

# STUDY OF NURSING STUDENTS PHYSICAL ACTIVITY LEVELS

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**A** – study design, **B** – data collection, **C** – statistical analysis, **D** – interpretation of data, **E** – manuscript preparation, **F** – literature review, **G** – sourcing of funding

## ABSTRACT

**Background:** Numerous connections between physical activity (PA) and health clearly indicate that nowadays conscious and purposeful PA is essential.

**Aim of the study:** To determine PA levels reported by University nursing students and to indicate the dominant activity areas.

**Material and methods:** A diagnostic survey which included the International Physical Activity Questionnaire – Short Form (IPAQ) was used to examine 419 students of nursing.

**Results:** The reported total PA of the students under investigation was 3443.9 MET-min/week. Walking activities were the dominant area of PA (mean = 1557.6 MET-min/week), whereas vigorous activities were the least common. Compared to women, men accumulated higher values of MET-min/week in the area of total PA and its components, with the exception of vigorous activities. Significant differences in PA were only shown when place of residence was factored in.

**Conclusions:** The IPAQ showed that one in four participants demonstrated high levels of PA. More than one-third of the respondents did not meet the criteria for moderate or high activity levels, thus exhibiting low levels of PA. The participants from urban areas were more active than those from rural areas. Out of the three areas of PA (vigorous, moderate and walking), walking was the most dominate activity.

**KEYWORDS:** physical activity, students, IPAQ, nursing

## BACKGROUND

The development of civilisation has brought numerous conveniences that make our everyday and professional life easier. Simultaneously, it has contributed to a considerable reduction in conscious and purposeful physical activity (PA), which was one of the engines of evolution [1]. Regular physically active is important for positive overall health [2], including psychophysical wellbeing [3–5]. Furthermore, it is one of the most effective ways of preventing lifestyle diseases such as coronary heart diseases, diabetes, obesity or hypertension [2,6,7]. In general, all forms of PA are beneficial; however, considerations on the volume, frequency and intensity of activities, and the individual capabilities of a person should be accounted for. Several studies have shown that individuals are less likely

to take up PA specifically for leisure or health-oriented purposes [1,8,9]. Study results also show a general tendency of reduced PA levels with age, starting at school age and decreasing throughout one's lifetime [10–15]. This decreasing activity level trend is particularly prominent for vigorous activity volume and frequency [11]. Although, several studies did not include relative changes in subjective assessment of intensity of efforts that occur through the course of involuntional processes [11]. Reductions in the amount of PA may lead to systemic inadequate levels achieved which could have adverse health and social implications on societies. As PA is considered a key condition for maintaining and improving health at all stages of life [4,16,17], determining PA levels and learning which of its forms are taken up by people may constitute a meas-

ure of leisure time consumption as a part of everyday routine [18].

Being informed on and taking a proactive approach with PA culture plays an important role in promoting health within society. University students, in particular students of medical courses who will intellectually be at the forefront in promoting future health related positions, should be aware of the effects of certain lifestyle behaviours on maintaining and improving health [19–21]. Research results on the levels of physical activity of nursing students are currently in-conclusive to a degree and there are both indications of low levels of PA in this group [22–26], and high levels [27].

Engaging in regular physical activity can be a challenge for students and despite the awareness of the positive benefits associated with this behaviour knowledge alone is not associated with maintaining healthy lifestyle habits [28]. Therefore, further investigation of the spontaneous daily physical activity levels particularly with medical students is required [22]. Furthermore, it is worth remembering that the students of nursing are future promoters of community health, and their own PA behaviours may undermine the credibility of knowledge they will transfer [29].

## AIM OF THE STUDY

The study aimed to determine PA levels reported by University nursing students and to indicate the dominant activity areas.

## MATERIAL AND METHODS

### Study design and participants

The study participants involved 419 students: 70 nursing students from Pope John Paul II State School of Higher Education (SSHE) in Biala Podlaska and 349 students from the University of Medical Sciences in Bialystok. The age of the respondents ranged from 19 to 37 years, and mean age was 21 years. Detailed characteristics of the studied group are shown in Tab.1. The criteria for inclusion in the research were the field of study, age and reported daily PA. The advisability of selecting the studied group was supported by the fact that the International Physical Activity Questionnaire (IPAQ) allows to determine the PA of people aged 15-69 years. Among the respondents, there were no participants reporting to undertake PA of more than 16 hours per day. The IPAQ Committee recommends eliminating results above this level of PA [30].

