



Protection of Health by Increasing the health Literacy of Pupils

R1 – COUNTRY ANALYSIS TRANSNATIONAL REPORT

Responsible partner: TUCEP

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1. INTRODUCTION

The PHILIP project intends to contribute to the increase of the health literacy levels of pupils aged between 11 to 15 through the development of learning modules targeted to the needs of the children and adolescents which are aimed at helping teachers tackle the content of health literacy properly at school.

As a matter of fact, several international studies and research show that pupils are quite illiterate, do not follow instructions from doctors, or are unable to evaluate the health information they come across. As future world citizens, pupils have the right to protect their health and, one of the main ways to do that includes educating children about health by raising their health literacy.

In order to achieve the project's objectives, the partnership, composed of six organisations from the Czech Republic, Greece, Italy, Lithuania, Portugal, and Spain, carried out country research aimed at providing an overview of the factual situation and health literacy level among children and adolescents in each country involved.

The country research has included two specific activities:

1. **Quantitative research among pupils 11-15 years old** aimed at identifying the situation of health literacy level among pupils in each partner country.
2. **Qualitative research** involving relevant stakeholders aimed at analysing the state of the art concerning health literacy among children as well as the potential and restrictions to increasing it.

This document presents data and main findings from the qualitative and quantitative research conducted at the transnational level pointing out the challenges pupils face with health information, as well as the needed skills and knowledge to support children and adolescents to evaluate health-related information in order to promote, protect and maintain good health.





2. METHODOLOGY

In order to conduct standardised research based on the same criteria, the partner organizations complied with the guidelines provided by TUCEP, the responsible partner of the first project deliverable, including methodologies, tools, timing, and instructions for the implementation of qualitative and quantitative research.

As far as the quantitative research among pupils is concerned, partners administrated a dedicated questionnaire among pupils aged between 11 to 15 aimed at:

- investigating the **level of health literacy** of pupils in terms of knowledge and understanding about health issues;
- identifying the health-related **skills and competence**, including skills needed to navigate in virtual environments and digital contexts
- identifying the pupils' ability to **assess the reliability of health-related messages** received through different communication channels
- understanding the **pupils' ability to implement actions** to protect their own health and the health of others.

Elements of this survey were adapted from the research "Health Literacy for School-Aged Children" conducted by Olli Paakkari and Leena Paakkari, Faculty of Sport and Health Sciences, University of Jyväskylä, Finland.

The anonymous questionnaire was made available in the partner national languages and was administered both print and online formats by involving local schools or other organisations dealing with pupils. Each partner defined the adequate methodology to be used for administering the questionnaire among pupils, based on their experience, networks, and national regulations.

The qualitative research with relevant stakeholders included the conduction of in-depth interviews with experts who address or encounter the effects of insufficient education of children in the health literacy field such as doctors, pediatricians, school psychologists, teachers, pedagogical counselling centres, and other representatives of the health sector.

The main objectives of this activity were:

- to analyse the state of the art regarding **health literacy among children** including the pupils' level of familiarity, challenges they face with health-related information, who is responsible for the delivery of health promotion and education, etc..
- to gather the **most relevant perspectives and views** on the issue of student health literacy from professionals working with children at both health and educational levels
- to **identify existing health-related initiatives** in school curricula.

After conducting the country research, each partner summarised the qualitative and quantitative data from the questionnaires and interviews in a national report based on a common template provided by TUCEP.

The main data and findings at the transnational level are presented in this document, also available on the project website: <https://philip.uzg.cz/project-result-1-country-analysis/>





3. QUANTITATIVE RESEARCH AMONG PUPILS

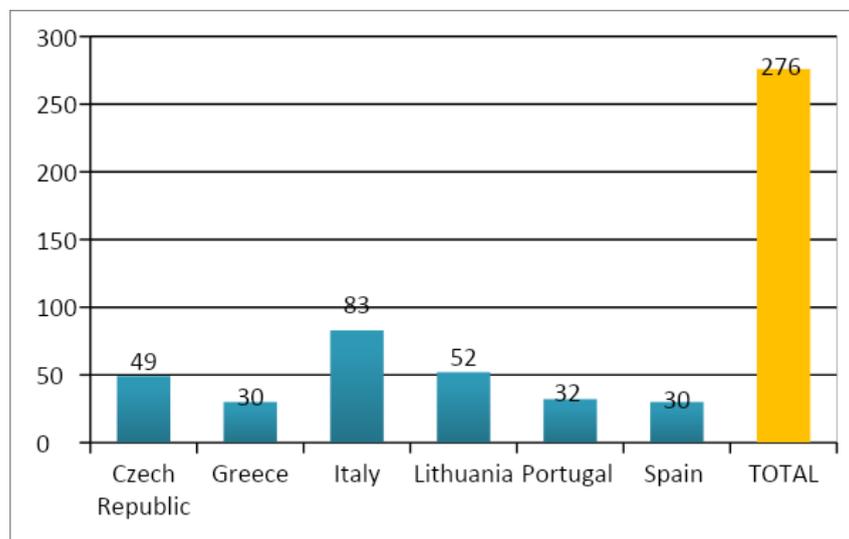
3.1 Questionnaires data

In order to administer questionnaires to a large sample of students aged between 11 and 15, the partner organisations involved local primary, upper and secondary schools through existing contacts with their headmasters and teachers.

Before starting the survey administration, the objectives and activities of the PHILIP project were presented to the teachers in order to provide them with sufficient information to be able to explain to the students why they were being asked to participate in a health literacy survey. Furthermore, the official definition of “health literacy” based on the World Health Organization glossary has been included in the questionnaire, as follows: “Health Literacy comprises the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health”¹.

All participants were informed that the data collection would be conducted confidentially, meaning that none of the project’s researchers analysing the results would be able to associate the participants’ names or other personal information with their responses. They were also informed that the data collected would be stored in a secure digital space provided by the project partners.

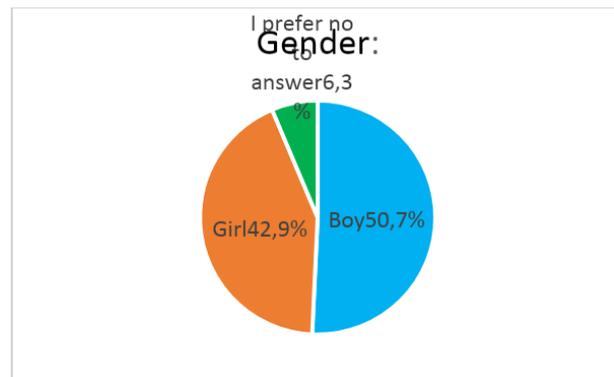
The consortium involved a total number of 276 pupils, a much higher number than expected by the project proposal (at least 30 students per country).



