



## The Importance of Health Education in Formal Education Program: A Research Based on Content Analysis

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### Abstract

With effective health education, it is expected that risky behaviors will diminish and positive behaviors towards health promotion and protection will improve. Reaching a wide audience by providing education in the school environment at an early stage is of critical importance in terms of affecting the future of the individual. When the causes of death engendered by risky behavioral factors underlying are examined, it is seen that the use of tobacco products, nutritional problems, physical inactivity, alcohol consumption, infections and motor vehicle accidents take place near the top. In the compulsory basic education program in Türkiye, the aim is to develop students' health-related knowledge levels and health behaviors with different courses and special activities. In this study, it was aimed to determine the health-related outcomes in 51 courses in the formal education program (pre-school and the first 9 years), to classify the outcomes according to themes and to compare them with the framework obtained from the literature. In the study, the information about the courses and outcomes were taken from the website of the Ministry of National Education and examined by content analysis method. As a result of the study, it was determined that there were 129 different health-related outcomes in eight different courses. These outcomes were gathered under the themes of nutrition, combatting against addiction, environmental health, physical activity, knowledge of diseases, personal care, mental health, health services, basic first aid, technology, health of body organs, safety and adolescent health. It was determined that the themes and sub-themes determined in the study were mainly compatible with the health education program recommendations in the literature. The topics that are included in the program proposals and also in the literature but which are not encountered in Türkiye can be summarized as global health, sexual health, disability life and consumer health.

### Keywords

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## Introduction

Protecting and improving the health of individuals depends on the developments in health sciences as well as the change in people's lifestyles. One of the most important methods to achieve this change is health education (Gökkoca, 2001; Marks, 2009). Health education, is as defined by the World Health Organization (WHO); "Consciously constructed opportunities for learning designed to improve health literacy, including improving knowledge, and developing life skills, which are conducive to individual and community health" (WHO, 2012, p. 59). In the Dictionary of Health Education (Bedworth & Bedworth, 2010), health education is defined in 12 different ways. According to these definitions, health education either planned or unplanned is a process that facilitates the voluntary implementation of health-related decisions in the individual and the society. Therefore, as a result of the education, it is aimed to gain behaviors to improve the health status of the individual and the society. Health education as a dimension of health promotion, effects health literacy therefore improved health, with healthy public policies, by focusing on improving the capacities of individuals through education, motivation, skill development and raising awareness methods (WHO, 2012). With that being said, it is also stated that health education has a very important place in the context of sustainability of health systems (Mortimer, 2010).

Swaying to voluntary behaviors related to health includes a process that requires the cooperation of political and administrative decision-makers, service and education providers and the citizens. In this process, information transfer is provided through mass media, workplaces, medical institutions, non-governmental organizations, religious institutions, foundations, migrant camps and schools (Glanz, Rimer, & Viswanath, 2008; Green & Iverson, 1982). It is an accepted fact throughout history that schools offer very important opportunities for health incentives and promotion (Tappe, Allensworth, & Grizzell, 2010). Schools have a central role in promoting positive health behaviors among children and adolescents and preventing long-term health problems and risks (Akel, Fahs, Salameh, & Godeau, 2019). Health education at school is defined as "the development and implementation of planned curricula and activities with the aim of positively influencing students' knowledge, attitudes, habits and practices related to their health" (Modeste & Tamayose, 2004, p. 113). Medical advances can play an important role in improving health outcomes, while, school-level education has a very important place in reducing the incidence of many diseases and other health problems (Taylor, Quinn, Littlelyke, & Coll, 2012). However, it is emphasized that since the main task of schools is to focus on educational outcomes instead of protecting health, and the fact that the school staff and teachers are not aware of their role in health education, in most countries health education at school has a low priority (WHO-UNESCO, 2018). It should not be forgotten that health education at school is a basic education of great importance for reasons such as encouraging healthy behaviors beginning from childhood, making evidence-based decisions about the health of the next generation, strengthening health competencies, and disseminating information to family, peers and wider communities (Carvalho, 2012; WHO-UNESCO, 2018; Willgoose, 2010). The education given to ensure youngsters to recognize themselves physically and mentally, to protect their health, to make conscious health decisions, to access and evaluate the necessary health information will affect themselves, their immediate environments and also future families throughout their lives (Auld et al., 2020; Talim ve Terbiye Kurulu Başkanlığı [TTKB], 1996). To put it simply, it is stated that health-related habits, behaviors and attitudes acquired at an early age have many positive effects on lifelong physical, psychological and social aspects (Geçkil, Çalışkan, & Zincir, 2004; Ishak & Omar, 2012; Şahinöz, Şahinöz, & Kıvanç, 2017). In addition, positive results emerge in many issues such as; decrease in tobacco and drug use, nutrition-related diseases, injury and sexually transmitted diseases, stress and insomnia problems, increase in effective and efficient use of health services, and not wasting resources (Coşgun & Kara, 2015; Kann, Telljohann, & Wooley, 2007; Marks, 2009; Pelen & Günay, 2013; WHO, 1997).

It is stated that the idea of incorporating health education into formal education, which is also defined as planned learning experiences that provide the opportunity to acquire knowledge, attitudes, and skills by using evidence-based practices to adopt and maintain healthy behaviors (Brown et al.,

2012), came to the fore with the Renaissance (Auld et al., 2020). The "Health Promoting Schools Project - HPS" initiated by WHO in 1995 and the "Transfer of Resources to Effective School Health Project" initiated by the World Education Forum in 2000 with the participation of WHO, UNESCO, UNICEF and the World Bank have contributed to the increase in the awareness of the concept of skill-based health education as well as school policies that take health into account, safe learning environment (physical-social), school-based nutrition services. In addition, 40 European countries, Australia, the Asia Pacific Region and more than 30 African countries implemented HPS (WHO-UNESCO, 2018). Türkiye joined the European Network of Health Promoting Schools (ENHPS) with 106 primary schools in 81 provinces in 1995 (Burgher, Rasmussen, & Rivett, 1999; Sağlık Bakanlığı, 2008). ENHPS basically aims to promote health, integrate it into all aspects of the educational program, and incorporate healthy programs and practices into the daily routine of schools (Burgher et al., 1999). In this direction, in order to achieve the ideal of raising healthy individuals stated in their vision and mission statements, the Ministry of National Education (MoNE), includes both health-related outcomes in the curriculums and also plans activities during health-related days and weeks (for example; Cancer Week, Disability Week, World Autism Awareness Day, World Diabetes Day) with cross-sectoral collaborations (Millî Eğitim Bakanlığı, 2018).

