

## PLACE OF ORIGIN AND PLACE OF RESIDENCE VERSUS LEVEL OF PHYSICAL ACTIVITY OF STUDENTS OF THE MEDICAL UNIVERSITY IN TERNOPIL, UKRAINE

## MIEJSCA POCHODZENIA I ZAMIESZKANIA A POZIOM AKTYWNOŚCI FIZYCZNEJ STUDENTÓW I STUDENTEK UNIWERSYTETU MEDYCZNEGO W TARNOPOLU NA UKRAINIE

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### Authors' contribution

Wkład autorów:

- A. Study design/planning  
zaplanowanie badań
- B. Data collection/entry  
zebranie danych
- C. Data analysis/statistics  
dane – analiza i statystyki
- D. Data interpretation  
interpretacja danych
- E. Preparation of manuscript  
przygotowanie artykułu
- F. Literature analysis/search  
wyszukiwanie i analiza literatury
- G. Funds collection  
zebranie funduszy

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### Summary

**Background.** Research on the state of physical activity level of medical faculty students is especially important because of their future roles as doctors and other professionals associated with health.

**Material and methods.** The study was conducted in 2015 among 646 students of the Medical University in Ternopil, Ukraine, with the use of the extended version of The International Physical Activity Questionnaire.

**Results.** A high level of physical activity of students with significantly higher values among men than women have been shown. No significant relationships in physical activity levels of students in relation to the place of origin and place of residence have been demonstrated.

**Conclusions.** The physical activity programmes at universities should take into account gender and fields of study.

**Keywords:** students of medical faculties, physical activity, place of origin and place of residence

### Streszczenie

**Wprowadzenie.** Badania nad stanem poziomu aktywności fizycznej studentów kierunków medycznych jest szczególnie ważne z racji przyszłej ich roli jako lekarzy i innych zawodów związanych ze zdrowiem.

**Materiał i metody.** Badania przeprowadzono w 2015 r. wśród 646 studentów Uniwersytetu Medycznego w Tarnopolu na Ukrainie z wykorzystaniem długiej wersji Międzynarodowego Kwestionariusza Aktywności Fizycznej.

**Wyniki.** Wykazano wysoki poziom aktywności fizycznej studentów przy istotnie wyższych wartościach wśród mężczyzn niż kobiet.

Nie wykazano istotnych związków poziomu aktywności fizycznej studentów z miejscem pochodzenia i miejscem zamieszkania.

**Wnioski.** W programach zajęć ruchowych w trakcie studiów należy uwzględnić płeć i kierunki studiów.

**Słowa kluczowe:** studenci kierunków medycznych, aktywność fizyczna, miejsce pochodzenia i zamieszkania

### Introduction

The beneficial influence of physical activity on human health is widely recognized and tested among international researchers [1,2,3,4,5,6,7]. Physical activity should be accepted in a special way among the students as future parents, including mainly among medical faculty students as future doctors and other professions related to health.

The issues of physical activity of students both in bio-physiological and cultural terms are more and more commonly undertaken on different continents: Asia [8], Europe [9,10], Africa [11,12], and in different countries [13,14,15], including medical universities' students [16,17,18,19].

An important issue in the study of physical activity is the search for the factors determining it. In the case of present work its goal is to seek connections between activity level and place of origin and place of residence of students, taking into account their gender.

Kozak D, Korda M, Bergier J. Place of origin and place of residence versus level of physical activity of students of the Medical University in Ternopil, Ukraine. *Health Problems of Civilization*. 2016; 10(4): 26-30. doi: 10.5114/hpc.2016.63568.

