

COMPARISON OF THE LEVEL OF PHYSICAL ACTIVITY IN YOUNG ADULTS BEFORE AND DURING THE COVID-19 PANDEMIC- A LONGITUDINAL STUDY

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ABSTRACT

BACKGROUND: The frequency with which people leave their homes and the time they spend in recreational places is significantly reduced at the time of the pandemic, particularly during the lockdown, due to which it is significantly more difficult for them to be active.

AIM: The aim of the study was to assess to what extent the outbreak of the Covid-19 pandemic has affected young adults' physical activity (PA)

METHODS: A total of 506 people aged 18 to 34 ($=24.67$ years \pm 4.23 years), who filled a retrospective-pre-post online survey, were qualified for the study. The survey began 12 days after the epidemic was announced at the site of the study, i.e. between weeks 2 and 4 of obligatory lockdown, including significant restriction of movement.

The levels of physical activity and sedentary time were measured using 7-item International Physical Activity Questionnaire - Short Form (IPAQ - SF). The respondents provided two answers to each question, i.e., information relating to the last 7 days during the pandemic (lockdown), and to a period of 7 days before the pandemic.



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Table 1. Comparison of physical activity during and before pandemic

IPAQ [MET-min./week]	During pandemic			Before pandemic			Z	p
	Me	Q1	Q3	Me	Q1	Q3		
Vigorous PA	0,0	0,0	960,0	480,0	0,0	1920,0	7,31	<0,001
Moderate PA	240,0	0,0	720,0	360,0	0,0	840,0	4,10	<0,001
Walking	3861,0	1485,0	7260,0	6930,0	3762,0	9702,0	11,35	<0,001
Total PA	5483,0	2380,0	9009,0	8752,5	5403,0	11820,0	12,39	<0,001
Sedentary behaviours	300,0	180,0	420,0	240,0	120,0	360,0	6,99	<0,001

Me-median; Q1- Quartile 1; Q3- Quartile 3; PA- physical activity, Z- Wilcoxon matched-pairs signed rank test result; p- probability level test

Table 2 Assessment of the level of physical activity during and before the pandemic

Level of PA	During pandemic		Before pandemic	
	n	%	n	%
High	418	82,6%	469	92,7%
Sufficient	35	6,9%	15	3,0%
Insufficient	53	10,5%	22	4,3%
Total	506	100,0%	506	100,0%
Significance (p)	Z=5,55 p<0,001			

n- number of participants; %-procent, PA- physical activity, Z- Wilcoxon matched-pairs signed rank test result;

P- probability level test

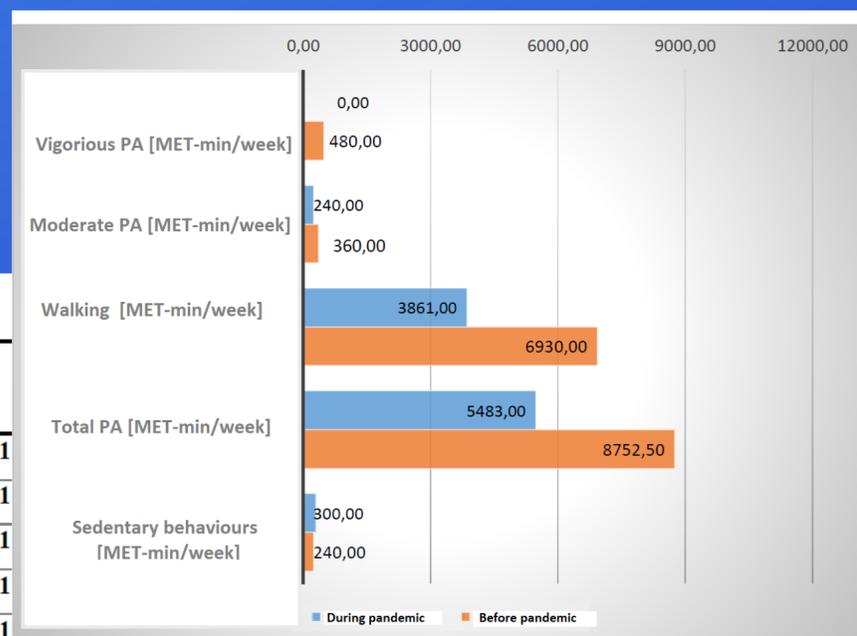


Fig 1. Comparison of physical activity of young adults during and before pandemic

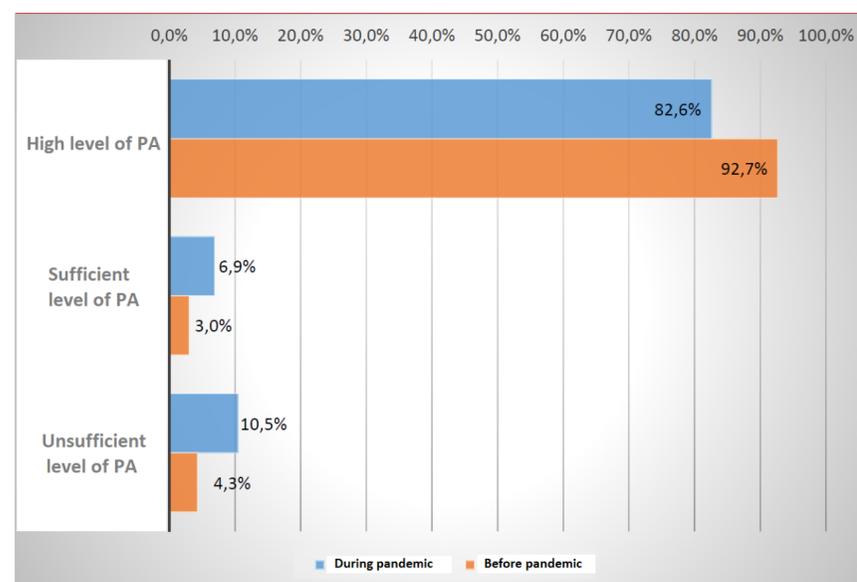


Fig 2. Assessment of the level of physical activity of young adults during and before the pandemic

CONCLUSIONS: During the Covid-19 pandemic young adults are significantly less involved in PA, which adversely affects their health status, including their physical and mental condition. The importance of sufficient PA should be highlighted during this specific period, particularly among young people.