Providing basic health-related education in a systematic manner within the program in the early stages such as school age will increase the expected outcomes from health education. In this context, it is a matter of curiosity which health-related outcomes are included in the programs in the Turkish Formal Education System. In the national literature, there is no study that examines in detail the health education outcomes of the curriculums in the Turkish Education System. In this study, it is aimed to determine the courses covering health-related outcomes in the program, to group health-related outcomes according to their themes and to compare them with the framework obtained from the literature. The results obtained from the study are aimed to contribute to evidence-based policies in determining content and scope for school health education and to contribute to the educational aspect of the goal of health-promoting schools in Türkiye. By means of this, information about the program components and outcomes will be given to all it may concern. However, the determination of educational outcomes and their impact is beyond the scope of this study.

## Methods

Planned with a qualitative design, in this study, content analysis was performed on the health-related outcomes of the curriculum. Content analysis; is an inductive scientific research method that consists of the process of searching the data in each publication carrying a message value, classifying them into categories (themes), summarizing them, and analyzing and interpreting the findings in line with the purpose. The analysis can be conducted in the forms of frequencies, categories, evaluative and relationship analysis (Karagöz, 2017). In the study, as stated in the definition of the analysis, the outcomes related to health education in the curriculums were searched, and categories were created by establishing logical relationships between health-related outcomes and data. Each outcome was examined according to the qualitative data analysis of Leech and Onwuegbuzie (2007); in terms of its suitability with the previously determined sub-themes through constant comparative analysis, and if not suitable, a relevant sub-theme was created. Then, the themes were determined and analyzed by inductive reasoning and the existing themes were interpreted in line with the literature.

### *Data Collection*

The Turkish National Education System consists of two main parts: formal education and non-formal education. Formal education is the education provided regularly to individuals in a certain age group in schools or educational institutions that have the characteristics of a school, with programs prepared based on the objectives of national education. Formal education consists of pre-school education, primary education, secondary education and higher education institutions. Of these, pre-school education institutions include institutions such as nursery schools and kindergartens, while primary education institutions consist of institutions that provide 8 years of compulsory education for all citizens between the ages of 6-14. Secondary education, on the other hand, includes all general,

vocational and technical education institutions that provide at least four years of education. In general secondary education institutions there are general high schools, Anatolian high schools, and science high schools. Vocational and technical secondary education institutions, other than general secondary education institutions, are educational institutions that train intermediate manpower for business and professional fields and, on the other hand, prepare students for higher education institutions (MoNE, 2021a).

In this study, secondary education institutions that provide education for a profession and due to branching starting from the 10th grade the programs of 10th, 11th and 12th grades of general secondary education institutions were not included in the research. It is stated that the total number of students receiving formal education in pre-schools, primary and secondary education institutions in Türkiye is 18,085,943 (MoNE, 2021a). The large number of students is the foremost indicator contributing to the importance of planning the future, education and the contents. Within the scope of the study, by examining the curriculum of the courses given in pre-schools, primary and secondary schools in the formal education system in Türkiye in the 2020-2021 academic year health-related outcomes were searched. The curriculums were reached from the Curriculum Monitoring and Evaluation System on the website of the Republic of Türkiye Ministry of National Education, Board of Education and Discipline. The curriculums examined have been in effect since 2017-2018 (MoNE, 2021b). Health-related outcomes were scanned by examining the curriculum of a total of 51 courses for each grade in the specified schools. As a result of the scanning of the curriculum of institutions affiliated with the Ministry of National Education, health-related outcomes were grouped in line with the framework below.

#### ***Determining the Framework for the Program Contents***

In order to examine formal education programs, a framework has been created by taking some standart tools as a reference from the literature related with health education programs. The first one is the Health Education Curriculum Analysis Tool (Health Education Curriculum Analysis Tool [HECAT], 2012) developed by the American Center for Disease Control and Prevention (CDC) as part of National Health Education Standards (NHES). Whereas, the recommended topics for health education from pre-school to 12th grade are explained in detail. The assessment tool includes topics such as mental and emotional health, healthy nutrition, physical activity, safety, personal health and well-being, violence prevention, tobacco, alcohol and other drugs, and sexual health. Another reference tool for the health education program in the school is the study of Willgoose (2010). In the mentioned study, in line with the recommendations of the American Academy of Pediatrics, the American Medical Association and the American Public Health Association, the contents that should be included for health education from 1st grade to 12th grade are stated as; personal hygiene and appearance, physical activity, sleep and rest, nutrition and growth, dental health, body structure and functioning, disease prevention and control, safety and first aid, mental health, sexuality and family life education, environmental health, consumer health, alcohol and drugs, tobacco and tobacco products, world health, health careers. In the third study taken as a reference, the elements that should be included in a comprehensive health education program are emphasized as; personal health, family health, community health, consumer health, environmental health, sexuality education, mental and emotional health, substance abuse, injury prevention, disease prevention and control, and nutrition (Kann, Telljohann & Wooley, 2007, 2007). The framework developed based on these three reference studies was used in the review of the programs.

#### ***Analysis and Reliability of Data***

In the curricula prepared by the Ministry of National Education, descriptive information about each course, expected outcomes and learning areas in detailed items and distribution of learning outcomes according to grade levels are stated. Within the scope of content analysis, the outcomes in all programs were read repeatedly. In the process of repetitive reading, health-related outcomes were coded. Sub-themes and themes were determined in this process. In the creation of sub-themes and themes, the above-mentioned health education contents were taken as reference. However, the process of creating and matching themes were not in deductive form, they were in an inductive form. Matching of themes, sub-themes and outcomes are presented in detail in Table 3 and below. By presenting these tables in detail and comprehensively, it is aimed to provide a detailed perspective on outcomes and matchings.

Connelly (2016) states that in order to ensure the reliability and validity of the data in qualitative studies, the study must meet the conditions of either credibility, reliability, verifiability, transferability and authenticity components that are suitable for the study. In this study, content analysis was performed on the outcomes in official documents. Researchers have Msc and PhD degrees in health management. In addition, they have conducted many quantitative and qualitative studies on issues such as health policy and education. In addition, independent expert opinions were asked for the relevancy of the outcomes and the matches. After the researchers matched the outcomes in the objective program documents with the themes and presented them in detailed tables it is seen that many of Connelly's (2016) suggestions were met.

### Findings

The findings of the study are presented in 2 sections. In the first part, there are lessons with outcomes, and in the second part, there are themes and sub-themes created based on the framework.

