**Baltic Journal of Health and Physical Activity 2019; 11(1): 83-95**
Journal of Gdansk University of Physical Education and Sport
e-ISSN 2080-9999

**ORIGINAL**

**doi: 10.29359/BJHPA.11.1.09**

# Level of knowledge regarding health as well as health education and pro-health behaviours among students of physical education and other teaching specialisations

**Authors' Contribution:**
**A** Study Design
**B** Data Collection
**C** Statistical Analysis
**D** Data Interpretation
**E** Manuscript Preparation
**F** Literature Search
**G** Funds Collection

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## abstract

**Background:** The aim of the study was to assess the relationship between the level of knowledge regarding health and health education as well as the pro-health behaviours of students of physical education and other teaching specialisation.

**Material and methods:** Anonymous and voluntary research was carried out in the years 2013-–2014 among a randomly chosen group of Krakow academic youth. The research applied: involved the Inventory of Health Behaviours (IHB) (Polish: Inwentarz Zachowań Zdrowotnych) by Z. Juczyński, a short version of the International Physical Activity Questionnaire (IPAQ) and an original test on knowledge regarding health determinants and education.

**Results:** Research has indicated differences in some health behaviours (IHB) and physical activity (IPAQ) of the students. It was found that along with an increase in the level of knowledge about health and health education, the level of pro-health behaviours, especially regarding healthy eating habits, also increased. However, there were no statistically significant correlations between knowledge about health and health education and the level of physical activity of students of the teaching specialisation.

**Conclusions:** Preparing students – future teachers – for the to implementation of health education at school requires comprehensive impact on various areas of health culture, including the level of knowledge about health determinants, pro-health behaviours, the position of health within one's value system and appropriate methodological competences.

**Key words:** health education, knowledge, health behaviours, physical activity, students of teacher education.

## article details

**Article statistics:** **Word count:** 4,268; **Tables:** 6; **Figures:** 0; **References:** 60

**Received:** July 2018; **Accepted:** September 2018; **Published:** March 2019

**Full-text PDF:** http://www.balticsportscience.com



**Indexation:** Celdes, Clarivate Analytics Emerging Sources Citation Index (ESCI), CNKI Scholar (China National Knowledge Infrastructure), CNPIEC, De Gruyter - IBR (International Bibliography of Reviews of Scholarly Literature in the Humanities and Social Sciences), De Gruyter - IBZ (International Bibliography of Periodical Literature in the Humanities and Social Sciences), DOAJ, EBSCO - Central & Eastern European Academic Source, EBSCO - SPORTDiscus, EBSCO Discovery Service, Google Scholar, Index Copernicus, J-Gate, Naviga (Softweco, Primo Central (ExLibris), ProQuest - Family Health, ProQuest - Health & Medical Complete, ProQuest - Illustrata: Health Sciences, ProQuest - Nursing & Allied Health Source, Summon (Serials Solutions/ProQuest, TDOne (TDNet), Ulrich's Periodicals Directory/ulrichsweb, WorldCat (OCLC)

**Funding:** This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

**Conflict of interests:** Authors have declared that no competing interest exists.

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## INTRODUCTION

Numerous international documents (including the Convention on the Rights of the Child and the Ottawa Charter for Health Promotion) indicate that health education is a fundamental right of children and youth, and health (as a universal value) should occupy an important place among the aims of education. In Poland, the role of a teacher – a health educator – has been validated in documents crucial for the education and training process, i.e.: the core curriculum of general education [1] and teaching standards preparing for the profession of a teacher [2], while the subject of health can be found in the content of most school subjects (not only Physical Education). The teachers' ability to combine the substantive content of a given subject with issues in the field of health education is, therefore, indispensable in the context of one of the basic aims of general education, namely preparing students for taking conscious and active care of their health [1].

Meanwhile, research indicates insufficient preparation of teachers of various specialisations to implement school health education [3, 4]. Observation also shows that academic teachers educating successive generations of educators do not perceive the need for multi-directional health education and are mostly supporters of the traditional method of its implementation, consisting in transferring knowledge about health determinants and selected diseases [5]. Numerous studies also point to significant deficiencies in the preparation of teaching specialisation students to create the health culture of their future pupils [6–9].