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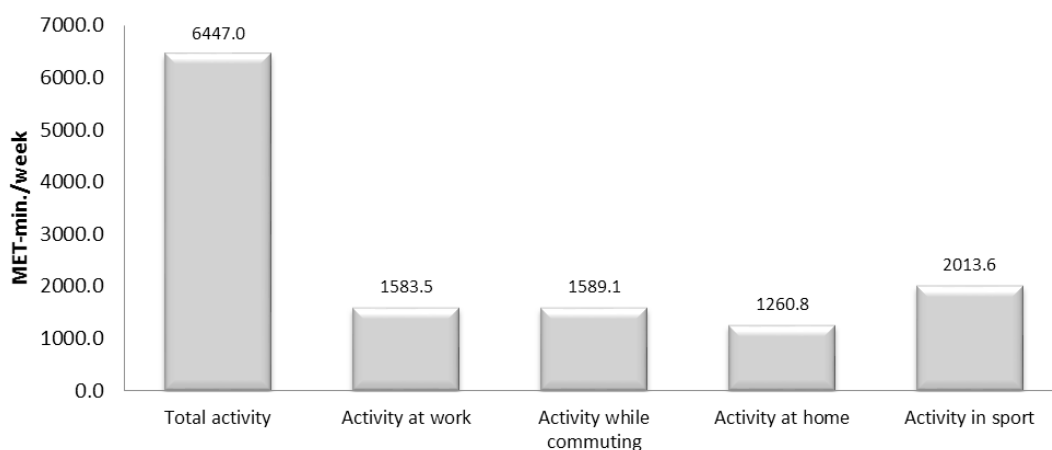
**Material and research methods**

The study was conducted in October 2015 among 646 students of the Medical University of Ternopil in Ukraine, including 333 women (51.5 %) and 313 men (48.5 %) from different fields of study: medicine - 504 (78 %), stomatology - 87 (13.5 %), pharmacy - 30 ( 4.6%) and 25 from other subjects ( 3.9%). As a method of research the International Physical Activity Questionnaire (IPAQ) in the long version [20] was used.

**Test results**

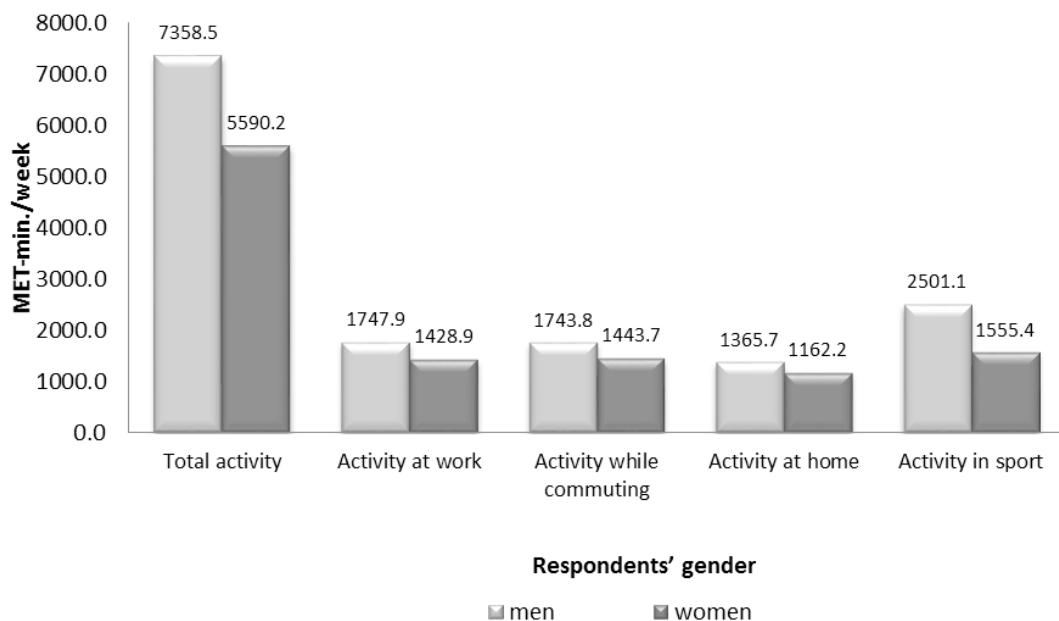
**1. The level of physical activity**

Students obtained indicator of physical activity of the value of 6447.0 MET.min / week . \* with the largest share of PA in sport - 2013.6 MET, and the lowest in housework activities - 1260.8 MET (Fig. 1).



