



Science, Movement and Health, Vol. XVI, ISSUE 1, 2016  
January 2016, 16 (1): 11-18  
*Original article*

## BUDGET ANALYSIS OF THE SPARE TIME ALLOCATED TO MOTOR ACTIVITIES BY THE FEMALE STUDENTS OF THE UNIVERSITY OF BUCHAREST

ADUCOVSCI DANIELA<sup>1</sup>

### Abstract

*Aim.* Determining the students' budget of free time on the main recreational activities and the share of physical and sportive activities among these.

*Methods.* Questionnaire method, statistical-mathematical method, and the method of graphic representation.

The experiment has been based on 2 groups represented by female students: 30 from the Faculty of Physics and 75 from the rest of 17 faculties of the University of Bucharest

*Results.* The motivation of those who do not practice sports is mostly linked to the lack of time, to their comfortableness and to their social situation.

*Conclusions.* From the processed data it can be observed that all the subjects have free time. Questioned students who practice sportive activities in their spare time prefer to relax by doing sports such as aerobics, fitness and team sports followed by free running or jogging. A greater involvement of the local administrations and supporting professors' initiatives are wanted.

*Key words:* female students, time budget, independent physical activity

### Introduction

The present issue is part of a study published in 2014, which includes the free time budget of the students (male and female) from two campuses belonging to the University of Bucharest. We have divided these results by genders because both reasons and necessities are different from one sex to another.

"The reason is working with that one power which helps us to go further and accomplish our tasks." (Mirzajani et al., 2014)

Time budget is distinctly partitioned from one campus to another and we wanted to observe more closely what determines the female students to do sportive activities in their spare time.

Pociello (1999) has an interesting approach on sportive loisir practices, divided in four major tendencies: enlarging and diversifying the activities, the existence of some common, unisex activities, increasing the length of active (sportive) life span which is not so school-based anymore, looking for ways of organizing as less formal and restrictive as they could.

The recreative nature, an invigorator of the loisir activities, has to complete the extras on the educational, cultural, intellectual, behavioural level, which any other resembling activity already has (Bota, 2006).

The fact that the necessity of the social interventions in the individual evolution is

comprehended on the society's scale is significant and specific, and accomplishing this evolution is being organized, controlled in particular methods, depending on the stage and characteristics of emancipation of every society (Dumitrescu, 2013).

In the previous study I was quoting Mirzajani et al., 2014, on the fact that there are more factors influencing the lifestyle [...] but in comparison with what is there to see in other countries, we also stumble upon the lack of financial aid for supporting those who want to practice physical activities outside classes. Yukseloglu & Karagüven (2013), have studied academic motivation wanting to identify the factors and the efficiency on a group of students. Results have shown that the group having demographic characteristics and common specialities had a greater efficiency regarding academic motivation. At their turn Haron et al., (2012), have studied the motivation and the effect on the intellectual apprehension and performances among students.

Students spend quite some time at home and both their behaviour and actions are influenced mainly by their parents. The parents' level of education plays an important role in the success of cultivating young people. The results discovered by Krug (1989) și Forsyth & McMillan (1991), have shown that the academic factors are just as efficient in students' academic motivation and guidance.

<sup>1</sup> The University of Bucharest-Department of Physical Education and Sport, ROMANIA

E-mail address: daniela3810@yahoo.com

Received 09.09.2015 / Accepted 21.10.2015



Hypothesis.1. The study programme of the female students from the University of Bucharest, being quite crowded as it is, we supposed they do have spare time but that it is limited arbitrarily in a big percent by the education, entourage and standard of living.2. Among their free time preoccupations there are found both physical and sportive activities and those with sedentary status. Objectives. Determining the spare time budget of the female students of the University of Bucharest, the main recreational activities preferred by them

No.	Item
1	How much spare time do you have ?
2	What kind of activities do you prefer?
3	Do you do sportive activities in your spare time?
4	How many times in a week do you do sports in your leisure time?
5	What sports do you prefer?
6	In what environment do you prefer to do sports?
7	If you do not practice sports in your spare time, explain why?
8	Are any places where you could practice sports in your leisure time close to your home ?
9	What are the reasons that make you do sports?
10	What are the reasons that determine you not to do sports ?

The time and location of the reasearch:

The experiment took place throughout the school year 2012-2013, two groups of female students from the University of Bucharest having been considered.

