

# DEPENDENCY, RISK OF ADDICTION TO THE USE OF THE CELLULAR IN MEDICINE STUDENTS AT SAN FRANCISCO XAVIER UNIVERSITY. SUCRE. 2017

Dependencia, riesgo de Adicción al Uso del Celular en estudiantes de Medicina en la Universidad San Francisco Xavier, Sucre, 2017

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## ABSTRACT

The present research was carried out with the purpose of identifying the dependence and risk of addiction to the mobile phone in Medicine students at San Francisco Xavier University. The selected approach used in the research was quantitative with a descriptive method of multidisciplinary type, taking into account a population of 345 surveyed students based on the levels of study they are, as well as their gender. As we show in the results, the time of use greater than three hours, prevails more in women than in men, which faces a possible risk of addiction. Concluding that, this differential prevalence between genders occurs more in women because of reasons of low self-esteem and / or social approval, while men are oriented towards the use of applications by means of distraction and overcoming.

## KEYWORDS:

Dependency, addiction, mobile phone, applications, nomophobia, phubbing

## RESUMEN

La presente investigación se realizó con el objetivo de identificar la dependencia y el riesgo de adicción al teléfono móvil en estudiantes de Medicina de la Universidad San Francisco Xavier. El enfoque seleccionado utilizado en la investigación fue cuantitativo con un método descriptivo de tipo multidisciplinario, teniendo en cuenta una población de 345 estudiantes encuestados en función de los niveles de estudio que son, así como su género. Como mostramos en los resultados, el tiempo de uso mayor a tres horas, prevalece más en mujeres que en hombres, lo que enfrenta un posible riesgo de adicción. Concluyendo que, esta prevalencia diferencial entre géneros ocurre más en mujeres por razones de baja autoestima y / o aprobación social, mientras que los hombres se orientan hacia el uso de aplicaciones mediante la distracción y la superación.

**PALABRAS CLAVE:** Dependencia, adicción, teléfono móvil, aplicaciones, nomofobia, phubbing

## INTRODUCTION

The emergence of new mobile technologies has facilitated communication between the global population, but it also has generated changes at all levels of coexistence in society. The new emerging social context, the use and development of these new technologies by the youngest, imply new potentials for their growth, development, autonomy and personal training, but it also brings associated risks (1). And those who are most affected, positively or negatively, are those who were born at the time of their implementation in society, as well as later generations who live adapted to the new technological environment (2).

Cell phones are already part of teenagers' anatomy, representing a Utopia, affecting their academic performance, family breakdown, obtaining physical and psychological damage (3).

There is talk of non-conventional addictions, also called behavioural or technological addictions that include the Internet, cell phones, video games and any technological device, always that their use is dependent, unjustified and excessive; they also involve the human-machine interaction, and are divided between passive (such as television) and active (such as Internet, cellular and videogames) (4). For this reason the present research was in need of further deepening this issue, seeing the use and applicability that is currently given, it proposes to define the limits of dependence and addiction in

the University students at Medicine College of San Francisco Xavier University of Chuquisaca.

## BACKGROUND

Cellular telephony and Internet emerged in parallel as a result of an intense search to improve interpersonal communication, it began at the beginning of the 70s with the only thought of benefiting large government sectors and private companies, however, both technologies exceeded their limits.

Takao, takahashi and kitamura (2009) state that at least 70% of the Japanese population, 62% of users in the United States and 81% of people in Australia, use mobile phones in 2005 showing high use (5).

Studies conducted in the United Kingdom in 2011, with a sample of 2163 people, revealed that almost 53% of users tend to feel anxiety when they lose their mobile phone, they run out of battery or credit, or they do not have coverage, in accordance with the study about 58% of men and 48% of women suffer from nomophobia (6).