¹ Nutbeam D., WHO Collaborating Center for Health Promotion, *Health Promotion Glossary*, 1998

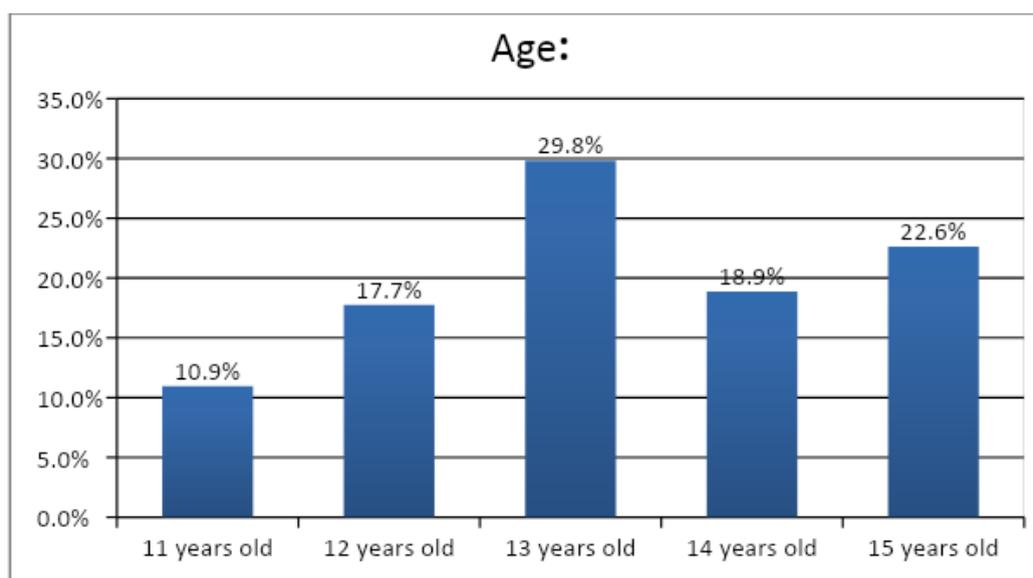


The number of students participating in the survey was approximately half boys and half girls.



As for the age of the sample of students involved, the partner organisations were able to cover all age groups of the target group, from 11 to 15 years.

The age groups most represented by the students are 13, 14 and 15 years old in accordance with the educational grade of the schools involved by the partners. It is meaningful to include students from all age groups as the responses are more representative of the challenges, behaviours and needs faced by both younger and older students.



In order to investigate the **level of health literacy** of pupils in terms of knowledge and understanding about health issues, the questionnaire presented a list of statements addressed to pupils asking them to express their opinion by using the following indicators:

- Absolutely true
- Somewhat true
- Not quite true
- Not at all true



Based on how much the students agreed with the statements or felt comfortable with them, the most relevant opinions were collected by grouping the statements according to the highest number of answers given for each item, as below summarised:

⇒ **Absolutely true:**

- I can follow the instructions given to me by healthcare personnel (e.g. doctor)

⇒ **Somewhat true:**

- When necessary, I am able to give ideas on how to improve health in the context I live in (e.g., family, friends, classmates) (138)
- I am able to compare health-related information from different sources (135)
- I'm confident to have good information about health (133)
- I can easily give examples of things that promote health (129)
- When necessary, I find health-related information that is easy for me to understand (124)
- I can usually figure out if some health-related information is right or wrong (120)
- I can judge how my own actions affect the surrounding natural environment (120)
- When I do not find satisfactory answers on health-related information, I ask my parents or friends (105 and 101 "absolutely true")
- I can judge how my behaviour affects my health (108 and 93 "absolutely true")
- I happen to look for health-related information on the Internet or on social media (106)
- I am able to explain the choices I make regarding my health (103 and 88 "absolutely true")

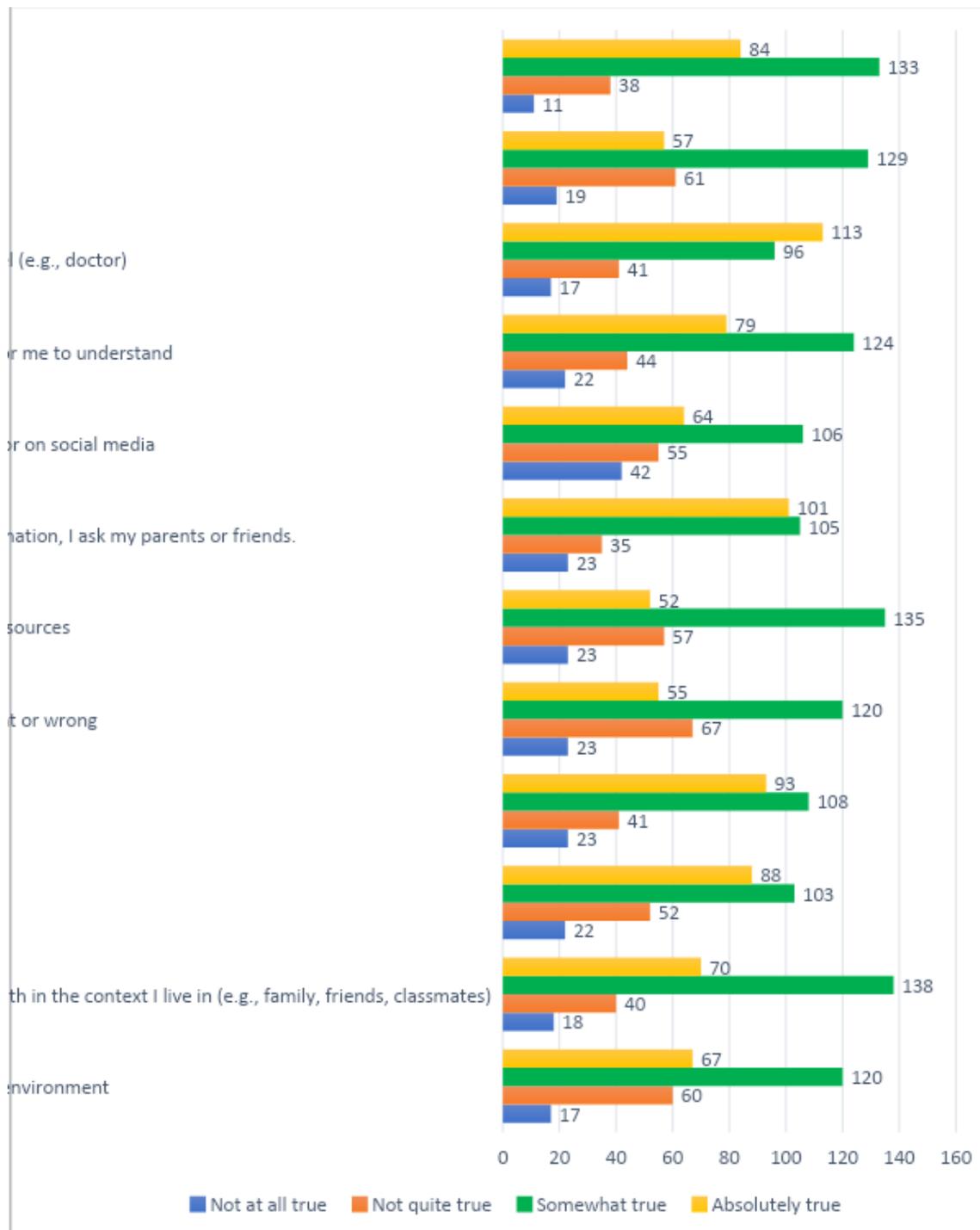
This overview provides an initial picture of the students' level of familiarity with health information: basically, they are able to follow the guidance/instructions given by medical personnel, feel comfortable with health information and are able to improve and promote their own health and the health of those around them.

With regard to searching for health information, more than half of the pupils feel they have a good ability to find information and to be able to compare it with others from different sources, including the Internet and social media.

More than 60% of students believe to be able to recognize whether the information is correct or wrong and, in case of doubt, ask parents and friends for clarification. Furthermore, they think they are quite aware of the consequences of their behaviour on health and the environment.