The subjects:

- a group of 30 first and second year students, of the Physics Faculty from Măgurele, which has its P.E. classes in the Măgurele sports facility.

- a group of 75 first and second year students, belonging to the rest of the 17 faculties of the UB, which has its P.E. classes in Bucharest's sportive facilities.

The study has continued from the desire of finding out what motivates the students to do sportive activities in their free time.. The offer divided by sportive disciplines is various and covers a great range of both individual and team sports. School schedule is very busy during the whole week and from the conversations had with them we found that they don not have enough time, they do not have a time budget assigned to sports.

The questionnaire's elaboration:

It was used the same questionnaire as in the first issue that included male subjects.

and the procent in which the physical and sportive activities are found among those activities.

**Methods of research** - We mention that according to the Helsinki Declaration, Amsterdam Protocol and Directive 86/609/EEC, the approval of the Ethics Commission of the Department of Physical Education and Sport of the University of Bucharest regarding research on human subjects was obtained and also, the subjects' consent for their personal participation in the research.

The questionnaire including the items regarding the female students of the University of Bucharest assigned to motor activities.

Table no. 1

Investigation based on the questionnaire: The questionnaire was designed by the author, with no more than 10 items, the answers being simple, unique or multiple;

*Statistical-mathematical method:* The program used for processing statistics was the 17<sup>th</sup> version of SPSS.

## Results

### II. Leisure time

When asked „how much spare time do you have?“, the subjects from Bucharest frequently answered around 3-4 hours/day with a percentage of 41%, for 1-2 hours/day with a percentage of 40% followed by a percentage of 15%, of those who caimed of having more than 4 hours of free time a day. However, we identified a small percentage of 4%, they do not have any free time.

When at the Faculty of Physics (Măgurele Campus), the answers have shown that 30%, have spare time 3-4 hours a day, then 27%, have around 1-2 hours a day of spare time, 23%, have more than 4 hours a day, leisure time and 20% have no free time at all.

As a total, the two results (a and b) from both groups equal 81% for the subjects in Bucharest and 57%, for the subjects in Campus Măgurele, which gives us freedom to say that the majority of those questioned claimed they have between 1-4 hours of leisure time per day (Fig. 1).

Table no. 2

Chi-Square Tests	Value
Pearson Chi-Square	<b>9.114</b>
df	<b>3</b>
P (Asymp. Sig. (2-sided))	<b>0.028</b>
Cramer's V ( $\phi$ )	<b>0.29</b>

There are significant differences between the two groups of female students regarding the answers at the question II, the significance threshold P

(Asymp. Sig. (2-sided)) = 0.028 < 0.05, for a Chi-Square = 9.114 value and df (freedom degrees) = 3. The effect's magnitude ( $\phi = 0.29$ ) shows an association of intensity from medium to large between the answers of the groups Măgurele and Bucharest. The share of the answers could be observed in the graphic from fig. no.1

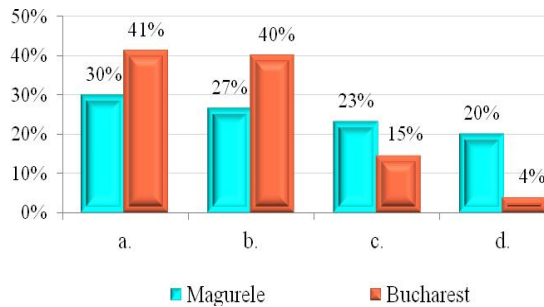


Fig. no. 1 – Free time: share of the answers for I2

### I2. Preferences

As far as the question „what kind of recreational activities do you prefer?” goes, the total of answers is superior to the number of cases thanks to the existence of multiple answers (Fig. 2).

According to the percentage distribution, the answers could be grouped in 3 categories for the subjects from Bucharest:

1. The percent of those who prefer tv/movies/internet activities are 25%, and that of those who prefer to relax in nature are 19%;
2. A group of 3 options follows: 18% are the female students who prefer shows/movies/concerts, 16% are those who prefer reading and 14%, those who would rather do physical and sportive activities.
3. In this third category we have placed those who prefer clubbing (5%) and and those students who claimed to have other activities (3%).

The first option confirms the tendence of sedentariness for those who like sitting in front of the TV or the computer.

