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HEALTH EDUCATION AND HEALTH BEHAVIOURS AMONG PHYSIOTHERAPY STUDENTS

INTRODUCTION

What we call today health education has already been part of the lives of ancient nations. One can become convinced about it, reaching the depth of history and development of human thoughts. Basing on available historical sources we learn that before the 4th century B.C., i.e. before Hippocrates and his students in Europe, in the tradition of Chinese medicine human body was considered a system of interdependent elements with the tendency to maintain natural balance. Lack of balance, i.e. illness according to Far Eastern views, results from a number of elements, including: small physical activity, improper diet, lack of sleep and family and social problems (Kwolek and Jandziś, 2014).

Hippocrates – the father of European medicine introduced the rule of first, not to harm – *primum non nocere* (Gajewski, 2004). According to his rules, good physical and mental state, i.e. health and bad physical and mental state, i.e. illness depends on the balance between the human being and what surrounds us. External balance between humans and the external environment makes it possible to ensure internal balance (Maszczak, 2002). The ideas of Hippocrates were developed by Galen by increasing the preventive role of gymnastics, massage and diet. Galen's rules were promulgated by Avicenna who, *inter alia*, called for getting to know the characteristics of one's own body: application of physical and respiratory exercises having large impact on human body. At the end of the Middle Ages, health was promoted by Paracelsus and Mercurialis. In modern times, scientific foundations of Western medicine were established and deepened in the field of health and illness. In the, other health forerunners were Tissot, Bacon and Virchow. Whereas, marks the achievements of scientific thought. Movements and organisations promoting gymnastic and social games were established in whole Europe (Vigarello, 1997). Currently, profes-

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sor B. Woynarowska of University of Warsaw can be regarded as a promoter of health education in Poland.

The notion of health originates above all from the history of idea always connected with medical practice and social and cultural reality. Politicians and researchers demonstrate increasingly greater interest in the problems of health care and thus the notion of health has become the history of health education.

Physiotherapist's education manifested by practical and theoretical skills makes it possible to teach, promote and encourage the society to healthy lifestyle to maintain physical and psychosocial balance. It means that physiotherapists, due to their education and profession are also health educators. The society considers physiotherapists to be physically active, in good physical condition, to maintain active and healthy lifestyle. This opinion makes it possible for them to be examples for people and to avoid numerous illnesses relating to physical inactivity and anti-health behaviour. One of the tasks of physiotherapists consists, *inter alia*, in health education in each social group: children, youth and adults. This can facilitate, though to a little extent, the decrease of the number of persons with various complaints relating to inappropriate lifestyle. In addition, it needs to be emphasized that physiotherapists are employed in educational care facilities, extracurricular educational establishments, cultural-educational institutions, but primarily in hospitals, clinics, spa resorts or sports and recreational clubs. It shows that a physiotherapist deals with various age groups and health-educational needs.

Literature presents numerous definitions of health, where the most popular is that of the World Health Organization, according to which health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health is also the ability to fulfil social roles, adapt to changes in the environment and to cope these changes. The definition cited, next to biological elements relating to the physical health, presents also the psychical dimension of health with mental health related to thinking processes and emotional health expressing the ability to have feelings and emotions. The definition also presents the social dimension of health that can be described as the ability to establish and maintain relations with other people. It may be said that health is a multidimensional phenomenon covering interdependent physical, psychological and social aspects.

Documents of the World Health Organization stress that health is:

- A value facilitating the realisation of aspirations of individuals or groups and the need of satisfaction as well modification of the environment and coping within it.
- A resource for the society, ensuring its social and economic development; only healthy society may establish material and cultural goods, develop appropriate level of the quality of life.
- A means (condition) of everyday life facilitating its better quality (Maszczak, 2002).

Healthy behaviour is conscious human acts regulating its attitude to the issues of health within the society in which it functions and health culture, norms and personal models developed. It also includes reactions of human body to stimuli from the internal and external environment that have direct or indirect impact on human health and good physical and mental state. Healthy behaviour may produce positive and negative consequences in persons introducing them to their lives. These include (Dworak, 2015):

- Behaviour contributing to health (pro-health) – e.g.: appropriate physical activity, rational diet, maintenance of appropriate interpersonal relations, coping stress, maintenance of cleanliness of the body and the surrounding environment. Its aim is prevention, development or improvement of one's own health.
- Behaviour harmful to health (anti-health) – smoking tobacco, abusing alcohol, other types of substances, stress, lack of physical activity and dietary mistakes. All healthy behaviour is culturally conditioned, thus one has to select appropriate models from numerous proposals. On the other hand, one should reject those which are unfavourable.

