

# A study evaluating the relationship between phubbing levels and empathic attitudes of college students

Fatoş Uncu<sup>1</sup>  Dilek Güneş<sup>2</sup>  Nur Özlem Kılıncı<sup>1</sup>   
Muhammet Emin Güneş<sup>3</sup> 

<sup>1</sup> Department of Public Health Nursing, Faculty of Health Sciences, Fırat University. Elazığ / Türkiye

<sup>2</sup> Department of Surgical Nursing, Faculty of Health Sciences, Fırat University. Elazığ / Türkiye

<sup>3</sup> Student, Fırat University. Elazığ / Türkiye

## Abstract

The objective of this research is to investigate the relationship between phubbing levels and the empathy attitude of college students. In our descriptive and correlational study, data were gathered from 528 college students studying in the undergraduate program of a university in Eastern Türkiye. Personal information form, Phubbing Scale, and Empathic Tendency Scale were employed as data collection forms. The research's findings were examined using the SPSS 22.00 package program, and all analyses were judged significant if the p-value is less than 0,05 ( $p < 0.05$ ). The average total scores of the college students were found to be  $42.77 \pm 19.09$  on the Generic Scale of Phubbing (GSP) and  $62.52 \pm 7.56$  on the Empathic Tendency Scale (ETS). We found a significant difference between the mean phubbing and empathic tendency scores of college students and the number of book readings per week, the number of friends, and the meeting with friends weekly. The conclusion was that there was a strong negative and significant association between students' total mean scores on the ETS and GSP scales ( $r = -0.581$ ,  $p = 0.00$ ).

**Keywords:** Empathic tendency, students, phubbing

**Citation:** Uncu U., Güneş D., Kılıncı NÖ. & Güneş ME. A study evaluating the relationship between phubbing levels and empathic attitudes of college students. Health Sci Q. 2024;4(1):53-60. <https://doi.org/10.26900/hsq.2180>

**Corresponding Author:**  
Fatoş Uncu  
Email: [funcu@firat.edu.tr](mailto:funcu@firat.edu.tr)



This work is licensed under a Creative Commons Attribution 4.0 International License.

## Introduction

This is the age of communication, and communication technologies are continuously changing [1]. Cell phones are undoubtedly one of the technologies that contribute greatly to human welfare. This device has turned into a sociocultural product that is widely used in human life [2,3]. The cell phone was initially marketed as a portable device that facilitated our daily lives. But soon after, due to its unconscious and excessive use, it irrevocably transformed the communication way between people [4].

Cell phones are regarded as an obstacle to social communication and interactions. Individuals use their cell phones to mingle and interact, but they also ignore individuals when they run into them because they use their phones to communicate with others. [4] This situation is called phubbing, a hybrid word of the words phone and snubbing (to ignore, humiliate) [1,4]. Phubbing defines the action of someone who looks at their cell phone in social settings and directs his attention to something else [1,3].

Empathy is a common psychological phenomenon in communication between people. Eisenberg and Strayer (1987) define empathy as the capability of an individual to understand others' emotional states and to express similar emotional experiences and emotional reactions to others. Empathy is an essential channel for the enhancement of individuals' health and social adaptation and functions as the basis for positive outcomes and moral development [5,6]. A high level of empathy enhances interpersonal relationships and promotes pro-social behaviors [7]. On the contrary, a low level of empathy leads to the externalization of aggressive behavior [5,8]. The research conducted by Przybylski and Weinstein (2012) also found a decrease in the empathy level perceived by individuals in conversations where there is a phone [9]. Shellenbarger (2013) indicated that being engaged with a cell phone during a chat decreases eye contact and decreases the feeling of emotional connection [10]. Nakamura (2015), however, reported that the sense of emotional connection will be lost in a conversation where the focus is on the smartphone [11].