According to a study conducted by Rastreador.com, more than half of the population (56%) actively uses the mobile device for at least 3 hours per day, the average usage being 4.24 hours daily, 24 minutes, more than the previous year. The users with a more active profile are the youngest between 18 and 24 years old, where the hours amount to 6.8 hours in contrast to the older ones who use it in a 3 hours daily. Furthermore, in terms of gender, women use an average of 42 minutes more than men. (7)

We worked with a sample of 1400 university students, 1044 of which came from the National San Agustín University (Public) and 356 from the San Pablo Catholic University (Private). With regard to sex, women had higher scores than men and students from private universities had higher scores than students from public universities (8).

With regard to technological addictions, cell addiction was first elaborated by Morales (2012) using a sample of 1253 students from a private university in Arequipa, and found that 8.1% of women and 3.4% of males present symptoms of cell addiction (9).

In January 2016, the Adimark company, together with Entel, carried out a study to detect the nomophobia in Chile. They revealed that 64% of respondents believe that the cell phone is more important than a computer or television. In this universe, women prioritize it the

most with 76% of responses vs. 53% of men. Another of the data reported by the survey is that half of the sample prefers to forget the keys at home before the phone, so it is not surprising that a majority 60% assures that they would be returned to look for it (10). The study Cultura y Violencia Digital in Cochabamba, prepared by Fundación Redes reveals that eight out of ten teenagers in the city of Cochabamba - Bolivia declare themselves addicted to mobile phones and do not mind being in that condition. The president of that organization Eduardo Rojas, explained that during the 2016 management a study was developed on the use of cell phones between 700 adolescents. "We have just finished the study and there it is revealed that 80% of adolescents under the age of 18 who are of school age declare themselves addicted," he said (11).

## PROBLEM FORMULATION

- ▶ What is the dependency and risk of addiction to the use of mobile phones in students of Medicine College at San Francisco Xavier University, Sucre, 2017?

## OBJECTIVE

- ▶ Identify the dependence and risk of addiction to cell phone use in medicine students at San Francisco Xavier University, Sucre, 2017.

For the study we will define the following words:

**1.- Mobile phone:** The mobile phone or cell phone is a very useful tool for easy communication and it currently has many applications that the individual can use in their daily activities and professional tasks. Nowadays, with the possibilities of mobility, the smartphone has become practically a computer and increasingly, a medium that supports other means. It has been adopted on a large scale and it is already part of the social landscape of many countries. It satisfies several human needs, such as communicating in movement, speaking and walking at the same time (12).

**2.- Applications:** These are softwares that run on smartphones or other mobile communication devices and that are usually distributed on digital platforms or generated by people or organizations through Software Engineering. Mobile applications (Apps) are part of this group of tools and have become the favourite way for users to connect from their devices. The specific characteristics of each mobile application are associated with the necessary requirements for

the effective provision of the services for which it was designed (13).

**3.- Dependence:** It is the uncontrollable desire to consume something or perform some activity, generating dissatisfaction if a need is not met, causing the individual to experience unpleasant feelings or anxiety while the addiction completely commits the will, considered a psychic disorder (14).

**4.- Addiction:** Addiction is the greatest risk of excessive use of new technologies, generates addictive behavior that leads not only to excessive dedication (which can be removed from other types of healthier activities and very necessary at certain ages), but to a true dependence and lack of control over their behavior. This addiction is more likely to be generated in the adolescent than in the adult (15).

**5.- Nomophobia:** Irrational fear of losing your cell phone or leaving it at home. It is also due to consult messages frequently. The symptoms presented are: anxiety, tachycardia, obsessive thoughts, headache and stomachache.

And its causes can occur because of problems of self-esteem and relationship, as well as personal insecurity, seeking perfectionism, reaching to an absolute slavery to the mobile, getting to the addiction be uncontrollable. As a consequence, it is people who cannot turn off their cell phone at night, interrupting their sleep hours, therefore, a clear sign of insomnia is frequent in nomophobic patients. (16)

**6.- Phubbing:** It is the sick action of paying all the attention to the cell phone or other mobile device just to be aware of what happens in social networks. This pathology was born with the arrival of the smart phone, phubbing consists of the act of belittling the person who accompanies oneself by paying more attention to the telephone or other electronic devices than to oneself.

