



Research Article

# Implementation of Health Promotion Programmes in Schools: An Approach to Understand Knowledge, Perceptions and Barriers

Psarouli Sofia<sup>1</sup>, Evangelia Mavrikaki<sup>2</sup>, Christos Alexopoulos<sup>4</sup>, Dimitriou Gavriil<sup>2</sup>, Apostolos Vantarakis<sup>1\*</sup>

<sup>1</sup>Department of Public Health, Medical School, University of Patras, Greece

<sup>2</sup>Faculty of Primary Education, University of Athens, Greece

<sup>3</sup>Pediatrics Department, Medical School, University of Patras, Greece

<sup>4</sup>Department of Early Childhood Education, University of Western Macedonia, Florina, Greece

\*Corresponding author: Apostolos Vantarakis, Professor, Department of Public Health, Medical School, University of Patras, Greece

Citation: Psarouli S, Mavrikaki E, Alexopoulos C, Gavriil D, Vantarakis A (2022) Implementation of Health Promotion Programmes in Schools: An Approach to Understand Knowledge, Perceptions and Barriers. J Community Med Public Health 6: 233. DOI: 10.29011/2577-2228.100233

Received Date: 03 February, 2022; Accepted Date: 10 February, 2022; Published Date: 15 February, 2022

## Abstract

School Health Education Programmes (SHEP) have positive effects on students' attitudes about health. In our study, the knowledge and perceptions of teachers and the barriers of implementation of SHEP in schools were investigated. A cross sectional study was conducted on a sample of 654 teachers in the prefecture of Achaia, Greece. The positive attitude and perception as well as the necessity of SHEP in schools are reported. However, incentives for teachers such as job advancement, bonus, exemptions, projects from institutions should be added. Barriers such as lack of knowledge about health education, lack of support from the authorities, colleagues and parents, lack of infrastructure in schools and their optional implementation obscures the successful implementation of SHEP. These barriers should be eliminated for the sustainability of SHEP in schools. Developing a national strategic framework for the further development of SHEP, strengthening cooperation in various fields such as health education, motivating teachers, linking all education curricula to health education, and redefining the role of the teacher, are key pillars for the implementation of health education programs in schools.

**Keywords:** Health education programmes; Barriers; Schools; Perceptions; Knowledge

## Introduction

School Health Education Programmes (SHEP) have positive effects for the students, the schools, and their interactions as well as their social relations including increased satisfaction and motivation, positive attitudes, personal development, competencies

and knowledge, health-related effects [1,2]. SHEP integrate educational components that can lead to improvement of health and well-being of students [3,4]. School health education, is an important element of the health policy in many European countries [5-8]. Health awareness in children may create healthy attitudes [9-11]. Students' health knowledge, skills, must be enabled and supported by their schools as well as by their families and local communities [12-14]. High quality school-based health education

is unlikely to happen if teachers do not understand the value of health education and promotion [15].

Nowadays, as children and teenagers spend about 40% of their time in the classroom, schools can positively influence students' quality of life, playing a crucial role in promoting health for children, families and teachers [16].

Health education is one of many tasks that schoolteachers are involved [17]. To be successful a SHEP, it must be taught by well-prepared teachers who are certified in continuing education [18]. In most countries, schools give low priority to health promotion, and school staffs, mainly teachers, are not aware of their role in health promotion [17,19,20]. The implementation of SHEP depends on the school system in each country. In Poland, for example, nationwide guidelines and curricula exist. In Germany, each state has their own strategy to implement health-related topics into school. In most European countries, health education or health promotion is not a standalone subject but included in other subjects, such as Biology [21]. In Greece, SHEP are implemented on a voluntary base by teachers, and included in the non-compulsory curriculum and implemented under a flexible teaching zone alongside other thematic areas e.g. environmental education [22]. The number of SHEP at the Greek school education has been gradually decreasing over the years. Most teachers in SHEP have specialties not related to health education [23-25]. Literature highlights the teachers' willingness and interest to participate in health promotion as a major factor for the success of SHEP [26-28]. The teacher's involvement in SHEP depends on several factors that can impede (i.e., barriers) or enhance (i.e., facilitators) their successful implementation including their perspectives on its relevance and the conceptualization of their role in health promotion [17,20].

The most significant barriers for the sustainability of SHEP is the lack of training for teachers, the lack of support from staff, students, and the community [29-31], the negative attitude of teachers towards an additional extra-curricular workload, the lack of confidence to lead health promotion. Moreover, the timing of implementation, the insufficient resources such as time and funding, capacity and facilities, staff perceptions of intervention and perceived skill-proficiency [31-38].

