STUDIA UBB EDUCATIO ARTIS GYMN., LXIII, 4, 2018, pp. 41 - 48
(RECOMMENDED CITATION)
DOI:10.24193/subbeag.63(4).32

ACTIVE COMMUTING TO FACULTY PILOT STUDY

NEGRU IOAN NICULAIE[1*], ANDRÁS ÁLMOS[1]

ABSTRACT. Nowadays active commuting represents a frequent subject in the scientific journals. Active commuting to school, as is emphasized in several studies, influences the level of physical activity and the health of young people. Obesity and some hearts issues could be prevented, as studies said, by walking and cycling to school. The aim of this study was to find how students, from Babeş-Bolyai University, commute to their faculties during a week. In the study were involved people aged 18-20 years old, n=186. The overcomes show that the main way of commuting is using a bus. Around 30% of them commute by walking, meanwhile only 3,4 students use cycling to rich their faculties.

Key Words: *Commuting, bus, walking, cycling, distance, body mass index.*

REZUMAT. ***Deplasarea activă la facultate. Studiu Pilot*.** Deplasarea activă, sub formă de mers sau folosind bicicleta, către şi dinspre şcoală acasă, este un subiect frecvent abordat în zilele noastre. Majoritatea studiilor cu această tematică, scot în evidenţă faptul că deplasarea activă are efecte benefice asupra sănătăţii tinerilor. Incidenţa obezităţii şi a unor probleme cardiace poate fi redusă prin deplasarea activă, spre şcoală/facultate, (pe jos sau cu bicicleta). Studiul de faţă îşi propune să determine felul în care o parte dintre studenţii Universităţii Babeş-Bolyai se deplasează la facultate şi dinspre facultate acasă. (sau la locul unde sunt cazaţi). În acest studiu au fost implicaţi studenţi cu vârsta între 18-20 de ani, n=186. Din analiza statistică a datelor a rezultat că majoritatea studenţilor se deplasează, spre facultate şi înapoi spre casă, folosind ca mijloc de deplasare principal autobuzul, în timp ce doar aproximativ 30% dintre ei se deplasează pe jos. Studiul arată că doar un număr redus, 3-4 studenţi dintr-un total 186, folosesc bicicleta ca mijloc de deplasare.

Cuvinte cheie: *deplasare, autobuz, bicicleta, mers pe jos, indicele de masă corporală, distanţă*.

[1] *Babeş-Bolyai Unversity, Faculty of Physical Education and Sport, Cluj-Napoca, Romania*
[*] *Corresponding Author: nicu.negru@ubbcluj.ro*

Introduction

The aim of this study is to determinate if the first year students, from different faculties, commute to faculties and back to their accommodation in an active way (walking or cycling).

Commuting to school in an active way (walking or cycling) is considered a physical activity with several implications on kids' health. (Kallio et al, 2016; Chillón, et al. 2017; Rodríguez-Lópezet et al, 2017). Active commuting to school "is a physical activity behavior occurring daily in specific frame times before and after school" (Chillón, et al. 2017, p. 613). Several studies which approach this subject emphasize that active commuting has a lot of benefits for the individual, by increasing the fitness level and their academic performance (Chillón, et al. 2017, apud Larouche et al, 2014; Van Dijk et al, 2014; Haapala et al 2014).

Active commuting influences the cardiovascular fitness level with direct influences on youths' health (Muntaner-Mas et al., 2018, p. 2). Keeping a normal weight, like some studies emphasize, could be influenced by an active commuting (Martins et al., 2016, apud Faulkner et al., 2009; Østergaard et al., 2012; Saunders, Green, Petticrew, Steinbach, & Roberts, 2013).

Some of the authors consider the active commuting to school (cycling or walking) as being prevention means against obesity and related heart disease. They were interested to find an association between active commuting, body fat and visceral adipose tissue. Those who reported that they commute active (walking and cycling) registered lower values of the body fat index and visceral adipose tissue than those who declared that they use cars for commuting (Mytton et al., 2018).

Material and Methods

The study was conducted on a sample of 186 students, boys (n=38), girls (n=148) and it was organized in June/2018.

In order to realize this study, we have used the following research methods: bibliography study, survey and statistical analysis. Collecting the data was based on "Mode and Frequency of Commuting to and from School Questionnaire" elaborated by Spanish researchers (Chillón, Herrador-Colmenero et al., 2016), from who we have asked the permission to use the questionnaire. At the initial instrument we have added few options, with the purpose to register the distance between students' accommodation and their faculties.