Many people prefer to make textual conversations in a family dinner, than to do it in person, that is considered a discourteous habit of attention (17).

## MATERIALS AND METHODS

The present work has a quantitative approach, the type of study is observational, with a level of descriptive analysis and a multidisciplinary directionality.

The research will be conducted in students from 1st to 5th year of study, of the Medicine College of San

Francisco Xavier University of Chuquisaca. Being a total of 2499 students.

The sample to be used will be of probabilistic type, (stratified and systematic), based on the number of students from the 1st to the 5th year and its distribution by grades, also differentiating the dependence and / or risk of addiction that they would present according to their study year of study.

According to the following formula (for quantitative variable) the sample size was obtained:

Where:

$$n = \frac{N \cdot z^2 \cdot (p)(q)}{d^2(N - 1) + z^2(p)(q)}$$

*n* = sample

*z*<sup>2</sup> = level of confidence

*p* = proportion of the elements that have the characteristics of study (probability of success).

*q* = proportion of the elements that do not have the characteristics of study (probability of rejection).

*d* = accuracy or margin of error

*N* = known population

$$n = \frac{2499 \cdot (1,96)^2 \cdot (0,5)(0,5)}{(0,05)^2(2499-1) + (1,96)^2(0,5)(0,5)}$$

$$n = 332,97$$

$$= 333 \text{ students.}$$

In the exercise, a 95% confidence level and a 5% margin of error were taken into account, resulting in a sample size of 333 students.

The population or universe to be studied in the present research are the students from 1st to 5th year of study, from Medicine College at San Francisco Xavier University of Chuquisaca, specially the students of the area of Public Health, that has 2499 students distributed in all the managements, related to the subject.

Inclusion criteria will be considered for those students who are enrolled in the 1st to 5th year of study, of the Medicine College, who are enrolled and regularly attend theoretical classes in the area of Public Health. Students who do not attend classes, who are repeating, who have abandoned the academic year, who are not at the time of data collection or who belong to other faculties will be excluded.

Regarding the primary sources for the collection of information, the students of the Medicine College will be

taken into account and a prepared and written survey (Questionnaire with direct and indirect questions) will have to be used as a collection instrument for the necessary information. And as a secondary source we used data from the internet website, magazines, dictionaries and related articles.

Concerning the pilot tests carried out before the information was collected, they had a favorable acceptance.

For the processing of the collected data and for the elaboration of the graphs, Microsoft Excel, Microsoft Word and Epi info 7 programs will be used. As for the data analysis plan, the work begins with the data collection through the surveys, because the work is quantitative and reliable for the development of statistics. Based on the reading and counting the surveys carried out, we will proceed to its representation and interpretation with programs such as Excel by making various tables or graphs.

And finally the survey to be conducted will be done anonymously, respecting the identity of the subject surveyed and the information will be used strictly for research purposes and will be handled specifically by

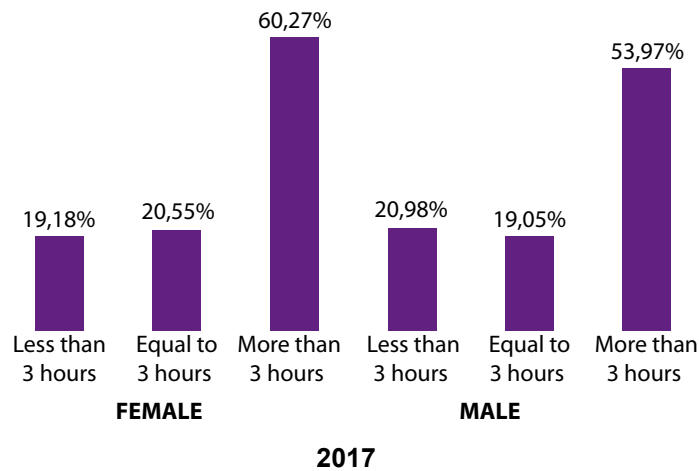
the authors and the tutor. Special authorization will be provided if required, to the Medicine College for the management of the results. The participation of the students will be voluntary; in addition doubts that could arise at the time of conducting the survey will be clarified.