Recognizing the importance regarding the value of health among individuals who influence the upbringing of children and youth as well as the neglect in the teaching community [10–14] and among teaching specialisation students [6–9] in this area, the need to monitor the preparation of students – future teachers – to create a pro-healthy lifestyle for pupils is justified. By undertaking professional work, they will be involved in the health education of schoolchildren in accordance with applicable regulations. Therefore, it can be assumed that the level of knowledge about health and its determinants as well as undertaking health-friendly behaviours by students preparing to perform the teaching profession should be conducive to promoting a healthy lifestyle among school children and youth. Therefore, within the context of the future role as a teacher and a health educator, it seems important to assess the level of knowledge about health and its determinants as well as the scope of pro-health behaviours of teaching specialisation students. Undertaking this issue also seems justified within the context of the results of American [12, 15], Chilean [16] and Chinese [17] studies confirming the importance of knowledge, attitudes and health behaviours among teachers in shaping selected aspects of a pupil's lifestyle.

The aim of the study was to assess health behaviours and knowledge in the field of health and health education, as well as to analyse the relationship between the level of the subjects' knowledge and the intensity of pro-health behaviours among students of physical education and other teaching specialisations. The hypothesis was verified stating that students who present a high level of knowledge about health determinants also declare a higher level of pro-health behaviours (in the scope of: daily health practices, preventive behaviours, proper nutrition, positive mental attitude and physical activity) in comparison to individuals with a lower level of knowledge regarding health and health education.

## MATERIAL AND METHODS

Anonymous and voluntary research was carried out in the years 2013–2014 among a randomly chosen group of Krakow academic youth using the method of a diagnostic survey. The study involved 607 participants, including 464 women (76.44%) and 143 men (23.56%) aged 22–28 (average age: 22 years). The research included students and teachers of 3rd year B.A. studies at four Cracow universities: Pedagogical University (53.05%), Jagiellonian University (20.26%), Andrzej Frycz Modrzewski Krakow University (6.75%) and the University of Physical Education (19.93%).

In the research, the Inventory of Health Behaviours (IHB) (Polish: Inwentarz Zachowań Zdrowotnych) by Z. Juczyński (2009) was used, based on which four categories of health behaviours were assessed: proper eating habits (PEH), preventive behaviours (PB), health practices (HP) and positive mental attitude (PMA). The severity of pro-health behaviours in the study group was assessed using applicable sten scores [18].

In order to assess the level of physical activity, a short version of the International Physical Activity Questionnaire (IPAQ) was used. The following categories were assessed: intense (above 1,500 or 3,000 MET-min/week) and moderate physical activity (600–1,500 or 600–3000 MET-min/week), as well as walking (below 600 MET-min/week) and sitting time [19].

The level of knowledge of students regarding health and health education was assessed using the authors' original test. The test questions were created by specialists in the field of physical culture sciences based on the analysis of documents (syllabuses) of individual universities, containing the core curriculum content of subjects within which health education issues were implemented. The test contained 25 closed questions, to which respondents replied by choosing one of three possible answers: 'yes', 'I do not know' or 'no'. The participant received 1 point for the correct answer, for the remaining choices (incorrect answer or 'I do not know') – 0 points. The reliability coefficient of the test, which amounted to Cronbach $\alpha = 0.61$, was calculated.

In descriptive statistics of qualitative data, numbers and percentages were determined, while for quantitative data, mean and standard deviations were calculated. Some of the respondents did not complete all questions in the questionnaire; therefore, there are differences in the number of people included in the analysis of the IPAQ questionnaire. Statistical analysis was performed using: a) Pearson's chi-squared test (to measure differences in the level of health knowledge and health education between physical education students and students of other teaching specialisations); b) Pearson's correlation analysis (to measure the relationships between physical activity and health using the general indicator of health knowledge and health education); c) Student's t-test (for measuring differences in the level of health behaviours, physical activity and the general indicator of knowledge regarding health and health education among students of teaching specialisations). Due to the lack of homogeneity of variance in the case of three comparisons of the level of physical activity (general indicator, intense and moderate effort) among students of physical education and other teaching fields of study, Student's t-test with separate estimation of variance was used. The significance level of $\alpha = 0.05$ was assumed.

