<b>65</b>	<b>100%</b>

### 3.3 Research Instruments

#### 3.3.1 The Nomophobia Scale

The (NMP-Q) developed and validated by Yildirim and Correia (2015) was used without any modification or adaptation. Originally, the questionnaire consists of (20) items distributed to four main themes: *not being able to access information* (items 1-4); *giving up convenience* (items 5-9); *not being able to communicate* (items 10-15); and *losing connectedness* (items 16-20). Items were rated in a seven-point Likert scale ranging from 1.00 = strongly disagree, 2.00 = agree, 3.00 = somehow disagree, 4.00 = neutral, 5.00 = somehow agree, 6.00 = agree, and 7.00 = strongly agree. Each participants' total score extended from 20 to 140 points. Therefore, mean scores ranging between (1.00 – 1.85) show no nomophobia, (1.86 - 2.71) show low level, (2.72 - 3.57), show somehow low level, (3.58 - 4.43) reveal moderate level. Mean scores from (4.44 - 5.29) reflect somehow high level; (5.30 - 6.15) indicate high level, while (6.15 - 7.00) represent a very high level of nomophobia.

#### 3.3.2 The Cyberloafing Scale

The cyberloafing scale used in the present study consisted of (20) items picked up from the 30-item scale developed and validated by Akbulut, Dursun, Donmez, & Sahin, (2016). Ten (10) items were removed to adapt the scale to Saudi community. Thus, the scale consisted of five main dimensions: *sharing* (items 1-7); *shopping* (items 8-9); *real-time updating* (items 10-13); *access to online content* (items 14-15); and *gaming* (items 16-20). Cyberloafing scale was used to measure the cyber activities commonly performed by Saudi university undergraduates. Responses were rated on a seven-point Likert scale, varying from 1.00 = never, 2.00 = rarely, 3.00 = occasionally, 4.00 = sometimes, 5.00 = frequently, 6.00 = usually and 7.00 = always. Therefore, mean scores that extend from (1.00 – 1.85) indicate very low level; (1.86 - 2.71) show low level; (2.7 - 3.57) represent somehow low level; (3.58 - 4.43) reveal moderate level. Mean scores from (4.44 - 5.29) indicate somehow high level, (5.30 - 6.15) show high level, whereas (6.15 - 7.00) indicate very high level of cyberloafing.

### 3.3 Procedures of data collection

The whole questionnaire consisting of the three main sections namely, the demographic information, the nomophobia scale, and the cyberloafing scale, was prepared using the google drive. Once students' consent to take part in the study, the questionnaire's link was sent to them via WhatsApp groups formed for the sake of conducting this study, within two days, all of them filled in the questionnaire and submitted it.

### 3.4 Analysis of collected data

After the classification of the collected data, the quantitative analysis program SPSS was used to analyze them. A diverse analysis that was descriptive, inferential and multivariate in nature was implemented in order to address the proposed research objectives. Data were processed using participants' proportions, mean scores, and standard deviations.

## 4. Findings

### 4.1 Findings Related to the First Question

In order to find whether undergraduates at Najran University have nomophobia, mean scores and standard deviations of participants' responses to the NMP-Q were used. Results are shown in Table 2.

**Table 2:** Mean scores & standard deviations of undergraduates' responses to NMP-Q

N		M	Factor Level
<b>Factor 1: Not Being Able to Access Information</b>			
1	I would feel uncomfortable without constant access to information through my smartphone	4.58	Somehow high
2	I would be annoyed if I could not look information up on my smartphone when I wanted to do so.	4.58	Somehow high
3	Being unable to get the news (e.g., happenings, weather, etc.) on my smartphone would make me nervous.	3.17	Somehow low
4	I would be annoyed if I could not use my smartphone and/or its capabilities when I wanted to do so	4.98	Somehow high
	<b>Mean score</b>	<b>4.33</b>	<b>Moderate</b>
<b>Factor 2: Losing Connectedness</b>			
5	Running out of battery in my smartphone would scare me.	5.03	Somehow high
6	If I were to run out of credits or hit my monthly data limit, I would panic.	3.83	Moderate
7	If I did not have a data signal or could not connect to Wi-Fi, then I would constantly check to see if I had a signal or could find a Wi-Fi network.	3.32	Somehow low
8	If I could not use my smartphone, I would be afraid of getting stranded somewhere	2.74	Somehow low
9	If I could not check my smartphone for a while, I would feel a desire to check it.	5.37	High
	<b>Mean score</b>	<b>4.06</b>	<b>Moderate</b>

Thouqan Saleem Yakoub Masadeh  
PREVALENCE OF NOMOPHOBIA AND CYBERLOAFING  
BEHAVIORS AMONG UNDERGRADUATE STUDENTS