During an in-person conversation, the association between the listener and the speaker is established and maintained with the help of non-verbal behaviors such as active listening, empathy, paying close attention, using body language accurately and effectively, and maintaining eye contact with the other individual. These non-verbal gestures are not seen when people show Phubbing behavior, which can cause distance and neglect between people [8,12]. This study aims to ascertain the effect of the phubbing level of college students on their empathy levels. We believe, based on the literature review, that there is an association between phubbing behavior and empathic attitudes. We propose the below hypothesis:

Hypothesis 1: Phubbing level is negatively related to empathic tendency behavior.

Hypothesis 2: Phubbing level is positively related to empathic tendency behavior.

## Material and Methods

### Purpose of the Study

This research used a descriptive and correlational design to investigate college students' phubbing behaviors and the impact of phubbing behaviors on their empathy attitudes. When the literature was scanned, no study was found examining the relationship between phubbing and empathic attitudes of university students. Therefore, it is thought that the results obtained from the sample determined for the study and the scales used will contribute to the literature. This descriptive and correlational research was carried out in line with the STROBE checklist.

### Target Population and Sampling for the Study

The target population of the study consisted of students studying in the undergraduate program of a university in Eastern Türkiye. Also, the sample of the research comprised 528 students determined by power analysis with a confidence interval of 0.95, a bias level of 0.05, an effect size of 0.3, and a population-representative power of 0.95. Only those students who conformed to the criteria of inclusion, were willing to enroll in the study, and gave a written consent form (N=424) were enrolled in the research. The response rate of the study was 80%.

The inclusion requirements for the study were (1) students attending an undergraduate program, (2) having a smartphone, (3) volunteering to enroll in the study, and submitting a consent form. Not freely accepting to participate in the study and not having a smartphone were the two requirements for exclusion.

Data were gathered from the students using the online data collection technique via the link [https://docs.google.com/forms/d/e/1FAIpQLSen051jz8lbrAEvRBFp6n4j3fj1f6koGIC-ZqC1k4Tgo0ILQ/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSen051jz8lbrAEvRBFp6n4j3fj1f6koGIC-ZqC1k4Tgo0ILQ/viewform?usp=sf_link)

### Data Collection Methods

The data of the research were gathered with the help of personal information form, phubbing scale, and empathic tendency scale.

#### *Personal Information Form*

It was developed to collect identifying information about the students who were willing to participate in this study. It includes information such as age, gender, which department they are studying in, the number of friends, and the number of books they read.

#### *Phubbing Scale*

The scale developed by Chotpitayasunondh and Douglas (2018) assesses the negative impacts of phone use on social relationships among college students [12]. The Turkish reliability and validity of the scale were carried out by Ergün et al. (2020) [13]. The phubbing scale is composed of four subscales and 15 items. The sub-dimensions of the scale are; nomophobia as the first sub-dimension, interpersonal conflict as the second sub-dimension, self-isolation as the third sub-dimension, and problem acceptance as the fourth sub-dimension. The scale is a seven-point Likert-type scale. Cronbach's alpha value of the scale was determined as 0.95. In this study, the total Cronbach's alpha coefficient of the scale was calculated as 0.912.

#### *Empathic Tendency Scale*

It is a measurement tool developed by Üstün Dökmen (1988) that takes into account the personality characteristics of people with empathic sensitivity [14]. The scale has 20 items and a 5-point Likert type. There are negative

items (8 items) on the scale. The Cronbach alpha value of the Empathic Tendency Scale was determined as 0.82. In this study, the scale's total Cronbach alpha coefficient was obtained as 0.86.

### Data Analysis

SPSS v22.0 package software was employed for statistical analyses. Following the descriptive statistical methods (percentage, number, standard deviation, mean), the Kolmogorov-Smirnov test was used to analyze if the data were distributed normally. For the comparison of two normally distributed groups, Student's t-test was used, and ANOVA was employed for comparisons of three or more groups with normal distribution. Regression and correlation analyses were utilized to analyze the relational data [15].

### Ethics Committee Approval

Firat University Non-Interventional Research Ethics Committee granted clearance for the study's execution (2021/12-36). The articles in the Declaration of Helsinki were taken into consideration at all stages of the study.