# RESULTS

## PRO-HEALTH BEHAVIOURS OF TEACHING SPECIALISATION STUDENTS

Among the categories of pro-health behaviours included in the Inventory, physical education students (PE) achieved the highest average scores in the category of positive mental attitude (21.01), and students of other teaching specialisations (OTS) in the area of behaviours covering daily health practices (19.48). The lowest mean results in both groups were demonstrated in the case of preventative behaviours (PE – 18.07, OTS – 17.99) (Table 1).

Table 1. Categories of pro-health behaviours (IHB) of academic youth depending on teaching specialisation (PE and OTS)

| IHB categories | Total (N = 607) | | PE (N = 121) | | OTS (N = 486) | | *t(605)* | *p* |
|---|---|---|---|---|---|---|---|---|
| | x̄ | SD | x̄ | SD | x̄ | SD | | |
| PPA (Positive mental attitude) | 19.77 | 4.13 | 21.01 | 3.78 | 19.47 | 4.16 | 3.71 | <0.001 |
| PB (Preventative behaviours) | 18.00 | 4.61 | 18.07 | 4.50 | 17.99 | 4.64 | 0.17 | 0.867 |
| PEH (Proper eating habits) | 19.22 | 4.93 | 20.31 | 4.85 | 18.95 | 4.92 | 2.73 | 0.007 |
| HP (Health practices) | 19.29 | 4.07 | 18.52 | 3.86 | 19.48 | 4.10 | -2.32 | 0.021 |

*N: number of observations; x̄: mean; SD: standard deviation; t: Student's t-test; p: p value*

Statistically significant differences between students of physical education and other teaching specialisations were demonstrated in the case of positive mental attitude and proper eating habits (in favour of the PE students) and in the area of everyday health practices (in favour of students of other teaching specialisations). Significant differences between groups of students were not found in the category of preventive behaviours (Table 1) and the general indicator of pro-health behaviours regarding the IHB (Table 2).

Table 2. General indicator of pro-health behaviours (IHB) of academic youth depending on teaching specialisation (PE and OTS)

| | Total (N = 607) | | PE (N = 121) | | OTS (N = 486) | | *t(605)* | *p* |
|---|---|---|---|---|---|---|---|---|
| IHB total index | x̄ | SD | x̄ | SD | x̄ | SD | | |
| | 76.28 | 12.75 | 77.90 | 12.33 | 75.88 | 12.83 | 1.57 | 0.118 |

*N: number of observations; x̄: mean; SD: standard deviation; t: Student's t-test; p: p value*

## PHYSICAL ACTIVITY OF TEACHING SPECIALISATION STUDENTS

Among the physical activity categories included in the IPAQ questionnaire, the physical education students obtained statistically significantly higher values for intense (IPAQ – vigorous) and moderate (IPAQ – moderate) effort indicators, and significantly lower values for the sitting time indicator (IPAQ – sitting time) than students of other teaching specialisations (Table 3).

Table 3. Categories of IPAQ physical activity (MET-min/week) of academic youth depending on teaching specialisation (PE and OTS)

| IPAQ categories | Total | | | PE | | | OTS | | | *t* | *df* | *p* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | x̄ | SD | N | x̄ | SD | N | x̄ | SD | | | |
| IPAQ vigorous | 587 | 1794.28 | 2728.55 | 119 | 4153.95 | 3662.84 | 468 | 1194.27 | 2042.66 | -8.49 | 137.18 | <0.001 |
| IPAQ moderate | 580 | 966.76 | 1582.47 | 119 | 1923.03 | 1962.46 | 461 | 719.91 | 1366.19 | -6.30 | 148.77 | <0.001 |
| IPAQ walking | 560 | 2951.00 | 2874.76 | 115 | 3306.17 | 2911.37 | 445 | 2859.21 | 2861.35 | -1.49 | 558 | 0.137 |
| IPAQ sitting | 510 | 371.29 | 172.24 | 117 | 277.44 | 147.12 | 393 | 399.24 | 169.42 | 7.03 | 508 | <0.001 |