<b>Factor 3: Not Being Able to Communicate</b>			
10	I would feel anxious because I could not instantly communicate with my family and/or friends.	5.00	Somehow high
11	If I didn't have my smartphone with me I would be worried because my family and/or friends could not reach me	5.51	High
12	I would feel nervous because I would not be able to receive text messages and calls.	2.78	Somehow low
13	I would be anxious because I could not keep in touch with my family and/or friends	5.88	High
14	I would be nervous because I could not know if someone had tried to get a hold of me.	2.32	Low
15	I would feel anxious because my constant connection to my family and friends would be broken.	2.35	Low
	<b>Mean score</b>	<b>3.97</b>	<b>Moderate</b>
<b>Factor 4: Giving Up Convenience</b>			
16	I would be nervous because I would be disconnected from my online identity.	4.23	Moderate
17	I would be uncomfortable because I could not stay up to-date with social media and online networks.	4.86	Somehow high
18	I would feel awkward because I could not check my notifications for updates from my connections and online networks.	2.43	Low
19	I would feel anxious because I could not check my email messages.	3.88	Moderate
20	I would feel weird because I would not know what to do if I do not have my smartphone.	2.06	Low
	<b>Mean score</b>	<b>3.51</b>	<b>Somehow high</b>
	<b>Overall Mean score</b>	<b>3.95</b>	<b>Moderate</b>

Table 2 shows that the overall mean score of graduates' responses to the NMP-Q was (M=3.95) proving that undergraduates at Najran University have nomophobia, but to a moderate level. These nomophobia levels ranged between high (M=5.88) and low (M=2.06). Students' anxiety because of their inability to keep in touch with their families and friends was at the top of the factors causing their nomophobia (M=5.58). Students' anxiety that their families will not be able to contact them once their smartphones are not ready to use was also of an effective source of their nomophobia (M=5.51). Students' desire to keep checking their smartphones if they could not check them for a while was another interesting cause of their nomophobia (M=5.37). Factors like battery run out in their smartphones (M=5.03); their anxiety of being unable to instantly communicate with their families and friends (M=5.00); and their disturbance if they could not use their smartphone when they want to do so (M=4.98) were also playing significant roles in students' nomophobia. Nevertheless, feeling weird because they would not know what to do (M=2.06) and being nervous because they could not know if someone had tried to get a hold of them (M=2.32) were the least important and effective factors in participants' nomophobia. Moreover, their anxiety because their constant connection to their families and friends would be broken (M=2.35) and their feeling awkward because they could not check their notifications for updates (M=2.51) were also not of much effect.

Concerning the mean scores of participants' responses to each subscale separately, Table 2 presents these mean scores.

**Table 3:** Mean scores of undergraduates' responses to each subscale

Nomophobia subscales	M	Level of Nomophobia
Factor 1: Not Being Able to Access Information	4.33	Moderate
Factor 2: Losing Connectedness	4.06	Moderate
Factor 3: Not Being Able to Communicate	3.97	Moderate
Factor 4: Giving Up Convenience	3.51	Somehow low
<b>Total mean score</b>	<b>3.95</b>	<b>Moderate</b>

Mean scores of students' responses to nomophobia factors in each subscale indicate that, not being able to access information (M=4.33), losing connectedness (M=4.06), and not being able to communicate (M=3.97) cause moderate level of students' nomophobia. However, the aspect of giving up convenience (M=3.51) was the least effective one.

## 4.2 Results Related to the Second Question

For the sake of answering the second question, in accordance with the most prominent nomophobia factors among undergraduates at Najran University, frequencies and proportions of participants' responses in each subscale were extracted. Results are shown in Tables 4, 5, 6, & 7.

### 4.2.1 Factor One: Not Being Able to Access Information

Frequencies and proportions of participants' responses to items in this aspect were calculated. Results are presented in Table 4.

**Table 4:** Distribution of participants' responses in not being able to access information aspect

Not Being Able to Access Information Aspect	Low level		Moderate level		High level	
	N	%	N	%	N	%
1. I would feel uncomfortable without constant access to information through my smartphone	21	32%	7	11%	37	57%
2. I would be annoyed if I could not look information up on my smartphone when I wanted to do so	21	32%	7	11%	37	57%
3. Being unable to get the news (e.g., happenings, weather, etc.) on my smartphone would make me nervous.	39	60%	10	15%	16	25%
4. I would be annoyed if I could not use my smartphone and/or its capabilities when I wanted to do so.	14	22%	9	14%	42	65%

Numbers and proportions of students' responses show that two thirds of them (65%) think that it is annoying for them if they could not use their smartphones and their capabilities when they want to do so. Meanwhile, more than half of them (57%) believe that their inability to access information constantly through their smartphones and their inability to look up information when they want to do so are also critical nomophobia factors for them. On the contrary, about two thirds of them (60%) think that being unable

to get the news (e.g., happenings, weather, etc.) on their smartphone would not make them nervous and consequently it is not a serious nomophobia factor for them.