### Settings

The research was conducted using the *International Physical Activity Questionnaire – Short Form (IPAQ-SF) – last seven days* questionnaire. The study began after obtaining approval from the administration of University and the Bioethical Commission at Pope John Paul II State School of Higher Education in Biala Pod-

Table 1. Demographic characteristics of the study participants (N=419)

Gender		
Women	Men	
329 (78.5%)	90 (21.5%)	
Place of residence		
Urban area	Rural area	
215 (51.4%)	204 (48.6%)	
Study year		
Year 1	Year 2	Year 3
233 (55.6%)	70 (16.7%)	116 (27.7%)
Body Mass Index (BMI)*		
Overweight	Normal weight	Underweight
73 (17.4%)	326 (77.8%)	20 (4.8%)

\*body mass [kg]/body height [m]<sup>2</sup>

laska. The study participants remained anonymous and the consent to participate was voluntary. The research was conducted in accordance with the clinical practice requirements of the 1975 Helsinki Declaration revised in 2000.

### Data sources/measurement

A diagnostic survey which included the International Physical Activity Questionnaire – Short Form (IPAQ-SF) was applied in the study. The participants completed the questionnaire individually at their respective Universities. The main aim was to identify students' general PA levels performed in their everyday life, studies, work and leisure time. Self-evaluation of PA weekly levels, expressed in metabolic equivalent of task units (MET-min/week), were identified in three areas of effort intensity. *Metabolic Equivalent of Task (MET)* is the ratio of the work metabolic rate to the resting metabolic rate. One MET is defined as 1 kcal/kg/hour and is equivalent to the energy cost of sitting still. A MET is also defined as oxygen uptake in ml/kg/min with one MET equal to the oxygen cost of sitting still equating to approximately 3.5 ml/kg/min [31]. The IPAQ makes it possible to classify respondents into one of three levels of activity: high, moderate or low [32].

### Statistical analyses

The data were analysed using Statistica 13.0 PL (StatSoft, USA). Data distribution deviated from a normal distribution of variables and was analysed by means of the Shapiro-Wilk test. The groups of students were compared using non-parametric tests, a Mann-Whitney U test and Kruskal-Wallis test. Statistical comparisons between qualitative characteristics were made

with the use of a chi-square test ( $\chi^2$ ). Statistical significance was set at  $p < 0.05$ .

**RESULTS**

The group total PA average was 3443.9 MET-min/week; this indicates that their PA levels were satisfactory. Efforts associated with walking were the dominant activity area, group median = 1557.6 MET-min/week, and vigorous activity was the least common (Fig. 1).

The comparison between values of MET-min/week in terms of gender revealed that men were overall more physically active, except in vigorous activity where women showed slightly higher levels (Fig. 2). No statistically significant differences were found between values of MET-min/week within total PA and PA types.

Taking into account the place of residence, considerably higher values of MET-min/week were observed

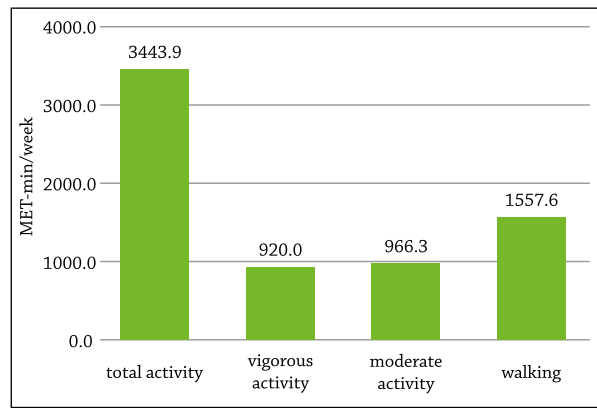
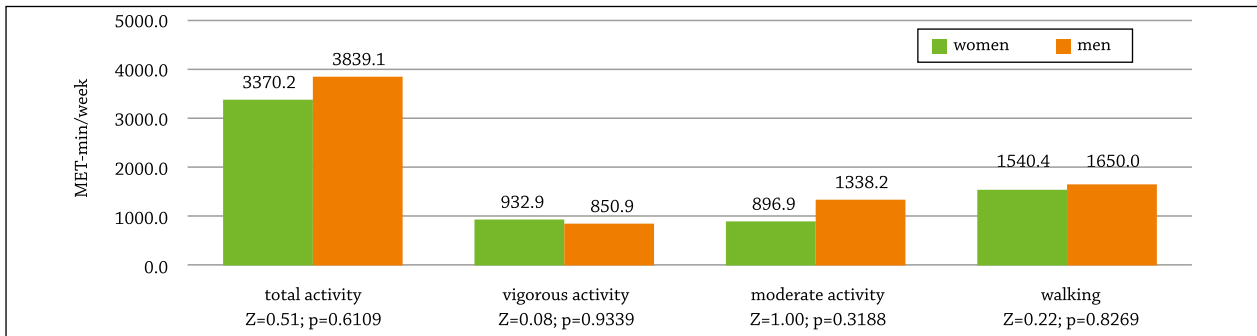