*N: number of observations; x̄: mean; SD: standard deviation; t: Student's t-test; df: degrees of freedom; p: p value*

It was also shown that the level of physical activity of physical education students (expressed by the general IPAQ indicator) was higher than in the case of students of other teaching specialisations (Table 4).

Table 4. General indicator of the level of physical activity (MET-min/week) of academic youth depending on teaching specialisation (PE and OTS)

| | Total (N = 532) | | PE (N = 114) | | OTS (N = 418) | | *t* | *df* | *p* |
|---|---|---|---|---|---|---|---|---|---|
| General IPAQ | x̄ | SD | x̄ | SD | x̄ | SD | | | |
| indicator | 5812.28 | 5192.33 | 9451.18 | 5920.31 | 4819.85 | 4497.27 | -7.76 | 150.36 | <0.001 |

*N: number of observations; x̄: mean; SD: standard deviation; t: Student's t-test; df: degrees of freedom; p: p value*

## KNOWLEDGE REGARDING HEALTH AS WELL AS HEALTH EDUCATION AND PRO-HEALTH BEHAVIOURS OF TEACHING SPECIALISATION STUDENTS

In order to find out the potential relationship between the level of knowledge on health as well as health education and undertaking pro-health behaviours and physical activity by students, the general indicator of subject-related knowledge was calculated. There was no statistically significant difference in the level of knowledge about selected determinants of health and health education between physical education students and students of other teaching specialisations (Table 5).

Table 5. General indicator of the level of knowledge regarding health and health education among academic youth depending on teaching specialisation (PE and OTS)

| | Total (N = 607) | | PE (N = 121) | | OTS (N = 486) | | *t(605)* | *p* |
|---|---|---|---|---|---|---|---|---|
| General indicator | x̄ | SD | x̄ | SD | x̄ | SD | | |
| of knowledge | 17.61 | 3.06 | 17.82 | 3.13 | 17.56 | 3.04 | -0.85 | 0.398 |

*N: number of observations; x̄: mean; SD: standard deviation; t: Student's t-test; p: p value*

On the other hand, analyses showed that with increasing knowledge on health and health education, pro-health behaviours, especially proper eating habits, intensified. This statistically significant relationship was demonstrated both among students of physical education and students of other teaching specialisations. In addition, for students of subjects other than physical education, statistically significant, positive relationships were found between knowledge of the subject and the level of preventive behaviours as well as positive mental attitude. On the other hand, there were no statistically significant correlations between the level of physical activity and knowledge about health and health education (Table 6).

Table 6. Correlations between different categories of health behaviours (IHB) as well as physical activity (IPAQ) and the general indicator of the knowledge level on health and health education among students of teaching specialisations (PE and OTS)

| IHB categories | General indicator of knowledge Pearson's r | |
|---|---|---|
| | PE (N = 121) | OTS (N = 486) |
| Positive mental attitude (PMA) | 0.020 | 0.098* |
| Preventative behaviours (PB) | 0.126 | 0.149* |
| Proper eating habits (PEH) | 0.312** | 0.222** |
| Health practices (HP) | 0.115 | 0.058 |
| IHN general indicator | 0.211* | 0.189** |
| **IPAQ categories** | **General indicator of knowledge Pearson's r** | |
| | **PE** | **OTS** |
| IPAQ vigorous ($PE_{N=119}$; $OTS_{N=468}$) | -0.025 | -0.016 |
| IPAQ moderate ($PE_{N=119}$; $OTS_{N=461}$) | -0.015 | -0.015 |
| IPAQ walking ($PE_{N=114}$; $OTS_{N=418}$) | 0.025 | 0.025 |
| IPAQ sitting ($PE_{N=117}$; $OTS_{N=393}$) | 0.018 | -0.018 |
| General IPAQ indicator ($PE_{N=114}$; $OTS_{N=418}$) | -0.015 | -0.015 |