The following graph shows all the answers given by the students to each statement:



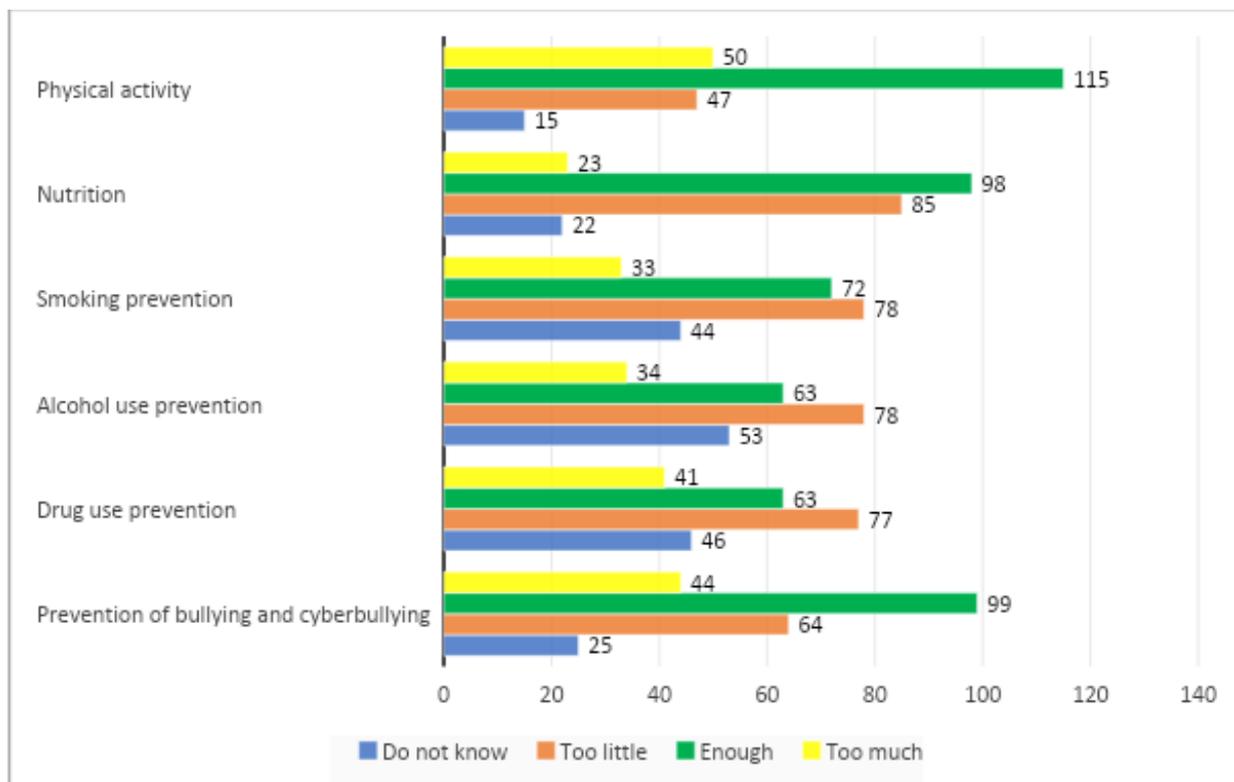


Another important question the students were asked concerns the attention their school pays to basic lifestyles, specifically on topics such as nutrition, physical activity, smoking prevention, alcohol and drugs prevention, bullying, and cyberbullying.

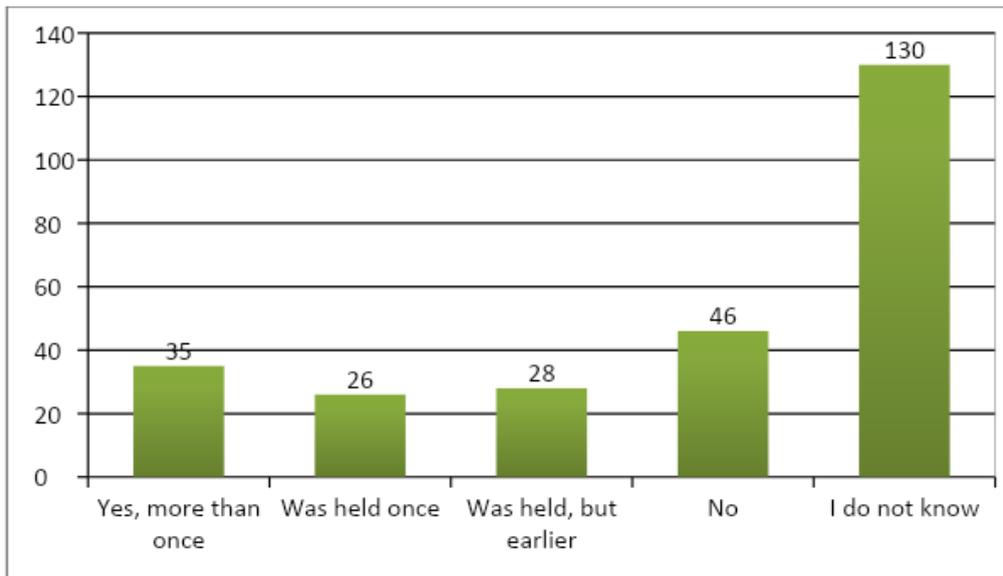
Looking at the students' opinions as shown in the following picture, the school places enough emphasis on raising awareness and educating pupils on the importance of physical activity and nutrition as lifestyles for staying healthy.

Prevention of bullying and cyberbullying is also an issue the school pays attention to, probably due to the increasing number of cases of bullying with disastrous consequences not only on a physical level but above all on an emotional and psychological level.

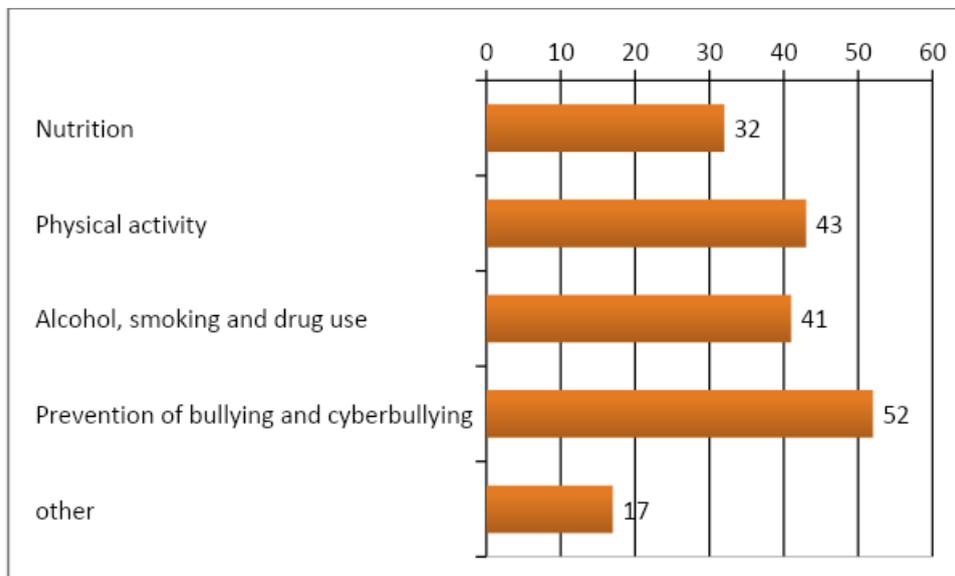
However, more than half of pupils think that schools still do **too little to prevent** health-damaging phenomena such as **smoking, alcohol, and drugs**. Considering that these phenomena are growing, especially among younger students, it is remarkable to note that students themselves realise there are not enough initiatives to inform them about the disastrous consequences of these behaviours on their health.



As far as the organisation of health promotion events in the current school year, half of the respondents (47,1%) claim that they are not aware of it. In any case, only 12% said that the school organised events more than once and 9,4% stated events had been organised at least once during the school year. However, it needs to point out that the questionnaire was administered in the first few months of the school year and, as a result, schools will still have time during the current year to organise health promotion events.



The events organised by the schools involved mainly concerned the prevention of bullying and cyberbullying, physical activity, alcohol, smoking, and drug use. Slightly fewer events were organised on the importance of nutrition as a lifestyle to stay healthy.