### Results

The descriptive characteristics of the volunteers enrolled in the study are displayed in Table 1. The average age of the students was  $21.68 \pm 1.87$ , 71.2% were male, 38.9% were in the second grade, 50.9% read a book once a week, 57.8% had 5-14 friends and 63.2% met with their friends 1-3 days a week.

According to Table 1, the mean phubbing score of college students who did not read books ( $62.98 \pm 17.76$ ) was significantly higher than the mean phubbing scores of college students who read one book per week ( $34.92 \pm 5.25$ ) and those who read more than one book per week ( $21.21 \pm 2.61$ ). As the number of books read per week increased, a statistically significant difference was detected in the mean phubbing scores of college students. The Post Hoc (LSD) test performed to detect the difference between the student groups showed that the mean phubbing score of the college students who did not read books was higher than the mean phubbing score of the college students who read more than one book per week, which was a significant difference (Table

1). The mean empathic tendency score of college students who do not read books ( $58.41 \pm 8.36$ ) is lower than the mean empathic tendency scores of college students who read one book per week ( $63.86 \pm 5.52$ ) and college students who read more than one book per week ( $67.81 \pm 6.52$ ). There is a significant difference between the mean empathic tendency scores of college students according to the number of book readings per week. Post Hoc (LSD) test performed to detect the difference among the groups showed that the average empathic tendency score of the college students who did not read books was lower than the average empathic tendency score of the college students who read more than one book per week and that this difference was statistically significant (Table 1).

College students with fewer than 5 friends have the highest mean phubbing score of  $85.00 \pm 4.25$ , as shown in Table 1. As the number of friends increased, a significant difference emerged between the mean phubbing scores of college students. Post Hoc (LSD) test conducted to find out the difference between the groups revealed that the mean phubbing score of the college students with the least number of friends was higher than the mean phubbing score of the college students with the highest number of friends and that this difference was statistically significant (Table 1). College students with less than 5 friends had the lowest mean empathic tendency score of  $45.80 \pm 5.80$ . There is a difference that is statistically significant between the mean empathic tendency score of college students as the number of friends increases. The Post Hoc (LSD) test conducted to analyze the difference between the groups showed that the mean empathic tendency score of the college students with the least number of friends was lower than the mean empathic tendency score of the college students with the highest number of friends, and the difference was significant (Table 1).

Table 1 shows that the mean phubbing score of college students who do not meet with friends is the highest ( $78.87 \pm 14.68$ ). A statistically significant difference was also detected between the mean phubbing scores of college students as the frequency of meeting with friends rose. After the Post Hoc (LSD) test conducted for the

intergroup difference analysis; it was seen that the mean phubbing score of the college students who did not meet with their friends was bigger than the mean score of the college students who met with their friends every day and created a significant difference (Table 1). The mean empathic tendency score of the college students who did not meet with their friends was  $52.44 \pm 7.89$  and had the lowest mean empathic tendency score. A significant difference emerged between the mean empathic tendency scores of college students as the frequency of meeting with friends increased. Post Hoc (LSD) test conducted to ascertain the difference between the groups revealed that the average empathic tendency score of the college students who did not meet with their friends was lower compared to the mean score of the college students who met with their friends every day, which was a significant difference (Table 1).

When looking at the overall mean scores of the college students, the average total score of the General Phubbing Scale was  $42.77 \pm 19.09$  and the average total score of the Empathic Tendency Scale was  $62.52 \pm 7.56$  (Table 2).

When the correlation between the average total scores of the empathic tendency scale and the General Phubbing Scale of the students was assessed (Table 3); it was detected that there was a strong negative significant relationship between the average total scores of the ETS and GSP of the students ( $r = -0.581$ ,  $p = 0.00$ ).

Information about the model created by considering the relationship between general phubbing and the empathic tendency is given below. It was found that the regression model that was obtained to understand the relationship between students' general phubbing and empathic tendency was significant ( $F = 215.285$ ,  $p = 0.00$ ). In the model, it was ascertained that the general phubbing scale explained 33.7% ( $R^2 = 0.337$ ) of the empathic tendency. According to the model, it was detected that the general phubbing scale increased the empathic tendency (Beta = -0.581) negatively by 0.581 times (Table 4).