We designed a cross-sectional study about the knowledge and perceptions of the teachers as well as the barriers they face for the implementation of health education programmes in schools in Achaia region in Greece. This is one of the few studies exploring the barriers of the implementation of health educational programmes in schools.

## **Materials and Methods**

### **Sampling frame**

We analyzed teachers' knowledge, perceptions, and barriers for SHEP in Greek primary (1<sup>st</sup> to 6<sup>th</sup> grade corresponding to

children 6-11/12 years old) and secondary schools (7<sup>th</sup> to 9<sup>th</sup> grade corresponding to children 12-14/15 years old). Schoolteachers of the prefecture of Achaia, Southwestern Greece, were our target population. Achaia is a prefecture with higher demographic density, lower socioeconomic level, lower life expectancy than in the rest of Greece ([http://www.wondergreece.gr/v1/en/Regions/Achaia\\_Prefecture/About\\_region/Overview](http://www.wondergreece.gr/v1/en/Regions/Achaia_Prefecture/About_region/Overview)). This region has non-equity in the social strata as it has residents who are among the high social class and other who are within the lowest economic class [39,40]. Ten percent of the total number of schools (654 out of 3703 schoolteachers) in the region was randomly selected. The teachers were approached through the mailing list of their Union but also through closed groups in the social media. Information about the research was given to potential participants who gave informed written consent prior to participating. Kindergarten teachers and teachers at Vocational High Schools were excluded from the research as they do not implement SHEP in their schools.

### **Research instrument**

A questionnaire was developed by two researchers, experts in quantitative research and public health. In a pilot-study, twenty (20) teachers were asked to answer the questionnaire to test the appropriateness of the questions and estimate the time needed for completion (max 30 minutes). The pilot results indicated that participants sufficiently understood the questions; therefore, no changes were made to the questionnaire. Given this, data from the participants in the pilot study was also included in the study.

The questionnaire was distributed to teachers in an online form, to their mail or to professional and social groups. Participation in the Google questionnaire was at the discretion, time, and availability of the teachers.

The questionnaire consisted of 69 questions in four parts. The first part focused on their demographic characteristics such as gender, number of years of service, school location; the second part on their experience with SHEP (topics and approaches, how satisfied they felt with their work etc.); the third part focused on teachers' perceptions about SHEP and consisted of 5-point Likert scale items (strongly disagree, disagree, neither disagree or agree, agree, strongly agree); the fourth part focused on teachers' opinions about factors that can motivate or obstruct teachers from applying SHEP.

### **Data analysis**

Data was analyzed with IBM<sup>®</sup> SPSS 26.0. Questions Chi square, Anova, Kruskal-Wallis tests were used where appropriate. The correlation coefficient of Pearson was also calculated. Statistical significance was set at  $p < 0.05$ . Cronbach's alpha ensured the reliability of the 3<sup>rd</sup> and 4<sup>th</sup> part of the questionnaire ( $\alpha_{19} = 0.81$  and  $\alpha_{30} = 0.88$  respectively).

## Results

The distribution of our sample according to gender and school level and the demographic are presented in Table 1. The experience of teachers in our sample in SHEP is shown in Table 2. Implementation of SHEP is rare in secondary education (only 41.6% had implemented at least one SHEP in the last 5 years). This is probably since only 36.8 % of them has received in-service training on Health Education in a seminar during the last 5 years in contrast to 60.3% of the primary education teachers.

		Primary	Secondary
		Frequency (%)	Frequency (%)
<b>Men</b>	Total/Responded	413/140 (33.9)	640/120 (18.7)
	<b>Women</b>	1600/245 (15.3)	960/149(15.1)
<b>Age</b>	<30	25 (6.5)	
	31-40	105 (27.3)	74 (27.5)
	41-50	124 (32.2)	90 (33.5)
	>50	131 (34)	92 (34.2)
<b>Working years</b>	<5	36 (9.4)	29 (10.8)
	6-10	51 (13.2)	49 (18.2)
	11-16	69 (17.9)	72 (26.8)
	17-25	126 (32.7)	85 (31.6)
	>25	103 (26.8)	34 (12.6)
<b>Area of school</b>	Rural	118 (30.6)	31 (11.5)
	Urban	175 (45.5)	136 (50.6)
	Semirural	92 (23.9)	102 (37.9)
<b>Employment status</b>	Permanent	300 (77.9%)	177 (65.8%)
	Part-time	76 (19.7%)	73 (27.1%)
	Hour-based	9 (2.3%)	19 (7.1%)

