



ISSN (E): 2277-7695  
ISSN (P): 2349-8242  
NAAS Rating: 5.23  
TPI 2022; SP-11(6): 1071-1076  
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[www.thepharmajournal.com](http://www.thepharmajournal.com)  
Received: 01-03-2022  
Accepted: 04-04-2022

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## Impact of mobile phone on interpersonal communication among student of Assam agricultural university

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**DOI:** <https://doi.org/10.22271/tpi.2022.v11.i6Sn.13116>

### Abstract

Mobile phones being the key components of the user's life have made life much easier. They are considered to be one of the most significant devices available that tends to make a huge difference in our day to day activity. Moreover, users prefer mobile phones due to many governing factors like portability, compactness, cost effective, user friendly, user satisfaction and much more. Additionally, mobile phones have become the center of attraction for the upcoming generation and the mobile phone seems to serve our communication needs better than any other communication technologies available in the market. Further, mobile phone usage provides us with a wealth of information just at the tip of our finger and our kin are found to be just a click away from us. Connecting to acquaint has become much simple and quick by the virtue of mobile phones. This study aims to understand the relationship between demographic characteristics of students and mobile use pattern as well as to understand the effect of mobile phone use pattern on interpersonal communication among students. The results show that mobile phone use pattern is completely a personal choice of the user and mobile phone use pattern shows significant association with gender and age, whereas, educational level is seen to have little or no influence on the mobile use pattern. Furthermore, significant impact of mobile phone on interpersonal communication of the student has been found in the study.

**Keywords:** Face-to-face communication, interpersonal communication, mobile phone, mobile phone use pattern, young generation

### 1. Introduction

Technological devices are designed to make significant differences in the lives of the user, mobile phones are one such great example. Mobile phone has become a key component of the user's life and it is no longer just a technological device as it is now considered a societal factor that is adjacent to every key component of the user's life (Srivastava, 2005) <sup>[11]</sup>. Mobile phone have now turned to be a social asset rather than just being a technological device (Campbell, 2005) <sup>[6]</sup>. New media's such as mobile phones and internet are an important part of our everyday life. These new media has made connectivity easier and distance is no longer a barrier. The upsurge of new media has improved communication from one point of the world to the other (Waqar, 2010) <sup>[16]</sup>.

Moreover, the ease of carrying around a mobile phone and easy access to every application required for everyday life has made the mobile phone a popular device. Users prefer mobile phones due to its comfort, portability, user-satisfaction as compared to other standard phones. These qualities of a mobile phone make it an efficient device. At the same time, mobile phones are less costly as compared to that of a computer. Simultaneously, mobile phones are also lightweight which makes it a portable device. Further, mobile phones can help us to customize our information or data as per our liking which in turn helps us work and manage day to day activities more expeditiously and to keep track of our schedule simultaneously keep us updated about the current and upcoming events (Nath and Mukherjee, 2015).

Today, mobile phone has become a center of attraction especially for the younger generation and has gained popularity in the past few years and it is certainly being used for communication as well. The number of mobile phone users are seen to be dramatically increasing in the past one decade more specifically among the younger generation depending upon the various facilities available through a mobile phone (Kim and Mitomo, 2006).

Additionally, communication technologies like the mobile phones allow us to interact with other people in various ways. Nowadays, using a mobile phone for communication is one of the most pervasive modes of interpersonal communication among the various types of mediated communication, particularly for college students. Thanks to its mobility, the mobile phone seems to serve our communication needs better than any other communication technologies (Ashiq *et al.*, 2013) [2]. It was found that mobile phones have the capacity to fulfill innumerable requirements of the users, such as entertainment, access to information, togetherness and much more. The users find mobile phones to be more satisfactory as compared to other technologies such as e-mails, IMs and other media's (Ramirez *et al.*, 2008) [10]. Furthermore, a mobile phone, for its user, can be the source of unexampled information from around the globe. It can be used to connect people with just a click. It is one of the most resourceful devices just at the fingertips of the user.