** p < 0.05; ** p < 0.01; N: number of observations; Pearson's r: Pearson's correlation coefficient*

## DISCUSSION

The discussed research showed variation in some health behaviours (IHB) and the level of physical activity (IPAQ) as well as the existence of correlations between some categories of health behaviours and the level of knowledge about health and health education among a group of students of teaching specialisations with different educational profiles (physical education vs. other specialisations). This allowed partially positive verification of the adopted research hypothesis.

Based on the obtained results, it was found that among the four categories of behaviours that are conducive to health (positive mental attitude, proper eating habits, preventive behaviours and health practices), so-called health practices (the appropriate amount of sleep and rest, recreational physical activity, limitation of stimulants) and interactions beneficial to mental health (positive thinking, maintaining proper relationships with other people, avoiding strong emotions and tensions) were dominant among the students of teaching specialisations other than physical education. Much less often, however, were proper eating habits found in the lifestyle of the respondents, and most rarely, prophylaxis preventing deterioration of health (compliance with medical recommendations, regular medical check-ups). Students of physical education, similarly to students of other specialisations, obtained the highest results in the area of positive mental attitude and the lowest in the category of preventive behaviours. The results obtained in our study for individual categories of health behaviours were comparable to those obtained by Rasińska [20], showing that students of Poznan universities demonstrated the highest intensity of behaviours related to positive mental attitude, and the lowest regarding preventive behaviours. Also, in the study by Palacz [6], students of Holy Cross University in Kielce received the highest values in the

areas of positive mental attitude and health practices, and lower ones related to proper eating habits, similarly as in the case of students from the Medical University of Lublin, who presented the highest intensity in the field of health practices, and the lowest one in the category of preventive behaviours [21]. Statistically significant differences were found among the students regarding positive mental attitude and proper eating habits (more favourable in the case of PE students) and daily health practices (in favour of students of other teaching specialisations).

In order to assess the readiness of students of teaching specialisations to promote an active lifestyle among their future pupils, the level of their physical activity was also determined. It was shown that among the categories of physical activity included in the IPAQ questionnaire, students of physical education obtained significantly higher values regarding intense (IPAQ vigorous) and moderate (IPAQ moderate) physical activity, and significantly lower ones concerning sitting time (IPAQ). The total physical activity of the studied group of Krakow academic youth was set at 9,451.2 MET-min/week for PE students and 4,819.8 MET-min/week for students of other specialisations; however, regardless of the specialisation, the youth most often undertook walking and intense efforts. Studies by other authors have shown a varied level of physical activity among academic youth with different educational profiles. Research at the State Higher Vocational School in Biala Podlaska, among young people studying tourism and recreation, emergency medical services, public health, nursing and IT [22], showed that students from Podlasie (as well as Krakow), performed intense efforts (901.5 MET-min/week) and walking (959.2 MET-min/week) most often, but of significantly lower intensity. Lower activity rates in the indicated domains translated into a lower overall level of physical activity among the youth from Biala Podlaska than among students of the teaching specialisations from Krakow (2,359.5 vs. 5,812.3 MET-min/week). The physical activity of students from Biala Podlaska was also lower compared to Krakow students studying specialisations other than physical education (2,359.5 vs 4,819.8 MET-min/week).

In turn, a high level of physical activity was described among students of the University of Physical Education in Poznan, of which 39% obtained results of total physical activity within the range of 4,001 to 8,000, and 17% from 8,001 to 12,000 MET-min/week [23]. Also, among Romanian students of physical education and sports, a high level of physical activity has been described (5,993.7 and 4,303.3 MET-min/week, respectively) [24]. Definitely lower results of physical activity were found among students of the University of Physical Education and the University of Silesia in Katowice as well as the Silesian University of Technology in Gliwice, for whom the total physical activity of female students was at the level of 658, and male students, 682 MET-min/week [25]. In turn, international Suğuksu research [26] showed a higher level of physical activity of Polish rather than Turkish female students (3,720 vs. 1,690 MET-min/week) and male students (5,045 vs. 2,590 MET-min/week). Such tendencies were also confirmed in other studies comparing the level of physical activity of Turkish students from the University of Aydin and the Polish University of Physical Education in Krakow (3,095.4 vs. 5,953.5 MET-min/week) [27].