**Table 1.** Empathic tendency scale (ETS) and phubbing score averages according to the descriptive characteristics of the participants.

			<b>Phubbing</b>	<b>ETS</b>
	<b>n</b>	<b>%</b>	<b>Ort ± Ss</b>	<b>Ort ± SS</b>
<b>Gender</b>				
<b>Woman</b>	302	71.2	43.65±19.11	62.97±7.82
<b>Male</b>	122	28.8	40.59±18.97	61.41±6.79
<b>Statistics</b>				
<b>t</b>			1.496	1.066
<b>P</b>			0.135	<b>0.05</b>
<b>Education status</b>				
<b>1st Class</b>	45	10.6	39.68±13.56	61.77±6.54
<b>2nd grade</b>	165	38.9	43.93±18.39	61.95±7.52
<b>3rd grade</b>	54	12.7	43.22±18.07	62.11±7.07
<b>4th grade</b>	160	37.7	42.30±21.38	63.45±7.99
<b>Statistics</b>				
<b>F</b>			0.634	1.320
<b>P</b>			0.59	0.26
<b>Number of Reading Books per</b>				
<b>Week</b>	148	34.9	62.98±17.76	58.41±8.36
<b>Doesn't read books</b>	216	50.9	34.92±5.25	63.86±5.52
<b>Reading One Book a Week</b>	60	14.2	21.21±2.61	67.81±6.52
<b>Reading More than One Book a</b>				
<b>Week</b>				
<b>Statistics</b>				
<b>F</b>			406.509	48.873
<b>P</b>			<b>0.00</b>	<b>0.00</b>
<b>Number of Friends</b>				
<b>Less than 5 Friends</b>	5	1.2	85.00±4.25	45.80±5.80
<b>5-14 Friends</b>	244	57.5	52.68±16.20	60.71±7.09
<b>15-50 Friends</b>	153	36.1	28.50±4.10	65.47±6.55
<b>50+ Friends</b>	22	5.2	18.09±1.79	65.81±8.53
<b>Statistics</b>				
<b>F</b>			185.138	25.794
<b>P</b>			<b>0.00</b>	<b>0.00</b>
<b>Frequency of Meeting with a</b>				
<b>Friend per Week</b>				
<b>Not meeting</b>	63	14.9	78.87±14.68	52.44±7.89
<b>1-3 Days</b>	268	63.2	41.10±8.87	63.29±5.02
<b>4-6 Days</b>	60	14.2	25.33±2.31	67.16±7.27
<b>Every day</b>	33	7.8	19.21±2.19	67.06±7.82
<b>Statistics</b>				
<b>F</b>			479.126	76.145
<b>P</b>			<b>0.00</b>	<b>0.00</b>



## Discussion

In this research, the association between phubbing and empathic tendency skills of college students, whether phubbing predicts empathic skills, and whether or not there are differences between groups according to gender, the number of book readings per week, the number of friends, and the frequency of meeting with friends per week were investigated.

The difference between the college students' mean phubbing and empathic tendency scores and the number of books read per week, the frequency of weekly meetings with friends, and the number of friends was statistically significant. As the number of book readings per week, the frequency of meeting with friends, and the number of friends decreased, the mean phubbing score of the students increased and the mean empathic tendency score decreased. According to the findings of this research, people who develop regular book reading habits, read more than one book a week, have friends and meet with them more frequently show less behavior of being interested in the phone and ignoring the social environment due to the phone and have better empathy skills. Phubbing is a distraction and undermines the benefits of social interactions

[12,16]. By reducing the sense of togetherness, it can impair communication quality, relationship satisfaction, and empathy skills [12,16]. Being phubbed is perceived as more irritant than being ignored by reading a magazine, as shown by Mantere et al. (2021), and this is typically due to people's perception that smartphones are a worse reason to ignore others than reading a magazine [17]. In a dissertation study conducted by Ballı (2020) on college students, it was stated that college students with high phubbing levels read less than one book a week due to engaging with the phone [8]. When the findings obtained from the number of book readings per week, having friends, and the frequency of meeting with friends are taken together in our research, we can presume that the level of phubbing is high.