#### 4.2.2 Factor Two: Losing Connectedness

Frequencies and proportions of participants' responses to items in this aspect were calculated. Results are presented in Table 5.

**Table 5:** Distribution of participants' responses in Losing Connectedness aspect

Losing Connectedness Aspect	Low level		Moderate level		High level	
	N	%	N	%	N	%
1. Running out of battery in my smartphone would scare me.	15	23%	5	8%	45	69%
2. If I were to run out of credits or hit my monthly data limit, I would panic.	32	50%	8	12%	25	38%
3. If I did not have a data signal or could not connect to Wi-Fi, then I would constantly check to see if I had a signal or could find a Wi-Fi network.	42	65%	5	7%	18	28%
4. If I could not use my smartphone, I would be afraid of getting stranded somewhere	48	74%	5	8%	12	18%
5. If I could not check my smartphone for a while, I would feel a desire to check it.	10	15%	4	7%	51	78%

Numbers and proportions of students' responses show that more than three quarters of them (78%) think that the desire to check their smartphones continually is their main nomophobia factor in this aspect. Whilst, more than two thirds of them (69%) believe that battery run out in their smartphones would scare them. On the contrary, about (65%) of them think that having no data signal or not being able to connect to a Wi-Fi network is not a real nomophobia factor for them. In addition, about (74%) do not consider that their inability to use their smartphones frightens them of being stranded somewhere.

#### 4.2.3 Factor Three: Not Being Able to Communicate

Frequencies and proportions of participants' responses to items in this aspect were calculated. Results are presented in Table 6.

**Table 6:** Distribution of participants' responses in Not Being Able to Communicate aspect

Losing Connectedness Aspect	Low level		Moderate level		High level	
	N	%	N	%	N	%
1. I would feel anxious because I could not instantly communicate with my family and/or friends.	14	22%	7	11%	44	68%
2. If I didn't have my smartphone with me, I would be worried because my family and/or friends could not reach me	3	5%	13	20%	49	75%
3. I would feel nervous because I would not be able to receive text messages and calls.	44	68%	11	17%	10	15%

Thouqan Saleem Yakoub Masadeh  
PREVALENCE OF NOMOPHOBIA AND CYBERLOAFING  
BEHAVIORS AMONG UNDERGRADUATE STUDENTS

4. I would be anxious because I could not keep in touch with my family and/or friends	3	5%	7	11%	55	85%
5. I would be nervous because I could not know if someone had tried to get a hold of me.	52	80%	6	9%	7	11%
6. I would feel anxious because my constant connection to my family and friends would be broken.	52	80%	13	20%	0	00%

Numbers and proportions of students' responses show that the majority of them (85%) think that inability to keep in touch with family and/or friends causes anxiety for them and so it is an important factor for being nomophobic. In addition, 75% of them would worry much if they do not have their smartphones with them because their families and friends would not be able to reach them. Whilst, more than two thirds of them (68%) believe that they feel anxious because they could not instantly communicate with their families and/or friends. However, about 80% stated that not knowing if someone had tried to get a hold of them does not drive them to be nervous. Meanwhile, 68% do not feel nervous if they would not be able to receive text messages and calls.

#### 4.2.4 Factor Four: Giving Up Convenience

Frequencies and proportions of participants' responses to items in this aspect were calculated. Results are presented in Table 7.

**Table 7:** Distribution of participants' responses in the Giving up Convenience Aspect

Giving Up Convenience	Low level		Moderate level		High level	
	N	%	N	%	N	%
1. I would be nervous when disconnected from my online identity.	21	32%	12	18%	32	49%
2. I would be uncomfortable because I could not stay up to-date with social media and online networks.	13	20%	10	15%	42	65%
3. I would feel awkward because I could not check my notifications for updates from my connections and online networks.	49	75%	9	14%	7	11%
4. I would feel anxious because I could not check my email messages.	30	46%	7	11%	28	43%
5. I would feel weird because I would not know what to do if I do not have my smartphone.	55	85%	8	12%	2	3%

Classification of students' responses to this aspect's items, show that (65%) stated that they feel uncomfortable because they could not stay up to-date with social media and online networks. Besides, half of them (49%) reported that they would be nervous when disconnected from their online identity in comparison with (32%) who stated that they would not be so. Results also reveal that (43%) feel anxious because they could not check their email addresses opposite to (46%) who do not feel so once they could not check their emails. The responses of (85%) of students show that feeling weird because they would

not know what to do if they do not have their smartphones with them was not an important factor in their nomophobia state.