In recent years, there have been favourable trends in the physical activity of young people, including students, which is confirmed by the results of research by authors from Polish and foreign centres [6, 7, 8, 28, 29].

With reference to the future professional work of the researched academic youth, it can be assumed that students with high knowledge of health and health education, and at the same time presenting a high level of pro-health behaviours, will consciously and actively influence the formation of pro-health attitudes and behaviours of their pupils, referring to the subjective understanding of health. This is suggested by the research results obtained in Oregon, USA, highlighting the importance of a teacher's positive attitude towards nutrition in the rationalization of eating habits of primary and secondary school pupils from a rural environment [12]. The results of other American studies also suggest that the knowledge, attitudes and dietary behaviours of future teachers may be determinants of the effectiveness of promoting the potential healthy eating habits of pupils [15].

It is commonly assumed that an adequate body of knowledge about health should, in accordance with the theory of cognitive dissonance, influence the rationalisation of pro-health behaviours. This was confirmed by the research results obtained among Krakow students of physical education [30] and Iranian medical students [31] as well as women at a procreative age [32]. Other studies among Polish youth [33] and students in Pakistan [34] as well as Saudi Arabia [35] have shown that a higher level of knowledge about health determinants does not always translate into more beneficial health behaviours. Studies generally indicate a limited body of knowledge about health and its determinants among students – future teachers. According to Gaweł [36], students of pedagogical faculties have knowledge about the harmfulness of drinking alcohol (97.1%), smoking (89.9%) and the importance of physical activity for proper development (94.4%) and shaping the physical fitness (85.9%). They know much less about the assumptions of immunoprophylaxis and a rational dietary model. In other research [37], it was found that over 90% of students of teaching specialisations (including physical education) primarily treat health as physical well-being, and 45% think that public health is mostly dependent on the quality of the health care system. Therefore, it can be assumed that students of teaching specialisations mostly present a biomedical understanding of health that deviates from the modern, holistic model. It was also observed that the vast majority of students (83.03%) do not know what life skills are (usually associated with self-care activities), and over 40% do not combine health education with strengthening self-esteem and belief in their abilities, which indicates limited knowledge of the goals of modern health education among future teachers [37].

In our own research, there were no statistically significant differences in the level of the subject-related knowledge between students of physical education and other teaching specialisations (irrespective of the study curriculum and the implementation of content in the field of education and preventive care). The lack of a significantly higher level of knowledge about health and its determinants among students of physical education compared to students of other specialisations provokes a critical perspective of their preparation to create a pro-health lifestyle among their pupils in future professional work, including the presence of content in study plans and curricula related to broadly understood health education. It is also important in the context of the specificity of the university, which is the University of Physical Education – oriented towards multidirectional promotion of a healthy lifestyle. The lack of significant differences in the level of subject-related knowledge among students of physical education and other teaching specialisations may also indicate the interest of the academic youth in health issues, regardless of their

profile of studies. This corresponds to current forecasts, indicating a higher life expectancy of people with a higher level of education due to their higher awareness and health culture [38]. At the same time, however, it should be pointed out that there is a need to improve the efficiency of preparing students of teaching specialisations for their role as health educators. The significance of health education in shaping a pro-health lifestyle was confirmed among university students in Saragossa [39] and American students of postgraduate studies [40]. In addition, meta-analytical research shows that many authors suggest the legitimacy of increased participation of health professionals in supporting teachers in recognizing the health needs of students [41].