For the subjects from Măgurele Campus, the answers could be grouped in 2 categories:

1. A group of 3 options: It represents the students who prefer show/movies/concerts, 20%, followed by those who prefer spending their time in nature, 18 %, and with a percentage of 16 % we can identify those who prefer watching tv/movies/surfing the internet.
2. What follows is the group of subjects who prefer reading (15%) and of those who prefer sportive activities (14%).

3. In the third category we have placed those who like other activities (10%) and those who opted for club attendances (7%).

4. Table no. 3

Chi-Square Tests	Value
Pearson Chi-Square	<b>8.161</b>
df	<b>6</b>
P (Asymp. Sig. (2-sided))	<b>0.227</b>
Cramer's V ( $\phi$ )	<b>0.17</b>

The answers for the question I2 given by the two groups of female students are not very different, the significance threshold  $P = 0.227 > 0.05$ , for Chi-Square = 8.161 and  $df=6$ . The effect's magnitude ( $\phi = 0.17$ ) indicates an association of a small to medium intensity between the answers of the groups Măgurele and Bucharest. The share of the answers could be observed in the graphic from fig. no.2

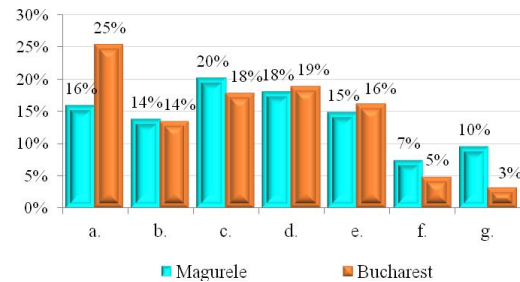


Fig. 2 – Preferences: share of the answers for I2

### I3. Sports in the spare time

For the question „do you do sports in your free time?”, from the representatives of the Bucharest Campus, 60% have said „Yes”, 40% answered with „No”.

From the representatives of Măgurele Campus, 67% have answered with „Yes” whereas 33% admit they do not practice any sportive activities(Fig. 3).

This shows that despite of the small amount of free time, the majority of students are consciuos of the necessity of doing physical exercices for a healty lifestyle.

Table no. 4

Chi-Square Tests	Value
Pearson Chi-Square	<b>0.404</b>
df	<b>1</b>
P (Asymp. Sig. (2-sided))	<b>0.525</b>
Phi	<b>0.06</b>

The differences between the two groups of female students are insignificant regarding the

answers given to question I3, significance threshold  $P = 0.525 > 0.05$ , for a Chi-Square = 0.404 value and  $df = 1$ . The coefficient  $\phi = 0.06$  shows a very small association between the two groups. The share of the answers can be observed in the graphic from fig. no. 3

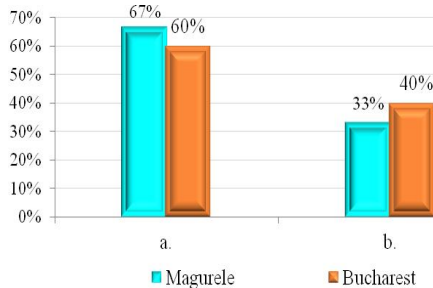


Fig. 3 – Sports on free time: the share of the answers to I3

#### I4. Frequency

The most frequent answer given to the question „how many times a week do you do sports in your spare time ?” (Fig. 4), was „occasionally” for those from the Bucharest Campus, with a percentage of 39%, followed by „once” a week 19%, „twice” a week 17% and the last 2 options „three times” with a score of 13% and „more than three times” a week with a score of 12%.

In the case of Măgurele Campus, 23% of the subjects have answered they were doing sports „once” a week, followed by an equality of three indicators with a percentage of 20%: „occasionally” „twice” a week și „three times” a week, and the answer „more than 3 times” a week obtained 17% of the options.

Table no. 5

Chi-Square Tests	Value
Pearson Chi-Square	<b>3.533</b>
df	<b>4</b>
P (Asymp. Sig. (2-sided))	<b>0.473</b>
Cramer's V ( $\phi$ )	<b>0.18</b>

The answers given to the question I4 by the two groups of students are not significantly different, the significance threshold  $p = 0.473 > 0.05$ , for a Chi-Square = 3.533 value and  $df = 4$ . Increasing the effect through the coefficient  $\phi = 0.18$  shows an association of small to medium intensity between the 2 groups. The share of the answers could be observed in the graphic from fig. no. 4