STUDY MATERIAL AND METHODS

The research covered students of physiotherapy of 2 state universities – University of Physical Education in Warsaw and Medical University of Warsaw. 216 students volunteered to take part in questionnaire study (154 females and 62 males), including 106 students of University of Physical Education and 110 students of Medical University of Warsaw.

The Health Behaviours Inventory (HBI) and the Individual Interview Questionnaire designed for the purposes of the study were the research tools to collect data. The study using the HBI and the Questionnaire was anonymous and was to guarantee feeling of safety and honesty of replies of the respondents. The Health Behaviours Inventory designed by Zygryd Juczyński contained 24 statements describing various types of behaviour related to health, *inter alia*: proper dietary habits, preventing behaviour, health practices and positive psychological attitude.

The respondent was to mark how often he/she performed the enumerated activities related to health, evaluating each of those presented in the Health Behaviours Inventory – on the three-step scale:

- 1-2 – never;
- 2-3 – rarely;
- 4-5 – often.

The result of the HBI scale was discussed comprehensively and in 4 sub-scales:

- Proper dietary habits;

- Preventive behaviour;
- Positive psychological attitude;
- Professional practices.

The norms assumed for the whole HBI are:

- From 24 to 77 points – low behaviour;
- From 78 to 91 points – average behaviour;
- From 91 to 120 points – high behaviour.

The Individual Interview Questionnaire contained demographic questions.

Large number of people in the group examined was the reason of applying the parametric t-Student test to study the differences between the groups. The level of $p \leq 0.05$ was the assumed statistical significance threshold.

STUDY RESULTS

Analysis of results of the Health Behaviours Inventory demonstrated strong positive health-related behaviour among students of Medical University of Warsaw 96.11 points (± 11.23 points) and University of Physical Education 95.20 points (± 10.17 points). The results were not significantly different (NS).

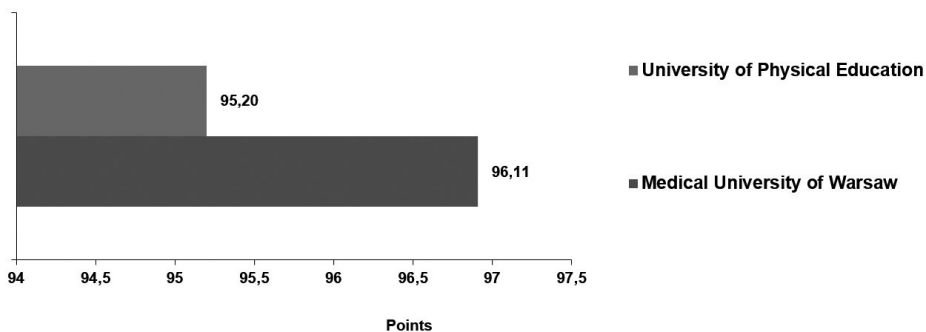


Figure. 1. Health Behaviours Inventory among physiotherapy students

Source: study of authors.

Appropriate dietary habits tested by means of HBI most of all considered the type of food eaten (wholegrain bread, vegetables and fruit). Analysis of the results demonstrates high intensity of appropriate dietary habits among the Medical University of Warsaw students –26.51 points (± 3.61 points) and similar values among the University of Physical Education students 22.15 points (± 4.78). The results were significantly different ($p < 0.05$).

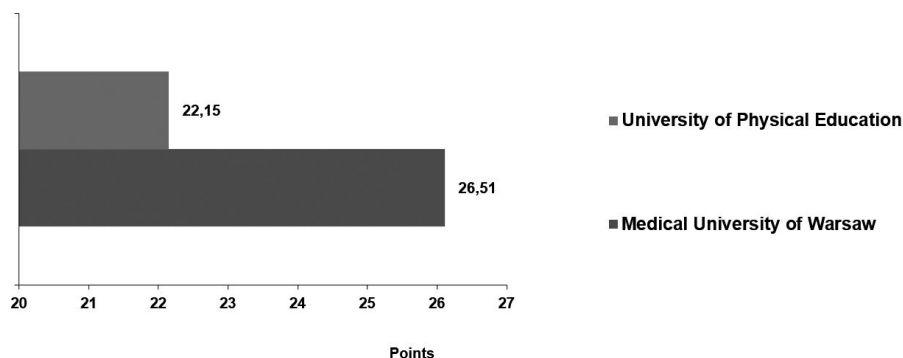


Figure. 2. Appropriate dietary habits tested by means of HBI among physiotherapy students

Source: study of authors.

The preventive behaviour tested by means of HBI related to observing the doctors' recommendations, obtaining information on health and illness. High level of the above-mentioned behaviour among students of Medical University of Warsaw 26.30 points (± 5.82 points) and University of Physical Education students 25.38 (± 6.70 points) was noted. The results were not significantly different (NS).