**Table 1.** List of Courses with Health-Related Outcomes

Course	Grade	Number of Outcomes	
		n	%
A-Physical Education and Sports	5-6-7-8-9	15	12
B-Biology	9	3	2
C-Science	3-4-5-6-7-8	26	20
D-Life Sciences	1-2-3	30	23
E-Pre-school	0	7	5
F-Chemistry	9	4	3
G-Health Information and Traffic Culture	9	33	26
H-Class Counselling	0-1-2-3-4-5-6-7-8-9	11	9

The curricula of 51 courses on the website of the Ministry of National Education Curriculum Monitoring and Evaluation System were searched with a focus on health education. In this context, in line with the data in Table 1, it was determined that there were 129 different health-related outcome targets in 8 different courses in the formal education programs included in the study. When the courses were examined in terms of the number of outcomes, it was found that the highest number of outcomes was in the Health Information and Traffic Culture Course given in the 9th grade (33), and the Life Sciences Course given in the 1st, 2nd and 3rd grades ranked number two with 30 outcomes. The number of health-related courses, grade levels and number of outcomes included in the curriculum are given in Table 1.

**Table 2.** Health-Related Themes, Courses and Number of Outcomes in Curriculums

Theme	Sub-Theme	Course*	Number of Outcomes
<b>Nutrition</b>	Balanced and Proper Nutrition	A-B-C-D-F-G	23
	Food Safety and Hygiene	C-D-H	
	Harmful Nutritions	A-C-D-E-G	
<b>Combatting Addiction</b>	Combatting Harmful Habits and Addiction	C-G	3
<b>Environmental Health</b>	The Impact of the Environment on Health	C-F-G	17
	Environmental Health	C-D-F-G	
<b>Physical Activity</b>	The Effect of Physical Activities on Health	A-D-G-H	7
	Precautions Against Injury	A	
<b>The Knowledge of Diseases</b>	Recognition and Prevention of Infectious Diseases	B-D-F	6
	Recognition and Prevention of Non-Communicable Diseases	C-D-E	
<b>Personal Care</b>	Oral and Dental Health	G	6
	Body Cleansing	A-D-E-G	
<b>Mental Health</b>	Mental Health and Stress	A-G-H	4
	Adolescent Health	C-G-H	8
<b>Health Services</b>	Rational Medication Use	C-D-G	13
	Patient Rights	G	
	Effective Use of the Service	D-G	
	Blood and Organ Donation	C	
	Introduction of Healthcare Professionals and their Duties	D-F	
<b>Basic First Aid</b>	Development of First Aid Knowledge and Skills	A-C-G	7
<b>Technology</b>	Negative Effects of Technological Devices on Health	D-G	2
<b>Health of Body Organs</b>	Recognition of Organs and Systems	B-C	8
	Protection of the Health of Organs and Systems	A-C-D	
<b>Safety</b>	Protection from Injuries and Accidents	A-C-D-E-G	25
	Safety	D-E-G-H	

\* Courses are represented by the letters in Table 1.

Outcomes matched with the sub-themes and themes are shown in Table 2. After examining the curriculums and outcomes, 12 themes and 25 sub-themes were developed, consisting of nutrition, combating addiction, environmental health, physical activity, knowledge of diseases, personal care, mental health, health services, basic first aid, technology, health of body organs and safety. When the themes were examined in terms of course diversity, it was determined that the themes with the most outcome objective were safety (25) and nutrition (23). However, it was determined that the course with the most sub-theme and outcome was the Health Information and Traffic Culture Course (33). In Table 2, it is seen that every student who graduates from formal education institutions in Türkiye is expected to achieve various outcomes in many subjects from protecting and improving the health of the individual and society to using health services effectively and efficiently. Among these outcomes, it is seen that the most frequently repeated outcomes are under the sub-themes of safety, balanced and proper nutrition, protection from injuries and accidents, combating addiction, the effect of physical activities on health, the effect of environmental factors on health, recognition and prevention of infectious diseases, body cleansing, and the negative effects of technological devices on health. The themes, sub-themes, courses with outcomes and the number of outcomes in the curriculums examined within the scope of the study are presented in Table 2.

Detailed outcomes related to the themes and sub-themes shown in Table 2 are presented in the tables below.

**Table 3.** Courses and Grades of the Outcomes Related with the Theme of Nutrition

<b>Sub-Theme</b>	<b>Course</b>	<b>Outcomes and Objectives</b>
<b>Balanced and Proper Nutrition</b>	A	A balanced diet and the issue of obesity is addressed in physical activities (5). The relationship between physical activity and energy source nutrients are reviewed (6). The nutrition program suitable for the physical activity and sports is prepared under the guidance of the teacher. The "pyramid of nutrition" (yellow card group) FEK can be used (7). Explains the relationship between healthy diet and physical activity (9).
	B	Insulin resistance, diabetes and obesity are mentioned in the context of healthy diet (9).
	C	Associates human health with a balanced diet. The relationship between obesity and eating habits is emphasized. Attention is drawn to the prevention of food waste (4).
	D	Eats balanced and according to mealtimes during the day. The basic plant and animal foods that must be consumed for a balanced diet are emphasized. It is emphasized not to distinguish between foods in a balanced diet. (1). Prepares a meal list suitable for a balanced diet (2). Recognizes the effects of seasonal fruit and vegetable consumption on human health (2,3). The necessity of a balanced diet for healthy growth is emphasized (3).
	E	Eats adequate and balanced. Eats/drinks food and drinks in sufficient quantities. Makes an effort to eat at mealtimes (0).
	G	Explains the importance of adequate and balanced nutrition. It is mentioned that adequate and balanced nutrition is not the same for everyone and varies according to factors such as age, gender, physical activity, etc. (9). Explains the causes of obesity and its effects on health. The effect of unbalanced diet, insufficient physical activity, heredity and hormonal factors on the emergence of obesity is explained (9).
	H	Explains with examples the importance of nutrition for well-being (2).
	<b>Food Safety and Hygiene</b>	C
D		The necessity of washing fruits and vegetables before consuming is emphasized (1). Prepares food for himself by paying attention to the cleanliness rules (1). Emphasis is placed on shopping by paying attention to the place where the food is purchased, the color, shape, smell, expiration date and ingredients of the product (3).
G		The importance of water and food hygiene is mentioned (9). The health effects of irrational use of nutritional supplements such as energy drinks, vitamin pills and protein powder are discussed (9).
<b>Harmful Foods</b>	A	Nutritional supplements that are beneficial (vitamin B group, vitamin C and vitamin D; minerals - calcium, magnesium, sports drinks, etc.) and nutritional supplements that are harmful (excessive protein supplements, energy drinks, etc.) are explained (8).
	C	Cautions are provided not to eat poisonous mushrooms (5).
	D	The injurious to health of consuming foods of unknown origin, foods sold unconcealed and/or on the street, and products such as carbonated beverages are emphasized (1).
	E	Avoids eating/drinking food and beverages that adversely affect health (0).
	G	The negative effects of consuming excessive fatty, sugary and salty foods and beverages on health are explained (9).