**Table 1:** Distribution of sample and its demographic characteristics.

Teachers' perceptions towards SHEP are neither positive nor negative (mean=3.62±0.38), but the teachers from the two educational levels differ statistically significant in their overall perceptions (t635.86=5.85, p<0.001) with primary school teachers being more positive (mean=3.69±0.40) than secondary school teachers (mean=3.52±0.33). The majority of the former (68%) would be willing to implement HEP parallel to their duties (51.3% of the secondary education teachers respectively) but both expressed the wish that they had received the appropriate health education training during their undergraduate studies (88.1% and 91.1% respectively).

Attendance of at least one Health Education seminar in the last 5 years			Implementation of at least one Health Education Programme in the last 5 years	
	Primary	Secondary	Primary	Secondary
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Yes	232 (60.3)	99 (36.8)	231 (60.0)	112 (41.6)
No	153 (39.7)	170 (63.2)	154(40.0)	157 (58.4)
Total	385 (100.0)	269 (100.0)	385 (100.0)	269 (100.0)

**Table 2:** Teachers' experience in Health Education.

Teachers' perceptions about SHEP seem to differ according to their gender ( $t_{652}=-5.436$ ,  $p<0.001$ ) with men being less positive towards SHEP (mean=3.52±0.37) than women (mean=3.68±0.37). Teachers' age group and the years of experience did not seem to affect statistically significant their perceptions about HEP ( $p>.05$ ).

The main obstacles involved in the implementation of HEP are shown in Table 3.

		<b>Optional implementation of HEP</b>	<b>Bureaucratic process of HEP is time consuming</b>	<b>Lack of incentives for teachers</b>	<b>Lack of technical and material infrastructure</b>
		<b>Frequency %</b>	<b>Frequency %</b>	<b>Frequency %</b>	<b>Frequency %</b>
<b>Primary</b>	Totally disagree	3 (0.8)	5 (1.3)	116 (30.1)	22 (5.7)
	Disagree	65 (16.9)	65 (16.9)	182 (47.3)	204 (53)
	Either agree or disagree	97 (25.2)	88 (22.9)	63 (16.4)	95 (24.7)
	Agree	159 (41.3)	206 (53.5)	19 (4.9)	59 (15.3)
	Totally agree	61 (15.8)	21 (5.5)	5 (1.3)	5 (1.3)
<b>Secondary</b>	Totally disagree	2 (0.4)	1 (0.4)	96 (35.7)	184 (68.4)
	Disagree	22 (8.2)	21 (7.8)	128 (47.6)	11 (4.1)
	Either agree or disagree	45 (16.7)	47 (17.5)	33 (12.3)	48 (17.8)
	Agree	128 (47.6)	191 (71)	12 (4.5)	24 (8.9)
	Totally agree	73 (27.1)	8 (3)		1 (0.4)

**Table 3:** Main obstacles involved in the implementation of HEP as perceived by teachers.

Teachers also stated that collaboration and support from official health organizations and/or regional departments (e.g. Department of Public Health) as well as University departments are important in developing a strategy for encouraging schools to adopt and implement SHEP. Primary teachers (66.4%) and secondary (77%) believe that SHEP programs should be implemented by health professionals.

Engagement of all school partners (parents, teachers, principal, and students) was reported as a critical factor for the implementation and success of SHEP in both levels. Another significant factor effecting to sustainability of the programmes was whether the programme was embedded in an organizational educational structure which offered support to the programme.

An important barrier for teachers (43.1% for primary and 49,1% for secondary teachers) was the presence of students with learning difficulties in the class, probably due to the lack of educational support for these students. Other barriers are the lack of support from competent authorities (state or regional), the lack of cooperation from colleagues and the lack of support from parents (Table 4). Also, teachers consider that SHEP are not included within their pre-defined educational tasks and there is a lack of knowledge from their basic studies as well as from their subsequent training on the design and implementation of SHEP.