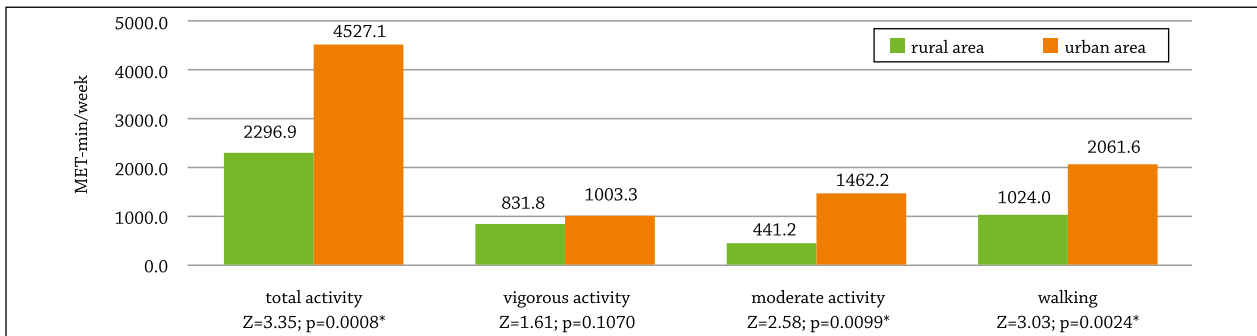
Figure 1. Total physical activity and its components (median) – MET-min/week.

among the study participants from urban areas (Fig. 3). Statistically significant differences were found in total



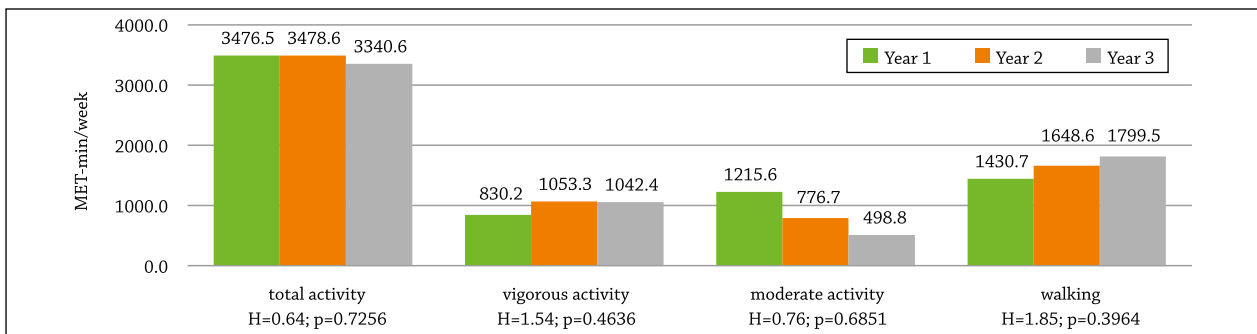
Z – value of U Mann-Whitney test.

Figure 2. Total physical activity and its components in relation to gender (median).



Z – value of U Mann-Whitney test; \* – statistical significance at  $p < 0.05$

Figure 3. Total physical activity and its components in relation to the place of residence (mean) – MET-min/week.



H – value of Kruskal-Wallis test.

Figure 4. Total physical activity and its components in relation to the year of studies (median) – MET-min/week.

PA ( $p=0.0008$ ) as well as moderate activity ( $p=0.0099$ ) and walking ( $p=0.0024$ ).