However, just like any other device or technology, mobile phones too come with disadvantages. Mobile phones are seen to pose serious threats to the health of the users. The electromagnetic waves and radiofrequency radiations (RFR) that are emitted by the mobile phones are absorbed by the human body and this in turn is said to affect the human health (Nath and Mukherjee, 2015). Further, mobile phones are also the major source of distraction among college students (Tindell and Bohlander, 2012) [15].

Further, communication is an essential skill which is important in various working environment. The term interpersonal communication, at any given instance, is the way of exchanging or interchanging ideas, thoughts, and emotions or may just be any general information between two or more people in a direct set up i.e. face to face setting. In simple expression, interpersonal communication is the social interaction between two or more person (Berger and Roloff, 2019) [4]. Interpersonal communication being the ability to relate with people can take place in verbal as well as written communication format. It can occur in a one to one setup or even in a group setting. Simultaneously, interpersonal communication requires a person to have the capacity to handle various people in varying situations and the ability to make them feel comfortable. It can include gestures such as eye to eye contact, body language, hand gestures, other sign languages and a combination of all these. The most common functions of interpersonal communication are to listen, talk and to resolve disputing situations. Depending upon the situation, interpersonal communication can be verbal and non-verbal (Knapp and Daly, 2011). Moreover, among students interpersonal communication is considered to be one of the major ability to socialize, connect and correspond with their fellow mates. Meanwhile, when a student fails in interpersonal communication, his capacity to develop his creativity and to increase his academic achievements is compromised (Barseli *et al.*, 2019) [3].

Communication via mobile phone is said to be popular for being more time efficient as compared to interpersonal communication i.e. face to face setup (Berghel, 1997) [5]. However, persuasive use of mobile phones has explicit impact on interpersonal communication. In a case study, to understand the impact of mobile phones on interpersonal communication of students from the Mount Kenya University, it was stated that the increased level of mobile phone uses among the students has most likely reduced their direct i.e. face to face communication (Wanjiru, 2015). Additionally,

mobile phones, as they have become a more integrated part of the social life of every individual, can result into unintended disputes and unforeseen repercussions due to the use of these technologies (Tertadian, 2012) [13]. Mobile phone use pattern among students have shown that mobile phones being more popular among the youths can be a potential source of harm and can ultimately lead to dependency. For instance, people's daily mobile phone uses have affected face-to-face interaction because they tend to use mobile phones with those whom they often meet in person (Thapa *et al.*, 2018) [14].

Therefore, considering all the aspects and upsurge of mobile phone, the purpose of this study is to examine the impact of mobile phone on interpersonal communication among the students of Assam Agricultural University. The researcher considers that understanding the impact of mobile phones on interpersonal communication is of utmost importance. More specifically, under the mobile phone use pattern following parameters has been considered in this study for more precision:

- Time spent
- Use of various mobile functions
- Preferences of using alone or group

### 1.1. Objective

**OBJ 1:** To study the relationship between demographic characteristics of students and mobile use pattern

**OBJ 2:** To assess the effect of mobile phone use pattern on interpersonal communication

## 2. Materials and Methods

### 2.1. Study site

A non-experimental survey was carried out from January to March in the year 2021 during the 2020-2021 academic session, to study the impact of mobile phone on Interpersonal communication among Student of Assam Agricultural University. The study site was purposively selected as the campus of Assam Agricultural University consists of 4 colleges out of which a sample size of 100 students was selected purposively under non-probability sampling method. The students who participated in this survey are currently studying in Assam Agricultural University, Jorhat. Researcher was adhering to the following research criteria:

1. The age of the participants ranged from 19-22 years
2. Sample must be a student of Assam Agricultural University

### 2.2. Method of data collection

Primary data consists of data collected directly by the researcher using present data collection tools such as questionnaires, interviews, measurements, observations, diaries, critical studies and brainstorming (Kothari, 2004) [9]. Before distributing the self-administered questionnaire to the respondents, they were assured that the data to be collected was purely for research purposes and would remain confidential. Data gathering was done through the survey by the use of a self-structured questionnaire. Questions were designed to capture the participant's mobile phone using pattern, amount of time spent on various mobile phone activities, uses of various mobile applications and the amount of time spent on mobile phones. Thus, the questions were formulated by keeping the 3 parameters in mind i.e. time spent, use of various mobile functions, preferences of using mobile phone alone or in group. Uses of mobile phones are

the independent variable in this study as this was expected to affect the interpersonal communication. Interpersonal communication is the dependent variable in this study as it was expected to be affected by the mobile phones uses. Initially, a pilot study was conducted for a sample of 30 students, the result of which depicted that the face-to-face communication (interpersonal communication) was affected by the mobile phone use pattern. These results successfully exhibit the reliability and validity of the questionnaire. Henceforth, the questionnaire (Goggle form) was distributed through Online networking platforms like: WhatsApp and Facebook messenger. 100 Sample of students were considered in order to ensure that the sample is the representative of the students' population. The questionnaire proved to be an invaluable tool to the researcher as it was used to independently guide the data gathering processes, enhancing the reliability and validity of the collected data. The structured questions were set to draw out responses on account of the pattern in which the mobile phones were being used by the students, ensured that data collected was complete (sufficient) for satisfactorily investigating the impact of mobile phone use pattern on interpersonal communication mode-which is the objective of the study.

### 3. Results and Discussion

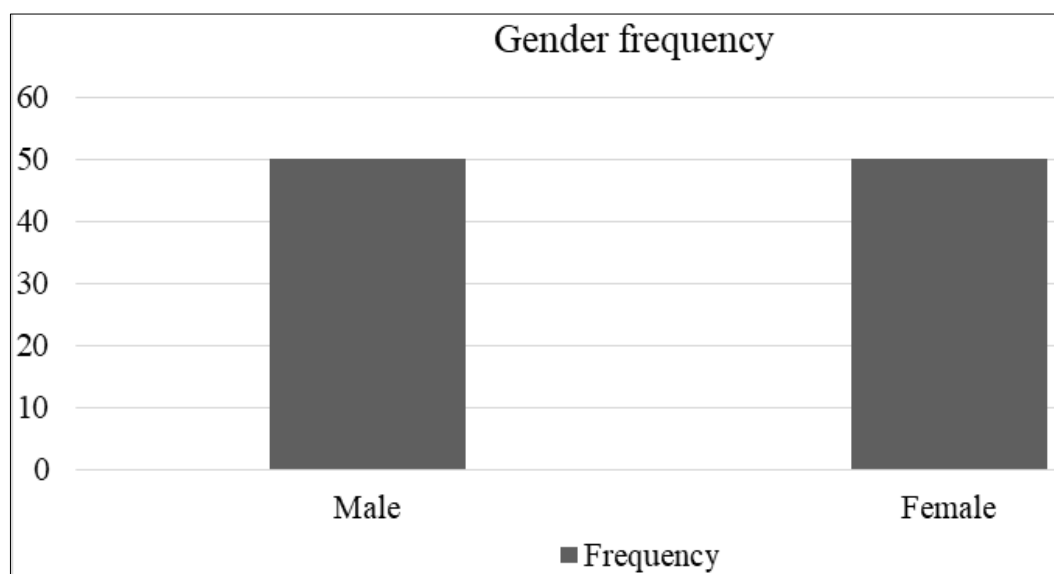
The study sample comprised a total of 100 respondents. Descriptive statistics, frequency %, chi-square test, Pearson's correlation coefficient were employed for analyzing the data. The descriptive analysis section recorded Demographic profile of the respondents and focused on age, gender and education level etc. Chi-square test was applied to test the relationship between mobile use pattern and the personal characteristics, whereas Pearson's correlation coefficient was used to assess the correlations of different aspects of mobile phone use pattern as well as to assess the correlation between mobile phone use patterns and inter personal communication.