In our study, students' phubbing negatively predicts their tendency to be empathetic, which supports our hypothesis. People with high phubbing levels have low empathic tendencies (Table 4). Empathy is defined as understanding and recognizing other people's emotions. Jones and Paulhus (2011) discovered that low levels of empathy would discourage college students from considering that other people might have

**Table 2.** Examination of the total mean scores of the participants.

<i>Scale and Sub-Factors</i>	Min-Max	Avg.	ss
<i>General Phubbing</i>	15-105	42.77	19.09
<i>Empathic Tendency Scale</i>	40-84	62.52	7.56

**Table 3.** The relationship between participants' Empathic Tendency Scale and Phubbing Scale Total Scores.

	1	2
<b>1.</b> Empathic Tendency Scale	1.0	
<b>2.</b> General Phubbing	<b>0.00</b>	1.0

**Table 4.** The prediction of the Empathic Tendency of the Participants' Phubbing Situations.

Variable	B	Standard Error B	$\beta$	T	p
<b>Fixed</b>	72,374	,735		98,459	,000
<b>Model</b> General Phubbing	-0,230	,016	-,581	-14,673	,000
<b>R = 0,581 R<sup>2</sup> = 0,337</b>					

desires and wishes [18]. In addition, individuals with low empathy tend to be dependent on social media and the internet because they are less social [19,20]. Social media and internet addictions lead to increased frequency of smartphone use [21,22]. Accordingly, it can be asserted that these individuals may also have high phubbing behaviors.

## Conclusion

It was concludable that a strong negative relationship exists between the level of phubbing and the empathic tendencies of college students. Particularly, it is apparent that college students with high phubbing levels have low empathy skills. It is critical to assess the empathy skills of college students before they start their careers. Providing empathy skills to young people during their college education is very important to reduce phubbing attitudes. In the age of technology, it should be deemed necessary to direct young people to various social, cultural and sports-related activities in order to reduce the time they spend on social media platforms. It is important to plan guiding training to ensure conscious and beneficial use of social media platforms. We advise future researchers to carry out interventional studies to improve their communication skills and to utilize technology wisely.

## Acknowledgment

The researchers would like to extend their sincere thanks to all the students who volunteered and contributed to this study.

## Funding

The authors declared that this study has received no financial support.

## Conflict of interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

## References

1. Narimani M, Ranjbar M. The role of loneliness and family cohesion in the tendency of teenagers to problematic use of mobile phones. *Communication Res.* 2016;23:45-62. doi: [10.22082/cr.2016.21005](https://doi.org/10.22082/cr.2016.21005).
2. Chotpitayasunondh V, Douglas KM. How phubbing becomes the norm: The antecedents and consequences of snubbing via smartphone. *Comput Human Behav.* 2016;63:9-18. doi: [10.1016/j.chb.2016.05.018](https://doi.org/10.1016/j.chb.2016.05.018).
3. Mousavi SK, Shafiq Y. Addiction to mobile in Tehran: A sociological study. *J Sociol Iran.* 2016;17(4):139-64.
4. Plant S. *On the mobile: The effects of mobile telephones on social and individual life.* Schaumburg: Motorola; 2001.
5. Weisz E, Cikara M. Strategic regulation of empathy. *Trends Cogn Sci.* 2021;25:213-27. doi: [10.1016/j.tics.2020.12.002](https://doi.org/10.1016/j.tics.2020.12.002).
6. Xu X, Liu Z, Gong S, Wu Y. The relationship between Eempathy and attachment in children and adolescents: Three-level meta-analyses. *Int J Environ Res Public Health.* 2021;19(3):1391. doi: [10.3390/ijerph19031391](https://doi.org/10.3390/ijerph19031391).
7. Di Fabio A, Kenny ME. Connectedness to nature, personality traits and empathy from a sustainability perspective. *Curr Psychol.* 2021;40:1095-106. doi: [10.1007/s12144-018-0031-4](https://doi.org/10.1007/s12144-018-0031-4).
8. Ballı ŞN. Üniversite öğrencilerinde sosyotelizmin incelenmesi [in Turkish]. Master's thesis. Hacettepe University. Ankara. 2020.
9. Przybylski AK, Weinstein N. Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality. *J Soc Pers Relatsh.* 2012;30(3):237-46. doi: [10.1177/0265407512453827](https://doi.org/10.1177/0265407512453827).
10. Shellenbarger S. Just look at me in the eye already - The workforce perils of staring at our phones and elsewhere: The ideal gaze lasts lasts 7 to 10 seconds. *The Wall Street Journal.* 2013; 28:05.13.p