As far as the year of studies are concerned, no statistically significant differences were noted in the values of MET-min/week. Second-year students turned were slightly more active as evidenced by the values of mean total PA. The analysis of PA areas showed that second-year students also participated in more vigorous activity. When it came to moderate activity, first-year students were the most active. While in the case of walking, the highest values of MET-min/week were observed among third-year students.

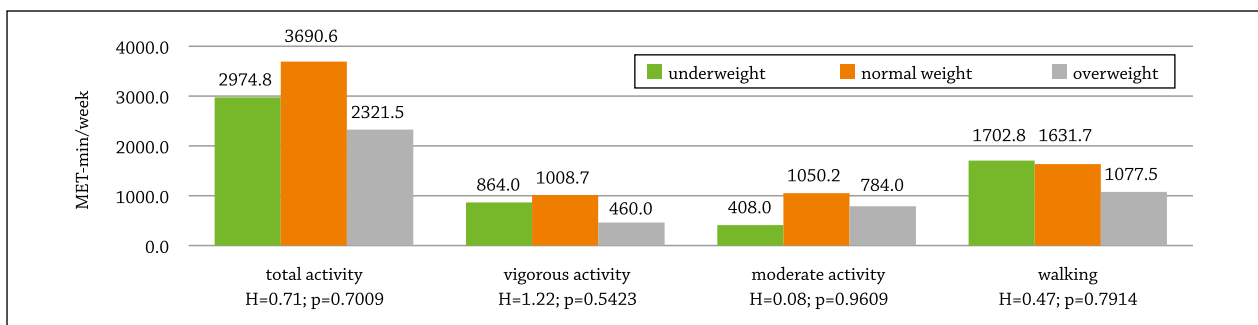
In the case of BMI, no statistically significant differences were found (Fig. 5).

The highest values of MET-min/week were accumulated by students whose BMI ranged from 18.5 kg/m<sup>2</sup>

to 24.9 kg/m<sup>2</sup>. The only exception was walking where the highest values of MET-min/week in this area were accumulated by underweight categorised students.

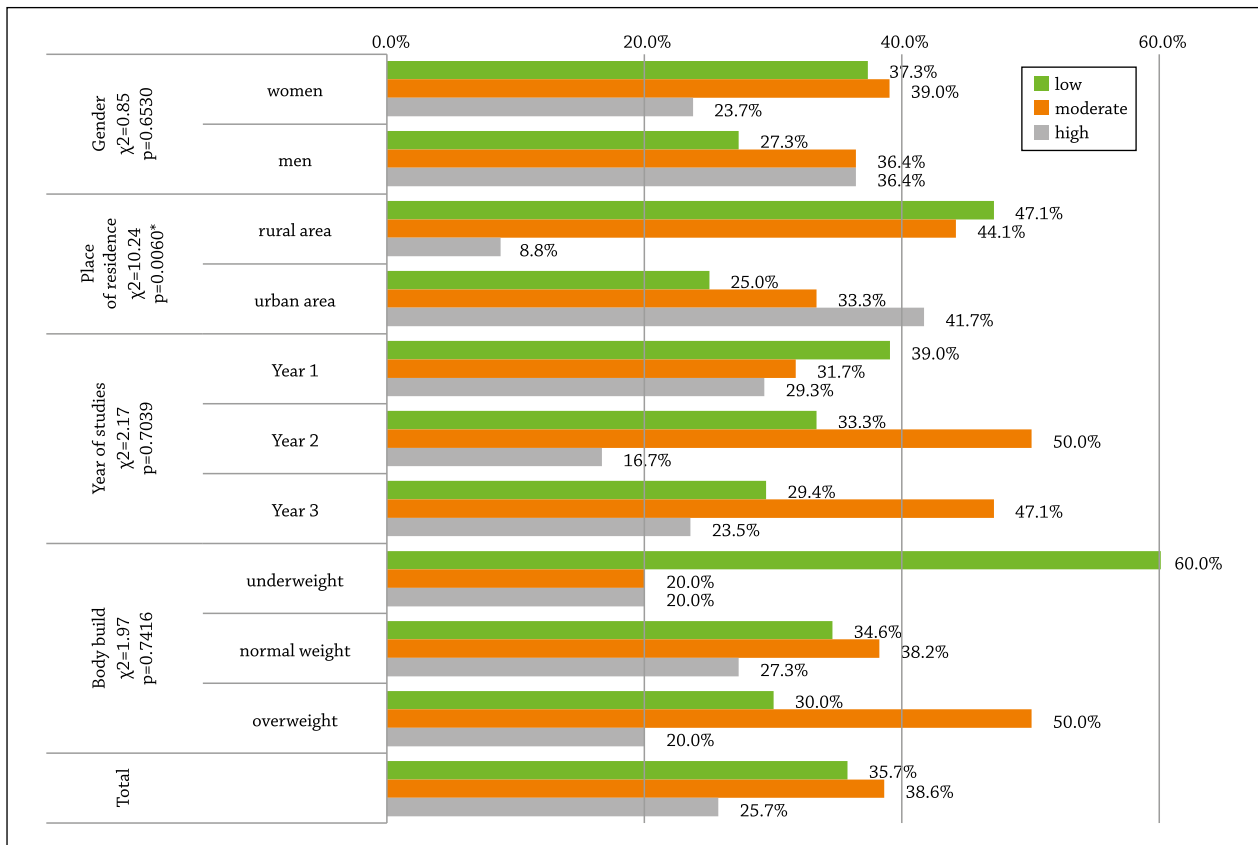
Following the IPAQ methodology, the level of PA in the current research group was determined [22]. Taking into account the criteria established by IPAQ Scientific Committee, the respondents were classified into one of three PA levels: high, moderate or low. The highest proportion of the examined students was moderately active (Fig. 6). One in four participants met the criteria of high PA levels. A total of 35.7% of the respondents demonstrated low levels of PA.