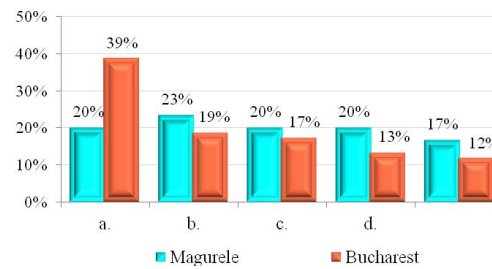


Fig. 4 – Frequency: Answer share for I4

#### I5. Sports

The number of answers given to the question „What sports do you prefer ?” (Fig. 5), is superior to the presented cases because of the appearance of multiple answers. For those from Bucharest Campus, the most frequent options were gymnastics, aerobics/fitness/bodybuilding, in a percentage of 22%, followed by free running-jogging 21% and by „sports on skateboard/roller skating/cycling” 19%.

On the inferior places in the ranking the preferences were „swimming” 11%, team sports 9%, followed by three indicators with 6% „winter sports- ice skating/snowboard/ski”, „tennis” and „others”.

At the Faculty of Physics (Măgurele campus), the students' options are also varied, the first two references being the team sports (24%), closely followed by free running-jogging 21%.

The second echelon is represented by „others” with the percentage of 12%, followed by 3 indicators with 10% „winter sports- ice skating/snowboard/ski”, „roller sports- skateboard/roller skating/cycling” și „tennis”.

The third echelon is represented by „aerobics/gymnastics/fitness/bodybuilding” (9%) and „swimming” (4%).

Table no. 6

Chi-Square Tests	Value
Pearson Chi-Square	<b>18.643</b>
df	<b>7</b>
P (Asymp. Sig. (2-sided))	<b>0.009</b>
Cramer's V ( $\phi$ )	<b>0.30</b>

Between the 2 groups of students there are significant differences regarding the answers to the question I5, the significance threshold  $P = 0.009 < 0.05$ , for a Chi-Square = 18.643 value and  $df = 7$ . Increasing the effect through the coefficient  $\phi = 0.30$  shows an association of medium to large intensity between the 2 groups. The share of the answers could be observed in the graphic from fig. no. 5

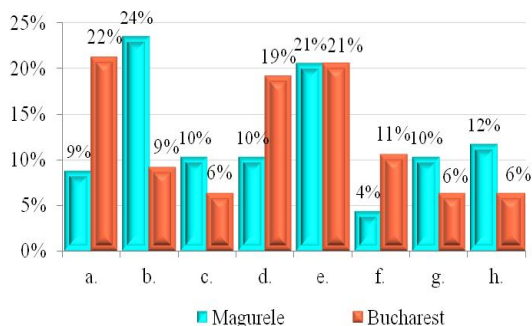


Fig. 5 – Sports: Answer share for I5

### 16. Where/ who with?

To the question „in what environment do you prefer to do sports?” (Fig. 6), we observe that the subjects from Bucharest have allocated a percentage of 51% for the answer „with a group of friends”, followed by 33% of those who claimed „individually” and 16% of those who opted for a gym.

In the case of the students from Măgurele a percentage of 50%, preferred to do sports with their group of friends, 32% opted for a gym, and 18% wanted to do sports individually.

Table no. 7

Chi-Square Tests	Value
Pearson Chi-Square	<b>6.274</b>
df	<b>2</b>
P (Asymp. Sig. (2-sided))	<b>0.043</b>
Cramer's V ( $\phi$ )	<b>0.22</b>

For the question I6 the differences between the answers of the 2 groups of female students are statistically significant. The significance threshold  $P = 0.043 < 0.05$ , for a Chi-Square = 6.274 value and  $df = 2$ . The coefficient  $\phi = 0.22$  for the size of the effect shows a medium association between the two. The share of the answers is represented graphically in fig. no. 6

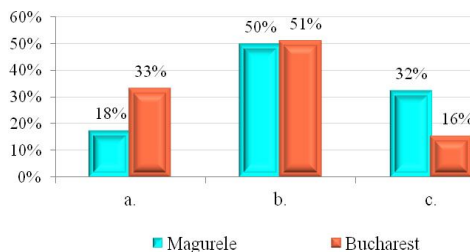


Fig. 6 – Where/ who with: answer share la I6

### 17. Why not?

The most frequent answer to „why don't you practice sports in your free time ?” (Fig. 7), by students from Bucharest was „I don't have enough time” and „because of the coziness” 29%, followed by „others” 16%, „I don't know where/with who” 15%, and the last but not least „I am not interested” with a percentage of 11%.