## RESULTS

The present work was planned to be carried out with 333 students from the first to the fifth year of the Public Health area of the Medicine College at San Francisco Xavier University of Chuquisaca, however 345 students were interviewed.

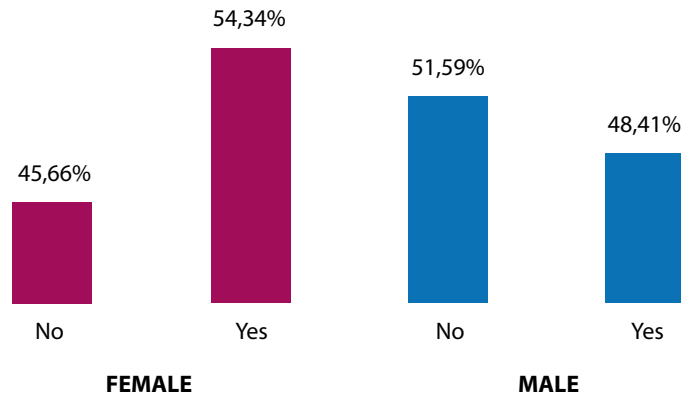
It is observed that those people who report an excessive use of mobile phones experience significant anxiety compared to those who do not tend to make excessive use of them. Besides that this excessive use prevails more in women than in men, being the main cause as social approval and self-esteem, while men are more oriented with the use of applications and games, as a means of distraction and improvement. And finally it is established that there is a close relationship between the excessive use of mobile and academic performance.

**Graph N ° 1**  
**TIME OF USE OF THE CELLULAR IN STUDENTS AT MEDICINE COLLEGE AT "SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA", SUCRE**



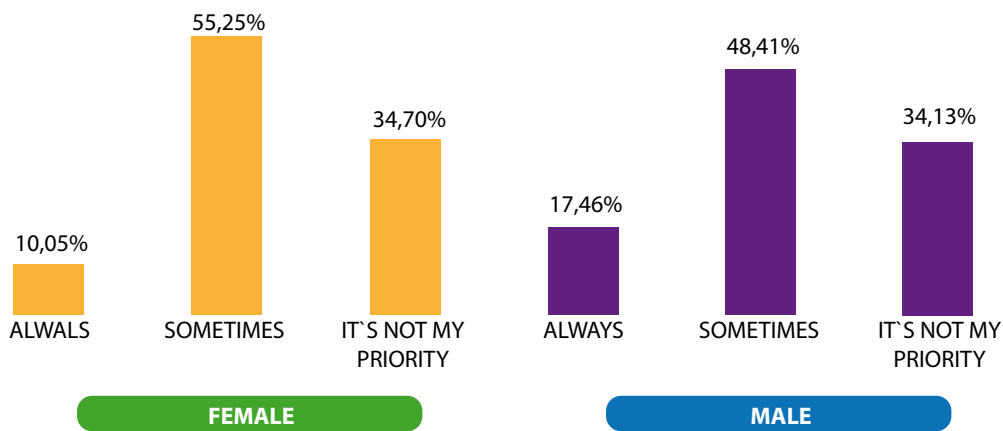
**SOURCE:** Survey conducted in Medicine students at San Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

**Graph N ° 2**  
**POSITION OF RESIGNATION TO THE CELLULAR IN STUDENTS AT MEDICINE COLLEGE AT “SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA”, SUCRE 2017**