### 4.3 Findings Related to the Third Question

Question 3 aimed to understand, whether undergraduates at Najran University practice cyberloafing and how intensive they do so. Thus, mean scores and standard deviations of participants' responses to cyberloafing scale were subjected to analysis. Results are shown in Table 8.

**Table 8:** Mean scores and standard deviations of students' responses to Cyberloafing scale

N	Cyberloafing behaviors	M	Rank	Activity level
1	I post status updates on social networks	5.97	1 <sup>st</sup>	High
2	I chat with friends	5.89	2 <sup>nd</sup>	High
3	I read tweets	5.88	3 <sup>rd</sup>	High
4	I retweet a tweet I like	5.80	4 <sup>th</sup>	High
5	I download applications I need	5.58	5 <sup>th</sup>	High
6	I watch videos online	5.51	6 <sup>th</sup>	High
7	I check online sport sites	5.37	7 <sup>th</sup>	High
8	I post tweets	4.89	8 <sup>th</sup>	Somehow high
9	I listen to music online	4.75	9 <sup>th</sup>	Somehow high
10	I check my friends' posts	4.72	10 <sup>th</sup>	Somehow high
11	I download music during class	4.42	11 <sup>th</sup>	Moderate
12	I watch shared videos	4.38	12 <sup>th</sup>	Moderate
13	I comment on shared photos	4.37	13 <sup>th</sup>	Moderate
14	I visit online shopping sites	4.20	14 <sup>th</sup>	Moderate
15	I favorite a tweet I like	3.98	15 <sup>th</sup>	Moderate
16	I share content on social networks	3.77	16 <sup>th</sup>	Moderate
17	I comment on trending topics	2.80	17 <sup>th</sup>	Somehow low
18	I check my friends' social networking profiles	2.62	18 <sup>th</sup>	Low
19	I play online games	2.35	19 <sup>th</sup>	Low
20	I shop online	1.98	20 <sup>th</sup>	Low
	<b>Overall mean score</b>	<b>4.46</b>		<b>Somehow high</b>

Table 8 shows that undergraduates at Najran university practice cyberloafing during lecture times to above the moderate level, i.e. somehow high (M=4.46). The twenty mean scores ranged between high (M=5.97) and low (M=1.98). Posting status updates on social networks was the behavior that students practice intensively (M=5.97). Chatting with friends (M=5.89), reading tweets (M=5.88), retweeting the tweets they like (5.80), and downloading applications they need (M=5.80) were highly practiced cyberloafing activities, too. Moreover, watching videos online (M=5.51) and checking online sport sites (M=5.37) were also prominent behaviors among participant students. However, checking friends' social networking profiles (M=2.62), playing online games (M=2.35), and shopping online (M=1.98) were rare behaviors practiced by participant students during the learning process time.

Concerning responses to cyberloafing subscales, Table 9 presents participants' mean score to each subscale.

**Table 9:** Mean scores of students' responses to each subscale

Cyberloafing subscales	M	Level of Cyberloafing	Rank
Dimension 3: Access to online content	5.07	Somehow high	1 <sup>st</sup>
Dimension 5: Real-time updating	4.67	Somehow high	2 <sup>nd</sup>
Dimension 1: Sharing	4.16	Moderate	3 <sup>rd</sup>
Dimension 4: Gaming	3.96	Moderate	4 <sup>th</sup>
Dimension 2: Shopping	3.09	Somehow low	5 <sup>th</sup>

Mean scores in Table 9 indicate that behaviors related to access to online content were the most practiced ones while behaviors belonging to shopping were the least practiced by undergraduates at Najran University.

#### 4.4 Findings Related to the Fourth Question

To determine what Cyberloafing behaviors mostly practiced by undergraduates at Najran University, frequencies and proportions of participants' responses were calculated. Analysis results are shown in Table 9.