Students from Măgurele, preferred „not enough time” 23%, and „I have no place/with who” followed by 20% for „I am not interested” and „others” and „from coziness” 14%.

Table no. 8

Chi-Square Tests	Value
Pearson Chi-Square	<b>5.034</b>
df	<b>4</b>
P (Asymp. Sig. (2-sided))	<b>0.284</b>
Cramer's V ( $\phi$ )	<b>0.22</b>

The significance threshold  $P = 0.284 > 0.05$ , for a Chi-Square = 5.034 value and  $df=4$  indicates insignificant differences statistically between the two groups' answers to question 17. The coefficient  $\phi = 0.22$  shows a medium association between the two groups. The share of the answers is represented graphically in fig. no. 7

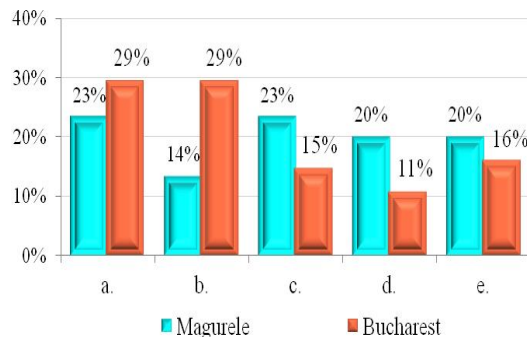


Fig. 7 – Why not?: Answer share for I7

### 18. Opportunities

The answers to the question „Are any places where you could practice sports in your leisure time close to your home (others than the U.B. classes)?” (Fig. 8), were eloquent regarding to the lack of concerns from the local administrations for creating special places where one can spend their spare time.

The ones from Bucharest have had distinct answers from those from Măgurele, in the sense that 59%, of them identified this kind of places,

thus answering „Yes”, whereas 41% didn't identify those places.

The ones from The Faculty of Physics, Măgurele campus, have answered they didn't identify places for sportive activities (63%) but that 37% of them did.

Table no. 9

Chi-Square Tests	Value
Pearson Chi-Square	<b>4.158</b>
df	<b>1</b>
P (Asymp. Sig. (2-sided))	<b>0.041</b>
Phi	<b>0.20</b>

For the question I8 the differences between the answers of the two groups of female students are significantly different, the significance threshold  $P = 0.041 < 0.05$ , for a value Chi-Square = 4.158 and  $df = 1$ . The size of the effect through the coefficient  $\phi = 0.20$  shows a medium association between the two groups. The share of the answers is represented graphically in fig. no. 8

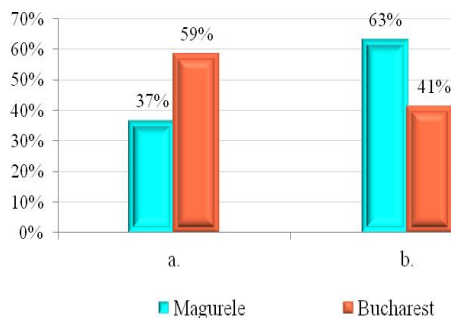


Fig. 8 – Opportunities: answer share to I8

#### I9. Reasons „pro” sports

The answers were divided as follows: for those from Bucharest, 37% are motivated by the education received from their families, 21% considered that the interesting options motivates them, with the same percentage of 17% we observe that the subjects admit the facilities are what is needed, as much as living close to such places. 8% of the options were allocated for the „involvement of the local authorities for supplying and equipping the sportive facilities”.

When asked, the girls from Măgurele also found the education from their families to be an important step (26%), 23% considered the various offer to be an advantage, 22% claimed that the facilities meet all the conditions, 19% appreciated the fact they live near sportive facilities, and 10%

mentioned the „involvement of the local authorities for supplying and equipping the sportive facilities” (Fig. 9).