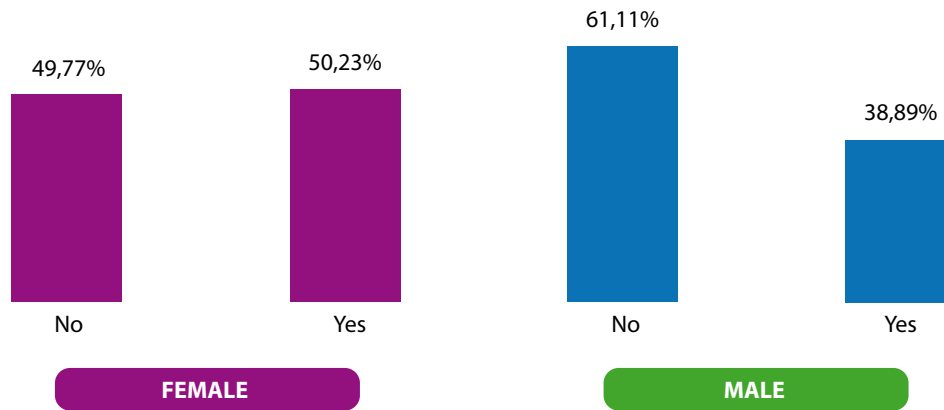
**SOURCE:** Survey conducted in Medicine students at San Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

**Graph N ° 3**  
**ATTITUDE BY NOT BEING ABLE TO USE THE CELLULAR IN STUDENTS AT MEDICINE COLLEGE AT “SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA”, SUCRE 2017**



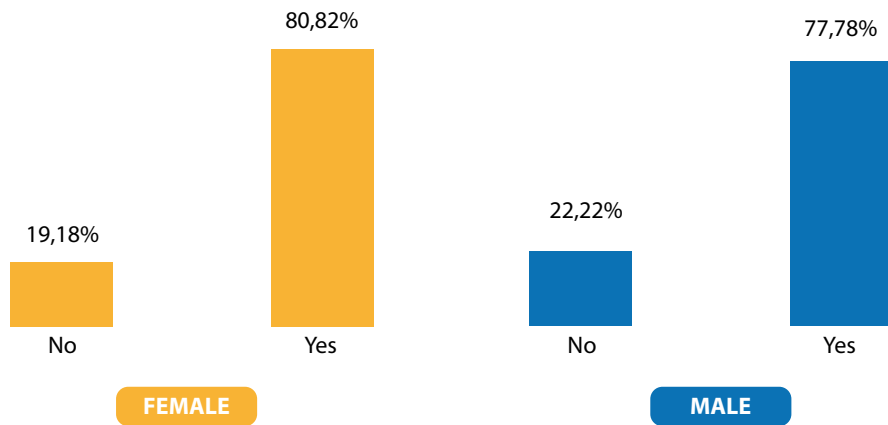
**SOURCE:** Survey conducted in Medicine students at St. Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

**Graph N° 4**  
**FEAR TO STAY WITHOUT BATTERY IN STUDENTS AT MEDICINE COLLEGE AT “SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA”, SUCRE 2017**