(Values in parentheses indicate the grade level at which the outcome is given)

Table 3 shows the nutrition sub-themes and outcomes. In the study, under the theme of nutrition, which is at the top in terms of the number of outcomes, health education outcomes are seen in the sub-themes of balanced and proper nutrition, food safety and hygiene, and harmful foods. In addition, many courses such as physical education and sports, biology, science, life sciences, preschool, classroom counselling, health information and traffic culture include health education contents related to nutrition. For example, in 9th grade in the health information and traffic culture course it has been reported that the negative effects of consuming excessively fatty, sugary and salty foods and beverages on health are discussed. Similarly in 4th grade in science course, the relationship between nutrition and health is mentioned, information is given about the negative effects of obesity on health and food waste.

**Table 4.** Courses and Grades of the Outcomes Related with the Theme of Combating Addiction

Sub-Theme	Course	Outcomes and Objectives
<b>Combatting Harmful Habits and Addiction</b>	C	Becomes aware of the negative effects of alcohol and cigarette use on human health (4-6). Evaluates the consequences of tobacco products, alcohol and substance use (9). Realizes the need to have decisive and consistent communication skills in order to avoid tobacco products, alcohol and substance addictions (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 4 includes the the list of courses and the outcomes under the theme of combating addiction. For example, in 4th, 5th and 6th grades in science course, there is information that students can recognize the negative effects of alcohol and cigarette use on human health. In addition, in the health information and traffic culture course, there is information about the negative consequences of harmful habits and ways to combat them.

**Table 5.** Courses and Grades of the Outcomes Related with the Theme of Environmental Health

Sub-Theme	Course	Outcomes and Objectives
<b>The Impact of the Environment on Health</b>	C	Expresses that loud noises can cause hearing loss (3). The importance of proper lighting for eye health is emphasized (4). The negative effects of environmental pollution on people's health are mentioned (5). It is reminded that medical waste shouldn't be touched (7). Takes the necessary precautions regarding the dangers that may occur during the use of acids and base as cleaning materials (8).
	F	The harmful effects of Hg, Pb, CO <sub>2</sub> , NO <sub>2</sub> , SO <sub>3</sub> , CO, Cl <sub>2</sub> on human health and the environment are emphasized (9).
	G	Analyzes the effects of environmental factors on individual and community health. Emphasize is made on the environmental factors of noise, radiation, mobile phone, air pollution, water pollution, garbage, carcinogenic substances, vectors and Genetically Modified Organisms (9).
<b>Environmental Health</b>	C	Discusses the damage that battery waste will cause to the environment and what needs to be done in this regard (3). Explains the negative effects of sound pollution on human health and the environment (4). Makes inferences about environmental problems that may occur in the future as a result of human activities (5). Discusses the effects of the use of different types of fuels for heating purposes on individuals and the environment (6). Pays attention to waste control in his immediate vicinity (7). Discusses the causes and possible consequences of global climate changes (8). Offers solutions for the prevention of acid rain (8).
	D	Takes care to protect animals and plants in his immediate vicinity. Becomes aware of keeping nature and the environment clean (1,2,3). Distinguishes the materials that can be recycled (1,2,3). Complies with the rules of cleanliness and hygiene in common areas in order to protect the health of himself and the society, (3).
	F	Explains the effects of chemicals on human health and the environment (9). Explains the chemical pollutants that cause air, water and soil pollution (9).
	G	Explains the measures that can be taken to reduce the negative effects of traffic on the environment. The importance of being sensitive to the environment and nature is emphasized by stating the precautions to be taken regarding traffic-related environmental pollution (exhaust gas, noise pollution, waste, non-standard fuels, unnecessary use of air conditioners, etc.) (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

In Table 5, environmental health sub-themes and outcomes are included. Accordingly, it is seen that educational content on environmental health and the effects of the environment on human health are included in the curriculums of science, chemistry, health information and traffic culture, life sciences. For example in the chemistry course in 9th grade it is seen that it is aimed to explain the chemical pollutants that cause air, water and soil pollution and to convey the effects of these substances on human health. Similarly in the science course, it is seen that the effect of negative conditions related to noise, sound and lighting on human health is emphasized, and it is aimed to convey waste management and the effects of wastes on human health. In life sciences course in 3rd grade it is stated that the cleaning and hygiene rules to be followed in common areas are introduced and adopted in order to protect the health of the students and the society.

**Table 6.** Courses and Grades of the Outcomes Related with the Theme of Physical Activity

<b>Sub-theme</b>	<b>Course</b>	<b>Outcomes and Objectives</b>
<b>The Effect of Physical Activities on Health</b>	A	The effects of various activities/sports on health-related physical fitness (body composition, cardiovascular system endurance, muscle strength and endurance, and flexibility) are examined (5). It is expected to conduct research on the positive effects of regular physical activities on the quality of life and to share these studies. (9).
	H	Explains with examples the importance of sleep, rest and physical exercise for well-being (2).
	D	Recognizes the relationship between healthy growth and development and personal care, exercise, sleep and nutrition (2).
	G	Evaluates the effects of physical activity on health (9).
<b>Precautions Against Injury</b>	A	In physical activities, issues such as warm-up, cool-down and the suitability of the materials used (sportswear, event-specific or sport-specific materials) for health are discussed (5). Knows the methods of protection from sports injuries (8) Emphasis is placed on the preventive feature of warm-up against injuries and its positive effects on performance (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

In Table 6, various outcomes are included under the sub-themes of the effect of physical activities on health and precautions against injury under the theme of physical activity. Accordingly, it is seen that health-related outcomes are included in physical education and sports, classroom counselling, life sciences, health information and traffic culture courses. For example in physical education course in 9th grade, it is stated that the positive effects of regular physical activity on health are investigated by the students and the results are shared by them. In addition, it is seen that information is given about regular and adequate exercise, the effects of activities of various intensities on health, and ways to prevent injuries and woundings.

**Table 7.** Courses and Grades of the Outcomes Related with the Theme of Disease Knowledge

<b>Sub-theme</b>	<b>Course</b>	<b>Outcomes and Objectives</b>
<b>Recognition and Prevention of Infectious Diseases</b>	B	It is ensured that the effects of viruses on human health are discussed through explaining rabies, hepatitis, influenza, herpes and AIDS diseases. Precautions against viral diseases are emphasized (9)
	D	Ways to prevent infectious diseases are emphasized (1).
	G	Explains the ways of protection from infectious diseases (9).
<b>Recognition and Prevention of Non-Communicable Diseases</b>	C	The most common system diseases in Türkiye are mentioned (6).
	D	Health problems such as obesity, diabetes, celiac disease and food allergy are also highlighted (3).
	E	Tells what is needed to protect his health. Explains the consequences that can occur when not taking care of health. Informative activities should be held about common pediatric diseases, ways to prevent them and ways of treatment (0).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 7 includes the outcomes in five courses related to the sub-themes of recognition and prevention of communicable and non-communicable diseases under the theme of disease knowledge. For example, in the 9th grade biology course, it is stated that it is aimed to discuss the negative effects of viruses on human health. In addition, it is seen that ways of protection from viral diseases are mentioned. Similarly, it is stated that in pre-school, students will be informed about the problems they will experience if they do not pay attention to their health, and information will be given about the common childhood diseases and how to protect themselves from them. Besides it is seen that in 6th grade in science course, information about the most common diseases in Türkiye are shared.