Table no. 10

Chi-Square Tests	Value
Pearson Chi-Square	<b>1.412</b>
df	<b>4</b>
P (Asymp. Sig. (2-sided))	<b>0.842</b>
Cramer's V ( $\phi$ )	<b>0.12</b>

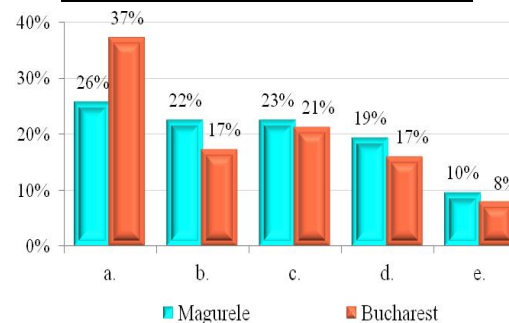


Fig. 9 – Reasons „pro” sports: answer share to I9

#### I10. Inconveniences

The female students who do not want to practice sportive activities in their spare time claim differently:

-In the Bucharest campus 27% of the subjects blaim their lack of time for not being able to go to the places designed for sportive activities and they would rather the facilities were closer to their school or homes, 22% don't have a mentor to guide them, 20% blame the local administrations for the lack of involvement in motivating this segmen of population to do more sportive activities, 16% don't have many options to choose from the offer and 15% say that the sportive facility doesn't satisfy their expectations.

-In the Măgurele campus 23% considered the facility to be unsatisfactory and that there is a lack of sports offers; 20%, say that the local administrations are not preoccupied with equipping a facility for practicing physical activities, with the lack of a teacher and with the fact that they do not have enough time to go there (17%)(Fig. 10).

Table no. 11

Chi-Square Tests	Value
Pearson Chi-Square	<b>2.844</b>
df	<b>4</b>
P (Asymp. Sig. (2-sided))	<b>0.584</b>
Cramer's V ( $\phi$ )	<b>0.16</b>

The significance threshold  $P = 0.584 > 0.05$ , for a value Chi-Square = 2.844 and  $df=4$  shows statistically insignificant differences between the two groups regarding the answers to I10. The coefficient  $\phi = 0.16$  for increasing the effect shows a small association between the two groups. The share of the answers is represented graphically in fig. no. 10

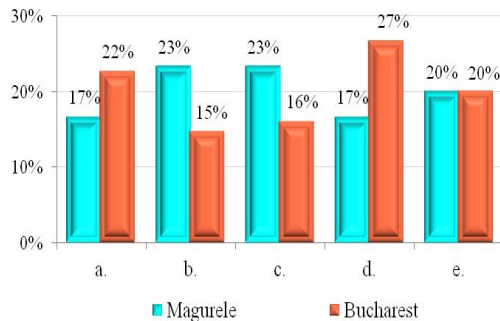


Fig. 10 – *Inconveniences*: answer share to I10

### Discussions

The authors Colibaba, Tache, Bocu, (2010) have commented on the motivation for physical activity in general and for a particular sport, motivation correlation with stress; physical continuity of pre-university education.

A new binome, antiscenesence ⇔ antidistress, was elaborated upon in the works of Riga, Riga, (2009), in their opinion representing a solution and an important strategy in order to improve the quality of life and active, useful and healthy longevity.

We can also identify similarly themed studies amongst the works of Wolf (2010), who helps elaborate global standards in promoting health training, Buiac, Suci (2007) discuss research conducted on volunteers who agreed to subject themselves to a more rational lifestyle for an extended period of time, focusing on movement and physical exercise. The results have been obviously positive, determined by an active life.

Subjects from both questioned groups have between 1 and 4 hours free time a day in a percentage of 96% for those in Bucharest and 80% for those from Măgurele. There are few who claimed of having no spare time (4%) for those in the Bucharest campus) in comparison with the 20% of those from Măgurele campus.

The most liked spare time activities by the students from Măgurele are shows/movies/concerts, in comparison to the students from Bucharest, who prefer the TV/movies/internet.

These sedentary activities confirm the second hypothesis for both groups of students.

60% (Bucharest campus) and 67% (Măgurele campus) of the questioned studentse have declared they do sportive activities in their free time, thus indicating that the majority, are conscious about the necessity of doing sports for a healthy life despite of the short amount of time they have .

Those who perform physical activities in their free time are 39% the ones from Bucharest, followed by those who do that once a week 19%. The ones from Măgurele campus, have also claimed they do sports once a week 23% and 20% are those who practice sportive activities twice or three times a week, occasionally.

A lot of students prefer doing sports with their group of friends (campus Măgurele 50%; campus Bucharest 51%).

From the conversations with both groups we found the education received from the family is very important, but just as important are the lack of attractive and durable options at a College level and the involvement of the local administrations or their support given to private initiatives.