The analysis of PA levels in terms of selected variables revealed that statistically significant differences were found only in the case of the place of residence. The participants from urban areas were more active than their



H - value of Kruskal-Wallis test

Figure 5. Total physical activity and its components in relation to BMI (median).



$\chi^2$  - value of Chi square Pearson's test; \* - statistical significance at  $p<0.05$

Figure 6. Physical activity in relation to selected variables

counterparts from rural areas, with 41.7% of the students from urban areas meeting the criteria of high levels, compared to 8.8% of the students from rural areas.

## DISCUSSION

The research was carried out using the IPAQ. This questionnaire is considered to be useful in terms of assessing PA levels in larger populations [33] and comparing research results.

PA of University students often depends on their study course as individuals attending health-related courses do physical exercise much more often [22]. It may stem from the fact that these students are obliged to attend a number of curriculum-based physical activity classes. Furthermore, those who choose to take courses in the field of health or physical culture sciences are aware of the requirements associated with a given profession. In order to be well-prepared to promote health-oriented patterns of behaviour and healthy lifestyle, students need to maintain physical fitness by attending extra-curricular PA classes [34]. Through regular practice that enhances their performance, they can exert a considerable positive influence on their functioning and life quality at an older age [21]. However, University students are involved in a wide variety of curricular classes that entail a lot of responsibilities and learning [31]. Despite the fact that students are a social group that have a broad knowledge and increased awareness of positive effects of PA on health, young people tend to take it up less often [35]. Research results in the USA, Brazil, Great Britain and Slovenia show extremely low levels of physical activity among nursing students [19,22,36–38]. The presented results of our research indicate that more than one-third of the nursing students did not meet the criteria for moderate or high activity levels.

Low physical activity was also reported among Malaysian nursing students [39]. This study involved 66 student nurses who are currently pursuing a Bachelor degree in the local Government Universities. The results showed strong signs of low physical activity level among nursing students across the two universities in Malaysia which recommended immediate attention by the healthcare authorities.

Nursing students in the UK did not meet the recommended physical activity guidelines of the World Health Organization (WHO) [37]. The main barriers reported for UK nursing students to carry out physical activity were lack of free time and energy, the physical effort, and a busy learning schedule [40,41]. The literature on physical activity levels in student nurses varied from 22% to 61% for those meeting physical activity guidelines of at least 30 minutes or more of moderate-intensity physical activity 5 days/week or 20 minutes of vigorous-intensity physical activity on three days per week [22,26]. FitzGerald [22] examined 85 nursing students and overall categorised 37.8% undertaking low activity, 36.5% moderate activ-

ity and 25.9% high activity based on the IPAQ. The Bachelor students comprised 68.4% of the low activity category and advanced practice nurse students comprised 62.5% of the moderate activity category.