		<b>Lack of parental support</b>	<b>Lack of cooperation with colleagues</b>	<b>Lack of support by authorities</b>	<b>Lack of knowledge from main studies</b>	<b>Lack of Knowledge of teachers</b>	<b>Lack of inclusion in their predefined tasks</b>
		<b>Frequency %</b>	<b>Frequency %</b>	<b>Frequency %</b>	<b>Frequency %</b>	<b>Frequency %</b>	<b>Frequency %</b>

<b>Primary</b>	Totally disagree	4(1)	5 (1.3)	15(3.9)	33(8.6)	20 (5.2)	8 (2.1)
	Disagree	44 (11.4)	58 (15.1)	181(4.7)	245 (63.6)	151 (39.2)	86 (22.3)
	Either agree or disagree	205 (53.2)	83 (21.6)	136(35.3)	74 (19.2)	151 (39.2)	136 (35.3)
	Agree	119 (30.9)	217 (56.4)	51(13.2)	32 (8.3)	57 (14.8)	147 (38.2)
	Totally agree	13 (3.4)	22 (5.7)	2 (0.5)	1 (0.3)	6(1.6)	8 (2.1)
<b>Secondary</b>	Totally disagree	0 (0)	3 (1.1)	9 (3.3)	34 (12.6)	7 (2.6)	1(0.4)
	Disagree	78 (29)	25 (9.3)	176 (65.4)	196 (72.9)	167 (62.1)	33 (12.3)
	Either agree or disagree	150 (55.8)	38 (14.1)	69 (25.7)	23 (8.6)	79 (29.4)	106 (39.4)
	Agree	38 (14.1)	194 (72.1)	14 (5.2)	15 (5.6)	15 (5.6)	117 (43.5)
	Totally agree	2 (0.7)	8 (3)	0	0	0	11 (4.1)

**Table 4:** Other barriers involved in the implementation of HEP as perceived by teachers.

## Discussion and Conclusions

The knowledge and perceptions of teachers for SHEP in schools, as well as the barriers play a crucial role in the implementation of these programs in schools. SHEP have been decreased the last years in both primary and secondary schools in Greece [40]. Our research investigated all the factors that encourage or discourage teachers to implement SHEP in schools according to their opinions.

Demographic factors such as gender, age, years of service, the area of the school (urban, semi-urban, rural) and the employment type (permanent, part-time), are statistically significant for teacher's involvement in SHEP as suggested in literature [26,31]. Teachers who have implemented a SHEP in the last five years, in Greece, are mainly female, over 41 years old, have several years of service and mainly located in an urban area. The finding that women are more interested in SHEP than men agree with previous literature. We recorded the positive attitude of schoolteachers in SHEP [20,27,41]. Teachers' participation in SHEP seminars significantly affects their implementation of SHEP [20,22,27]. It is important that schools strive to garner support from other partner institutions, such as churches and community associations. It would be ideal for health and education professionals to acquire a permanent and professional position of empowering students, teachers and staff at schools, thus implementing the basic principle of health education [42]. The teacher's perspectives emphasized the need for the health promotion model to identify and address the determinants of the health-disease process. Nevertheless, SHEP in secondary schools have gradually been declining in recent years and our findings agree by other researchers [23,24].

There was a connection between demographic characteristics such as socio-economic and cultural conditions and SHEP. While there are specific social factors regarded as essential for the creation

of health, students are also thought as social players who can have a direct impact on the health-disease process. According to literature, the individual component involvement process is regarded as being a health promoter to the extent that they can redeem, for example, a sense of self-esteem and a feeling of value and social capital [43]. Teachers highlighted the influence of the characteristics of school's surroundings. The approach to health promotion emphasized by the Ottawa Charter implies that health is produced in the dynamic exchange between people and the environment in which they live [44]. Schools should be in a safe environment away from busy roads, hazardous industrial installations, and polluted areas [44,45]. The perceptions of teachers regarding factors related to health promotion influences their professional performance, where it is vital that these professionals acknowledge the environment to which they belong, in addition to the reality of all those involved in the school environment.

Several barriers reported in our study. Lack of appropriate conditions in the school environment such as the area, the school climate, the technical infrastructure, the lack of educational material are significant barriers as supported by other studies [22,36,37]. The bureaucratic process was also a major barrier, as in other studies [34,37,46]. The optional implementation of SHEP probably is a main reason for the reduced interest [32,36]. Another barrier is that schoolteachers consider SHEP is not included within their pre-defined educational tasks. Also, the lack of knowledge for health from their basic studies as well as from their subsequent training and the knowledge they receive regarding the design and implementation of SHEP [22,31,34,47-49].