3.2 Summary/conclusions

The quantitative research conducted in six partner countries (Czech Republic, Greece, Italy, Lithuania, Portugal, and Spain) was carried out through the administration of an anonymous questionnaire aimed at identifying the level of familiarity of students aged between 11 and 15 with health-related information.

The consortium collected a total number of 276 questionnaires filled in by pupils attending local primary, upper and secondary schools the partner organisations are working with.

The review of the answers given by the students, half boys and half girls mainly aged 13 to 15, shows a good overview of their level of familiarity with health information: basically, they are able to follow the guidance and instructions given by medical personnel, feel comfortable with health information and are able to improve and promote their own health and the health of those around them.

With regard to searching for health information, more than half of the pupils feel they have a good ability to find information and to be able to compare it with others from different sources, including the Internet and social media.

More than 60% of students believe to be able to recognise whether the information is correct or wrong and, in case of doubt, ask parents and friends for clarification. Furthermore, they think they are quite aware of the consequences of their behaviour on health and the environment.

When students were asked if their school pays enough attention to basic lifestyles, they pointed out that the school places enough emphasis on raising awareness and educating pupils on the importance of physical activity and nutrition as lifestyles for staying healthy. Prevention of bullying and cyberbullying is also an issue the school deals with, probably due to the increasing number of cases of bullying with disastrous consequences not only on a physical level but above all on an emotional and psychological level.

However, more than half of pupils think that schools still do too little to prevent health-damaging phenomena such as smoking, alcohol and drugs. Considering that these phenomena are growing more and more, especially among younger students, it is remarkable to note that students themselves realise there are not enough initiatives to inform them about the disastrous consequences of these behaviours on their health.

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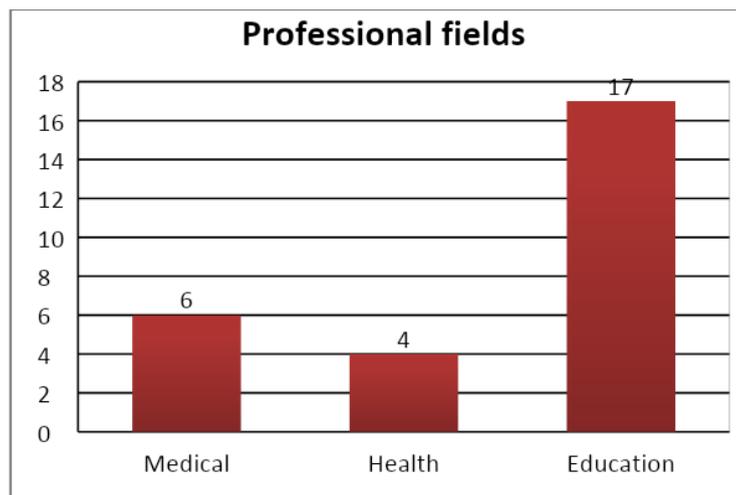
4 INTERVIEWS WITH RELEVANT STAKEHOLDERS

The partner organisations conducted interviews with relevant stakeholders in the education, health and medical field who collaborate with them at different levels. Specifically, experts who have worked or still deal with children, adolescents and young people have been selected in order to investigate the state of the art of children's health literacy and to understand how the pandemic and digitalisation have impacted this.

The survey was conducted through the administration of an online questionnaire (via Google Forms) or through in-person/telephone interviews. The data were collected by the partners and an overview presenting the relevant qualitative and quantitative information is provided below.

4.1 In-depth interviews data

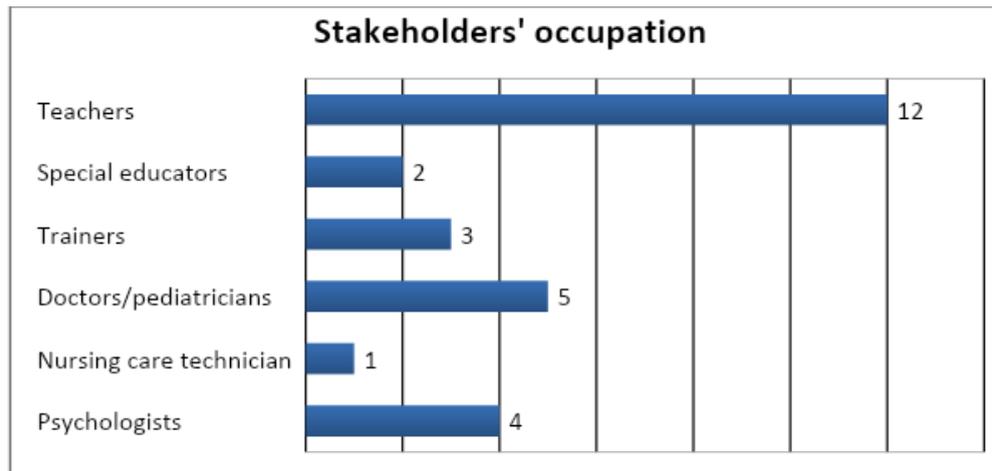
The total number of experts involved in the qualitative research was 27 covering the education, medical and health fields at different levels.



As shown below, the stakeholders interviewed are mainly school teachers (12) in several subjects (such as Health Education, Sciences, Natural history, Sport Sciences, Biology, Language, and Literature), special educators working in the school as supporters of students with special needs and trainers dealing with children and young people.

The medical sector has been represented by doctors, pediatricians, and nursing care technicians who provided their opinion on the children's health literacy from a medical point of view. Also, the opinion from the health sector has been collected through the involvement of psychologists and psychotherapists who mainly work in the school context.





After collecting preliminary information on the professional field and occupation of the respondents, the partners asked specific questions aimed at identifying the experts' opinion on the level of health literacy of children, the challenges they face with health information as well as the impact of the pandemic and digitization on it. The experts' answers are summarised below per each question:

1. What is the **level of familiarity** with health-related information of children and adolescents you work/have worked with?

CZECH REPUBLIC

The experts, from the educational sector, agree that students have a **rather varied level of familiarity with health information**, often related to the understanding of this value in their community or family. Familiarity with health-related information also depends on the **students' lifestyle**: those who play sports are more actively interested in health-related issues as opposed to students who do not play sports and are completely indifferent to anything health-related. In addition, the **age of the student** affects the level of familiarity with health-related issues: younger children are not yet fully aware that our health also affects our mental health, whereas older children are able to recognize psychological distress and ask for help from an expert.

GREECE

The majority of students **do not have a strong background in matters pertaining to health**, and they show some interest in only those subjects that really appeal to them. The Internet is becoming the primary source of information for children and teenagers. This, however, does not guarantee a high level of knowledge because the vast amount of data available makes it difficult for individuals to assess and compare what they read and find reliable sources. What is more, **students have no education on important health issues** affecting our society today, such as diet or sexual health.





Moreover, the extensive use of smartphones has caused a number of issues for children, such as exhaustion, lack of concentration, dizziness, bad eyesight, insomnia, etc. Furthermore, the widespread use of smartphones has resulted in a variety of problems for children, including weariness, lack of attention, dizziness, poor eyesight, insomnia, and so on. This has resulted in a low level of well-being and knowledge, which should be one of the primary goals of modern education.

ITALY

The majority of the experts interviewed stated that the level of health literacy of the adolescents they worked with **is rather poor**. Three other experts stated, however, that the pupils had a good level. Of course, this is subjective data related to the type and context of the students the experts work with.

In any case, the figure emerging from the interviews conducted in Italy is a **rather poor level of health literacy** among adolescents.

LITHUANIA

Experts interviewed said that the level of health literacy among children and adolescents varies depending on their emotional maturity. Most students are not comfortable talking about health. According to the experts, only a few pupils are interested in health literacy in depth. In this context, it can be said that the level of health literacy is low. According to the experts, the relationship between health literacy and education in schools needs to be further explored through long-term research, linking science to practise, to better understand how to promote health literacy in childhood and adolescence.

