

# The Use of Mobile Phone Features Among Students in Isfahan University of Medical Sciences in Iran

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**Background:** Mobile phones have become extremely popular and widely used all over the world. Nowadays, consumers around the world can purchase a single product and utilize it as a mobile phone, camera, camcorder, calculator, game console, text-messaging device, MP3 player, alarm clock, web browser and email device.

**Objectives:** The purpose of the present study was to explore self-reported use of various mobile phone features in university students.

**Materials and Methods:** This descriptive cross-sectional study was conducted on 1180 students of the Isfahan University of Medical Sciences in 2011. Data were collected by self-report questionnaires. The questionnaire consisted of demographic characteristics including age, sex, marital status, education and information about the possibilities of mobile features. The data were analyzed by software SPSS 18 and descriptive and analytical statistical methods were used.

**Results:** Female students used SMS and educational software like dictionaries significantly more than the male students, while male students used mobile phone more for accessing the Internet. Accordingly the overall average of mobile phone features use was significantly higher in male than female. Also, more male students than female ones had changed their mobile phones ( $P \leq 0.001$ ).

**Conclusions:** Among mobile phone features SMS, alarm, clock, educational software like dictionaries, phonebook and memory are more frequently used by students. Most students use the multimedia or audio visual features of mobile phone. Mobile phones can be useful as a tool to educate and inform students.

**Keywords:** Cellular Phone; Universities; Students

## 1. Background

Mobile phone use has been growing dramatically over the last decade. Mobile phone is one of the greatest innovations of the communication technology in today world and has become extremely popular and widely used all over the world. Worldwide, there are more than 4 billion mobile phones in use, three-quarters of them in the developing world; as an instance in Africa, four in 10 people now have a mobile phone (1). Therefore, the mobile phone is no longer a luxurious item that only the high-income group can afford, but has become an imperative piece of telecommunication and is reasonably priced to people from all walks of life. All mobile phones have a number of features in common, but manufacturers and producers also attempt to differentiate their products by implementing additional functions to make them more and more attractive to customers. This has led to expanded innovations in mobile phone development field over the past years. As a result nowadays, consumers around the world can purchase a single product and use it as a mobile phone, camera, camcorder, calculator, game console, text-

messaging device, MP3 player, alarm clock, web browser and email device (1).

These dramatic progresses have added to the popularity and effectiveness of mobile phones more than ever and increased its application capabilities for various age groups and environments. Even recently, manufacturers have begun to market products toward specific demographic groups, like children or older adults (2). Therefore, researchers have explored the use of mobile phone features and tools from perspective of user preferences and perceptions in various groups, for instance Ow and Su investigated the preferences of users when purchasing a mobile phone in Malaysia (3). Another study attempts to identify the design features of a mobile phone critical for user satisfaction (4). Glasscock & Wogalter explored self-reported preferences for 24 mobile phone features. Participants rated each feature on a scale, indicating their likelihood to use the feature if it was available on their mobile phone. The results revealed effects of gender, age category, student status and parental status on preference ratings (2).

### Implication for health policy/practice/research/medical education:

To obtain information on the use of mobile phone features among students helps better understanding and planning for proper educational use.

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**Table 1.** Comparison of the Scores of Mobile Phone Features Use in Students According to the Gender <sup>a</sup>

Features	Scores			P Value
	Total Students	Females	Males	
SMS	3.96	4.04	3.81	≤ 0.001
Bluetooth	2.78	2.86	2.63	≥ 0.05
Camera	2.56	3.01	2.85	≥ 0.05
video recording	2.49	2.48	2.51	≥ 0.05
Internet browser	2.04	1.78	2.36	≤ 0.001
Notes	2.41	2.39	2.35	≥ 0.05
Calculator	2.55	2.53	2.58	≥ 0.05
Alarm	3.97	4.01	3.81	≥ 0.05
music player	3.69	3.78	3.75	≥ 0.05
Educational software	3.29	3.31	3.26	≤ 0.001
Movies and video player	2.50	2.39	2.7	≥ 0.05
Games	2.29	2.12	2.63	≤ 0.001
Voice recording	2.62	2.68	2.50	≥ 0.05
Clock	3.83	3.91	3.67	≤ 0.001
Calendar	3.02	3.03	3.08	≤ 0.001
Phonebook	3.72	3.78	3.64	≥ 0.05
Answering phone	1.75	1.67	1.89	≤ 0.001
Inside memory	2.98	2.89	3.16	≥ 0.05
GPS	2.07	1.59	1.95	≤ 0.001
Reminder	1.71	1.95	2.30	≤ 0.001
Other software	1.92	1.78	2.19	≤ 0.001

<sup>a</sup> Abbreviations: GPS, global positioning system; SMS, short message system

**Table 2.** Comparing the Mean Scores of Students Mobile Features Use According to the Age Groups <sup>a</sup>

Age Groups, y	Mean Score	F (Test Parameters)	P Value
≤ 20	59.27 ± 11.45	3.2	0.041
20-25	58.84 ± 11.93		
≥ 25	55.01 ± 13.56		

<sup>a</sup> Data are presented as mean ± SD.

A survey examined college students' preference level, with five new mobile phone design features, facilitating universal information access through mobile phones: camera, color screen, voice activated dialing, Internet browsing and wireless connectivity (i.e. Bluetooth, infrared, etc.). The results showed that color screen, voice activated dialing and Internet browsing features can strongly predict users' satisfaction level and preference levels of these three features account for 22.7% of the variance of the users' overall satisfaction (5).