**Table 9:** Distribution of participants' responses to cyberloafing behaviors

Dimensions of Cyberloafing scale	Low level		Moderate level		High level	
	N	%	N	%	N	%
<b>Dimension 1: Sharing</b>						
1. I check my friends' posts.	16	25%	10	15%	39	60%
2. I check my friends' social networking profiles	48	74%	10	15%	7	11%
3. I share content on social networks.	32	49%	10	15%	23	35%
4. I comment on shared photos.	23	35%	9	14%	33	51%
5. I post status updates on social networks.	0	0%	3	5%	62	95%
6. I chat with friends.	1	2%	9	14%	55	85%
7. I watch shared videos.	23	35%	12	18%	30	46%
<b>Dimension 2: Shopping</b>						
8. I shop online.	55	85%	5	8%	0	0%
9. I visit online shopping sites.	25	38%	7	11%	33	51%
<b>Dimension 3: Access to online content</b>						
10. I download music during class.	23	35%	8	12%	34	52%
11. I watch videos online.	3	5%	13	20%	49	75%
12. I listen to music online.	15	23%	11	17%	39	60%
13. I download applications I need.	5	8%	7	11%	53	81%
<b>Dimension 4: Gaming</b>						
14. I check online sport sites.	7	11%	9	14%	49	75%
15. I play online games.	52	80%	13	20%	0	0%
<b>Dimension 5: Real-time updating</b>						
16. I comment on trending topics.	46	71%	12	18%	7	11%
17. I post tweets.	14	22%	11	17%	40	62%
18. I read tweets	6	92%	0	0%	59	91%
19. I retweet the tweet I like.	1	2%	7	11%	57	88%
20. I favorite the tweet I like.	27	42%	9	14%	29	45%

Categorization of students' responses to cyberloafing behaviors in every dimension, as shown in Table 9. show that posting status updates on social networks (95% agreed) and chatting with friends (85% agreed) were the prominent cyberloafing behaviors in the sharing dimension. With respect to shopping dimension, visiting online shopping sites was the most practiced cyberloafing behavior though half of participants (51%) only stated that they do visit the shopping sites. Downloading needed applications in access to online content dimension was the behavior that the majority of students (81%) practice. In accordance with gaming behaviors in dimension four, checking online games was the most distinguished behavior that (75%) of students practice during lecture times. Students' practices in the real-time updating dimension reveal that reading tweets, retweeting tweets they like, and posting tweets were dominant behaviors practiced by (91%, 88%, & 62%) of participants respectively.

#### **4. Discussion**

The present study aimed to examine nomophobia level of undergraduate students and its link to cyberloafing behaviors. Results showed that undergraduate students use their smartphones to perform a set of activities. According to the NMP-Q, these activities were classified into four main dimensions namely not being able to access information, giving up convenience, not being able to communicate, and losing connectedness. Analysis of responses showed that the level of undergraduates' nomophobia level was moderate. Among the twenty factors associated with nomophobia, students' anxiety because of their inability to keep in touch with their families and friends was reported as the most prominent factor. Anxiety caused by the sense that their families will not be able to contact them once their smartphones are not ready to use was seen important, too. Their anxiety to keep checking their smartphones if they could not check them for a while was another source of their nomophobia. The fear of battery running out in their smartphones and the anxiety of not being able to communicate their families were also of significant role. These findings emphasize the findings of (Ak & Yildirim, 2018; Daei, Ashrafi-riza, & Soleymani, 2019; Gezgin & Çakır, 2016; Adnan & Gezgin, 2016; and Madhusudan, Sudarshan, Sanjay, Gopi1, & Fernandes, 2017) regarding students' level and activities of nomophobia. They also corroborate the results of Zahid (2019) regarding the anxiety caused by students' sense of nomophobia. In addition, they assert the results of Gezgin (2017) showing that the level of nomophobia is higher among students who check their smartphone more frequently during the day. One interesting interpretation of these results may be found in the fact that communication and mobile game applications provided in today's smartphones like WhatsApp, Viber, Facebook messenger are main reasons for the excessive use of these phones and Internet connections. Consequently, students with larger mobile Internet access will suffer from increased levels of nomophobic behavior.

On the other hand, the present study also aimed to examine the levels of undergraduates' cyberloafing behaviors. Results showed that those undergraduates

practice cyberloafing during lecture times. Their practice degree ranged from high to low levels with the result that their overall practice degree was somehow high, i.e. above the average. Posting status updates on social networks, chatting with friends, read tweets, retweeting a tweet they like and downloading applications they needed were the most practiced cyberloafing behaviors. These results are, of course in agreement with Yeik (2018), on the types of cyberloafing behaviors university students usually practice. Findings of this study can be seen in light of the fact that habit and intention are significant causes for cyberloafing behavior. Attitude, prescriptive norms and perceived behavioral control were significant in predicting students' intention to cyberloaf. Level of class engagement also play an important role in determining students' attitude towards cyberloafing (Soh, Yeik & Lim, 2018). Furthermore, certain factors like, for instance, variables of information technologies usage status, online learning activities usage status, academic self-efficacy, motivation, and cognitive absorption are effective in cyberloafing behaviors (Durak, 2019). That is availability of various types of technology, internet connections and developed smartphones, in addition to classroom environment encourage students to practice cyberloafing. Therefore, teachers have to engage students in lectures that require the use of such technology like searching for educational sites and scientific materials in order to help students use their smartphones appropriately and do not cyberloaf. Besides, lectures should be interesting and so students can be easily engaged in.