**Table 8.** Courses and Grades of the Outcomes Related with the Theme of Personal Care

Sub-theme	Course	Outcomes and Objectives
<b>Oral and Dental Health</b>	G	Explains what needs to be done to protect oral and dental health (9).
<b>Body Cleansing</b>	A	Explains the importance of personal care and cleanliness, and in terms of health explains the importance of dressing appropriately while doing sports (9).
	D	Washing hands and face, brushing teeth properly, bathing, combing hair, toilet training, wearing daily clothes and using them carefully are emphasized. In addition, ensuring continuity in personal care is emphasized (1). Explains the necessity of cleanliness for a healthy life (2).
	E	Follows the rules of cleanliness regarding his body, combs his hair, brushes his teeth; washes hands and face, performs tasks related to toilet needs (0).
	G	The necessity of personal hygiene (hand, face, neck, armpits, ear, nose, hair, foot cleaning, post-toilet cleaning, bathing) is emphasized. It is emphasized that personal items (toothbrushes, combs, towels, nail clippers, razors, washcloths, socks, slippers, headphones, etc.) should not be shared with others in terms of hygiene (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 8 shows the outcomes related to the theme of personal care. Accordingly, it is seen that there are many outcomes in different courses such as physical education and sports, health information and traffic culture, life sciences, and preschool. For example, in physical education and sports course, it is seen that it is aimed for students to explain the importance of personal care and cleanliness. Similarly in life sciences course in the 1st grade the information that cleanliness is necessary for a healthy life is conveyed. Similarly, it is seen that in various courses in accordance with age groups it is planned to provide physical cleaning and hygiene-based education.

**Table 9.** Courses and Grades of the Outcomes Related with the Theme of Mental Health

<b>Sub-theme</b>	<b>Course</b>	<b>Outcomes and Objectives</b>
<b>Mental Health and Stress</b>	A	Students are encouraged to explain what coping methods they use (breathing exercises, relaxation exercises, autogenous exercises, mental strategies, psychological assistance strategies, etc.) and their effects when they encounter stressful situations in sports and physical activities (8).
	G	Explains with examples the sources of stress. Explains ways to cope with stress (9).
	H	Manages intense emotions he experiences. Realizes the importance of emotions that support well-being in his life (6,8). Uses appropriate methods to cope with stress (8).
<b>Adolescent Health</b>	C	Explains the physical and mental changes that occur during transition from childhood to adolescence (6). Discusses what can be done to ensure a healthy adolescence period based on research data (6).
	G	Explains the physical, emotional and social changes during adolescence, which is one of the growth and development processes (9). Awareness is raised about the importance of a healthy menstrual cycle and hygiene during this period (9). It is stated that weight loss pills and stomach reduction operations used for aesthetic concerns will endanger the life of the person (9). Explains the importance of mental, emotional and social health for adolescents for a healthy life (9).
	H	Notices physical and emotional changes (6). The focus is on reviewing and regulating self-care skills during adolescence. (8).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 9 contains information about the sub-themes, courses and outcomes related to the theme of mental health. Accordingly, it is seen that there are various outcomes in four different courses under the sub-theme of mental health and stress and adolescent health. For example, under the theme of mental health and stress in 9th grade in health information and traffic culture course, there are outcomes related to the recognition of stress sources and methods of coping with stress. In the same course, the knowledge of recognizing physical, psychological and social changes during adolescence, which is one of the growth and development processes, is included. Similarly in 6th grade the science course program includes a discussion of what can be done to ensure a healthy adolescence, based on research data.

**Table 10.** Courses and Grades of the Outcomes Related with the Theme of Health Services

Sub-theme	Course	Outcomes and Objectives
<b>Rational Drug Use</b>	C	The harms of irrational drug use are emphasized (6).
	D	Rational drug use is emphasized (1).
	G	Explains the importance of rational drug use. The harms of irrational drug use in terms of patient health and the use of resources are emphasized. The possible effects of herbal medicines used without doctor's advice and purchased from unsafe places other than pharmacies on patient health are discussed. (9).
<b>Patient Rights</b>	G	Explains patient rights and responsibilities. It is emphasized that being healthy is a fundamental human right (9).
<b>Effective Use of Service</b>	D	The necessity of going to the dentist and doctor is emphasized (1). Knows the phone numbers of the institutions to call for help in case of an emergency (1,2).
	G	Explains the ways to benefit from health services. Primary, secondary and tertiary health institutions and preventive, therapeutic and rehabilitative health services are mentioned. The importance and necessity of gradual use of health institutions is emphasized (9). The importance of the patient's compliance with the treatment is emphasized (9). The importance of getting individual help in mental, emotional and social health problems and the experts and units that provide support are explained (9).
<b>Blood and Organ Donation Introduction of Healthcare Professionals and Their Duties</b>	C	Understands the importance of organ donation in terms of social solidarity (6). Evaluates the importance of blood donation for society (6).
	D	Institutions such as hospitals, family health centers/health centers, pharmacies and professions such as doctors, nursing, pharmaceuticals and dentistry are emphasized (2).
	F	Professions related to the field of chemistry such as chemical engineering, metallurgical engineering, pharmacist, chemist, chemistry teacher are introduced (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 10 shows the sub-themes, course matchings and outcomes related to the health services theme. Accordingly, it is seen that in four different courses, there are outcomes related to the sub-themes of rational drug use, patient rights, effective use of services, blood and organ donation, introduction of health professionals and their duties regarding effective use of health services. For example in 6th grade science course, it is seen that the effects of rational drug use and organ and blood donation on society and health are emphasized. Also in the health information and traffic culture curriculum, the effects of rational drug use on health and resource consumption are emphasized. In addition, in the same course, it is seen that the ways of benefiting from health services are explained, primary, secondary and tertiary health institutions and preventive, therapeutic and rehabilitative health services provided in these institutions are mentioned and the importance of the referral chain is mentioned. The importance of the patient's compliance with the treatment is one of the gains in this context. Finally, under the theme of health services, there is information that health professions and their duties are also introduced.