PORTUGAL

The familiarity level of students with health-related information is quite good or medium. Nowadays, one of the main sources of information for young people is the internet, which can have positive and negative aspects. On the one hand, there is easier and faster access to health-related information, however, there are still some difficulties in digital literacy skills, for example, in assessing and comparing information, identifying reliable sources, and what use they make of that information. In general, young people want to know more about health, but they still do not understand all the information they are given or searched for. Another important aspect is the issue of physical and mental health, the latter is still associated with a lot of stigmas, so it is essential to invest more in demystifying beliefs and stereotypes and in empowering young people in this area.

SPAIN

One of the experts in health services is a doctor and the other is an auxiliary nursing care technician. In both cases, the level of familiarity with health-related information of children and adolescents is high due to their occupations. The doctor considers that young people show interest in getting health-related information but on sexual illness and the technician states that they only show interest in specific topics.





2. *Based on your experience, what is the **attitude of children/adolescents** towards health-related information?*

CZECH REPUBLIC

As for all information, it depends on what form and from what source they come to children and teenagers, how attractive they are. Based on the expert opinion and experience as a school psychologist, quite a few children are looking for information related to mental health.

Some students perceive the effects of their lifestyle on their health. They can name well why they are sleepless - they play for a long time on the PC. It can say that our pupils have a sufficient number of preventive programs, from the issue of smoking and alcohol, through the risks of cyberspace to the safe establishment of sexual contact. However, the family is the basis of health. If the individual is not guided in the right direction by the family, then the educational influence of the school has little chance of influencing anything.

GREECE

In general, children and adolescents do not appear to be particularly interested in acquiring health-related information, nor do they appear to be particularly interested in disease and virus prevention. They are uninterested and look for very specific information on the internet to satisfy their curiosity. Except for those who have a health-related difficulty, they generally do not demonstrate extreme. Their attitudes vary widely and are heavily influenced by their families.

ITALY

The experts interviewed found very different attitudes of students towards health information: about half of them said that students show little interest and low awareness about the importance of health issues, perhaps because they are not well informed or do not receive reliable information. Indeed, some students who usually look for health-related information via social media, prefer to talk to experts when possible. On the other hand, 5 experts out of 10 said that adolescents show a positive attitude of interest/curiosity in health and wellness topics.

LITHUANIA

The attitude of children and adolescents towards health information depends greatly on their age and personal maturity. In fact, younger children are rather shy to talk about health issues, whereas older children have a specific interest in certain topics.

PORTUGAL

Generally, young people's attitude toward health-related information is positively evaluated. They are curious to know about their health and well-being aspects and consequently look for adequate information about it. However, their interest depends on the topics addressed. Other opinions show that most young people think they already know everything and tend to devalue health education. For that reason, it is important to stimulate a critical sense of the information they access.





SPAIN

Generally, teenagers do not show excessive concern about health issues, except for those who have a problem related to it. However, in the last two years of the pandemic, they seem to show more interest in the issue. Another health topic young people show interest in is sexual diseases even though they have difficulties receiving specific information. That is why they tend to turn to social networks and share information with each other with the risks that this entails.

3. What are the **challenges** children/adolescents face when finding health information? Do you believe the pandemic has affected these challenges?

CZECH REPUBLIC

The main challenge children face with health information is not the quantity of information they find but the difficulty in distinguishing whether the information is really relevant and reliable. They usually look for information on the Internet when they are troubled by a problem and are afraid/embarrassed to ask an adult. However, the reliability of the information found depends very much on its source.

The pandemic affected the attitude of children towards health, certainly also the problems of finding information - because currents of opinion were formed that did not exist before (vaccination deniers and believers, etc.). During the pandemic, pupils could get to know the healthcare system, be responsible for the health of their surroundings, and listen to the advice of doctors and other experts.

GREECE

Most of the time, they don't get their information from official sources. Instead, they look for it on the Internet, which has a lot of information. This means that children and teenagers **dedicate insufficient time to locating credible sources**. In addition, they struggle to comprehend the terminology and more sophisticated concepts.

They have been afflicted by the pandemic because they are unable to distinguish between accurate and misleading information due to information overload. Their inability to interpret the terminology of health information or failure to identify official sources is one of the obstacles they confront, as the majority of their information comes from the Internet.

They have been affected in two ways by the pandemic. Apart from causing them stress and anxiety, it has enhanced their awareness of the importance of a solid health system.

Probably the **biggest challenge is comprehending the information they receive**. In addition, they are unable to distinguish between credible Internet sources and non-Internet sources, in order to retrieve accurate information. We must consider that the first thing they do is check the Internet for any doubts and that they frequently visit dubious websites.

ITALY





As far as the challenges faced by students are concerned, the most commonly found out by the experts are related to the **information's reliability** and the **channels through which information is spread**. Specifically, some challenges are:

- Difficulty to find scientifically reliable information useful for everyday life
- Search for health information through the Internet with a low skill to spot the accuracy of the information.
- Difficulty to identify correct information among the much information that is offered.
- Difficulty to select the information channels, which are often many and poorly documented or inaccurate.
- Challenges to look for information from reliable sources both online and in person.
- Lack of specific guidelines or dedicated platforms to bring them closer to proper health education.

Experts say that the problems young people have getting health information can lead to a number of problems, such as:

- the development of unjustified fears of disease
- the underestimation of real health problems
- struggle to internalise the information found, so they often compare themselves with their peers for support

As for the impact of the pandemic on the pupils' health literacy, the experts' opinions are quite variable: on the one hand, some of them believe that the pandemic did not affect the challenges faced by pupils. On the other hand, the pandemic has increased the focus on the health issue, especially among young people who have intensified their search for health information, especially via the Internet and social media.

LITHUANIA

One of the challenges encountered is the inability to think critically due to a large amount of information students receive.

The most common sources of health information are friends, adults, and the Internet, and children are often unable to distinguish which information is correct and which is not.

PORTUGAL

Nowadays, the information available through digital media enters young people's lives very early, so it is very important to understand what kind of content or what kind of health information can be appealing and useful. It is essential that young people **know how to identify reliable sources, credible and useful information**, and, finally, how to use this knowledge. Another issue that may be relevant is language, which should be clear and simple, accessible to young people of different ages and educational levels. It is important to highlight the fundamental role that schools play in this area of health literacy, both through one-off initiatives and with programmes and the inclusion of topics in this area in subjects.

The COVID-19 pandemic has required a great capacity to adapt on the part of all sectors of society. It is an example that has highlighted the importance of health literacy, both in terms of





reliable information and adherence to recommendations. Young people were particularly attentive, because this pandemic situation completely transformed people's lives and had a great impact on these age groups, with changes in routines, interactions, and isolation. In addition, the pandemic had an impact in that it made it impossible for children and young people to travel to health centres and support centres. Access to information, and even to school, was also severely limited and a lot was lost in terms of learning.

SPAIN

Probably the biggest challenge is knowing how to discriminate reliable sources from those that are not on the Internet. Not receiving information from official sources, young people have to look for it on the internet and they do not always find it. In addition, in many cases, this information is not correct keeping in mind that at these ages most of them look for information on social networks and unofficial pages.

The pandemic has affected them because they are overloaded with information and cannot discern what is true and what is false. Moreover, the pandemic has made them more aware of the importance of having a good health system. Probably, the pandemic has affected this challenge since as a result of it boys and girls seek more information on topics related to health.

4. Do you think digitalization can affect children health literacy?

CZECH REPUBLIC

Digitalisation definitely has an impact on children's health literacy, although it depends on how it is used. There are a lot of interesting applications that students can use to their advantage and they will also enjoy them. For example, an application where they monitor their daily routine (movement, rest, food, liquids). Applications that show the time spent on the Internet. Also, a smart watch that measures sleep quality.