## **5. Conclusion**

The present study analyzes the factors leading to undergraduates' nomophobia in lecture times. It also analyzes the behaviors those undergraduates used to practice which at last lead to cyberloafing. Data collected showed that levels of nomophobia and cyberloafing among participants were due to their irregular use of their smartphones during learning. Results revealed that nomophobia level was moderate while cyberloafing was somehow high among participant undergraduates. Meanwhile, none can ignore the increased use of smartphones everywhere. Students all over the world are using their own smartphones for both educational and non-educational purposes and particularly for personal communication while studying. Thus, setting policies that can regulate the use of smartphones in classrooms becomes a necessity. Learners of all kinds nowadays should be informed about the importance of the effective and suitable utilization of new technologies inside classrooms and lecture halls. In brief, students, as well as teachers, should know the negative sides of technology usage as mobile learning that may cause nomophobia and cyberloafing.

## **Acknowledgement**

The researcher is thankful for all undergraduates at Najran University who took part in this study for their keenness to provide accurate replies and carefulness to make this study come to reality.

### Conflict of Interest Statement

The author declares no conflicts of interests.

### About the Author

Dr. Thouqan Saleem Yakoub Masadeh is an Associate Professor of English language Curriculum and Instruction at the department of Curriculum and Instruction at Najran University, Saudi Arabia. His main research interests are TESL, TEFL, ESP, Curriculum design, Teaching Strategies, Teacher Preparation, Technology in Education and any interesting topic in the field of education and mainly teaching English as a foreign language.

### References

- Adnan, M. & Gezgin, D. (2016). A Modern Phobia: Prevalence of Nomophobia among College Students Ankara University, *Journal of Faculty of Educational Sciences*, 49 (1): 141-158. <http://dergiler.ankara.edu.tr/dergiler/40/2128/22023.pdf>
- Ak, & Yildirim, S. (2018). *Nomophobia among Undergraduate Students and its Link to Mobile Learning*, Proceedings of EDULEARN18 Conference 2nd-4th July 2018, Palma, Mallorca, Spain. <https://library.iated.org/view/YASANAK2018NOM>
- Akbulut, Y., Dursun, O. O., Donmez, O., & Sahin, Y. L. (2016). In Search of a Measure to Investigate Cyberloafing in Educational Settings, *Computers in Human Behavior*, 55: 616-625. <https://doi.org/10.1016/j.chb.2015.11.002>
- Aybas, M. & Gungor, A. (2020). Does Cyberloafing Reduce Academic performance? A Comparative Study between Turkey and Poland, *Revista Argentina de Clínica Psicológica*, 29 (5). DOI: 10.24205/03276716.2020.1101
- Barry, S., Murphy, K. & Drew, S. (2015). From Deconstructive Misalignment to Constructive Alignment: Exploring Student Uses of Mobile Technologies in University Classrooms, *Computers & Education*, 81: 202–210. <https://doi.org/10.1016/j.compedu.2014.10.014>
- Baturay, M. H., Toker, S. (2015). An Investigation of the Impact of Demographic on Cyberloafing from an Educational Setting Angle, *Computers in Human Behavior*, 50: 358-366. <https://doi.org/10.1016/j.chb.2015.03.081>
- Becker, M., Alzahabi, R., & Hopwood, C. (2013). Media Multitasking is Associated with Symptoms of Depression and Social Anxiety. *Cyberpsychology, Behavior and Social Networking*, 16(2): 132-135. <https://doi.org/10.1089/cyber.2012.0291>
- [Bhattacharya, S.](#), [Bashar, M.](#), [Srivastava, A.](#) & [Singh, A.](#) (2019). Nomophobia: No Mobile Phone Phobia, *Journal of Family Medicine and Primary Care*, 8: 1297-300. [https://www.jfmpc.com/temp/JFamMedPrimaryCare841297-3385457\\_092414.pdf](https://www.jfmpc.com/temp/JFamMedPrimaryCare841297-3385457_092414.pdf)
- Blanchard, A. & Henle, C. A. (2008). Correlates of Different Forms of Cyberloafing: the Role of Norms and External Locus of Control, *Computers in Human Behavior*, 24 (3): 1067-1084. <https://doi.org/10.1016/j.chb.2007.03.008>