Results

In order to establish the body mass index, we started from the weight and the height self-reported measurements. Most of the students, 143 from 186 have a normal weight while 18 of them are overweight, as it can be seen in the Chart no.1.

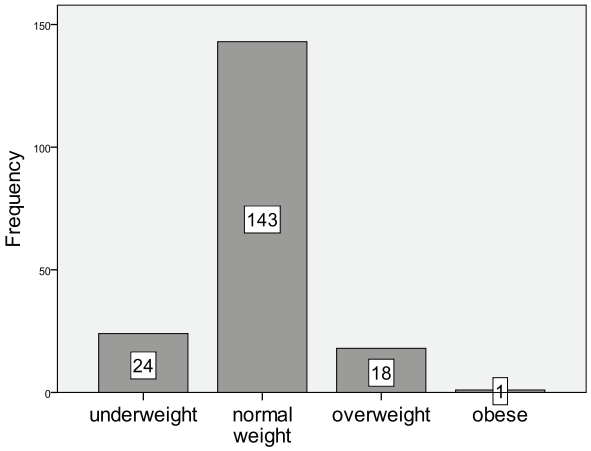

Chart no. 1 Body mass index

Every student had to declare the distance between their accommodation and faculties. As it can be observed in the Chart no.2 the most of them have to cover daily a distance between 2 and 5 km.

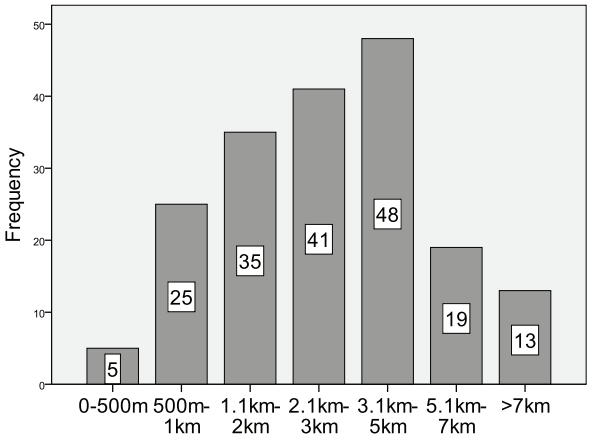

Chart no. 2 Distance to faculty (km)

The most of the students, usually, commute to their institutions, as is represented in the Chart no. 3, by bus (107 of them) while just 59 by walking and 12, of them, half walking and half by bus. Only 2 of them use a bike for commuting.

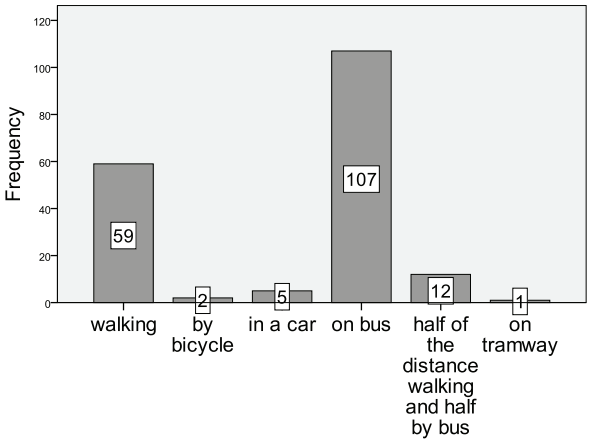

Chart no. 3 Commuting to faculty (usually)

Being asked how they come back, usually, from their institutions to the place where they live, they reported as it can be seen in Chart no 4, 115 of them use the bus and just 51 comeback, to their residence, by walking.

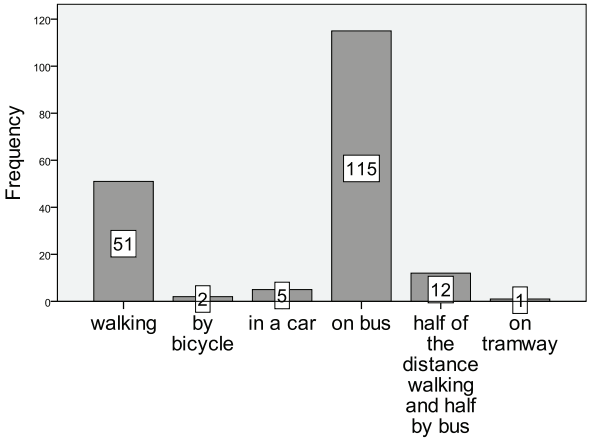

Chart no. 4 Coming home from faculty (usually)

The ways in which they commute to faculties (go and back) on Monday is represented in the charts situated bellow (no. 5 and 10). From 186 students, 90 of them reported that they use a bus, toward their institution and 65 are more active, because they commute by walking. Some of the students, precisely 105 return to their accommodations using the bus, while just 57 return by walking.