**Figure 1.** The level and areas of physical activity of students

Total level of PA was also compared and its areas taking into account gender. The results showed significantly higher levels of total PA among men - 7358.5 MET against women - 5590.2 MET. Men also obtained significantly higher values in areas such as: activity in work / studies, commuting and activity in sport. There were no significant differences within the scope of gender, but for the area of activity at home (Fig. 2, Tab. 1).



**Figure 2.** The level and areas of physical activity of students with regards to gender

**Table 1.** The differentiation of the level and the areas of physical activity of students with regards to gender

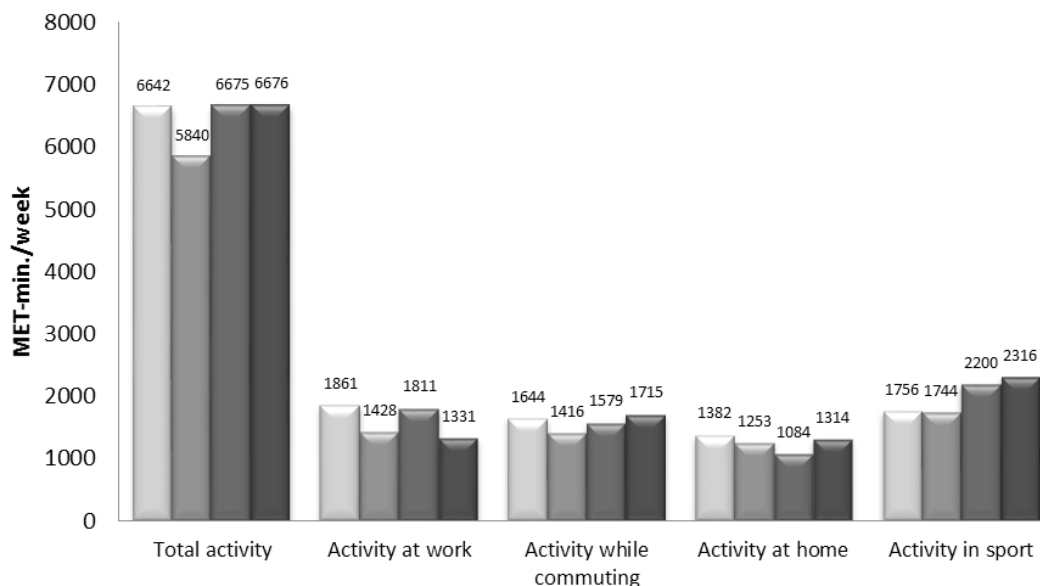
U Mann - Whitney test					
The level and the area of physical activity (PA)	Sum of ranks		Z	p	
	men	women			
Activity at work	109298	99682	3.42	0.0006*	
Activity while commuting			2.29	0.0218	
Activity at home	101238	107742	-0.01	106688	102292
Activity in sport	113932	95048	5.36	0.0001*	
Total activity	111479	97501	4.31	0.0001*	

- significant differences at <0.05

**2. Physical activity versus place of origin.**

Prior to commencement of the study four centers of residence were used in the analysis: village, small town – under 30.000 residents, medium city - above 30-10.000 and a big city - over 100.000 residents.

The total level of PA was the lowest in the group of students from small towns - 5.840 MET and it was similar in the remaining groups. There were no significant differences according to centers of residence (origin), in the total PA and in each area (Fig. 3, Tab. 2).



**Place of residing prior to commencement of studies**

■ village ■ small town ■ medium city ■ large city

**Figure 3.** The level and the areas of physical activity of students with regards to their place of origin prior to commencement of studies

**Table 2.** The differentiation of the level and the areas of physical activity of students with regards to place of origin prior to commencement of studies.

Kruskal-Wallis Test			
The level and the area of physical activity (PA)	H	P	differentiation
Activity at work	7.11	0.0684	-
Activity while commuting	2.81	0.4220	-
Activity at home	3.78	0.2864	-
Activity in sport	4.82	0.1851	-
Total activity	2.88	0.4110	-

### 3. Physical activity and the place of residence.

Three places of residence were used for the analysis: student house /homestay, own family home and block of flats. Also this combination showed no significant differences in the total PA and its areas depending on the place of daily residence (Fig. 4, Tab. 3).