- Boumosleh, J & Jaalouk, D. (2018). Smartphone Addiction among University Students and its Relationship with Academic Performance, *Global Journal of Health Science*, 10 (1). DOI: [10.5539/gjhs.v10n1p48](https://doi.org/10.5539/gjhs.v10n1p48)
- Daei, A., Ashrafi-riza, H. & Soleymani, M. (2019). Nomophobia and Health Hazards: Smartphone Use and Addiction among University Students, *international Journal of Preventive Medicine*, 10. Doi: [10.4103/ijpvm.IJPVM\\_184\\_19](https://doi.org/10.4103/ijpvm.IJPVM_184_19)
- Durak, H. Y. (2019). Cyberloafing in Learning Environments Where Online Social Networking Sites are Used as Learning Tools: *Antecedents and Consequences*, *Journal of Educational Computing Research*, 58 (3): 539-569. <https://doi.org/10.1177%2F0735633119867766>
- Elfeky, A. I. M. & Masadeh, T. S. Y. (2016). The Effect of Mobile Learning on Students' Achievement and Conversational Skills, *International Journal of Higher Education*, 5 (3). doi:10.5430/ijhe.v5n3p20
- Gerow, J. E., Galluch, P. S. & Thatcher, J. B. (2010). To Slack or not to Slack: Internet Usage in the Classroom, *Journal of Information Technology: Theory and Implication*, 11, (3). <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1287&context=jitta>
- Gezgin, D. M. (2017). Exploring the Influence of the Patterns of Mobile Internet Use on university Students' Nomophobia Levels, *European Journal of Education Studies*, 3 (6). <https://core.ac.uk/download/pdf/236102745.pdf>
- Gezgin, D. M. & Çakır, Ö. (2016). Analysis of Nomophobic Behaviors of Adolescents Regarding Various Factors, *Journal of Human Sciences*, 13 (2): 2504-2519. <https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/3797>
- Grinols, A., & Rajesh, R. (2014). Multitasking with Smartphones in the College Classroom. *Business and Professional Communication Quarterly*, 77 (1): 89-95. <https://doi.org/10.1177/2329490613515300>
- [Guerrero](#), A. J. [Belmonte](#), J. L. [Rodríguez](#), J. M. & [García](#), A. M. (2020). Nomophobia: Impact of Cell Phone Use and Time to Rest among Teacher Students, *Heliyon*, 6. <https://doi.org/10.1016/j.heliyon.2020.e04084>
- Kalaskar, P. B. (2015). A Study of Awareness of Development of Nomophobia Condition in Smartphone User Management Students in Pune City. *ASM's International E-Journal on Ongoing Research in Management and IT*, 10: 320-326.
- [King](#), A. L., [Valença](#), A. M. & [Nardi](#), A. E. (2010). Nomophobia: The Mobile Phone in Panic Disorder with Agoraphobia: Reducing Phobias or Worsening of Dependence? *Cognitive and Behavioral Neurology*, 23 (1): 52-54. DOI: [10.1097/WNN.0b013e3181b7eabc](https://doi.org/10.1097/WNN.0b013e3181b7eabc)
- King, A. L., Valença, A. M., Silva, A. C., Sancassiani, F., Machado, S., Nardi, A. E. (2014). Nomophobia: Impact of Cell Phone Use Interfering with Symptoms and Emotions of Individuals with Panic Disorder Compared with a Control Group, *Clinical Practice & Epidemiology in Mental Health*, 10: 28-35. DOI: [10.2174/1745017901410010028](https://doi.org/10.2174/1745017901410010028)