Other barriers are the lack of incentives such as job advancement, bonuses, additional earnings, exemptions, recognition for teachers [29,30,33,35]. Secondary school teachers believe SHEP should be implemented by health professionals as it is recorded by other studies [29,46,50]. The difficulty in

implementing SHEP when there are students with learning difficulties is like other studies findings [47,51].

Other barriers, recorded in other studies as well, are the lack of support from competent authorities (state-regional), the lack of cooperation from colleagues [37,38] and the lack of support from parents [28,35,36]. Health policies identify the school environment as a privileged site for SHEP [45]. SHEP focus mainly on the promotion of knowledge of students, staff and the community involved [44]. The success of a SHEP is related to collaborative work conducted between the team, students, parents, and authorities in the areas of education and health within the school community [42,52].

To improve SHEP, it is essential that changes are made both in the process as well as the education of those involved. The literature emphasizes that for success of health education in school, it is important that SHEP be developed based on what students, teachers know [42,45]. The role of the school should be to improve future new citizens of a society on ethics, justice, and general welfare, thereby guaranteeing the sustainability of social advances achieved by collective action.

### **Implications for Practice**

Overall, results from the present study add to the knowledge base for health education and promotion, in Greek schools and internationally. Knowledge on barriers is limited about their actual practices and preferences; such knowledge is a necessary starting point for the development of successful SHEP to promote these kinds of knowledge in schools [45]. While it is likely that study findings are transferable to other countries teachers and school organization with similar infrastructure, variations in factors – e.g. access to infrastructure, outdoor-life, – between Greece and other countries may reduce the transferability of certain findings. For instance, knowledge about health promotion in Greece is found to be very average [22].

Nevertheless, findings suggest that those responsible for the design and implementation of measures for promoting health education in schools, both in Greece and internationally, should be aware of the health potential that may lie in school environments and teachers. Study findings related to the teachers' practices in and preferences for health education suggest specific measures: at the national level (e.g. health policies that ensure limited barriers in direct proximity to teachers' perceptions); at the local level (e.g. regional planning that includes the development and maintenance of schools that invite health promotion activities); and at the group or individual level (e.g. teachers who are trained in health education). Careful evaluations of such measures should be conducted to further strengthen the knowledge base in the field [22].

### **Study Limitations and Avenues for Future Research**

The limits of the data analysis are due to the practice of social sciences and quantitative methodology. It should be considered that the purpose of a quantitative study is to identify the entire range of questions for the participants. Although this study adds to existing knowledge, the limited sample size means that it only displays a preliminary picture of schoolteachers in Greece. To obtain an optimal knowledge base for SHEP, future research should attempt to explore this topic in larger samples, preferably using methodological approaches that allow the researchers to obtain an even more thorough understanding of the teachers' preferences and barriers. Further, as teachers cannot be treated as a homogenous group, it would be of interest to illuminate similarities and differences between subgroups of the teacher population (e.g. according to previous experiences with health promotion and school type). Quantitatively designed research studies would be particularly suitable in this context, and would also aid in assessing the generalizability of findings.

### **Acknowledgments**

The authors would like to thank Mr. Bagiorgos Andrew and Mrs. Strati Vicky for their contribution to the research. We are especially grateful to the teachers for offering their time and sharing their opinions with us.

### **Authors' Contributions**

SP designed the study and drafted the manuscript; EV and C provided advice on the study design; DG reviewed the manuscript. AV designed the study and drafted the manuscript; All authors have read and approved the final manuscript

### **Ethics Approval and Consent to Participate**

Ethical approval was granted by the Ethics Committee of the University of Patras (15/5/2020). Information about research was provided to the participating teachers. Prior written consent was obtained from the involved teachers before collecting the data. All identifiable information was recorded confidentially and will not be disclosed to any party other than the research team.

### **References**

1. Griebler U, Rozatz D, Simovska V, Forster R (2017) Effects of student participation in school health promotion: A systematic review. *Health Promot Int* 32: 195-206.
2. Lee A, Chee Lo AS, Keung MW, Amy Kwong CM, Wong KK (2019) Effective health promoting school for better health of children and adolescents: indicators for success. *BMC Public Health* 19: 1088.
3. Kolbe LJ (2019) School health as both a strategy to improve both public health and education. *Annu Rev Public Health* 40: 443-463.