GREECE

The process of digitalization can make information and sources more readily available, which can help reduce the amount of time spent researching for them. It is possible that as a result of this, pupils will have a greater motivation to search for information regarding health and acquire the knowledge they seek.

Children are more concerned with their physical image than their health, as they are influenced by unrealistic online images and social expectations. They focus on the present rather than the potential future consequences of their actions. Digitalization can help students increase their knowledge. However, students need to be trained on how to look for information safely.

ITALY





Digitalization can influence children's health literacy. Mainly, the use of digital tools is acknowledged as a positive way to get students closer to health-related information and to stimulate their interest and learning towards health issues.

However, as with most things, there is a downside from which we need to protect ourselves. In fact, according to some experts' opinions, the use of the Internet, social media, and digital tools encourages the spread of misinformation which, in the field of health, is very dangerous. That is why, children and adolescents need guidance from adults around them, such as parents, teachers and doctors that can support them in the right search for health information on the web.

PORTUGAL

We live in a digital age and young people have easy and fast access to a wide range of information in health, such as applications, games, and programs that facilitate adherence and motivation to learn more. It is essential to understand if digitalization is understood and well applied in everyday life despite the great ease of access to information.

SPAIN

Digitization can affect both in positive and negative ways: the positive is that young people have all the information at their fingertips and the negative is that there is so much unverified information, even counter information, so digitization is a double-edged sword. Children and adolescents do not know how to distinguish what is true or not in this information since they lack and/or are unaware of the official health pages such as the WHO or manuals such as the Diagnostic and Statistical Manual of Mental Disorders (DSM).

Moreover, teenagers tend to search for everything on the Internet and, on many occasions, they follow the advice they see on Tik-Tok, and Instagram... and trust people without taking into account their training and whether to check the information.

5. What is the sector responsible for the delivery of children/adolescents' health promotion and education? Please also specify which professionals should be involved.

CZECH REPUBLIC

The foundation should be in the family, the school can work with preventive programs, but the one who most influences children's habits and should set an example are the parents. The family is ultimately responsible for a child's education, so the same applies to health awareness. Pediatricians, education, and the social sphere should be involved. Also the Ministry of Education and Culture.

GREECE





Given that health education should begin in the classroom, I believe the Ministries of Education and Religious Affairs and Health should coordinate their efforts to promote health through the educational system. It is the educational body in charge of educating children on critical issues, and this education should begin at a young age. Thus, there could be a special subject developed relating to health to be added to the curriculum. Other important occupations include health workers. The educational and health sectors should collaborate to develop and spread health education and preventative initiatives programs and workshops that should be implemented on a regular basis.

ITALY

The answer provided by the relevant stakeholders involved in the interviews is basically the same: the sectors responsible for delivery of health promotion and education to young people are the medical and the education sector.

From the medical sector, firstly pediatricians and doctors are asked to provide health education and correct information to children, but also other professionals working in this field such as social and child care workers. On the other hand, the school and teachers play a crucial role in raising children's awareness about health issues as they spend a lot of time with pupils and, specifically, science and physical sciences teachers can use their time and subjects to increase pupils' health literacy.

Most of the respondents believe the family has an important role in educating their children about how to deal with health issues, access health information, and look for it in an appropriate way.

LITHUANIA

The experts involved in the research believe it is primarily the family, class teachers and health professionals at school who are responsible for the health promotion among children. Generally, everyone working with young people should be involved in initiatives addressed to increase their health literacy. The health professionals should provide information on the topic as well as organise seminars and lectures.

PORTUGAL

Based on the experts involved in the research, the following professionals/organisations are responsible to promote health information among children and teenagers:

Schools, health centres and hospitals, universities, schools within the scope of citizenship and psychology services, family doctors, pediatricians, psychiatrists, nurses, psychologists, nutritionists, social workers, dentists, people that practise sports, Ministry of Education and Ministry of Health and training/educational institutions.

SPAIN





The promotion of health education should start from the school since as an educational body it should focus on cross-cutting issues of great importance to children.

Other key professionals are health workers, pediatricians, and family doctors who should provide clearer information for children and adolescents, taking their time with them, and making sure they have understood the information.

The educational and health sectors should coordinate to create and disseminate programs, workshops, etc. in health education and prevention.

6. Are there initiatives for health education among pupils?

CZECH REPUBLIC

The initiatives reported by experts involved in the research are the following:

- Organisation of first aid days at school when pupils try first aid. Project days focused on prevention, and there is a psychologist at school as part of the counselling office, who takes care of the mental health of not only the pupils.
- Organisation a project day once a year, where everyone can try out first aid and behaviour in crisis situations, and at the first level, traffic education projects. We deal with pupils' mental health in the framework of the counselling workplace, the school's preventive program, and project events related to school relationships. Pupils are provided with school meals.
- Every June there is a Defense Day dedicated to first aid, health protection, and evacuation of people at the school. Pupils go through stations with different topics. Some stations are provided by teachers, some students from the secondary medical school, police officers, and paramedics with an ambulance stationed in front of the school.

ITALY

- INITIATIVE N.1:

Responsible organisation: SCHOOL

Activity description (objectives, results, and activities carried out): Health awareness projects

Age of pupils/grades: adolescents

Time allocated: school-year

Involved experts leading the initiative: Teachers, psychologist, presence of a commission within Teachers who annually plan a training course on 'health'.

- INITIATIVE N.2:

Responsible organisation: ANLAIDS LAZIO (National Association for the Fight against Aids)





Activity description (objectives, results, and activities carried out): Well-being promotion and sex education

Age of pupils/grades: Adolescents aged 11-18

Time allocated: school-year

Involved experts leading the initiative: Educators, psychologists, doctors.

Comments: The interviewed expert was part of the technical committee of the Edufor1st project for the prevention of sexually transmitted diseases and the promotion of well-being: practices implemented in prevention campaigns in schools were examined and reflections on the topic were produced.

- INITIATIVE N.3:

Responsible organisation: secondary schools

Activity description (objectives, results, and activities carried out): Prevention campaigns aimed at fighting smoke and alcohol use

Age of pupils/grades: Adolescents aged 14-19

Time allocated: school-year

Involved experts leading the initiative: Experts - doctors.

LITHUANIA

In the last school year, the Children's Healthy Lifestyle Academy project was organised by the Public Benefit Society for Health.

PORTUGAL

Initiative 1: Health Education and Health Promotion Support Program (HEHPSP)², Directorate General of Education of the Ministry of Education

Responsible organisation: Directorate General of Education (DGE), Portugal

Activity Description: This program³ aims to promote health literacy, attitudes, and values that support healthy behaviours, value behaviours that lead to healthy lifestyles, universalize access to health education in schools, qualify the provision of health education in schools, consolidate support for projects in schools. Works in different areas: Mental health and violence prevention; Food education and physical activity; Prevention of addictive behaviours and addictions; Affects and sexuality.

Age of pupils/grades: Preschool to High School

Time allocated: It exists since 2014

Involved experts leading the initiative: Family doctor, nurses, psychologists, and teachers.

