



## **Variations in Physical Activity of Male and Female Students from Different Countries**

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### **Dear Editor-in-Chief**

Physical activity of societies plays an important role in a health promoting life style, which largely determines the health condition. University students, as the future elite group of each of the countries, hold a prominent place in the studies on physical activity of various socio-occupational groups. One of the most important methodological matters in research is to apply a validated tool such as International Physical Activity Questionnaire (IPAQ) (1). Studies with the use of this tool allow the comparison of physical activity of societies in various countries. Previous studies on the physical activity of students from various countries do not demonstrate a positive image of the surveyed group. Research on the physical activity of students in Poland (2) has shown that the most numerous group (43, 6%) is characterized by a moderate level of activity. Studies with the use of this instrument, which their goal was to compare the physical activity of students from Taiwan and the United States of America, indicated a higher level of physical activity among American students (3). American male students obtained on average 6227 MET value, while male students from Taiwan – 4079, 7 MET. The average value of physical activity expressed in MET in American female students is 5921,5 while among their Taiwanese female counterparts the average value expressed in MET is 3786,3.

Low level of activity was noted among South African students (4) because one-third of the students obtained a low level of physical activity. Low level of physical activity was noted namely among 36.3% of females and 30.5% of males. High activity was observed among 17.3% of females and 20.9% of males.

In all of the presented studies (2-5), males were characterized by a higher level of physical activity than females.

In order to ascertain the physical activity in another country, its assessment was also conducted among male and female students in Ukraine, including eating habits (6).

Studies with the use of the IPAQ, and a sports-recreational activity questionnaire designed by the author were conducted in 2013 among 2125 students of 12 specialties at the National University in Lutsk, Ukraine, aged 17-22 - 1291 females (60.8%), and 834 males (39.2%).

Comparison of the level of physical activity of students from Poland and Turkey (5) demonstrated a significantly higher level of physical activity among Polish students.

### ***Level of physical activity and its areas***

The value of total physical activity expressed in MET in females is 3365, which is significantly lower than among males – 3863 MET.

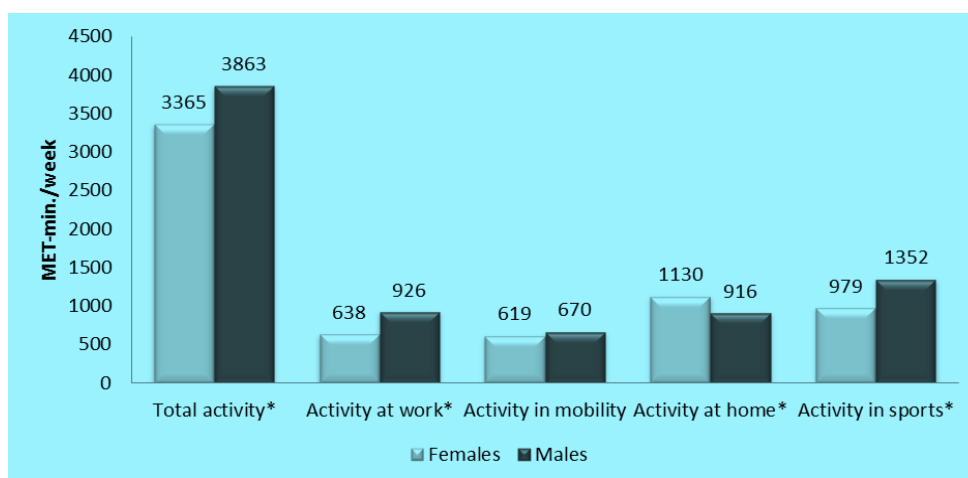
Lower physical activity confirmed among females is typical for the majority of the studies with the use of the IPAQ. It is noteworthy that males are also characterized by a significantly higher activity (in order of the MET values) in sports-recreational activities and activity at work (univer-

sity). Female students are characterized by a significantly higher activity in household chores. However, no differences according to the respondents' gender were observed in the area of mobility (Fig. 1; Table 1).

**Table 1:** Differences in areas of students' physical activity according to gender

Area of activity	Rank sum		Mann-Whitney U Test	
	Females	Males	Z	p
Total activity	1307380	951495	-4.70346	0.001*
Activity at work	1279479	979396	-6.77109	0.001*
Activity in mobility	1367724	891151	-0.33432	0.73814
Activity at home	1459616	799259	6.32124	0.001*
Activity in sports	1261113	997762	-8.05420	0.001*

\*- significant differences at  $P < 0.05$



**Fig. 1:** Areas of students' physical activity according to gender

\*- significant differences at  $P < 0.05$

A more favourable assessment of physical activity among males is confirmed by comparing the levels of this activity. High activity is observed among 57.1% of males and 45.7% of females, whereas low activity is noted in 3.6% of males, compared to 6.3% of females. Evaluation of the levels of physical activity allows a positive evaluation of university students from the Ukraine, because more than 90% of the respondents obtained high or moderate activity, while only several percent – low activity.

The example of lower physical activity among female students than male students in Ukraine, which confirms the results achieved in previous studies, determines the need to intensify the measures aimed at female students.

This is even more important given the fact that current female students, and future mothers, will have to confront the challenge of promoting a healthy life style, which also includes the role of physical activity in their families.

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