#### 3.1. Personal Characteristics

The questionnaire was offered to both male and female respondents. The percentage of male and female respondents is found to be equal i.e. 50% each. The respondents in this study falls between the ages of 19-22 years, out of which the highest number of respondents are 19 years old (30%), 22% were 20 years old, 20% were 21 years old and 28% were 22 years old. Further, upon considering the educational level, all of them were found to be pursuing Bachelor of Science (B.Sc.) but were from different classes. 28% were form 1<sup>st</sup> year, 23% were from 2<sup>nd</sup> year, 22% were from 3<sup>rd</sup> year and 27% were from 4<sup>th</sup> year (See Table 1).

**Table 1:** Distribution of respondents according to Personal characteristics

Student's personal characteristics	Category	Adolescents (N=100)		Total
		F	%	
Gender	Male	50	50	50
	Female	50	50	50
Age	19	30	30	30
	20	22	22	22
	21	20	20	20
	22	28	28	28
Educational level	B.Sc. 1 <sup>st</sup> year	28	28	28
	2 <sup>nd</sup> year	23	23	23
	3 <sup>rd</sup> year	22	22	22
	4 <sup>th</sup> year	27	27	27



**Fig 1:** Graphical representation of gender frequency

Figure 1 represents the graph of male and female respondents of the questionnaire. It shows that male and female respondents were 50% each.

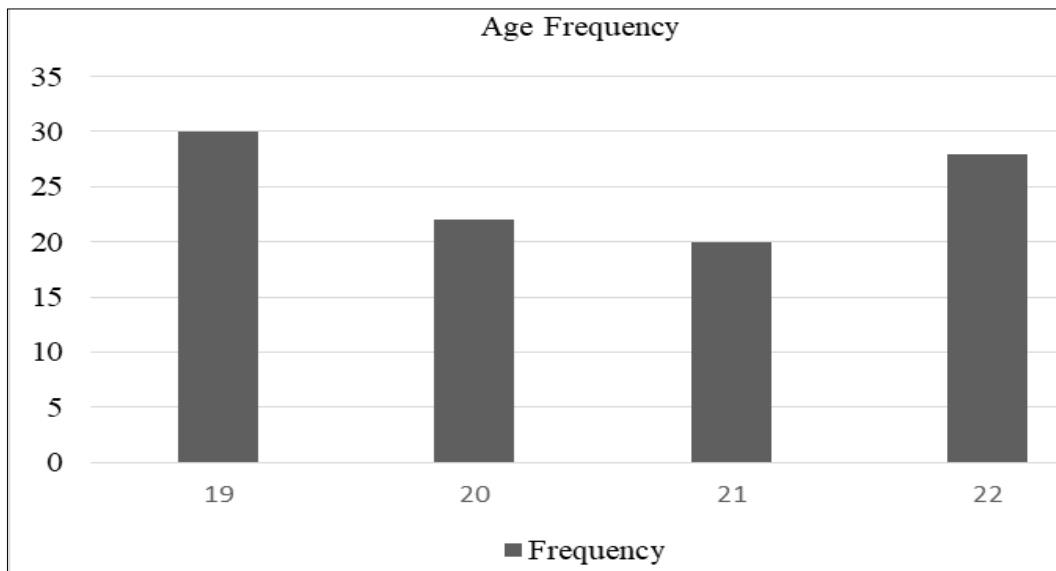


Fig 2: Graphical representation of age frequency

Figure 2 represents the age graph of the respondents who took part in the study.