The authors' research has also proved that there is a statistically significant positive correlation between the level of knowledge in the field of health and health education and assuming health-promoting behaviours among students of teaching specialisations. It was found that along with the increase in knowledge of health-related issues, students – future teachers – significantly more often assume behaviours beneficial to health, including preventive behaviours and those related to normal eating habits and a positive mental attitude. The strongest relationship between the level of health knowledge and the intensity of pro-health behaviours concerned adopting rational dietary behaviours, and the weakest one – assuming behaviours serving mental health. However, statistical analyses did not show any significant correlations between students' knowledge about health and health education and the level of physical activity undertaken as well as the intensity of so-called health practices (everyday health habits, including avoiding overworking, as well as sleep and rest hygiene).

Comprehensive, multidirectional care for the quality of life through the inclusion of various pro-health behaviours (proper nutrition, coping with stress, early prevention of civilization diseases, positive mental attitude, etc.) requires extensive knowledge about health and its determinants. In the discussed results of our research, the strongest relationships concerned knowledge and positive nutritional behaviours among AWF students, which confirms the legitimacy and significance of nutritional education as one of the important areas of health education and rationalisation of dietary choices. However, the lack of correlations between the level of health knowledge and physical activity of academic youth of teaching specialisations may limit the inclusion of health training as a factor of implementing health (in the physiological and psycho-social dimension) in one's lifestyle, regardless of their profile of education. Similarly, among Spanish students, there was no significant correlation between knowledge about the health consequences of obesity and the level of physical activity [28]. Unlike our research, among students of tourism and recreation, the University of Physical Education in Wroclaw describes significant positive relationships between knowledge of health determinants and undertaken physical activity [42]. This corresponds to studies confirming the health motives for undertaking physical activity [43–46] and the importance of physical activity in stress reduction and improving the well-being of university students [47, 48].

In the modern, holistic concept of health, the key importance of a pro-life lifestyle is emphasized not only for improving and perfecting health potential, but also for raising the broadly understood quality of life. Research among students of teaching specialisations has shown that academic youth characterised by a greater intensity of pro-health behaviours (in terms of positive mental attitude, daily health practices, proper eating habits and preventive behaviours) were

also characterised by a higher level of life satisfaction [49]. Research among teachers from Wielkopolska also showed that a higher level of life satisfaction was associated with lower BMI values and a more favourable diet [50]. Similar tendencies to increase life satisfaction with more rational dietary choices were also confirmed among perimenopausal women [51] and young women recreationally training fitness [52]. Relationships of life satisfaction with some behavioural health determinants (mainly nutrition) have also been confirmed by Chilean researchers [53, 54]. A positive correlation between the level of life satisfaction and physical activity was also recorded in US [55–57], Croatian [58] and Australian [59] studies. Health education related to the promotion of physical activity is an important element in improving the quality of life of young people [60].

## CONCLUSIONS

1. Among the categories of health behaviours (IHB), students of physical education obtained the highest results in the category of positive mental attitude, and students of other teaching specialisations in the area of so-called health practices and positive mental attitude. However, students showed greatest negligence (regardless of their specialisations) in the category of preventive behaviours.

2. Among the physical activity categories included in the IPAQ questionnaire, students of physical education obtained statistically significantly higher values for intense (IPAQ vigorous) and moderate (IPAQ moderate) indicators, and significantly lower results for the sitting time indicator (IPAQ) compared to students of other teaching specialisations.

3. The level of health-related behaviours increased along with the increase in the level of knowledge about health and health education, especially including proper eating habits. However, there were no statistically significant correlations between the level of physical activity and knowledge about health and health education among students of teaching specialisations.

4. Preparing students – future teachers – for the implementation of health education at schools requires comprehensive impact on various areas of health culture, including the level of health knowledge, pro-health behaviours, and the position of health in one's value system and appropriate methodological competences.

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Cite this article as:

Kosiba G, Gacek M, Wojtowicz A, Majer M.
Level of knowledge regarding health as well as health education and pro-health behaviours among students of physical education and other teaching specialisations.
Balt J Health Phys Act. 2019;11(1):83-95.
doi: 10.29359/BJHPA.11.1.09