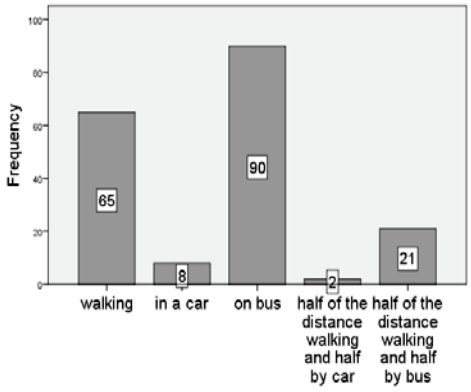

Chart no. 5 Commuting to faculty on Monday

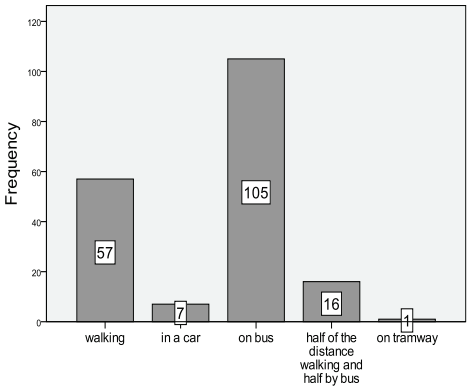

Chart no. 10 Coming home from faculty on Monday

The chart no.6 shows us that the preferred mean to rich the faculty, on Tuesday, is the bus, while 62 prefer having a walk. Only three of them use a bike. Regarding the way back, chart no.11, toward their accommodation, 103 use the bus and 61 prefer walking.

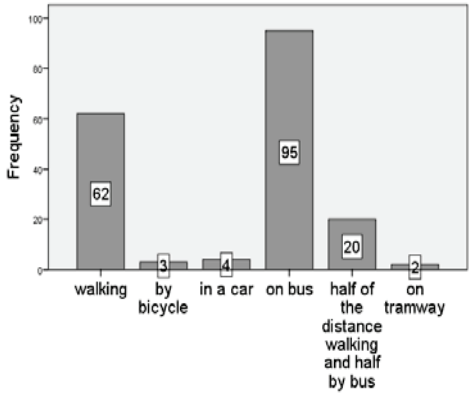

Chart no. 6 Commuting to faculty on Tuesday

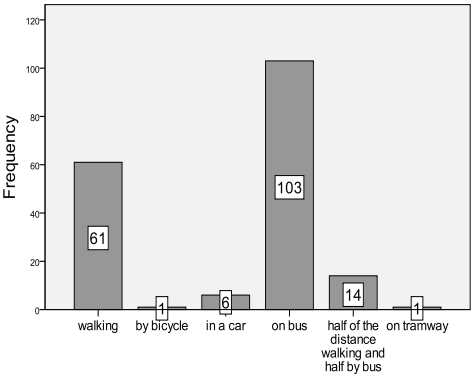

Chart no.11 Coming home from faculty on Tuesday

Wednesday, the main means to commute are the buses and walking, as it can be seen in the graphics bellow (chart no.7 and no.12).