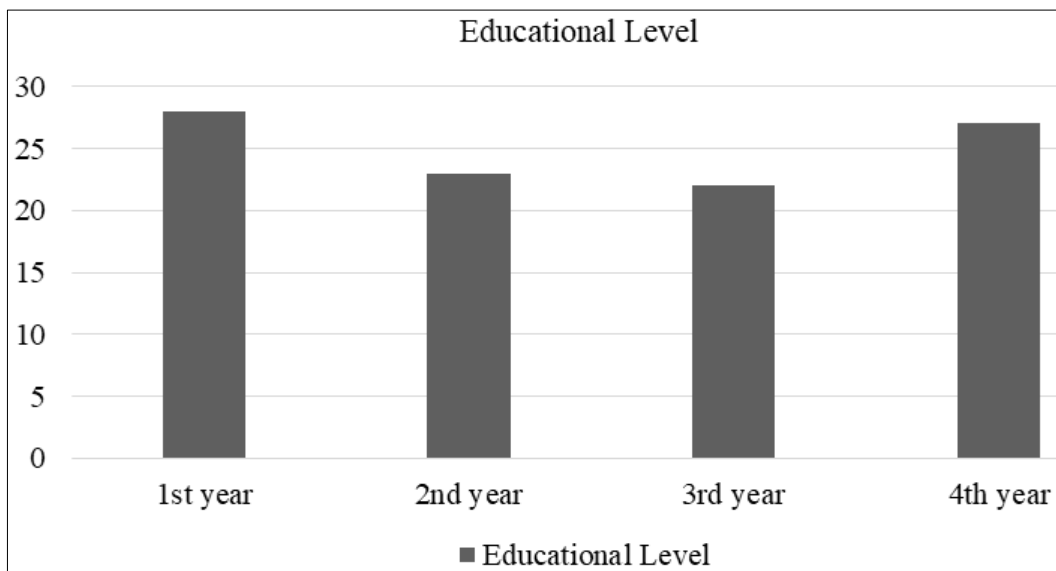


Fig 3: Graphical representation of educational level

Figure 3 represents the educational level of the respondents. It shows that majority of the respondents were from 1<sup>st</sup> year followed by 4<sup>th</sup> year, 2<sup>nd</sup> year and 3<sup>rd</sup> year.

**3.2. Relationship between mobile phone use pattern and personal characteristics**

Relationship between mobile phone use pattern and personal characteristics of the respondents was analyzed by using Chi-square test. In the results, the calculated value of chi square test of Independence for gender is 6.07 and the critical value is found to be 5.99. Thus, at a significance level of 0.05, the gender and mobile phone use pattern is seen to have a statistically significant relationship. Similarly, in terms of age the calculated value of chi square test of Independence is found to be 14.1 and the critical value is 12.59. Therefore, at a significance level of 0.05, it can be inferred that there is a statistically significant relationship between mobile use pattern and age. Whereas, upon considering educational level of the respondents there has been no significant relationship

between mobile use pattern and educational level as the calculated value of chi square test of Independence is found to be 10.3 and the critical value was found as 12.59 at a significance level of 0.05 (see Table 2). From the results, it can be said that mobile phone use pattern is completely influenced by gender and age, whereas, educational level has no influence on mobile phone use pattern. Both males and females tend to use mobile phone for their personal requirements and educational requirement is usually the least influential factor for using a mobile phone. The students, be it a male or female, tend to use mobile phone for personal factors like texting, voice calling, video calling, clicking pictures and other entertainment requirements. Moreover, mobile phone use pattern being influenced by age is justified by the fact that it is seen that younger generations are more inclined towards using mobile phones which is usually directly associate with activities and applications entitled for entertainment purpose as well as those designated for social interaction among each other. Whereas, the older people are

seen to use mobile phones less as compared to the younger generation and they usually use mobile phones for its classic purpose and additionally for information gathering process (Andone *et al.*, 2016) [1].

**Table 2:** Association of mobile use pattern and personal characteristics

Personal Characteristics	N	Calculated value	DF	Critical value
<b>Gender</b>				
Male	50	6.07*	2	5.99
Female	50			
<b>Age</b>				
19	30	14.1*	6	12.59
20	22			
21	20			
22	28			
<b>Educational level</b>				
B.Sc. 1 <sup>st</sup> year	28	10.3	6	12.59
2 <sup>nd</sup> year	23			
3 <sup>rd</sup> year	22			
4 <sup>th</sup> year	27			