The study of Górski et al. [42] showed that students from Poland were significantly more active than their counterparts from Ireland. Their investigation included 159 students of physical education. The differences between the groups were revealed for both women and men. As many as 93% of all the participants were classified into the group accumulated high levels of PA, which is not in line with the findings of the present study. In the case of nursing students from SSHE in Biala Podlaska and SMS in Bialystok, high levels of PA were demonstrated by 36% of the respondents only. Pastuszek et al. [43] compared PA of physical education students from the University of Physical Education (UPE) in Warsaw and Charles University (CU) in Prague. Their study revealed that Polish students were nearly half as active as students from the Czech Republic. The criteria of high levels of PA were fulfilled by 54% of the Polish students and as many as 95% of the students from CU. Walentukiewicz et al. [44], who examined 214 students of physical education from Gdansk University of Physical Education and Sport as well as students of public health from Olsztyn University, noted satisfactory levels of PA among the study participants. It was found that the majority of the respondents (56%) accumulated high levels of PA, and 39% exhibited PA levels that were satisfactory, while only 5% of the participants had their PA levels classified as unsatisfactory. The study revealed that a high level of health-related knowledge gained by the students in the course of their studies did not correspond to their levels of PA.

Another example is the investigation carried out by Sochocka and Wojtyłko [21]. The study sought to determine PA levels and to identify reasons for taking it up by full-time students of medical and non-medical courses. The research involved 553 students from six universities in Poland. Students of medical courses accounted for 57.68% of the sample group, while non-medical students constituted 42.32% of the population under examination. As many as 79.5% of the respondents claimed they were physically active; however, it turned out that 57% of the students did not do regular physical exercise. Gender and study course proved to be significant when it came to taking up physical activity. The study showed that the place of residence was significant as well.

Taking into account the discrepancies in the obtained results to the literature, consideration to adding an objective measure such as an accelerometer to the research methodology may be warranted. When planning to conduct research with the use of IPAQ, an interview is recommended in order to avoid inaccurate interpretation of the questions. As other researchers also note, the presence of a trained interviewer may be useful should any doubts regarding question comprehension arise [42,45,46].

## Limitations of the study

The research was carried out using the International Physical Activity Questionnaire, which meant the students' subjective declarations were analysed. In future research on PA levels, it is worth considering the implementation of an objective measurement tool such as an accelerometer. It would enable researchers to compare respondents' weekly energy expenditure based on results obtained with the accelerometer and IPAQ. However, such research would require receiving funds for purchasing more measurement devices.

It is worth highlighting the fact that IPAQ is a recognised and recommended research tool for use in large population-based studies. Uniform methodology rules applied when administering the questionnaire make it possible to compare results.