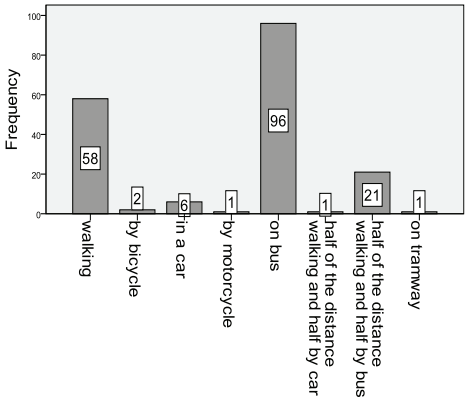

Chart no. 7 Commuting to faculty on Wednesday

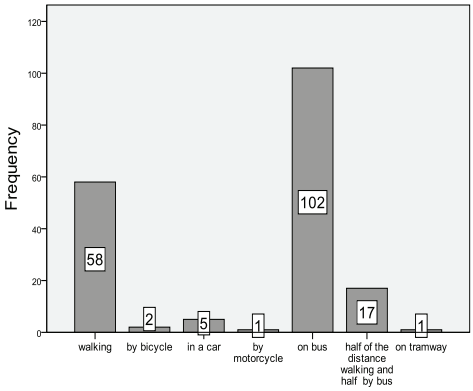

Chart no. 12 Coming home from faculty on Wednesday

The ways of reaching the faculty and back to their accommodations, on Thursday, can be seen in the charts no. 8 and 13. Most of the students use the bus, as they reported before, and some of them prefer walking. Just one of them uses the bike even if the data was collected during the summer season when usually young people use bikes in order to commute.

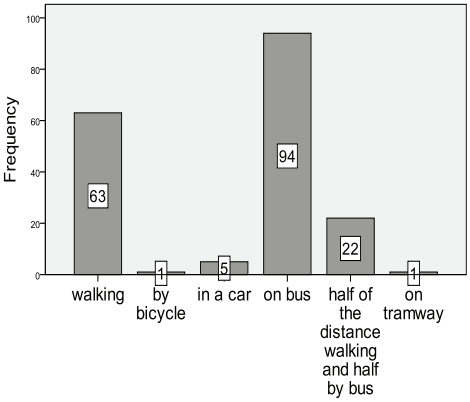

Chart no. 8 Commuting to faculty on Thursday

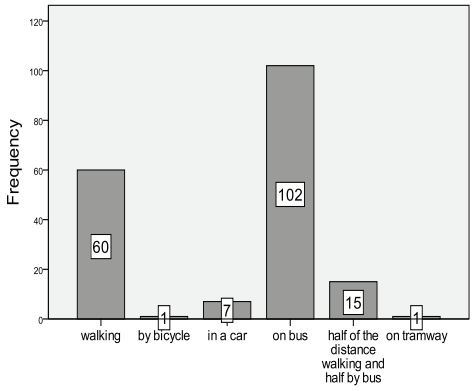

Chart no. 13 Coming home from faculty on Thursday

Seeing the charts bellow (no. 9 and 14) we realize that people, on Friday, prefer commuting by bus or walking and only few of them commute with the bike or by car.

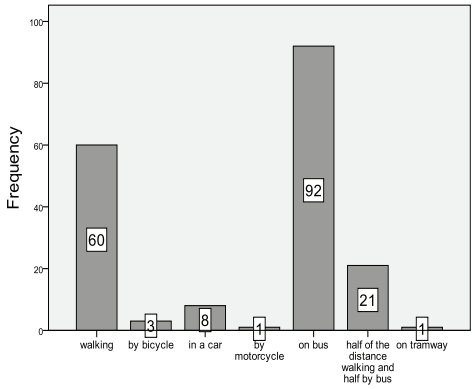

Chart no. 9 Commuting to faculty on Friday

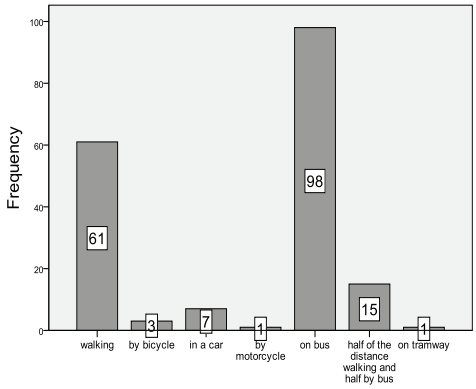

Chart no. 14 Coming home from faculty on Friday

Conclusions

Starting from outcomes we can observe, the major part of the students (143 from a total of 186) have normal BMI values, which could be considered a good news, knowing the implications of obesity diseases.

The results show us that the students should commute daily a distance between 2 and 5 km from their accommodation to their faculties.

The people involved in this study prefer to commute using the bus, while only around 30% of them commute by walking.

Regarding the interest to commute by cycling is very weak, only 3,4 of the them use the mentioned mean for commuting.

Meanwhile in the European biggest cities more and more people use active means for commuting, in our city the young people still prefer to commute by bus. The main reason could be the reduced number of cycle tracks and the lack of safety during commuting. As a short comparison between two similar cities, Nantes and Cluj-Napoca, at least at the level of population number (World population, n.d) the city of Nantes (declared velo City in 2015) has 485 km of cycle tracks, while the city of Cluj-Napoca, and its surroundings, has only around 59 km of cycle tracks (Oroș, 2015).

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