² DIREÇÃO-GERAL DA EDUCAÇÃO (2014). *Programa de Apoio à Promoção e Educação para a Saúde* [Online]. Available from: https://www.dge.mec.pt/sites/default/files/Esaude/papes_doc.pdf [Accessed 11th October 2022]

³ LUSQUINHOS, L. & CARVALHO, G: (2017). *Health promotion and education in Portuguese schools: Links between the health and the education sectors* [Online]. Available from: https://repositorium.sdum.uminho.pt/bitstream/1822/48557/1/ConexaoCi_Health%2BEducationSectors.pdf [Accessed 11th October 2022]





Initiative 2: Schools for Health in Europe (SHE) at Group of Schools in Condeixa-a-Nova⁴

The vision of SHE is that the health-promoting school approach becomes an acknowledged and accepted concept in all EU Member States, with increased implementation activities on regional and local levels within schools. Fernando Namora Secondary School, part of the Group of Schools in Condeixa-a-Nova, promotes different actions related to health and the promotion of healthy lifestyles, with the collaboration of the Leisure Activity Centre, from Cáritas Coimbra, the Condeixa Health Centre (integrated into the National Health Services) and The Portuguese Cancer League, among others. The activities run out throughout the school year and are aimed at all school students aged between 13 and 20.

SPAIN

Generally, the local administration carries out activities related to health promotion: healthy eating, prevention of smoking and drug use, and sexually transmitted diseases. One of these activities is the following:

Responsible organisation: 1. Healthy nutrition 2. Contact with words

Activity description: 1. This activity is intended for students to know the nutrients in the food they eat and thus prevent eating disorders. The objective of this activity is to promote the emotional well-being of the students.

Age of pupils/grades: 1º/2º/3º de la ESO (11-14 years) 4º de la ESO (15/16 years)

Time allocated: 2/3 sessions per year - 4 sessions per year

Involved experts leading the initiative: Nutritionists, Technicians of ADAFAD.

⁴ In Portugal, the school network is organised in school clusters which are made up of schools that offer all education levels from pre-school education to secondary education.





4.2 Summary/conclusions

In this section are reported the summary of the main findings from the interviews conducted at the national level:

CZECH REPUBLIC

The level of knowledge of students in the field of health is very diverse, it depends on the age and attitudes of the pupils. It varies in different stages of their development and also according to interest. For instance, those who regularly play sports are actively interested in everything related to their health. Moreover, their attitudes towards health as a value are also different, often related to the understanding of this value in their community or family.

Talking about the challenges faced by pupils, we can say that pupils usually look for information on the Internet when they are troubled by a problem and are afraid/embarassed to ask an adult. Subsequently, it very much depends on what information they get from the Internet and its source. Finding information is not an issue, but sometimes one needs to distinguish whether the information is really relevant.

The pandemic affected the attitude of children towards health, certainly also the problems of finding information - because currents of opinion were formed that did not exist before.

Educators, students of secondary medical school, and sometimes health professionals ensure health promotion and education. However, interviewees agree that the foundation should be in the family. The school can work with preventive programs, but the one who most influences children's habits and should set an example are the parents. The family is ultimately responsible for a child's education, so the same should apply to health awareness, according to the people interviewed. Additionally, pediatricians, education, and the social sphere should be involved.

The existing health-related initiatives in school curricula in the Czech Republic are related to first aid days when pupils try first aid and behaviour in crisis situations. Project days focused on prevention are also organised. These actions are initiated by the school and its teachers.

The school counts health education, primary education, science, natural history, and physical education subjects - all these subjects also include the area of human health. The school deals with pupils' mental health in the framework of the counselling workplace, the school's preventive program, and project events related to school relationships.

GREECE

From the responses, it can be observed that the majority of students are unfamiliar with health issues and are uninterested in learning more about their own or others' health. The professionals surveyed also said that adolescents obtain the majority of their knowledge from the Internet, where there is an abundance of material, making it difficult for them to determine their credibility and that of the sources they visit.

Everyone agrees that, when used properly, digitalization may be a useful tool for enhancing students' health literacy. Now, the majority of people rely on any information they find online without consulting official websites such as WHO or DSM, or even being influenced by





unrealistic photos, which can cause health problems due to rigid diets in order to achieve a flawless figure.

Last but not least, it should be mentioned that the experts were unaware of any health education initiatives for students, indicating that substantial efforts should be done to increase their knowledge and skills. Everyone was of the opinion that both of the educational sector and the Ministry of Health should develop a health-related program to be added to the schools' curriculum.

ITALY

From the qualitative research conducted with professionals working in the medical, education, and training fields, the level of health literacy among pupils is quite poor. Mainly, students show little interest and awareness of the importance of health issues. The reasons may be related to a lack of access to age-appropriate information, or because they are not stimulated by adults to take an interest in health issues. Indeed, some students who usually look for health-related information via social media, prefer to talk to experts whenever possible in order to verify the reliability of the information.

As far as the challenges faced by students are concerned, the most common is related to the reliability of information (such as difficulty to identify correct information, looking for reliable sources online and offline, lack of skills to spot the information accuracy) and the channels through which information is spread (there is no specific guidelines or reliable platforms to bring children closer to proper health education; difficulty to select the information channels).

As a consequence, the challenges young people face with regard to health information can create several problems, such as the development of unjustified fears of disease, underestimation of real health problems, and struggle to internalise the information found, so they often compare themselves with their peers for support.

According to some interviewees, the Covid-19 pandemic has increased the focus on health issues also in children and adolescents who have intensified their search for health information, especially via the Internet and social media. Also, digitalization has an impact on children's health literacy: on the one hand, it gets students closer to health-related information, stimulating their interest and learning about health issues. On the other hand, the use of the Internet, social media, and digital tools foster the spread of misinformation by creating real dangers.

Based on these considerations, children and adolescents need guidance from adults, both in the medical sector (doctors, pediatricians, health professionals) and in the educational sector (teachers and psychologists), in order to receive support in the proper search for health information and the application of what they have discovered in their daily lives.

The few initiatives reported by respondents mainly concern awareness-raising campaigns organised in schools on the prevention of diseases, alcohol, drug use, and smoking. One interesting initiative was organised by an Aids association on the prevention of sexually transmitted diseases





LITHUANIA

The interviews show that respondents are most interested in healthy lifestyles themselves, and in many cases, this is also dependent on the current situation as far as the situation requires.

According to the respondents, the attitudes of children - adolescents towards health information are different. One of the respondents also states that children are shy when it comes to talking about health issues. This shows that children lack information on health literacy and that this issue needs to be addressed in schools as soon as possible. Schools are attended by almost all children of school age and therefore provide an ideal environment for improving health literacy.

According to the respondents, the challenges students face when searching for health information include the overload of information, and the inability to critically evaluate and process information.

When asked about the sector responsible for promoting and promoting children's/adolescents' health, respondents felt that this sector included: the family, school class teachers, subject teachers, health professionals, and all others who work with children and young people.

In the question of whether there are health promotion initiatives for pupils, one respondent answered that last year the school had a project called 'Children's Healthy Lifestyle Academy', organised by the NGO 'Healthy'. This project covered the following topics: the basics of healthy eating, the choice of foods, the principles of healthy cooking, the analysis of eating disorders, the prevention of chronic diseases and obesity through the practical application of the principles of a healthy lifestyle, and the practical application of label analysis.

According to the scientific literature, one of the main reasons for the lack of healthy lifestyle initiatives in schools is that there is a persistent belief that health literacy and health promotion take time away from teaching basic subjects such as mathematics or reading.

Health literacy must be seen as an important component of 21st-century school education WHO Europe region and beyond. Improving health literacy will contribute to the overall health of schools, including the physical, mental, and digital health of school-age children and education professionals. Health literacy will have an impact on learning outcomes and achievement, academic competencies, and critical students will become strong individuals and ethically and socially responsible citizens. Health literacy education in schools will also contribute to reducing health inequalities in society.

