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**THE LEVEL OF HEALTH LITERACY AMONG FUTURE
TEACHERS BEFORE ENTERING EDUCATIONAL REALITY**

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Abstract

Health literacy is one of the basic factors that affect health and the onset and development of many diseases. The objective of international as well as national strategic documents of the World Health Organization (WHO) and the Ministry of Health of the CR, such as Health 2020 or the Development of health literacy for 2015-2020 is to increase the level of health literacy among the population. One of the core intervention areas is education. Teachers' level of health literacy affects its development among their students. This paper presents the results of a research study aimed at health literacy among future teachers with an emphasis on health promotion. The research was carried out in 2018/2019 and involved 180 respondents in the final year of the study programme Teaching at the Faculty of Education, Palacký University Olomouc. The authors used a research instrument designed by the WHO and provided by the National Institute of Public Health in Prague. Applicable methodology for data analysis and evaluation was observed. The results are unsatisfactory because 97.3% of future teachers showed a problematic or inadequate level of health literacy in the area of health promotion. Students of Teaching health education for elementary schools achieved a higher average score in health literacy compared with students of other fields of Teaching, but this difference is not statistically significant. The results a need for extending the portfolio of mandatory courses in all fields of Teaching in order to increase the level of health literacy among future teachers.

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Keywords: Health literacy, health promotion, future teachers, study programme Teaching, field of study Teaching health education for elementary schools.



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1. Introduction

The level of health literacy is one of the key factors affecting health of an individual and the whole society (Sørensen et al., 2015). Regarding the fact that in developed countries of the world including the Czech Republic the most frequent cause of morbidity and mortality is chronic non-communicable epidemics, which are related to an inadequate lifestyle (Report on the health of the population of the Czech Republic, 2014) and a low level of health literacy, both international (Health 2020, 2013) and national strategies are developed in order to increase the level of health literacy and health of the population (Development of health literacy for 2015-2020, 2015). One of the key areas that can have a positive effect on the level of health literacy and lifestyle habits is the area of education, specifically teachers in the educational reality in preschool, elementary, grammar school and vocational education (Hřivnová, 2017; Marádová, 2016; Development of health literacy for 2015-2020, 2015).

2. Problem Statement

The last decade has seen some significant research studies on the level of health literacy. Both in the European and Czech context, the research results on the level of health literacy among the current adult population are unsatisfactory (Kickbusch, Pelikán, Apfel, & Tsouros, 2013; Kučera, Pelikan, & Šteflová, 2016). Therefore, it is desirable to search for ways of increasing the level of health literacy among the current adult population and the upcoming young generation. In the Action plan of the Czech government called the Development of health literacy for 2015–2020 (2015) the third priority area is the area of education. In order to achieve this objective, teachers who educate the young generation must be literate in the first place (Hřivnová, 2017; Marádová, 2016). However, currently there is scarcity of research studies on the level of health literacy among teachers (whether future or existing).

Professionals who try to combine the area of healthcare and education in the Czech Republic have in the long term supported the inclusion of disciplines focused on health protection and promotion, health education, primary prevention, and the development of health literacy in the study plans of Teaching study programmes. Health education of the upcoming young generation is the primary task of students of the field of study Teaching health education, whose portfolio of study disciplines includes issues relating to comprehensive (i.e. holistic) health promotion and health literacy development. These include for example the following disciplines: Somatology, First aid, Nutrition physiology, Nutrition, Reproductive health, Sexuality education, Prevention of addictions, Prevention of risk behaviour, Psychology of health, Health promotion and health literacy development, etc. (Hřivnová, 2017). At the Faculty of Education, Palacký University Olomouc, general mandatory disciplines of the Pedagogical propaedeutic module in the Bachelor's degree programme of Specialization in Education include Somatic and physiological characteristics of the child and school hygiene and First aid; the area of educational sciences includes a mandatory discipline Prevention of risk behaviour. The follow-up Master's programme Teacher training for elementary schools and Teacher training for secondary schools in the Teacher qualification module has a core elective discipline Health literacy (Hrivnova, Sofkova, & Chraskova, 2019).

Marádová (2016) recommends a systematic increase in health literacy among all teachers, which should become an integral part of study programmes aimed at education. The author states that if this is

accomplished, and schools will have qualified Health education teachers surrounded by a team of teaching (and non-teaching) staff motivated for health promotion, it can be anticipated that the outcome of their coordinated action will be a health literate citizen.

3. Research Questions

This paper aims to answer the following two research questions:

1. What is the level of health literacy in the area of health promotion among future teachers before they enter the teaching process?
2. Do students of Teaching health literacy for elementary schools have a higher level of health literacy in the area of health promotion compared with students of other fields of Teaching?