**Table 11.** Courses and Grades of the Outcomes Related with the Theme of Basic First Aid

Sub-theme	Course	Outcomes and Objectives
<b>Development of First Aid Knowledge and Skills</b>	A	The definition of first aid, its importance, general objectives, basic rules (protection, notification and rescue) and the materials that should be included in the first aid kit are discussed (5). Conditions such as bleeding, abrasions and cuts, dislocations and fractures, sprains, and poisoning are addressed (7). Explains basic first aid practices. The concepts of protection, rescue, and notification are emphasized (9).
	C	Basic information about first aid is given (6).
	G	Explains the importance, aims and basic applications of first aid (9). The importance of the basic practices of first aid in the event of an accident, Protection-Notifying-Rescue (intervention), which is emphasized (9). Explains the precautions to be taken for safe first aid application. Evaluates the condition of the patient/injured. Explains the first aid applications to be performed in case of respiratory tract obstruction, bleeding, shock, poisoning (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 11 includes the outcomes and course matching information regarding the sub-theme of developing first aid knowledge and skills under the basic first aid theme. Accordingly, it is seen that there are various outcomes regarding the development of first aid skills in physical education and sports, science, health information and traffic culture curriculums at different grade levels. For example, it is seen that basic information about first aid is given in the science course, and information about the definition, importance, basic rules and preparation of first aid kit is provided in physical education and sports course in 6th grade. It is seen that the health information and traffic culture course includes content such as emphasis of protection-reporting and rescue, which are the basic practices of first aid in case of an accident.

**Table 12.** Courses and Grades of the Outcomes Related with the Theme of Technology

Sub-theme	Course	Outcomes and Objectives
<b>Negative Effects of Technological Devices on Health</b>	D	The points to be considered when using mass media and the negative effects of misuse of these tools on human health are emphasized (1,2).
	G	The unbalanced use of technology on health is recognized and its negative consequences are discussed (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 12 shows various outcomes related to the sub-theme of the negative effects of technological devices on health. Accordingly, it is seen that life science, health information and traffic culture course programs include outcomes regarding the appropriate use of mass media as well as emphasizing the negative effects of misuse on human health.

**Table 13.** Courses and Grades of the Outcomes Related with the Theme of Health of Body Organs

<b>Sub-theme</b>	<b>Course</b>	<b>Outcomes and Objectives</b>
<b>Recognition of Organs and Systems</b>	C	Explains the basic functions of the sense organs (3). Explains with examples the structures of the support and movement system (6). Explains the functions of the structures and organs that make up the digestive system by using models (6). Explains the functions of digestive organs (6). Explains the functions of the structures and organs that make up the circulatory system by using models (6). Explains the functions of the structures and organs that make up the respiratory system by using models (6). Summarizes the functions of the structures and organs that make up the excretory system by showing them on the model (6). Explains the functions of the nervous system, central and peripheral nervous system on the model (6). Recognizes the importance of endocrine glands for the body (6). Explains the structures and organs of reproduction in humans by showing them on the diagram (7).
	B	Features of cellular structure, nutrition, respiration, excretion, movement, response to stimuli, metabolism, homeostasis, adaptation, organization, reproduction, growth and development are emphasized for the living beings (9).
<b>Protection of the Health of Organs and Systems</b>	A	The effects of various activities/sports on health-related physical fitness (body composition, cardiovascular system endurance, muscle strength, endurance, and flexibility) are examined (5-6-7-8).
	C	Explains what needs to be done to protect the health of the sensory organs (3-6).
	G	Behaviors that may pose a health risk (tattooing, ear and nose piercing, etc.) are mentioned (9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 13 shows the outcomes and course matches related to the sub-theme of recognition and protection of organs and systems under the theme of health of body organs. Accordingly, it is seen that the outcomes on body and organ health are included in the curriculums of four different courses. For example, it is seen that the principles of healthy functioning of sensory organs and body systems are emphasized in different grade levels of the science course. In addition, it is seen that physical education and sports courses include outcomes regarding the effects of physical exercises on body composition, cardiovascular system endurance, muscle strength and endurance at different grade levels.

**Table 14.** Courses and Grades of the Outcomes Related with the Theme of Safety

Sub-theme	Course	Outcomes and Objectives
<b>Protection from Injuries and Accidents</b>	A	Ways to prevent sports injuries such as nosebleeds, sprains, collisions, abrasions, fractures and first aid applications are discussed (6).
	D	Emphasis is given on topics such as going up and down the stairs carefully, using the elevator correctly, walking carefully on wet floors, using glassware in the classroom (cabinets, corners of honor, etc.) carefully, not leaning down from windows and balconies, not playing with electrical sockets, cables and fire, not leaving the water running, knowing and carefully using cleaning materials and what to do in cases of gas leakage. (1). Obeys the traffic rules on the way to and from school (1,2,3). Follows safety rules at school and at home (1). Distinguishes between safe and unsafe areas for himself (1). Obeys safety rules when traveling by means of transport (2,3). Uses tools on playgrounds safely (2,3).
	C	Discusses that touching, looking, tasting, and smelling certain substances can harm the living body (3). Investigates and reports the precautions to be taken regarding heater stove and natural gas poisoning (6).
	E	Protects himself from dangers and accidents (0).
	G	Explains the causes of traffic accidents [Factors that may pose a risk to traffic and road safety such as fatigue, inattention, insomnia, visual defects are mentioned. The reasons why one should not drive under the influence of alcohol, drugs or stimulants are explained] (9).
<b>Safety</b>	D	When communicating with people, the importance showing effective rejection behavior when faced with any invitation or offer that violates their personal rights is emphasized (1). When there is a person who threatens their safety, the necessity of situations such as walking away, running away, asking for help loudly or shouting, informing family, and contacting safety personnel are emphasized (3). Emphasis is placed on what needs to be done during situations such as peer pressure, people and groups that are sources of crime, terrorism, war, earthquakes and floods. (3). In case of an emergency, the necessity of moving away from the area, using exit doors and fire exit points are emphasized. The importance of having the contact information of a relative who can be reached in case of an emergency is emphasized (3). By emphasizing the disadvantages of making unnecessary reports, fire department, ambulance, police, military police and forest fire etc. institutions and telephone numbers are discussed. Telephone numbers are taught by coding in digits (1,2).
	E	Tells dangerous situations. Tells what needs to be done to protect oneself from dangers and accidents. Knows the basic safety rules. Stays away from dangerous situations, people and habits. Asks for help in case of any danger and accident (0). Learns the phone number of his parents or an adult he can reach in case of an emergency, learns the police and military police, emergency aid, fire and forest fire phone numbers. It is also underlined that these numbers should only be called when needed (0).
	G	Evaluates the effects of violence on the individual (9). The importance of saying "No!" by his will to the pressures coming from his immediate and distant environment is emphasized (9). Explains the attitudes and behaviors that should be exhibited in traffic (9). Explains the precautions to be taken for safe travel (9). Knows and uses adequately the numbers of the Police (155), Emergency Aid (112), National Poison Information Center (114).
	H	Explains the situations, environments and behaviors that may be risky at school (0,1,4,5,9). Explains the necessity of saying "No!" for personal safety (0,1,3,8,9). Believes in the necessity of personal spaces for personal safety (3,4). Uses appropriate ways to cope with peer pressure (4,8). Follows guidelines for the protection of personal rights and for ensuring personal safety (6). Uses ways to cope with bullying (7,9).