PORTUGAL

The in-depth interviews in Portugal involved relevant stakeholders, working in the fields of Education, Medicine, and Psychology, with experience and a very important knowledge about health literacy among young people. There is unanimous agreement that nowadays one of the main sources of information for young people is the internet, which can have positive aspects but also potentially negative aspects. On the one hand, there is easier and faster access to information, however, there are still some difficulties in digital literacy skills, for example, in assessing and comparing information, identifying reliable sources and what use they make of





that information. In general, young people want to know more about health, they show interest and have a positive attitude, but they still don't understand all the information that they research or are given by professionals. Communication is essential and should be based on a clear and simple language, accessible to young people of different ages and educational levels. Another relevant aspect is the physical and mental health promotion, the latter still associated with a lot of stigmas. It is essential to empower young people in this area.

In the opinion of the stakeholders involved, one of the main aspects to be considered regarding health literacy among young people is that they should be empowered to know how to identify reliable sources, credible and useful information and, finally, how to use this knowledge. The COVID-19 pandemic has required a great capacity of adaptation from all sectors of society, and it was an example that has highlighted the importance of health literacy. Young people were particularly attentive, because the pandemic transformed people's lives and had a great impact on these age groups, with changes in routines, interactions, and isolation.

It is important to highlight the fundamental role that schools play in this area of health literacy, through initiatives, programmes, and the inclusion of topics in this area in subjects. Schools, health centres and hospitals, universities (family doctors, paediatricians, psychiatrists, nurses, psychologists, nutritionists, social workers, dentists, etc.). should be involved in health promotion and education.

SPAIN

The level of familiarity with health-related information of children and adolescents has been evaluated highly due to the occupations of interviewees. The doctor considers that young people show interest in getting health-related information but on sexual illness and the technician states that they only show interest in specific topics. The teacher stated that generally, they do not show excessive concern about health issues, except for those who have a problem related to it. Although it is true that in this last year and, due to the pandemic, they seem to show more interest in the issue.

As for the challenges adolescents face when finding health information, the main one is the lack of information from official sources. They look for information on the Internet and this information sometimes is wrong, since they look up information on social media or videos made by influencers. According to the experts' opinion, the pandemic has affected these challenges; the doctor thinks that they are confused about what is true or false due to so much information generated during the Pandemic. The technician is now more aware of the importance of having a good National Health Service System.

Digitalization can affect children's health literacy both positively and negatively. On the one hand, they have the information at their fingertips but the problem is that children don't understand the difference between the truth and a lie. Instead of looking for information on official websites, like WHO or DSM, they surf the internet without any precise criteria. Indeed, teenagers tend to search for everything on the Internet and, on many occasions, they follow the advice they see on TikTok, and Instagram and trust people without taking into account their training and whether to check the information.





Regarding the sector responsible for the delivery of adolescents' health promotion and education, both consider that it must come from schools in coordination with health services professionals. The school's children should attend to the subject on this topic and doctors, nurses, etc should give information as they can be examples of different problems and difficulties derived from wrong information about the topic. It should be a necessary information day to prevent bad habits and behaviour.

Regarding initiatives for health education among people, there aren't any kind of initiatives, at least they know. The doctor is 25 and she was never informed at school about the topic. She considers that education in schools is more focused on Math, Languages, and so on instead of worrying about crucial issues for the physical and psychological development of the students.

Regarding other relevant information regarding the topic the doctor says that it should pay attention to sexual information, some schools give chats but they are basic, and they should be emphasised different sexually transmitted diseases and how to prevent them, as well as mental diseases that are affecting a lot of young people, not only depression, buy anxiety and eating disorders and addiction. In some schools, they are still seen as taboo subjects.

Among the existing health initiatives addressed to students there are activities related to health promotion carried out by local administrations including healthy eating, prevention of smoking and drug use, and sexually transmitted diseases...





5 OVERALL CONCLUSIONS

The context analysis conducted in the six partner countries through the administration of a survey among 276 students aged between 11 and 15 years, and in-depth interviews with 27 stakeholders in the educational, health and medical sectors shows a rather discordant picture of the level of health literacy among children and adolescents.

With regard to health literacy as perceived by the students themselves, the review of their answers shows a good level of familiarity with health information: basically, they are able to follow the guidance and instructions given by medical personnel, they feel comfortable with health information and are able to improve and promote their own health and the health of those around them.

Pupils feel they have a good ability to find health-related information and to be able to compare it with others from different sources, including the Internet and social media. More than half of surveyed pupils believe to be able to recognize whether the information is correct or not and, in case of doubt, they usually ask adult people, such as parents and friends. Furthermore, they think they are quite aware of the consequences of their behaviour on health and the environment.

As far as the school's focus on health issues is concerned, students stated that the school places enough emphasis on raising awareness and educating pupils on the importance of physical activity and nutrition as lifestyles for staying healthy. Prevention of bullying and cyberbullying is also an issue the school deals with, probably due to the increasing number of cases of bullying with disastrous consequences not only on a physical level but above all on an emotional and psychological level.

However, more than half of pupils think that schools still do too little to prevent health-damaging phenomena such as smoking, alcohol, and drugs. Considering that these phenomena are growing more and more, especially among younger students, it is remarkable to note that students themselves realise there are not enough initiatives to inform them about the disastrous consequences of these behaviours on their health.

On the other hand, according to the opinion conveyed by adults working with children in both the medical and educational fields, it seems that the level of familiarity with health information among students is rather low. The majority of pupils are unfamiliar with health issues and show little interest and awareness of the importance of learning more about their own and others' health. However, the level of familiarity of pupils is very diverse depending on their age and attitudes, often related to the understanding of health values in their community and family.

The main challenges children face with health information highlighted by the experts are related to a large amount of information available:

- difficulty in understanding what information is really relevant to their health
- inability to distinguish whether the information is correct or not
- difficulty in critically assessing the reliability of information
- inability to select reliable channels where they can find health information.





These challenges are further intensified if we take into account that, in the lack of sufficient official sources, pupils search for health information especially on the web via the Internet and social media where there is very little control over the accuracy of information.

Moreover, when pupils are troubled by a problem and are afraid or embarrassed to ask an adult, they prefer to look for information on the Internet.

The growing phenomenon of digitalization has an impact on children's health literacy: on the one hand, it gets students closer to health-related information, stimulating their interest and learning towards health issues. On the other hand, the massive use of the Internet, social media, and digital tools foster the spread of misinformation by creating real dangers.

The latter proved to be true during the Covid-19 pandemic which affected the attitude of children towards health: the pandemic has increased the focus on health issues also in children and adolescents who intensified their search for health information, especially via the Internet and social media. Often, children are confused about what is true or false due to so much information generated during the pandemic.

In this regard, the responsible for the delivery of health promotion and education seems to be both the medical and educational sector: based on the experts' opinion, the representatives from these sectors should closely work in order to develop health-related programmes to be added to the schools' curricula and organise regular information days to prevent unhealthy behaviour and promote healthy lifestyles among pupils.

In this way, children and adolescents might receive support in the proper search for health information and the application of what they have discovered in their daily lives.

However, most of the interviewed stakeholders agree that the foundation should be in the family as it is the one that most influences children's habits in the health field.

As for the existing initiatives addressed to students aimed at enhancing their health literacy, it is worth noting that there are few activities in the partner countries, indicating that substantial efforts should be made to increase the pupils' knowledge and skills. The few initiatives reported by respondents mainly concern awareness-raising campaigns organised in the schools on preventing diseases, alcohol, drug use and smoking, sexually transmitted diseases, and healthy eating.

The lack of healthy lifestyle initiatives in schools is due to the persistent belief that health literacy and health promotion take time away from teaching basic subjects such as mathematics or reading.

Health literacy must be seen as an important component of 21st-century school education. There are several reasons to include health promotion in the school curricula: it will contribute to the overall health of schools, including the physical, mental, and digital health of school-age children and education professionals. Health literacy can have an impact on the learning outcomes and critical skills of students who can become strong individuals and ethically and





socially responsible citizens. And, health literacy education in schools will also contribute to reducing health inequalities in society.