11. Nakamura T. The action of looking at a mobile phone display as nonverbal behavior/ communication: A theoretical perspective. *Comput Human Behav.* 2015;43:68-75. [doi: 10.1016/j.chb.2014.10.042](https://doi.org/10.1016/j.chb.2014.10.042).
12. Chotpitayasunondh V, Douglas KM. Measuring phone snubbing behavior: Development and validation of the Generic Scale of Phubbing (GSP) and the Generic Scale of Being Phubbed (GSBP). *Comput Human Behav.* 2018;88:5-17. [doi: 10.1016/j.chb.2018.06.020](https://doi.org/10.1016/j.chb.2018.06.020).
13. Ergün N, Göksu İ, Sakız H. Effects of phubbing: Relationships with psychodemographic variables. *Psychol Rep.* 2020;123(5):1578-613. [doi: 10.1177/0033294119889581](https://doi.org/10.1177/0033294119889581).
14. Dökmen Ü. Empatinin bir modele dayandırılarak ölçülmesi ve psikodrama ile geliştirilmesi [in Turkish]. *Ankara University J Faculty Edu Sci.* 1988;62(21):155-90. [doi: 10.1501/Egifak\\_0000000999](https://doi.org/10.1501/Egifak_0000000999).
15. Karagöz Y. SPSS ve AMOS uygulamalı nitel-nicel-karma bilimsel araştırma yöntemleri ve yayın etiği. Nobel Akademik Yayıncılık, Ankara: 2017; 402. p
16. Dwyer RJ, Kushlev K, Dunn EW. Smartphone use undermines enjoyment of face-to-face social interactions. *J Exp Soc Psycho.* 2018;78:233-9. [doi: 10.1016/j.jesp.2017.10.007](https://doi.org/10.1016/j.jesp.2017.10.007).
17. Mantere E, Savela N, Oksanen A. Phubbing and social intelligence: Role-playing experiment on bystander inaccessibility. *Int J Environ Res Public Health.* 2021;18(19):10035. [doi: 10.3390/ijerph181910035](https://doi.org/10.3390/ijerph181910035).
18. Jones DN, Paulhus DL. The role of impulsivity in the dark triad of personality. *Personality and individual differences.* 2011;51(5):679-82. [doi: 10.1016/j.paid.2011.04.011](https://doi.org/10.1016/j.paid.2011.04.011).
19. Akat M, Arslan C, Hamarta E. Dark triad personality and phubbing: The mediator role of fomo. *Psychol Rep.* 2023;126(4):1803-21. [doi: 10.1177/00332941221109119](https://doi.org/10.1177/00332941221109119).
20. Zhan S, Shrestha S, Zhong N. Romantic relationship satisfaction and phubbing: The role of loneliness and empathy. *Front Psychol.* 2022;3:967339. [doi: 10.3389/fpsyg.2022.967339](https://doi.org/10.3389/fpsyg.2022.967339).
21. Liu C, Ma J. Development and validation of the Chinese social media addiction scale. *Pers Individ Differ.* 2018;134:55-9. [doi: 10.1016/j.paid.2018.05.046](https://doi.org/10.1016/j.paid.2018.05.046).
22. Liu C, Ma J. Social support through online social networking sites and addiction among college students: The mediating roles of fear of missing out and problematic smartphone use. *Curr Psychol.* 2020;39(6):1892-9. [doi: 10.1007/s12144-018-0075-5](https://doi.org/10.1007/s12144-018-0075-5).