NOMOPHOBIA LEVELS ON MEDICAL STUDENTS FROM PARAGUAY, YEAR 2015

César M. Matoza-Báez 1,2, María S. Carballo-Ramírez1,2

1Scientific Society of Medical Students ("SOCEM-UNIDA"), University of Integration of the Americas, Asuncion, Paraguay
2University of Integration of the Americas, Asuncion, Paraguay.

ABSTRACT
Introduction: The term “nomophobia” refers to the fear or doubt that appears when the person does not have the phone in their hands or at least turned on. Objective: To determine the level of nomophobia in the medical students of Paraguay, taking into account their sex, age group and academic performance. Methodology: This was a cross-sectional descriptive study. Non-probabilistic by convenience sample was performed using 234 surveys with anonymous and voluntary character. The data was analyzed with the statistical package SPSS 15. Results: 43.6% students presented a level of mild nomophobia, 40.6% moderate and 15.8% severe. Conclusion: A high prevalence of nomophobia in medical students of Paraguay was found in the study.

Key words: Nomophobia, medical students, Paraguay, mobile phone.

INTRODUCTION
The term “nomophobia” comes from the abbreviation “no mobile phone phobia”, it refers to the fear of not having the mobile phone at hand or operating it, which creates psychological effects such as anxiety, anguish, despair, lack of attention, insecurity, stress and even uncontrolled anger; these conditions may be accompanied by physical symptoms such as spasms, excessive sweating, tachycardia, gastrointestinal problems and panic attacks (1). In 2013, this phobia was proposed to be included in DSM-V because of its psychopathological effects on human behavior (2). The use of cellphones has increased in the last decade because of the multiple uses that they offer, like more fluid communication, the use of cameras, internet, games, and easier access to information; however, the time that they dedicate to the use of this device has influenced their behavior, and expressing anxiety when not using it (3). Anxiety is common among medical students; a study made in Paraguay found a frequency of 16.5% (4); they may be more susceptible to develop a phobic disorder, such as nomophobia. Due the high demand for use of mobile technology in this sector of the population, representing the 85.6% of the population according to official data for 2009 (5). Therefore, the main objective of this study is to determine the level of nomophobia in medical students of Paraguay during the period of 2015, in order to highlight this problem that may be afflicting students.

MATERIALS AND METHODS:
A descriptive cross sectional study was conducted. The population consisted of medical students from different universities of Paraguay (National University of Asuncion, Catholic University of Asuncion, Pacific University, University of the integration of the Americas, National University of Itapúa and National University of Caaguazú). A non-probabilistic by convenience sampling was done, with a size of 234 students, with a confidence level of 95% and an expected proportion of 40%. Inclusion criteria was defined by all medical students from the first to the sixth year of the career. Questionnaires with incomplete data were excluded. The variables used were sex, age, year of study, nomophobia level and academic performance. Dr. Robert Weiss’s test LCSW, CSAT-S consisting of 20 questions, of multiple choice, where each item can be answered with a value of 1 to 7, was used to measure the level of nomophobia; At the end of the test, a summation is performed to determine levels: mild (20 and 60 points), moderate (60 to 100 points), severe (greater than 100 points); values below 20 are rated as non-nomophobics. The questionnaire was filled virtually, prior informed consent of the person. The analysis of results was performed in the SPSS v.15 statistical package. The information is summarized in tables and graphs for better understanding.

RESULTS
The average age among respondents is 21.9 years, the men represent 67.10% (157) of the sample and the women 32.9% (77). In relation at the level of nomophobia is observed that 43.6% (104) presents a slight nomophobia; 40.6% (95), moderated nomophobia and 15.8% (35) a severe nomophobia. (Table 1) According to the age group, the students of the range 1 presented slight nomophobia with more frequency, in the range 2 they presented moderate nomophobia. Accord-
ding to the sex, slight nomophobia predominate among wo-
men and moderate nomophobia, in man. As for the academic 
year, in the first, fifth and sixth year it is more frequent to see 
moderated nomophobia and in the second, third and fourth 
year a slight nomophobia. The academic average of the medi-
cal students was measured according to the general average of 
the career, obtaining a proportional relation: those of minor 
average have a slight nomophobia and those of major average 
a moderate nomophobia (Table 1).