(Values in parentheses indicate the grade level at which the acquisition is given)

Table 14 presents various outcomes related to the theme of safety, protection from injuries and accidents, and safety sub-themes. Accordingly, it is seen that there are themes related to health and safety at different grade levels in six lessons. For example, in the curriculum of the life sciences course, it is seen that there are outcomes in a wide variety of areas at different grade levels such as using stairs

carefully, walking carefully on wet floors, using glazed items carefully, not hanging down from high places, careful use of electricity, fire, gas and water tools and recognizing cleaning materials. It is also seen that there are different gains in many areas, from providing healthy and correct transportation to using the vehicles in the playgrounds safely. Apart from this, there are many outcomes in different courses regarding the recognition of behaviors that will put individual safety and health at risk and ways to communicate in emergencies.

## Discussion

Although there are authors who state that the content for health education in formal education institutions in Türkiye is insufficient (Pelen & Günay, 2013; Şahin & Özata, 2009), according to the content analysis findings, it is seen that the content of the program for the 2020-2021 academic year is largely compatible with the framework created with reference to the health education literature. In addition, it has been determined that the themes included in the health education program proposals but not included in the formal education program in Türkiye are world health, sexual health, disabled life and consumer health.

In their study, Çalik and Çan (2012) used WHO's 5 informative items on health education as themes and matched the contents of health education in Turkish formal education with these themes. In this regard, in many courses from 1st grade to 12th grade the course contents are on the themes of, "ensure that individuals understand the importance of good health for their own health and public health", "encourage individuals and society to solve their own health problems", "enable individuals and communities to effectively benefit from health institutions and organizations", "encourage individuals and communities to adopt healthy habits and lifestyles" and "convince individuals and society to pay attention to their own health". Although the course contents are discussed in more detail in this study, it can be stated that the themes, sub-themes and outcomes are compatible with the WHO objectives examined by Çalik and Çan (2012). In addition to the curriculums, Çalik and Çan (2012) also state that, the outcomes of health education are also achieved with activities on important health-specific days and weeks.

In the study conducted by Akel, Fahs, Salameh and Godeau (2019) to investigate health education programs in schools in Lebanon, it was determined that health-related courses were included in 70% of the programs in schools. It is stated that the main health education topics in these courses are quitting smoking, alcohol, nutrition, dental health, physical activity, diseases, sexual behaviors and mental health. In addition, it is stated that other than the curriculums, 76% of schools organize health-related activities and encourage students' participation and that these activities have an important place in health education. Activities for individuals, community and environmental health are organized in schools in Türkiye on many special days and weeks.

In the study by Chrappan (2012), in which the contents of health education in the Hungarian formal education program are examined, it is stated that the contents of health education are presented in the primary and secondary education programs on subjects such as environmental studies, home studies, physical education, health education, chemistry and ethics. In the study, it is stated that in the first 4 years, students are informed about issues such as body recognition, personal care, awareness of disabled individuals, safe use of household appliances, environmental health, disease symptoms, sources and prevention of infection, waste management, negative effects of behaviors and advertisements that endanger health, and the development of basic physical abilities. In the second 4 years, personal hygiene, physical exercise and relaxation, buildings and energy consumption, environmental health, healthy eating habits and kitchen management, safety, use of psychoactive substances, sexuality, stereotypes, family relationships and conflicts, the effects of developing technology on health, taking responsibility for personal health, use of health services, taking responsibility for the future, recognition and importance of the anatomy and physiology of living beings, individuals and their environment (their place in the world), responsibility towards society, instincts, anger, thinking, prejudices and tolerance, social relations, sexual identity, personal and social values are presented. Although the main emphasis is on academic development at the high school level, it is stated that, there are contents of health education in courses such as chemistry, biology and ethics.

When the contents of health education in Hungary and Türkiye are examined, although there are many similarities, especially in the context of sustainability it can be said that the outcomes in areas such as waste management, energy consumption, future-oriented awareness, as well as the place of the individual in the world, and sexual education are insufficient in Türkiye. In addition, a positive behavior target towards disabled people has not been found as an outcome in Türkiye. Although activities are held on special days and weeks for disability, the inclusion of content related to the subject in the curriculums can enrich health education in Türkiye.

In a study conducted on the content of health education in schools in the Republic of Karelia (Gvozdeva & Kirilina, 2012), it is stated that some basic information about health education is conveyed in physical culture (physical education), biology and safety education courses. However, due to the fact that it is a country that is more prone to communicable and non-communicable diseases due to its cold climate in the north and the low indicators of general health status, it is stated that comprehensive studies should be carried out on the health education program. Based on the localization here, although not within the scope of the program in Türkiye, trainings could be planned in line with the needs of specific regions on special days and events.

In the study by Ambusaidi and Al-Balushi (2012), in which the contents of health education in schools in Oman were analyzed, it is stated that there are contents for health education on themes such as body health, healthy foods, healthy air, plant health, environmental health, safety on the road in science lessons from 1st grade to 12th grade. It is also stated that some health education programs are carried out, educational materials are distributed to students, meetings and seminars are organized, and social events are held in which students participate interactively. "Life Facts Book Project" is shown as another sample. It is mentioned that in this project, international organizations such as UNICEF, UNESCO and WHO carry out positive awareness-raising activities for behaviors such as combating harmful substance use, malnutrition, bad lifestyle habits, and less exercise in cooperation with the Ministry of Education and the Ministry of Health. It is also stated that in the project, in addition to presenting educational materials to students, a traditional essay writing competition is organized for 9th and 10th grade students. In addition to these examples of projects such as "learn from peers" are carried out to educate certain groups and instill positive behavior in their friends, and "girl's health" to gain self-confidence in teenage girls, to be aware of biological changes, and to promote personal care and care products are given.

In the study by Moronkola (2012) in which the health education contents offered in formal education in Nigeria were analyzed, it was stated that there were basic education themes such as first aid and safety education, personal health care and nutrition at the primary school level. Similarly, in secondary school, there are themes such as first aid and safety training, personal, school and community health, food, nutrition and health, pathogens, diseases and their prevention, and also there is possibilities of participation in physical activities. At the high school level, the health education is given on the themes of history and development of health education, human anatomy and physiology, personal health, environmental health, community health, food and nutrition, safety education and first aid, drug, alcohol and tobacco education, consumer health and communicable and non-communicable diseases. Adding outcomes in all aspects of consumer health in Türkiye will strengthen health education.