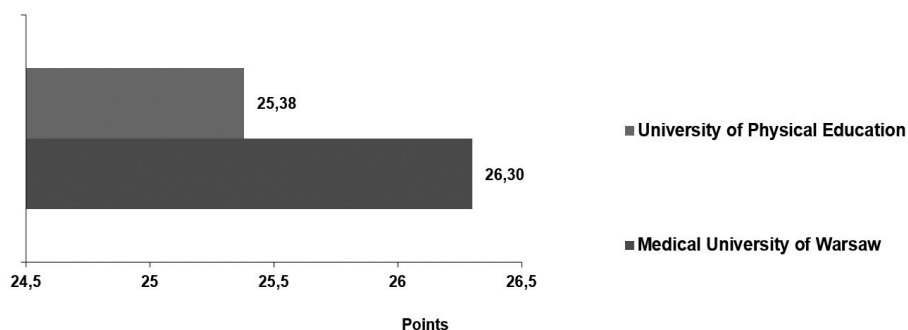


Figure. 3. Preventive behaviour tested by means of HBI among physiotherapy students

Source: study of authors.

Positive psychological attitude tested by means of HBI included such factors as: avoiding strong emotions, stress and depression. It was noted that high values were obtained by University of Physical Education students 24.47 points (± 5.93 points) as compared to Medical University of Warsaw with 21.53 points (± 4.58). The obtained results reached the level of $p = 0,05$.

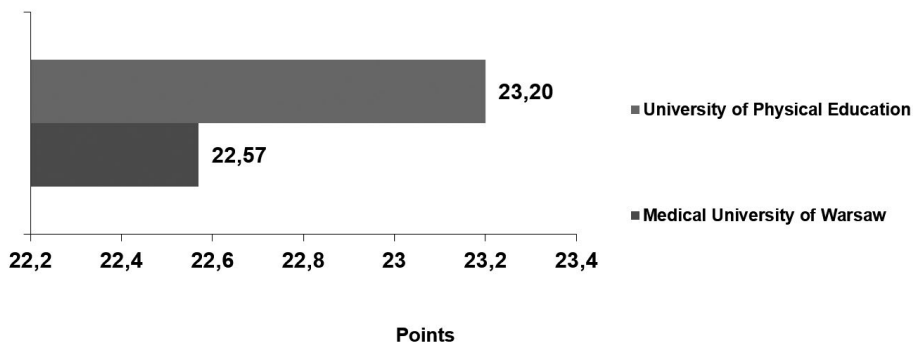


Figure. 4. Positive psychological attitude tested by means of HBI among physiotherapy students

Source: study of authors.

The study of the professional practice factor by means of HBI covered everyday sleeping habits, recreation and physical activity. University of Physical Education students obtained the factor of 23.20 points (± 6.67 points) and Medical University of Warsaw students obtained 22.57 points (± 5.92 points). Values of both groups are similar and have high status.

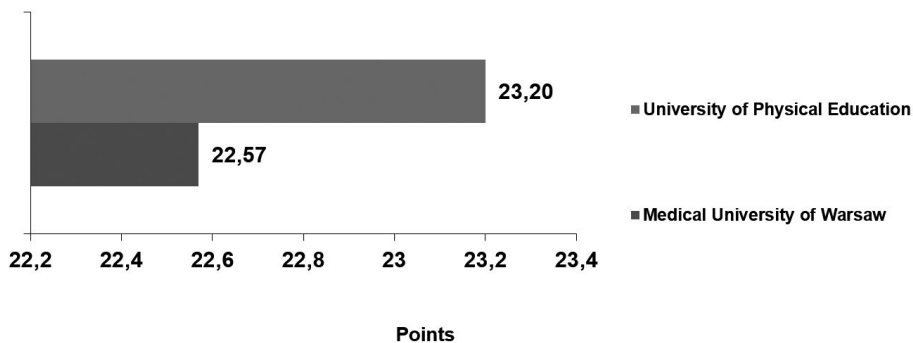


Figure. 5. Health practices tested by means of HBI among physiotherapy students

Source: study of authors.

DISCUSSION

Health-related behaviour covers every activity undertaken by an individual to strengthen or increase the health potential independently from its effectiveness. State of the individual's awareness and legitimacy of activity are important elements of this definition. In everyday life people undertake different forms of activity having impact on health, even though they are not accompanied by conscious intention. They are called health-related behaviour. The effects of such activities on health may be positive and negative. Negative effects are called behaviour threatening health or risky behaviour.

Health-related behaviour of pro-health lifestyles should be perceived against the background of social position of people. Social position demonstrates the possibilities to make pro-health choices – activities aimed at health, eliminating threatening behaviour. The very accessibility of these activities does not determine specific health-related behaviour. The level of health-related knowledge and awareness of individuals is important. It should be added that specific health-related habits from childhood and teen age will to a large extent determine health-related behaviour of the adult members of the society.