Table 1. Level of nomophobia according to the variables of study

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Level of nomophobia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Slight</td>
</tr>
<tr>
<td></td>
<td>(n=104)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Range 1 (17 - 26)</td>
<td>101</td>
</tr>
<tr>
<td>Range 2 (27 - 35)</td>
<td>3</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Feminine</td>
<td>38</td>
</tr>
<tr>
<td>Masculine</td>
<td>66</td>
</tr>
<tr>
<td>Academic year</td>
<td></td>
</tr>
<tr>
<td>Fist</td>
<td>9</td>
</tr>
<tr>
<td>Second</td>
<td>25</td>
</tr>
<tr>
<td>Third</td>
<td>34</td>
</tr>
<tr>
<td>Fourth</td>
<td>22</td>
</tr>
<tr>
<td>Fifth</td>
<td>13</td>
</tr>
<tr>
<td>Sixth</td>
<td>1</td>
</tr>
<tr>
<td>Academic performance</td>
<td></td>
</tr>
<tr>
<td>Range 1 (2–3)</td>
<td>87</td>
</tr>
<tr>
<td>Range 2 (4–5)</td>
<td>17</td>
</tr>
</tbody>
</table>

According to the results obtained, 56 % of our polled ones 
might have some degree of nomophobia from moderate to 
severe, which is translated in a trend to develop anxiety or fear 
of not having in the hand the mobile phone, causing a pro-
blem of mental health. Other studies have found similar per-
centages, as an investigation conducted in Spain by the Center 
of Specialized Studies in Disorder of Anxiety (CEETA) which 
found that 53% of mobile phone users have nomophobia (6). 
In the United Kingdom a similar percentage was brought in 
a study realized in 2163 students of Medicine; nevertheless, in 
countries where the promotion of mobile telephony is lower 
the numbers diminish, like in India where only 18,5 % of the 

medical students at a hospital had nomophobia (7).

In accordance to nomophobia related to age, it is possible to 
see that this disorder affects more students between an aver-
age of age of 21.9 years, which is similar to the results found 
by the Center of Specialized Studies in Disorder of Anxiety: 
“the young persons of between 18 and 24 years are the most 
inclined to suffer nomophobia, within this range, 8% of the 
university are those who most suffer” (8).

In our study it occurred more frequently in men than in wo-
men; in contrast with what Antonio de Dios affirms: “It is 
usually more common in females, since the cerebral structu-
re of women makes them easier to communicate and more 
affective needed than men” (9).

Also, the academic record of the participants was taken in 
consideration. It was seen that as higher the level of nomo-
phobia is, the lower the academic performance was. It might 
be caused by the multiple use the give it, such as being part 
of the social media or playing online games. Though, a study 
realized in Cartagena - Venezuela does not find a significant 
relation between a probable addiction to the mobile devices 
and the academic performance (10). Another study relates the 
amount of time they use the mobile, to minor time of study; 
influencing in the learning process of the student (11). In the 
year 2014 it was reported that the university students mana-
ged to spend 9 hours of the day using their cellphones; dimi-
nishing their hours of dreams, and even influencing in their 
behavior making them isolated from others, tired, selfish and 
self-dependent (12).

Given these results, we can come to the conclusion that the 
students of Medicine present high levels of nomophobia. We 
recommend to performed greater studies that develop this 
problematics. On the other hand, we made a call to the autho-
rities to structure campaigns in order to correct this habit and 
reduce its consequences.

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Conflicts of interest
The authors declare no conflict of interest.

Corresponding author:
César Martín Matoza Báez
tinmato@hotmail.es

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