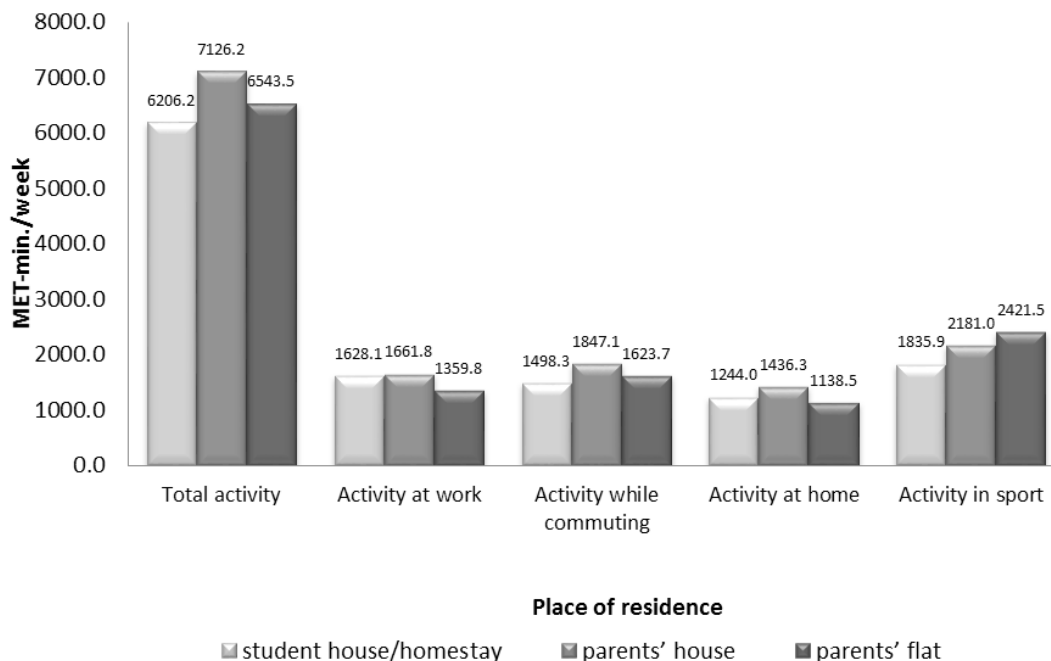


Figure 4. The level and the areas of physical activity of students with regard to the place of residence

Table 3. The differentiation of the level and the areas of physical activity of students with regard to the place of residence

Kruskal –Wallis Test			
The level and the area of physical activity (PA)	H	P	differentiation
Activity at work	0.16	0.9231	-
Activity while commuting	3.85	0.1462	-
Activity at home	2.54	0.2807	-
Activity in sport	4.61	0.0999	-
Total activity	1.70	0.4264	-

### Discussion

It should be emphasized that examined medical faculty students, have a high level of total PA (6.447 MET). It should be noted that levels of physical activity of men are significantly higher than women, as evidenced by studies in other countries: Turkey [15], China [14] and the African continent [12]. One of the major problems is cognizing of students’ PA in relation to their social conditions [21]. The study of the conditioning of the students’ PA within the scope of their origin (village and small and large cities) showed no significant associations. This fact can be explained by the fact that medical academies’ students are a sort of intellectual elite of the youth and regardless of the place of residence before the studies, their PA within the lifestyle is similar. There was also no relationship between the place of residence (student house, family house, block of flats) and physical activity. It could have been expected that physical activity should be higher among those living in a student home because of a richer offer of sports and proximity to places designated for exercising, but this thesis was not confirmed. Therefore, it can be assumed that the main factor, regardless of the place of residence, conditioning physical activity among students is their similar awareness about the role of this factor in a healthy lifestyle.

### Conclusions

1. The examined students are characterized by a high level of total physical activity with significantly higher values among men compared to women.

2. The place of residence of students before the studies: village, small town, medium and large city does not differentiate significantly the level of physical activity.
3. Place of residence during the studies: student house, family house, block of flats, does not differentiate significantly the level of physical activity of studying youth.

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