## REFERENCES

- Puciato DJ, Rozpara M, Mynarski W, Oleśniewicz P, Markiewicz-Patkowska J. Economic correlates of physical activity in adults. *Health Prob Civil* 2019; 13(2): 129–134.
- Gaskin C, Keesman K, Rogerson M, Salmon J, Orellana L. Physical activity and sedentary behavior among older adults with non-communicable diseases: Liliana Orellana. *Eur J Public Health* 2017; 27(3): cxx187.244.
- Theodoratou M, Kalafatis D, Panitsa G. The impact of physical activity on mental health and psychological well-being, perspectives on improving the educational curriculum. *J Psychol Neurosci* 2020; 2(2): 1–9.
- Wang SY, G. Kim G. Impact of physical-mental comorbidity on subjective well-being among diverse elders. *Innov Aging* 2017 Jul; Suppl 1: 121–122.
- Cooper SL. ACSM-CEP promoting physical activity for mental well-being. *ACSM's Health Fit J* 2020; 24(3): 12–16.
- Amini M, Djazayeri A, Khosravi M, Shafaatdoost M. Promotion of physical activity to prevent non-communicable diseases: an advocacy paper. *Int J Prev Med* 2020; 11: 124.
- Parnicka U. Physical activity in promoting health of the elderly. *Health Prob Civil* 2018; 12(4): 265–271.
- Biernat E, Buchholtz S. The regularities in insufficient leisure-time physical activity in Poland. *Int J Environ Res Public Health* 2016; 13(8): 798.
- Biernat E, Piątkowska M. Leisure-Time Physical Activity Participation Trends 2014–2018: A Cross-Sectional Study in Poland. *Int J Environ Res Public Health* 2020, 17(1): 208.
- Ulloa L, Echeverría G, Carpenter C, Rigotti A. Physical activity and sedentarism are independent risk factors for overweight, obesity and metabolic syndrome: a cross-sectional analysis among Chilean adults. *Atherosclerosis Suppl* 2018; 32: 84.
- Biernat E, Piątkowska M. Stay active for life: physical activity across life stages. *Clin Interv Aging* 2018; 13: 1341–1352.
- Shatenstein B, Barberger-Gateau P. Prevention of age-related cognitive decline: which strategies, when, and for whom? *J Alzheimers Dis* 2015; 48(1): 35–53.
- World Health Organization. Global action plan on physical activity 2018–2030: more active people for a healthier world. Geneva, Switzerland: World Health Organization; 2018.
- Urbaniak-Brekke AM, Solbraa T. Factors influencing physical activity level of the inhabitants in Norway and Poland – the case of sports and recreation infrastructure. *Phys Act Rev* 2019; 7: 96–106.
- Ball JW, Bice MR. Adult BMI and physical activity: retrospective evaluation of high school sport and recreation participation. *Recreat Sport J* 2015; 39(2): 144–156.
- Biernat E, Piątkowska M. Comparative leisure physical activity: a comparison between Polish and European population. *Phys Cult Sport Stud Res* 2013; 59(1): 33–41.
- Pańczyk W. Wychowanie fizyczne dla zdrowia. Aktywność fizyczna wobec zdrowotnych potrzeb człowieka cywilizacji konsumpcyjnej. Rzeszów: Wyd. Uniwersytetu Rzeszowskiego; 2012. (In Polish).
- Biernat E. Aktywność fizyczna w życiu współczesnego człowieka. e-Wydawnictwo NCBKF 2014; 1–4. (In Polish).
- Hawker CL. Physical activity and mental well-being in student nurses. *Nurs Educ Today* 2012; 32(3): 325–331.
- Mędreła-Kuder E. Ocena stylu życia studentów fizjoterapii i edukacji techniczno-informatycznej na podstawie żywienia i aktywności fizycznej. *Rocznik PZH* 2011; 3: 315–318. (In Polish).
- Sochocka L, Wojtyłko A. Aktywność fizyczna studentów studiów stacjonarnych kierunków medycznych i niemedycznych. *Medycyna Środowiskowa – Environmental Medicine* 2013; 16(2): 53–58. (In Polish).
- Fitzgerald LZ. Categorization and determinants of physical activity among nursing students. *J Nurs Educ Pract* 2015; 5(5): 10–20.
- Buckworth J, Nigg C. Physical activity, exercise, and sedentary behavior in college students. *J Am Coll Health* 2004; 53(1): 28–34.
- Godino JG, Watkinson C, Corder K, Sutton S, Griffin SJ, van Sluijs EM. Awareness of physical activity in healthy middle-aged adults: a cross-sectional study of associations with sociodemographic, biological, behavioural, and psychological factors. *BMC Public Health* 2014; 2: 414–21.
- Snopek S, Szostak-Węgierek D, Ziółkowska A. Rozpowszechnienie cech stylu życia zwiększających ryzyko zaburzeń lipidowych u młodych mężczyzn – studentów medycyny. [Prevalence of

## CONCLUSIONS

- According to the methodology of IPAQ, one in four study participants accumulated high levels of PA. Unfortunately, more than one-third of the respondents (nursing students) did not meet the criteria for moderate or high activity levels, thus exhibiting low levels of PA.
- The place of residence was the only variable within which significant differences in PA levels were observed. The participants from urban areas were more active.
- Out of the three areas of PA (vigorous, moderate and walking) walking was the most dominant.

It appears necessary to increase activities aimed at promoting pro-health behaviours among University nursing students, including the need to spend leisure time in an active manner.