4. Purpose of the Study

The purpose of the present paper is to analyse and evaluate the level of health literacy in students in the final year of the study programme Teaching at the Faculty of Education, Palacký University Olomouc, i.e. future teachers before they enter the teaching process. The primary focus is on the dimension of health literacy in the area of health promotion. One of the basic motives for this research is the scarcity of research studies on the level of health literacy among teachers in the Czech Republic. Regarding the fact that the issue of health promotion, health education and development of health literacy is most strongly embedded in the study profile of students of Teaching health education for elementary schools, the research focuses on the differences between the results of health literacy in the area of health promotion between these students and students of other fields of Teaching, who take disciplines focused on health promotion, health education and development of health literacy only as part of the so-called general course.

5. Research Methods

The present research used a standardized method of analysing the level of health literacy among students of Teaching in their final year at the Faculty of Education, Palacký University Olomouc, i.e. future teachers before they enter the teaching process.

5.1. Description of research participants

The research sample (research participants) comprised students in the final year of the study programme Teaching at the Faculty of Education, Palacký University Olomouc, i.e. future teachers before they enter educational reality ISCED 1, ISCED 2 and ISCED 3; the total number of respondent was 191. Regarding the fact that 11 respondents did not meet the requirements for questionnaire analysis (see 5.2.), the final research sample comprised 180 students. In terms of gender, the sample included 158 women and 22 men, which matches the current gender distribution among students of Teaching. Specifically, the research sample comprised students of the field of study Teaching health education for elementary schools, whose study plan includes disciplines focusing on health promotion and health education in order to train teachers of Health education in elementary schools and develop health literacy in their students. Of the total

research sample (180 respondents), the number of students of the field of study Teaching health education (THE) is 20 (11%), see Table 1.

Table 01. Description of research participants by field of study and gender

Gender	Other fields	THE	Row Totals
Female	141	17	158
Male	19	3	22
All Grps	160	20	180

Note: The item Other fields refers to students of other fields of study except Teaching health education; THE refers to students of Teaching health education

5.2. Research method: “health literacy” questionnaire

The research was performed by means of the health literacy questionnaire designed by the World Health Organization, which had also been used to examine the level of health literacy among the citizens of the Czech Republic (Kučera, Pelikan, & Šteflová, 2016). This is a standardized research instrument used for the detection of the level of overall health literacy and its subcomponents – HL in the area of healthcare, HL in the area of health promotion, and HL in the area of disease prevention. For the purposes of the present research the instrument was provided by the Institute of Public Health in Prague, specifically the Centre for Public Health Promotion, which has been a long-standing partner of the Faculty of Education, Palacký University Olomouc. For the purposes of the present research, the original “structured interview” method was changed into a written questionnaire. In the process of data evaluation, the required standard methodology was observed (Kučera, Pelikan, & Šteflová, 2016). The indexes of individual HL dimensions (HL in the area of healthcare HC-HL, HL in the area of disease prevention DP-HL, HL in the area of health promotion HP-HL and general level of health literacy GHL) have values from 0 to 50 points divided into four health literacy intervals: Inadequate (0-25 points); Problematic (26-33 points); Sufficient (34-42 points) and Excellent (43-50 points). The HP-HL index was calculated based on question Q1/32-37 (total of 16 questions). However, it was calculated only for respondents who in the 16 cases indicated a maximum of two “5” response (i.e. “I don’t know”).

The t-test statistical method was used for data processing. The research data were processed by means of the STATISTICA 13 package including relevant graphs (Histogram and Box & Whisker Plot). This paper describes the partial data evaluating the level of “Health literacy in the area of health promotion (HP-HL)”. The research study was conducted at the Faculty of Education, Palacký University Olomouc in the academic year 2018/2019.

6. Findings

6.1. Assessment of health literacy in the area of health promotion among students of Teaching before they enter the teaching process

The level of health literacy in the area of health promotion and its subcategories among students in the final year of the study programme Teaching at the Faculty of Education, Palacký University Olomouc is shown in Figure 1.