- Yeik, K. K. (2018). Assessing Cyberloafing Behavior among University Students: A Validation of the Cyberloafing Scale, *Pertanika J. Soc. Sci. & Hum.* 26 (1): 409 – 424. [http://www.myjournal.my/filebank/published\\_article/81107/24.pdf](http://www.myjournal.my/filebank/published_article/81107/24.pdf)
- Lee, S., Kim, M., Mendoza, J. S., & McDonough, I. M. (2018). Addicted to Cellphones: Exploring the Psychometric Properties between the Nomophobia Questionnaire and Obsessiveness in College Students, *Heliyon*, 4 (11). DOI: <https://doi.org/10.1016/j.heliyon.2018.e00895>
- Lepp A, Barkley J. E., & Karpinski, A. C. (2014). The Relationship between Cell Phone Use, Academic Performance, Anxiety, and Satisfaction with Life in College Students, *Computers in Human Behavior*, 31: 343-350. <https://doi.org/10.1016/j.chb.2013.10.049>
- Lim, V.K.G. (2002). The IT Way of Loafing on the Job: Cyberloafing, Neutralizing and Organizational Justice, *Journal of Organizational Behavior*, 23 (5). Doi: <https://doi.org/10.1002/job.161>,
- Madhusudan, M., Sudarshan, B., Sanjay, T., Gopi1, A., & Fernandes, S. (2017). Nomophobia and its Determinants among the Students of a Medical College in Kerala, *International Journal of Medical Science and Public Health*, 6 (6). <https://www.bibliomed.org/mnsfulltext/67/67-1486473136.pdf?1612345803>
- Masadeh, T. S. Y. & Elfeky, A. I. M. (2016). Efficacy of Open-Source Learning Management Systems in Developing the Teaching Skills of English Language Student Teachers, *American Journal of Educational Research*, 4(4), 329-337. <http://www.sciepub.com/educatiOn/abstract/5781>
- Ozdemir, B., Cakir, O. & Hussain, I. (2018). Prevalence of Nomophobia among University Students: A Comparative Study of Pakistani and Turkish Undergraduate Students, *EURASIA Journal of Mathematics, Science and Technology Education*, 14 (4): 1519-1532. <https://doi.org/10.29333/ejmste/84839>
- Shaheen, H., Alkorma, S. & Alkalash, S. (2020). Nomophobia among Medical Residents, *Menoufia Medical Journal*, 33 (3): 1094-110. DOI: 10.4103/mmj.mmj\_17\_20
- Outishata, M., Lazarusa, E., R. Razmy, M. & Packianathan, S. (2020). University Students' Nomophobia Prevalence, Sociodemographic Factors and Relationship with Academic Performance at a University in Oman, *International Journal of Africa Nursing Sciences*, 13. <https://doi.org/10.1016/j.ijans.2020.100206>
- Ragan, E. D., Jennings, S. R., Massey, J. D., & Doolittle, P. E. (2014). Unregulated Use of Laptops over Time in Large Lecture Classes. *Computers & Education*, 78: 78-86. <https://doi.org/10.1016/j.compedu.2014.05.002>
- Roberts, J. A., Yaya, L. H., & Manolis, C. (2014). The Invisible Addiction: Cell-Phone Activities and Addiction among Male and Female College Students, *Journal of Behavioral Addictions*, 3 (4). <https://doi.org/10.1556/jba.3.2014.015>
- Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and Texting Made me Do it: Media-Induced Task Switching while Studying. *Computers in Human Behavior*, 29 (3): 948-958. <https://doi.org/10.1016/j.chb.2012.12.001>

- Saritepeci, M. (2019). Predictors of Cyberloafing among high school students: unauthorized access to school network, metacognitive awareness and smartphone addiction. *Educ Inf Technol*, 25, 2201–2219. <https://doi.org/10.1007/s10639-019-10042-0>
- Soh, P. C. & Yeik, K. K., & Lim, V. K. (2018). Understanding Cyberloafing by Students through the Lens of an Extended Theory of Planned Behavior, *First Monday*, 23 (6). DOI: <https://doi.org/10.5210/fm.v23i6.7837>
- Taneja, A., V. Fiore, V., & Fischer, B. (2015). Cyber-Slacking in the Classroom: Potential for Digital Distraction in the New Age, *Computers & Education*, volume 82: 141–151. Doi: <https://doi.org/10.1016/j.compedu.2014.11.009>
- Wu, J., Mei, W. & Ugrin, J. (2017). Student Cyberloafing In and Out of the Classroom in China and the Relationship with Student Performance, *Cyberpsychology, Behavior, and Social Networking*, 21 (3). <https://doi.org/10.1089/cyber.2017.0397>
- Yildirim C, Correia A. P. (2015). Exploring the Dimensions of Nomophobia: Development and Validation of a Self-Reported Questionnaire, *Computers in Human Behavior*, 49: 130-137. <https://doi.org/10.1016/j.chb.2015.02.059>
- [Yilmaza, F. G. K., Yilmaz, R., Öztürk, H. T., Sezer, B., & Karademir, T.](#) (2015). Cyberloafing as a Barrier to the Successful Integration of Information and Communication Technologies into Teaching and Learning Environments, *Computers in Human Behavior*, 45: 290-298. <https://doi.org/10.1016/j.chb.2014.12.023>
- Zahid, B. (2019). Nomophobia an Emerging Fear: An Experimental Exploration among University Students, *Peshawar Journal of Psychology and Behavioral Sciences*, 9 (1): 67-82. DOI: [https://doi.org/10.32879/pjpbs.2019.5.1.67\\_2](https://doi.org/10.32879/pjpbs.2019.5.1.67_2)

Thouqan Saleem Yakoub Masadeh  
PREVALENCE OF NOMOPHOBIA AND CYBERLOAFING  
BEHAVIORS AMONG UNDERGRADUATE STUDENTS

---

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).