**SOURCE:** Survey conducted in Medicine students at St. Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

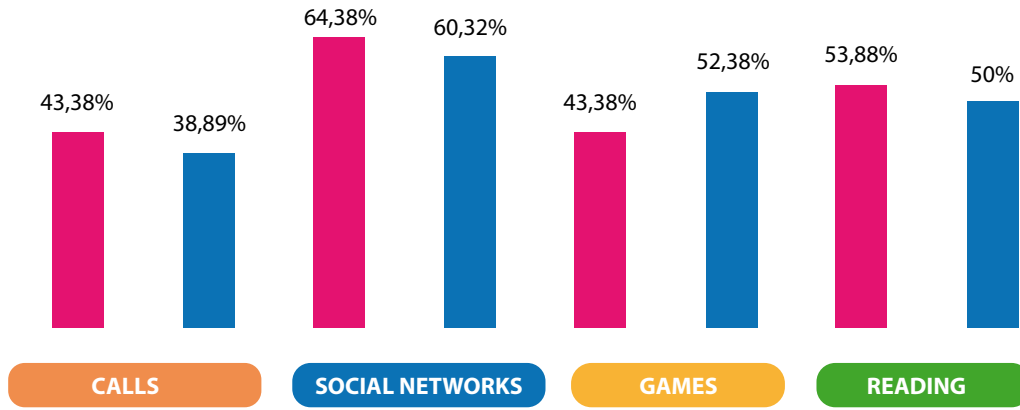
**Graph N° 5**  
**SLEEP HOURS AFFECTED BY THE USE OF THE CELLULAR IN STUDENTS AT MEDICINE COLLEGE AT**



**“SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA”, SUCRE 2017**

**SOURCE:** Survey conducted in Medicine students at St. Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

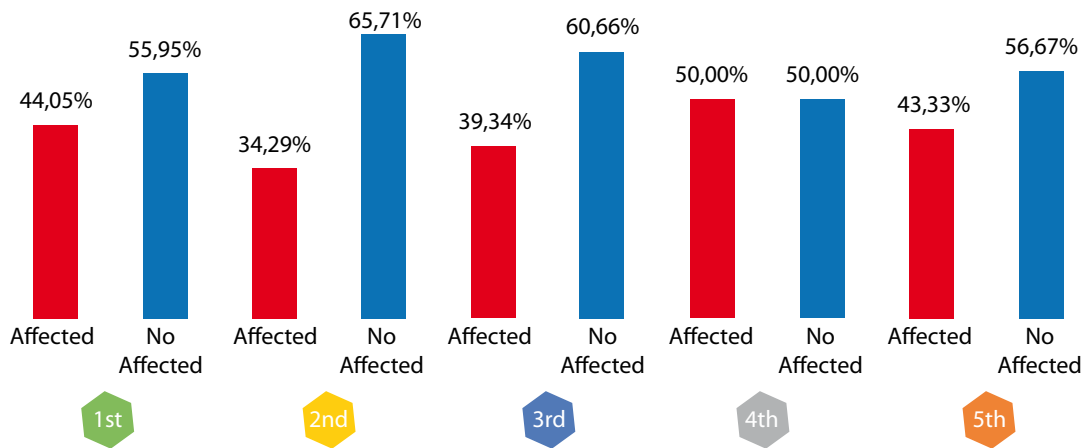
**Graph N° 6**  
**PERCENTAGE OF FREQUENCY OF USE OF APPLICATIONS BY STUDENTS AT MEDICINE COLLEGE AT “SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA”, SUCRE 2017**



**SOURCE:** Survey conducted in Medicine students at St. Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

**RELATIONSHIP BETWEEN EXCESSIVE USE OF THE MOBILE AND ACADEMIC PERFORMANCE**

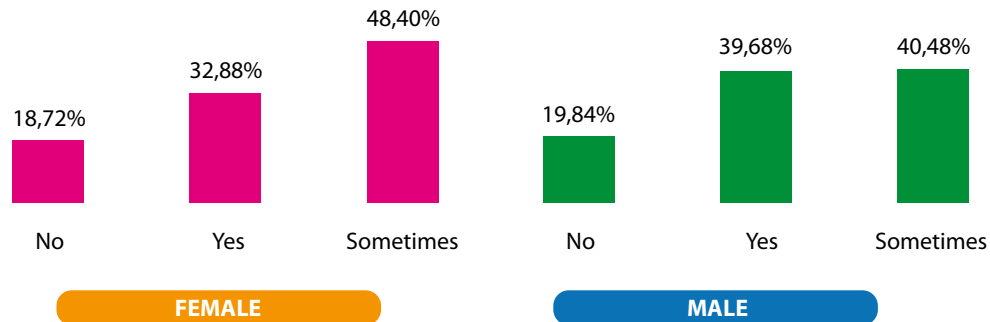
**Graph N° 7**  
**PROPORTION OF ACADEMIC PERFORMANCE BY COURSES IN STUDENTS AT MEDICINE COLLEGE AT “SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA”, SUCRE 2017**