Studying the use of mobile phone features by users, especially university/college student's users, is extremely important since the university/college students have

been labeled as one of the most important and largest consumer groups of mobile phone services (6). Furthermore, previous studies demonstrated that students use more mobile phone features than non-students (2). Based on the statistics released by the IT News in 2011; the number of mobile phone users in Iran was 73 million people ([www.mobna.net](http://www.mobna.net)). Studies have demonstrated that although mobile phone use has been growing in all economic and age segments in Iran, university students are more likely to use mobile phones than any other demographic groups (7). Therefore, there is this urgent need to investigate and focus on use of mobile phone features and tools by university students. Knowing the

most popular features of mobile phones among university students may help in setting useful plans to prevent probable problems such as mobile phone addiction and effective usage of these tools and features in educational programs.

## 2. Objectives

The purpose of the present study was to explore self-reported use of various features found in mobile phone products today. The correlations between demographic characteristics (i.e. age, gender, economic status of the family and education of parents) and the use of features were also examined.

## 3. Materials and Methods

Respondents of the present study were selected using a random sampling technique.

One thousand five hundred students from Isfahan University of Medical Sciences, Iran, were given questionnaires to fill out. Of these, 1295 were returned, giving a response rate of 86.33%. There were 1180 usable questionnaires (774 females, 406 males). The participants' age was 18-36 years ( $20.96 \pm 2.32$ ), all owning mobile phones and using it regularly.

The data collection was preformed through self-reported questionnaires. The questionnaire consisted of two sections; first section included demographic information, like age, sex, marital status, education and the second part included information about the features of mobile phone accessories. Mobile phone feature questionnaire was designed in 2009 by Manteghi and colleagues and its acceptable reliability and validity have been reported (8). Cronbach's alpha coefficient of the present study was detected to be 0.8. This questionnaire determined the rate of mobile phone features use through a 5-point Likert scale (very low, low, medium, high and very high).

Data analysis was performed using SPSS 18 statistical software. At first all features were analyzed separately according to students' gender, as well as the overall scores, by summing the scores of all features for each individual. Afterwards, the mean scores were compared according to the age groups. A p value less than 0.05 was considered statistically significant.

## 4. Results

The study results demonstrated that 65.5% of the respondents were female, 88% were single, 56.7% lived in dormitory and 80.1% were unemployed.

About 10.7% of male and 2.6% of female participants thought having a mobile phone may cause problems. Nearly 10% of female and 15.6% of male participants had more than one SIM card.

Among female and male participants 25.7% and 41.4%, respectively had changed their mobile phones more than twice ( $P \leq 0.001$ ).

## 5. Discussion

The present study attempted to gather data on the use of mobile phone features among students of Isfahan University of Medical Sciences. In Iran, mobile technologies were launched since 1994 and are now widely adopted among young people and integrated into their everyday lives. Despite the growing number of Iranian mobile phone users, few researches have been done on this subject. This study can be considered as a primary step to a better understanding for planning the proper use of mobile phone features. Examination of data revealed that in general, among the mobile phone features SMS, alarm, clock, educational software like dictionary, phonebook and memory were used more than others. These findings largely conform to the findings of some studies (1, 8, 9) and are not consistent with others, like the Glasscock study, in which phonebook, voicemail, caller ID and alarm clock were the most used features (2).

These differences may be due to methodological differences between the studies. Glasscock study was designed to consider the technical issues according to the preferences of mobile phone users. Data showed that mobile features use among people above 25 years was significantly less than other age groups. This finding was consistent with previous studies (2). Researchers consider gender differences as affecting factors for the level of technology use among people (10). Although both genders utilize modern technology equally, comparing the use of it in two sexes seems interesting. While numerous studies have studied gender differences and the computer use, the gender differences in the field of mobile phones have been less studied. In the present study the use of mobile features was compared between male and female students.

Results showed females use SMS and educational software like dictionaries, significantly more than males, while males are probable to utilize phones for Internet browsing. Also the overall average of mobile phone features use was significantly higher in male participants than females. These findings were consistent with previous studies findings (2), which led us to design educational programs, especially for female students. Some studies tried to use mobile phone applications to encourage healthy behaviors, for instance breast self-examination (11) and weight loss (12). Some studies also tried to text messaging for clinical and healthy behavior interventions (13). The number of male students who changed their mobile phones was more than twice higher, compared to the female students. This finding was consistent with that of the Baqhyany moghadam's study (7). The popularity of mobile phones has caused mobile phone manufacturers to produce several different models of phones. Young people are the main target of producer markets. The desire for modernistic enthusiasm, being different and attractive and some other reasons has caused young people to change their phones.

Nearly 10% of female and 15.6% of male participants had more than one SIM card. The first and most obvious reasons coming to mind as a reason for this is improper use of mobile phones and hiding relationships and information or data from others. There were several limitations to this study initially; there are concerns about generalization of the results, although a relatively suitable sample size of 1180 was studied, the study was confined to a limited region. Therefore, generalization of the results should be interpreted with caution. Continued research should include larger sample sizes to reach more accurate conclusions. Considering the enormous existence of mobile phones in our daily lives, future studies should focus on the impacts of mobile phone features on education. It is important to note that due to rapid technological development, mobile phone designs, features, functionalities and tools have changed considerably over the last few years and will probably continue to change dramatically in the future. Therefore, future studies should explore the use of new features and applications, like the We Chat software among university students. Among the features of a mobile phone SMS, alarm, clock, educational software like dictionaries, phone books and memory are more frequently used by students. The findings showed that with the age increase, the extent of mobile features use decreases. The mobile phone can be used as a useful tool for education and information for students.

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### Authors' Contribution

Maryam Amidi Mazaheri developed the original idea and protocol, abstracted and analyzed data, wrote the manuscript and is the guarantor. Mojtaba Karbasi contributed to the development of the protocol, abstracting data and preparing the manuscript.

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