Our study indicated that physiotherapy students of both universities showed a high level of health behaviour, which can positively influence not only their lives, but also the lives of their potential patients, clients and pupils – people from different age groups and with different biopsychosocial needs. Unfortunately, when analysing source literature, we came across a study conducted among students studying both medical and non-medical subjects on a low and/or average level, as shown by under-mentioned scientific reports.

The authors from Zielona Góra (Kowalski and Kowalski, 2003) carried out tests on 420 students of University of Zielona Góra, Faculties of Humanities, Education and Sociology and Arts. The aim of the study was to describe knowledge in the area of health and pro-health behaviour of students of teaching faculties. The results of research failed to be satisfactory. Nearly 31% of the students are persons who do not do physical exercises. Despite obligatory physical education classes, males demonstrated greater activity. About 63% of the respondents consumed alcohol *moderately*.

Nearly 13% of students consumed alcohol often or very often. On the other hand, 33% of student smoked tobacco (females in majority). The reasons for smoking tobacco were, inter alia, the presence of smokers and curiosity. The study conducted 2 years later by the same authors in a group of 300 students of University of Zielona Góra showed that more than 27% of both male and female students regularly consumed alcohol and more than 41% of respondents were heavy smokers (Kowalski et al., 2005).

Different health-related results were reached in a group of 80 students of University of Poznań and Poznań University of Medical Sciences. 90% of respondents showed positive health habits. However, the study on health behaviour conducted in Poznań in 2012 in a group of 464 male and female students showed a low level of health behaviour (Rasińska, 2012). Other studies on health behaviour were conducted at Wrocław Medical University, Wrocław University of Science and Technology and Wrocław University of Environmental and Life Sciences. The results indicated that more than 47% of students did not know proper nutrition rules, despite claiming to keep appropriate nutrition habits in their everyday lives (Seń et al., 2012).

A study of health control placement in a group of 194 students in Sanok revealed that more than half was addicted to tobacco products and 7.7% regularly consumed alcohol (Smoleń et al., 2012). Also, a study conducted at an academic centre in Opole in a group of 315 students of 6 universities, both medical and non-medical,

proved that more than half 57% did not engage in any physical activities, justifying it with lack of time (Sochocka and Wojtylko, 2013). Recent studies conducted in 2015 among 74 students of Opole University of Technology indicated a low level of health behaviour. In contrary to all these results, our own latest studies concluded that physiotherapy students of Medical University of Warsaw and University of Physical Education, as future health promoters and health educators, showed a high level of health behaviour which can positively influence various individuals and social groups.

The results demonstrate, on the one hand, knowledge of the respondents in health, and on the other, contradiction between knowledge of elements of pro-healthy lifestyle and activity. Future teachers bearing in mind the good of children and youth should probably represent positive attitudes. For a young person, a teacher is very often an authority the pupil or student models on. It also affects students of various subjects, including students of medicine and pedagogy. Own studies reveal that physiotherapy students of Medical University of Warsaw and University of Physical Education in Warsaw – future promoters of health – demonstrated positive health-related behaviour.

In this paper, we tried to reference source literature relating to similar groups of respondents and applied research instruments. Unfortunately, despite many scientific reports on health behaviour, at present there is no agreement regarding research. The lack of multicentre studies and standardised research procedures makes it difficult to properly interpret and compare the results. Changes in specific research orientation and standardisation could contribute to raising standards of higher education.

CONCLUSIONS

High level of the above-mentioned health-related behaviour among students of Medical University of Warsaw and University of Physical Education students was demonstrated. It seems that educational classes in issues relating to health promotion positively affected the lifestyle of students of Medical University of Warsaw and University of Physical Education.

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Keywords: health education, health behaviour, student, physiotherapy

Abstract: The aim of this paper is to evaluate the connection between health education and health behaviour in a group of physiotherapy students attending two Warsaw universities. The study used Health Behaviour Inventory and an interview questionnaire. The analysis of obtained results revealed a high level of health behaviour among physiotherapy students of both universities.

EDUKACJA ZDROWOTNA A ZACHOWANIA ZDROWOTNE WŚRÓD STUDENTÓW KIERUNKU FIZJOTERAPIA

Słowa kluczowe: edukacja zdrowotna, zachowania zdrowotne, student, fizjoterapia

Streszczenie: Celem pracy była ocena związku pomiędzy edukacją zdrowotną a zachowaniami zdrowotnymi w grupie studentów kierunku fizjoterapia dwóch uczelni warszawskich. Do badań wykorzystano Inwentarz Zachowań Zdrowotnych i kwestionariusz wywiadu. Analiza uzyskanych wyników ujawniła wysoki poziom zachowań zdrowotnych wśród studentów fizjoterapii na obydwu uczelniach.