**SOURCE:** Survey conducted in Medicine students at St. Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

## PHUBBING

**Graph N° 8**  
**CONVERSATIONS AFFECTED BY THE USE OF THE CELLULAR IN STUDENTS AT MEDICINE COLLEGE AT "SAN FRANCISCO XAVIER UNIVERSITY OF CHUQUISACA", SUCRE 2017**



**SOURCE:** Survey conducted in Medicine students at San Francisco Xavier University of Chuquisaca, Sucre – 2017. Own elaboration.

## CONCLUSIONS

Based on the results, the proposed hypothesis was confirmed:

- People who report an excessive use of mobile phones experience significant anxiety compared to those who do not tend to make excessive use of them. Using the following questions of the survey:

- ▶ **How long do you use your cell phone during the day?**
- ▶ **If I do not have a connection to the Network (either through data or Wi-Fi), do I constantly check if there is any signal nearby to connect to or try to find it?**
- ▶ **If I am talking to a person and I receive an SMS, do I ignore it so that I do not lose the attention of the conversation?**
- ▶ **Does the idea of running out of my cell phone scares me?**
- ▶ **Does it bother me not being able to use my phone and its applications when I want to do it?**
- ▶ **Emotionally, would it be very difficult for me to give up using my mobile?**

- There is the prevalence of excessive use of mobile phones more in women than in men, due to low self-esteem and / or social approval, compared to men it would be more because of the use of applications as a mean of distraction and improvement.

It was confirmed that women use more cell phones in accessing social networks and reading and men in social networks and games (Graph N°7). Taking into account that women carry the highest percentages in the use of the cell shown through the answers obtained in the surveys, in the question:

- ▶ **What is the main purpose to use your cell phone?**

- There is a close relationship between excessive use of the mobile phone and academic performance in students at Medicine College. According to the following questions:

- ▶ **Did the use of your mobile affect your academic performance?**
- ▶ **How long do you spend using your cell phone during the day?**
- ▶ **Did the use of your mobile affect your academic performance?**
- ▶ **Does the time I dedicate to my mobile prevents me from doing important tasks?**

## Dependence and addiction

As we have realized, students at San Francisco Xavier University of Chuquisaca at Medicine College, assure that the cell phone is fundamental for social interaction such as friendship, personal evolution; among others that show that the student not only believes that the cell phone is a tool to meet unique communication needs, but also it is essential for daily living, the bad thing is the abuse in the use of the cell phone.



The present work was planned to be carried out with 333 students from the First to the Fifth Year of the area of Public Health, at Medicine College at “San Francisco Xavier University of Chuquisaca”, however, 345 students were interviewed, from which 219 belong to the female gender and 126 belong to the masculine gender.

Based on our objectives to determine the degree of dependence and risk of addiction, the following parameters are taken:

**Hyperconnectivity:** related to the time of use and sleep late to use the cell phone.

**Anxiety:** related to the annoyance of not being able to use your cell phone when you want to do it.

**Nomophobia:** related to the fear of running out of battery

**Phubbing:** related to distracting in important conversations by cell phone use.

## RECOMMENDATIONS

Considering the importance of the fulfilled research, and based on the results obtained, the following recommendations are formulated both for students and for future research that may be carried out related to the subject.

- To educate students about the consequences of an unconventional addiction such as the excessive use of cell phones.
- It is also recommended to the national providers who provide the services of mobile telephony, to create awareness for their users about the appropriate use, excessive and addiction to cell phones, through advertising campaigns they carry out to promote their products.

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