\*Calculated value of chi square test of Independence

Significant level=0.05, df: Degree of freedom

**3.3. Correlation of different aspects of mobile phone use pattern**

To assess the relationship between different aspects of mobile phone use pattern among both the genders, Pearson’s correlation coefficient was employed. Results in table 3 shows that there is a positive correlation between the variables- time spent on mobile phone and use of various mobile phone function,( $r = 0.441$  for males and  $r = 0.12$  for females)(see Table 3) which means that the more the respondents spend time on mobile phone greater is the use of mobile phone functions. These results can be justified by the fact that the younger generation uses diversified mobile functions like clicking pictures, sharing post on various social media platforms, shopping for varying utilities like art supplies; clothing; stationaries, tracking fitness and health status, gaming, etc. In this instance, to be more specific there is a mobile phone application available for each and every aspect of life. Further, in today’s digitalized world, the younger generation, irrespective of their gender are seen to be using these applications in their day to day life and it seems to have become a habit for them to use their mobile phones every now and then (Taywade and Khubalkar, 2019) [12].

**Table 3:** Correlations of different aspects of mobile phone use pattern

Males				Females			
Pearson’s Correlation	Time spent	Use of various mobile phone function	Preference of using Alone or group	Pearson’s Correlation	Time spent	Use of various mobile phone function	Preference of using Alone or group
Time spent	1	0.441**	0.192**	Time spent	1	0.120**	0.327**
Use of various mobile phone function		1	0.219**	Use of various mobile phone function		1	0.261**
Preference of using Alone or group			1	Preference of using Alone or group			1

\*\*Correlation is significant at the 0.01 level (2-tailed).

**3.4. Correlation between mobile phone use pattern and inter personal communication**

To assess the correlation between mobile phone use pattern and interpersonal communication Pearson’s correlation coefficient was employed and the outcome of which indicates that mobile phone use pattern has a significant relationship with interpersonal communication. Both the variables were found to be positively correlated,  $r(98) = 0.32$ ,  $p = 0.01$ (see Table 4). These days mobile phones are the new emerging means through which students prefer to communicate interpersonally. From the results, it can be stated that everyone uses mobile phone for staying connected with the world and surroundings at the same time, it can be stated that mobile phone usage definitely affects the interpersonal communication. Further, mobile phone provides the youth with a sense of everlasting contact by the virtue of which they

can connect with anyone at any given point of time irrespective of the distance which in turn allows them to pull out themselves from engaging with people in the physical world and instead provide them with a gateway to the virtual world of interpersonal communication, henceforth, avoiding face-to-face communication (Deol, 2021) [7]. Thus, when the mobile phone has the implications of easy communication that is within the reach of the young generation, they tend to be more inclined towards mobile phones which further reduce their face to face communication and interaction with the physical world around them. Similarly, in studies done previously, it has been stated that social media was one of the factors that are found to be negatively affecting interpersonal communication rather than having a positive impact (Gjylbegaj and Jararaa, 2018).

**Table 4:** Correlation between mobile phone use patterns and inter personal communication

Variables	Correlation coefficient (r value)	Calculated t value
Mobile phone use pattern and inter personal communication	0.320**	t-value:3.34365603

\*\*Correlation is significant at the 0.01 level (2-tailed).

**4. Conclusion**

To conclude, it can be stated that there is a definite relationship of gender and age on mobile use patterns whereas educational level has the least association. Further, it has been found there is a significant effect of mobile phone usage on

interpersonal communication of students. The student’s spend hours using their phone because they think mobile phones an essential part of life. Moreover, growing trend of mobile phone usage amongst the students is affecting the quality of interpersonal communication.

## 5. Further Research

Future research may compare the results of various age groups of respondents or the researcher may consider broadening the geographical background of the respondents considering various other academic institutions. Additionally, researchers can explore other significant areas like mobile phone usage to avoid real life socialization, mobile phone usage and its impact on behavioral factors, mobile phone addiction and impact on academic performance as these factors or areas may potentially have an implication on the lives of every other individual of the globalized world.

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