- lifestyle characteristics increasing the risk of lipid disorders in young male medical students]. *Probl Hig Epidemiol* 2009; 90(4): 598–603. (In Polish).
26. Luszczyńska A, Haynes C. Changing nutrition, physical activity and body weight among student nurses and midwives: effects of a planning intervention and self-efficacy beliefs. *J Health Psychol* 2009; 14(8): 1075–1084.
  27. Dubray A, Bergier J, Gładysz I. Role of physical activity in the lifestyle of French nurses. *Health Prob Civil* 2017; 11(4): 253–260.
  28. Yamazaki F, Yamada H, Morikawa S. Influence of an 8-week exercise intervention on body composition, physical fitness, and mental health in female nursing students. *J UOEH* 2013; 35(1): 51–58.
  29. Waksmańska W, Bobiński R, Wiczowska A, Piesz A. Physical activity among nursing students measured with the International Physical Activity Questionnaire and their BMI. *Pol J Public Health* 2017; 127(3): 122–126.
  30. International Physical Activity Questionnaire [online] [cit. 10.10.2020]. Available from URL: <http://www.ipaq.ki.se>.
  31. Biernat E. Aktywność fizyczna mieszkańców Warszawy na przykładzie wybranych grup zawodowych. Warszawa: Oficyna Wydawnicza SGH; 2011. (In Polish).
  32. Bergier J, Wasilewska M, Szepeluk A. Global Physical Activity Questionnaire (GPAQ) – the Polish version. *Health Prob Civil* 2019; 13(1): 1–8.
  33. Bergier J, Kapka-Skrzypczak L, Biliński P, Paprzycki P, Wojtyła A. Physical activity of Polish adolescents and young adults according to IPAQ: a population based study. *Ann Agric Environ Med* 2012; 19(1): 109–115.
  34. Klimatskaya LG, Shpakov AI, Laskiene S, Kolarzyk E, Kleszczewska E, Melnikova EA. Physical activity is a factor to form healthy life style among students. *Siberian Medical Review* 2011; 1: 61–67. (In Russian).
  35. Khan BZ, Megha Sheth M. Physical activity level and physical fitness parameters in physiotherapy students. *Int J Physiother Res* 2019; 7(5): 3247–3251.
  36. Pires C, Mussi F, Cerqueira B, Pitanga F, Silva D. Physical activity practice among undergraduate students in nursing. *Acta Paul Enferm* 2013; 26(5): 436–443.
  37. Hawker CL. Physical activity and mental well-being in student nurses. *Nurse Educ Today* 2012; 32(3): 325–331.
  38. Cilar L, Preložnik N, Štiglic G, Vrbanjak D, Pajnikhar M. Physical activity among nursing students. *Nursing in the 21st Century* 2017; 16(1): 30–35.
  39. Soh K, Japar S, Leong Ong S, Lam Soh K. Physical activity and health promoting lifestyle among diploma nursing students in Malaysia. *Res J Pharm Technol* 2018; 11(6): 2331.
  40. Chung-Yan Chan J. Psychological determinants of exercise behavior of nursing students. *Contemp Nurse* 2014; 49(1): 60–67.
  41. Bryer J, Cherkis F, Raman J. Health-promotion behaviors of undergraduate nursing students: a survey analysis. *Nurs Educ Perspect* 2013; 34(6): 410–415.
  42. Górski M, Piątkowska M, Pastuszek A, Michalak B. Level of physical activity of physical education students in Poland and Ireland. *J Educ Health Sport* 2017; 7(3): 221–230.
  43. Pastuszek A, Lisowski K, Lewandowska J, Buśko K. Level of physical activity of physical education students according to criteria of the IPAQ questionnaire and the recommendation of WHO experts. *Biomedical Human Kinetics* 2014; 6: 5–11.
  44. Walentukiewicz A, Łysak A, Wilk B. Poziom aktywności fizycznej studentów wychowania fizycznego i zdrowotnego a zalecenia aktywności fizycznej w profilaktyce chorób cywilizacyjnych. *Medycyna Sportowa* 2012; 2(4): 129–137. (In Polish).
  45. Bergier J. A critical review of physical activity figures for comparison studies using IPAQ surveys and accelerometer measurements. *J Health Inequal* 2017; 3(1): 78–82.
  46. Stelmach M. Physical activity assessment tools in monitoring physical activity: the Global Physical Activity Questionnaire (GPAQ), the International Physical Activity Questionnaire (IPAQ) or accelerometers – choosing the best tools. *Health Prob Civil* 2018; 12(1): 57–63.

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