Considering the two samples from different campuses we have discovered that every region has its issues and so every student has different situations, each of them being at disadvantage. Those from the Bucharest campus have more options to choose from, yet the time is not enough. In Măgurele campus, things go different, in the sense that there is a sportive facility but it is not well equipped.

### Conclusions.

The hypothesis is realized. The study programme of the female students from the University of Bucharest, has demonstrated the spare time is limited arbitrarily in a big percent by the education, entourage and standard of living. Among their free time preoccupations there are found both physical and sportive activities and those with sedentary status. A development of the sportive facilities, an investment for building polyvalent halls, modern sportive fields, swimming pools, etc. are highly needed for both campuses.

Local authorities should create projects in order to properly equip these special places for spending time.

Physical education teachers should benefit from the Board's involvement to the rectorship level in organizing more special events designed to motivate the female students to practice sports and this becoming a way of life.

This study will be continued with other elements in order to enlighten us on how to proceed



to determine youngsters to schedule their budget of spare time.

#### Aknowledgements.

We want to thank you to all of participants to this study.

#### References

- Bota A, 2006, Physical exercises for a working life-Driving activities for leisure time. Publisher University Book, Bucharest, 15.
- Buiac D, Suciuc A, 2007, Health and physical activity over time, Publishing Afir, Romanian Federation of Sport for All, p.59
- Colibaba SR, Tache S, Bocu T, 2010, Motivation in athletic activities. *Palestrica of the third millennium civilization and sport* Vol. 11, no 3, July. – Sep., p. 216-220
- Cross River University of Technology, Calabar. Review of Higher Education in Africa, 2012;4:63-83
- Di Serio Á, Ibáñez MB, Kloos CD, 2013, Impact of an augmented reality system on students' motivation for a visual art course. *Computers & Education*,;68:586-596
- Dumitrescu R, 2013, Mountain and water sports activities. Publisher University of Bucharest, ,69
- Filsecker M, Hickey DT, 2014, A multilevel analysis of the effects of external rewards on elementary students' motivation, engagement and learning in an educational game. *Computers & Education*, 75:136-148
- Forsyth DR, McMillan JH, 1991, Practical proposals for motivating students. *New directions for teaching and learning*; (45):53-65.
- Ganciu M coord.. Physical independent activities and the recovery of free time through movements motion, Vol. I, Publisher University of Bucharest, 2010,39-40
- Haron HNH, Shaharoun AM, Puteh M, Harun H, 2012, Does Motivation Affect Students' Understanding and Performance in Engineering Statics ? *Procedia-Social and Behavioral Sciences*, 56:191-203
- Yukseloglu SM, Karagüven MH, 2013, Academic Motivation Levels of Technical High School Students. *Procedia-Social and Behavioral Sciences*, 106:282-288
- Kaylene WC, Williams CC, 2011, Five key ingredients for improving student motivation. *Research in Higher Education Journal*, 2011;12:1-23
- Krug SE, 1989, Leadership and learning: A measurement-based approach for analyzing school effectiveness and developing effective school leaders. In: Maehr ML, Ames C. *Advances in motivation and achievement: Motivation enhancing environments*. Greenwich: JAI Press Inc. 1989;6:248-274.
- Mirkazemi N, 2003, Community's reaction field theory. *Effective practices in student motivation*. J. Educ. Ministry Ed., 2003
- Mirzajani H, Rahimisadegh Z, Alami R, Farnia M, Bayekolaei MD, 2014, The Effective Factors on the Guidance School Students' Academic Motive. *Res. J. Recent Sci.* 2014;3(6),77-82.
- Moghadam B, 2002, Application of Psychology in the School. Tehran, Soroush Publications, Congress Code: 2K7M/ 1051 LB, 2002.
- Pociello C, 2000, *Sports et sciences sociales*. Ed. Vigot, 2000
- Riga S, Riga D, 2009, Vulnerability, stress and senescence. *Movement and physical activity – anti-aging factors*. *Palestrica of the third millennium civilization and sport* Vol. X, no 1 (35), Mart. p. 7-13
- Stoicoviciu A, coord. 2012, Physical independent activities and the recovery of free time through movements motion, Vol. I, Publisher University of Bucharest.
- Wolf K, 2010, *Creating Global Standards in Health Promotion Training – the International Institute for Health Promotion*. *Palestrica of the third millennium civilization and sport* Vol. 11, no 4, Oct. –Dec., p. 291-292