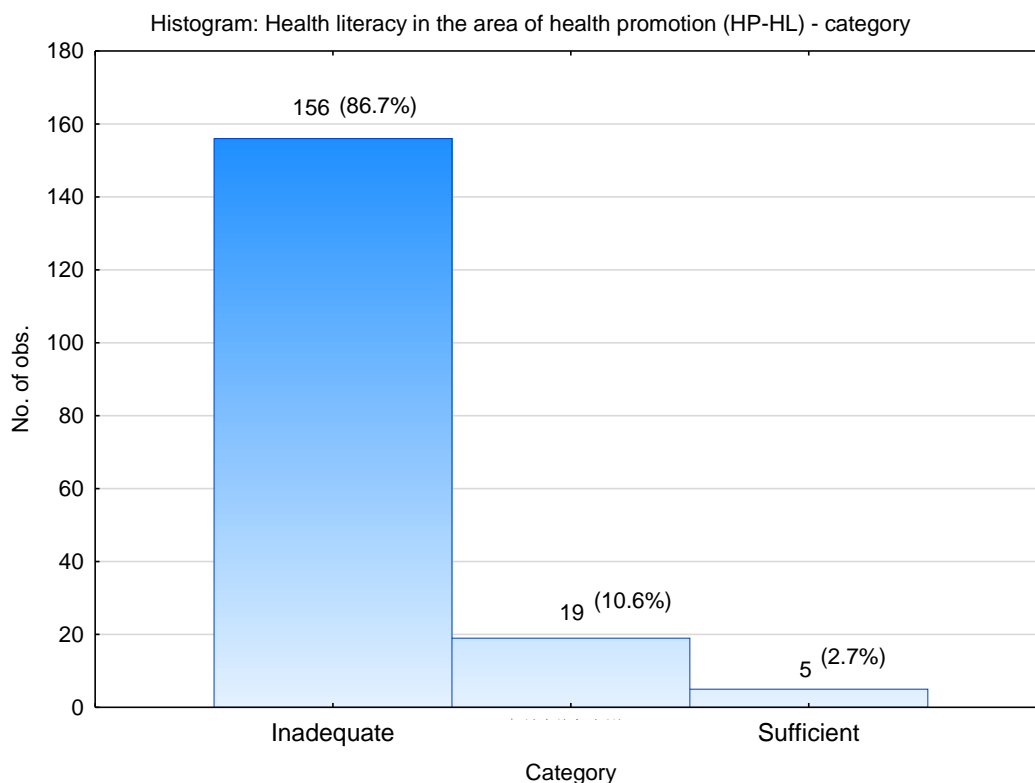


Figure 01. Level of health literacy in the area of health promotion among students of Teaching

The figure 1 suggests that most students (86.7%) in the final year of the study programme Teaching at the Faculty of Education, Palacký University Olomouc were in the category of inadequate level of health literacy in the area of health promotion. 10.6% of students showed an problematic level of health literacy in the area of health promotion, and 2.7% of future teachers showed a sufficient level of health literacy in the area of health promotion. No future teachers were in the excellent category. In their research on health literacy among the citizens of the Czech Republic, Kučera, Pelikan and Šteflová (2016, p. 236) observed 64% of adult population in the category if inadequate or problematic level of health literacy in the area of health promotion. In a European context, Kickbusch, Pelikán, Apfel and Tsouros state that a research study conducted in eight European countries showed that half of all adults had inadequate knowledge and skills relating to health literacy.

The low level of health literacy in university students was also generally suggested by Jarolímeck and Lustigová (2018), who performed a research study on a sample of 286 respondents aged 18 to 30 years and observed that the worst area was health literacy and taking preventive examinations. According to the authors, “the results of the study suggest that despite the good availability of information in the current era which is sometimes referred to as the modern information society, even well-educated young people have very low awareness of the availability of preventive examinations and are not overly interested in their health in this respect” (p. 12). In 2013, Urbánková and Reissmannová emphasised in their research that there was insufficient awareness among university students about primary prevention and primary care concerning health-related areas, which belong among the most fundamental matters.

The not very positive results observed in the dimension of health literacy in the area of health promotion in future teachers reflect their lack of awareness of the recommendations relating to activities

aimed at improvement of their own health, and the inability to follow these recommendations, as stated by Kučera, Pelikan and Šteflová (2016), who observed an inadequate health literacy score in the area of health promotion in the Czech adult population.

6.2. Comparison of evaluation of health literacy in the area of health promotion among students of Teaching health education and students of other fields of Teaching before they enter the teaching process

As mentioned above, the largest proportion of future teachers was in the problematic level of health literacy in the area of health promotion. This section focuses on an analysis and evaluation of the average score achieved in the assessment of health literacy in the area of health promotion with respect to a specific field of study in students of the study programme Teaching at the Faculty of Education, Palacký University Olomouc. For this purpose, two groups of respondents were created: students of the field of study Teaching health education for elementary schools, whose study plan includes more disciplines aimed at the development of health literacy, and students of other fields of Teaching, whose Teacher qualification module includes an elective discipline Health literacy (see above).

Both tabular and graphical depiction (Table 2 and Figure 2) of average scores in the groups of respondents in terms of health literacy in the area of health promotion suggest a higher score in students of Teaching health education for elementary schools (average score 19.61) as opposed to students of other fields of Teaching (average score 17.38).