Bhutta (2012), in his study to analyze the content of health education in the formal education program in Pakistan, states that the program in the 1970s covered a wide range of health topics such as personal hygiene, elimination of bad habits (such as smoking, spitting on the ground), prevention of accidents, food and nutrition, environmental cleanliness, infectious diseases, growth and development and human physiology. However, in the program, which was developed in 1990 and is still used, it is stated that these contents are not defined as a separate theme, but health-related trainings are given in different disciplines. In this context, the study examined primary school textbooks in terms of health education. It is stated that some basic education is given on topics such as food and health, environment, cleanliness and safe water, pollution, germs and disease, environment, neighbourhood, healthy habits,

rights and duties, accident prevention, values and social responsibility, road safety, beneficial plants, food, health care, vaccination and helping others. Bhutta (2012) states that the importance of health education in school is understood by policy makers in Pakistan, but there is a gap in practice. And in order to fill this gap, it is aimed to provide health education in cooperation with some non-governmental organizations such as Save The Children United Kingdom and to achieve positive health-related gains with the philosophy of peer learning with projects such as "From Child to Child".

Kruatong and Dahsah (2012) analyzed the contents of the health education program in school in Thailand and stated that many arrangements have been made for health education in the recent past, but the outcomes of health education were included in the Basic Education Program, which was finally adopted in 2008. In this context, health education at school in Thailand includes understanding the nature of human growth and development, understanding and appreciating the family, sexual education and life skills, understanding and possessing kinesthetic skills, engaging in movement and physical exercise, having a competitive and sportsman attitude, strengthen and protect personal health, acquiring skills to protect health and maintain good health, preventing accidents, combating addictive substances and harmful behaviors such as violence. It is stated that the diseases that health education focuses on are diseases such as HIV/AIDS, Obesity, Aggressive Behavior. It is seen that as in the world and in Türkiye, Thailand also aims to overcome regional and universal health problems through health education.

Sexual health education (CSE), which is included in the recommendations in the literature, has not been found in the curriculum in Türkiye. Studies have shown that CSE contributes to safe sexual behaviors, increases knowledge and self-esteem, and changes gender norms and social norms, and contrary to popular belief, it does not encourage sexuality it postpones sexuality. Nevertheless it is also emphasized that it prevents sexually transmitted diseases (Akel, Fahs, Salameh & Godeau, 2019; Gürsoy & Özerdoğan, 2017). Zeren and Gürsoy (2018) state that CSE should start in the family and continue with formal education. Individuals who do not receive education from reliable sources like the family and the school environment receive information about sexual health from informal information sources and peer learning. It is thought that health education given by experts in the school environment will have positive effects on the attitudes, behaviors and values of individuals.

Ioannou, Kouta, and Charalambous (2012) examined the contents of health education in the formal education curriculum in Cyprus. In their report, it is reported that before the curriculum study in the country, only biology and home economics courses were presented with the content of health education, but after the new action plan, an importance was given to health education. It is claimed in the action plan that instead of a knowledge-intensive system, students trying to gain the skills to understand and analyze the health of themselves and their environment is aimed to be achieved. In this regard, the program was analyzed in 3 themes: recognition of the determinants of health, development of skills, and promotion of changes. As sub-themes, emotional health, self-awareness, meaning of life contents are included under personal development and empowerment; nutrition, drugs, exercise and safety are included under healthy lifestyle and safety; human rights, economic welfare, consumer education contents are included under citizenship; and cultural diversity, social skills, sexual health and family planning are included under social development. From this point of view, it is seen that the contents in these two countries have similar and different aspects. Although the program has been examined in more detail in this study, it can be stated that it is more inclusive in terms of social, mental and physical health outcomes. However, considering Türkiye's migration, education and health policies, the inclusion of health education components in the program on cultural diversity, sexual health and family planning, and adequate and conscious consumption may positively affect the expected outcomes of the program in terms of health education.

Välimala et al. (2008) in their study on the content of health education in the formal education curriculum in Finland emphasize that health education was not an independent and formal course before 2001 curriculum. However, it was stated that the National Basic Program came into force in 2006 at various education levels after the laws enacted on the subject. In their study, it is suggested that the basis of health education in the program in Finland (between grades 1-9) is to teach health as a physical, psychological and social ability. In this context, health education is given within the scope of environmental and natural sciences, biology, geography, physics and chemistry courses between the 1st and 6th grades, and then in the 7th-9th grades consisting of 3 lessons and 38 sessions of 45 minutes each as an independent subject. It is stated that in these courses, training is provided in the areas of growth and development, coping skills, mental health, communication skills, emotions, cultural identity, internationalism, communication, social media, environment, sustainable future responsibility, youth health and safety and traffic life. In this respect, when health education in the Finnish Education System is compared with the findings of this study, it is seen that the components related to physical, mental and social health are handled together in areas such as health, environment and safety in both countries. In the health information and traffic culture course in Türkiye, health education is emphasized independently. However, it is thought that more emphasis on health education like in Finland with independent courses can increase the awareness of health education in students.

In addition to the program contents, Moronkola (2012) complains that although there are many qualified health educators in the country, these people are not employed and the existing educators do not provide qualified training in the field of health education. In Türkiye within the scope of the program, health education at school is given by biology, physical education and sports teachers, as well as teachers of other courses with the health-related outcomes. Özcan, Kılınç, and Gülmez (2013) suggest that it is not effective to hold classroom or branch teachers solely responsible for health education. In this context, it is important to include on the agenda that teachers who have received health education or work in the field of health education in health vocational high schools to take part in these courses.

### **Conclusions and Recommendations**

As a result of the study, it can be said that the content of health education in the formal education program in Türkiye is significantly compatible with international standards. In addition, it is thought that the activities taking place on certain days and weeks will contribute to the quantitative and qualitative improvement of health education. The topics that are included in the program proposals and also in the literature but which are not encountered in Türkiye can be summarized as global health, sexual health, disability life and consumer health. Adding the outcomes related to these topics to the curriculum will ensure effective health-related outputs. As Tones (2005) points out, health promotion is shaped by a combination of healthy policies and health education. Although it is very important that the content and quality of the education offered to the individual is at a high level, education should also be supported by healthy policies. For example, the benefit of education will decrease if individuals who are well-educated about nutrition encounter unhealthy foods in or around the school cafeteria or are exposed to harmful habits in the social and media environment. Therefore, as stated before, health education, which is an element of health promotion, should be supported by many elements, as it is a supporter of many other elements. This plays a critical role in achieving countries' sustainable health goals.

The fact that there is no comprehensive research in the national literature on health education in the curricula in Türkiye is considered as the strength of the study. In addition, subjective judgments of the authors in line with the framework taken as a basis are the limitations of the study. For the future studies, it is recommended to examine the educational content and teaching methods provided directly or indirectly on special health-related days and events as well as the program contents.

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