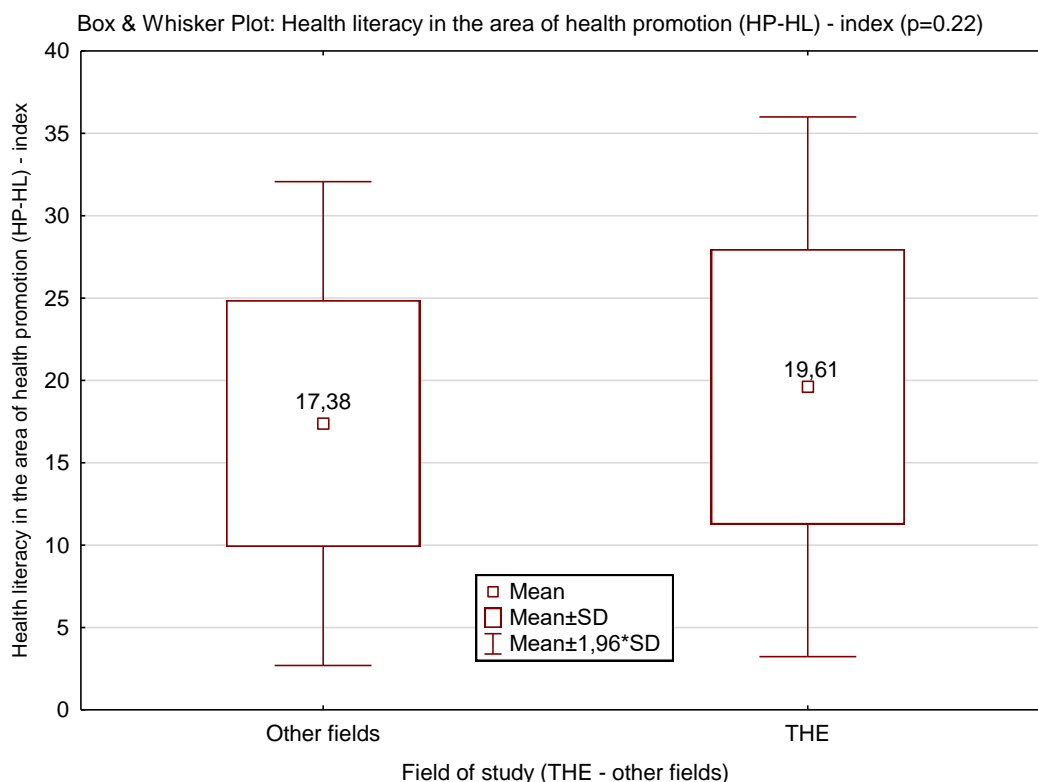


Figure 02. Comparison of the average score in the assessment of health literacy in the area of health promotion among students of Teaching health education for elementary schools and students of other fields of Teaching

Despite the fact that students of Teaching of health education show a higher average score in the assessment of health literacy in the area of health promotion compared with students of other fields of Teaching, it should be stated that this difference is not significant, but still suggests a positive trend induced by the study plan of Teaching health education. Nevertheless, the situation concerning the level of health literacy among future teachers is unsatisfactory and it is imperative to search for ways of increasing the level of health literacy in the area of health promotion.

Table 02. Comparison of the average score achieved in health literacy in the area of health promotion among students of Teaching health education for elementary schools and students of other fields of Teaching using a t-test

Variable	Mean Other fields	Mean THE	t-value	df	p	Valid N Other fields	Valid N UVZ	Std. dev. Other fields	Std. dev. THE	F- ratio variances	P variances
HP – HL index	17.38	19.61	-1.24	178	0.22	160	20	7.49	8.36	1.24	0.46

7. Conclusion

A high level of health literacy is a significant factor of applying health-relevant behaviour and habits that support health in everyday life. However, currently the level of health literacy in the Czech Republic is relatively low, especially in the dimension of health promotion of the adult population. One of the areas for increasing the level of health literacy in the CR as specified in strategic documents of WHO and the Ministry of Health of the Czech Republic is education.

In the present research, focus is on an analysis and evaluation of the level of health literacy with an emphasis on the dimension of health promotion in students in the final year of the study programme Teaching at the Faculty of Education, Palacký University Olomouc, i.e. future teachers before they enter the teaching process.

The results suggest that most future teachers (97.3%) have a problematic or inadequate level of health literacy in the area of health promotion. A selective analysis suggested a higher average score in health literacy in the area of health promotion among students of Teaching health education for elementary schools compared with students of other fields of Teaching. However, this difference is not statistically significant.

In conclusion, it is desirable to emphasise the fact that the observed level of health literacy in the area of health promotion in future teachers is unsatisfactory and it is important to search for strategic ways of increasing the level of health literacy in future teachers in order for them to be able to pursue the fundamental objective of education, i.e. “to teach students to actively develop and protect their physical, mental and social health, and be responsible for their health”. This means that teachers themselves need to be health literate in order to develop health literacy in their students.

The recommendations based on the results could be summarized into a call for action that would stimulate the implementation of a broader portfolio of mandatory study disciplines of the so-called Teacher qualification module in order to increase the level of health literacy in students of Teaching, i.e. future teachers before they enter the teaching process.

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