4. Lee A, Lo A, Li Q, Keung V, Kwong A (2020) Health Promoting Schools: An Update. *Appl Health Econ Health Policy* 15: 1-19.
5. Woynarowska-Soldan M, Tabak I (2013) Zachowania prozdrowotne nauczycieli i innych pracowników szkoły [Health Enhancing Behaviors of Teachers and other School Staff]. *Medycyna Pracy* 64: 659-670.
6. Mckenzie T, Lounsbury MA (2013) Physical Education Teacher Effectiveness in a Public Health Context. *Res Q Exerc Sport* 84: 419-430.
7. Chin MK, Edginton CR (2014) Physical Education and Health. Global Perspectives and Best Practice. Sagamore Publishing LLC.
8. Storey KE, Montemurro G, Flynn J, Schwartz M, Wright E, et al. (2016) Essential conditions for the implementation of comprehensive school health to achieve changes in school culture and improvements in health behaviours of students. *BMC Public Health* 16: 1133.
9. Langford R, Bonell PC, Jones EH, Pouliau T, Murphy MS, et al. (2014) The WHO Health Promoting School framework for improving the health and well-being of students and their academic achievement. The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.
10. Birch DA, Auld EM (2019) Public Health and School Health Education: Aligning Forces for Change. *Health Promot Pract* 20: 818-823.
11. Kosiba G, Gacek M, Wojtowicz A (2020) Preparation of Teachers and of Teaching Specialisation Students for the Implementation of School Health Education-a Review of Research. *Educational Studies Review*.
12. Lohrmann DK (2010) A complementary ecological model of the coordinated school health program. *Journal of School Health* 80: 1-9.
13. Hahn AR, Truman IB (2015) Education Improves Public Health and Promotes Health Equity. *Int J Health Serv* 45: 657-678.
14. Videto DM, Dake JA (2019) Promoting Health Literacy Through Defining and Measuring Quality School Health Education. *Health Promot Pract* 20: 824-833.
15. Mann JM, Lohrmann KD (2019) Addressing Challenges to the Reliable, Large-Scale Implementation of Effective School Health Education. *Health Promot Pract* 20: 834-844.
16. Pulimeno M, Piscitelli P, Collazo S, Colao A, Miani A (2020) School as ideal setting to promote health and wellbeing among young people. *Health Promot Perspect* 10: 316-324.
17. Jourdan D (2011) Health education in schools: The challenge of teacher training.
18. Birch DA (2017) Improving schools, improving school health education, improving public health: The role of SOPHE members. *Health Educ Behav* 44: 839-844.
19. Jourdan D, Samdai O, Diagne F, Carvalho SG (2008) The future of health promotion in schools goes through the strengthening of teacher training at a global level. *Promot Educ* 15: 36-38.
20. Jourdan D, Simar C, Deasy C, Carvalho GS, McNamara PM (2016) School health promotion and teacher professional identity. *Health Educ* 116: 106-122.
21. Knisel E, Kleiner K, Bronikowski M, González Gross M, Martínková PI, et al. (2017) Health Promotion at School. *Pedagogical Aspects and Practical Implications*. Published by De Gruyter Open Ltd, Warsaw/Berlin.
22. Cholevas NK, Loucaides C (2012) Factors that facilitate and barriers towards the implementation of health educational programmes in primary education schools of the prefecture of Achaia, Greece. *Health Educ J* 71: 365-375.
23. Spyropoulou D (2008) Innovative Programs in Primary and Secondary Education: Functional Penetration and Sustainability. *Pedagogical Institute, Thessaloniki*.
24. Kadigiannopoulos G, Galanopoulou E, Galanopoulos A (2018) Health Education Programs in Secondary Education. *Archives of Greek Medicine* 35: 262-267.
25. Kadigiannopoulos G, Karavida M, Galanopoulou E, Galanopoulos A (2020) Sex education in secondary education in Greece. *Archives of Greek Medicine* 37: 267-272.
26. Mohammadi NK, Rowling L, Nutbeam D (2010) Acknowledging educational perspectives on health promoting schools. *Health Educ* 110: 240-251.
27. Jourdan D, McNamara MP, Simar C, Geary T, Pommier J (2010) Factors influencing the contribution of staff to health education in schools. *Health Educ Res* 25: 519-530.
28. Davo-Blanes CM, Garcia de la Hera M, La Parra D (2016) Health Education in Primary School: Alicante City (Spain) Teachers' Opinions. *Gac Sanit* 30: 31-36.
29. Stronge JH (2018) *Qualities of effective teachers* (3rd Edition). Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).
30. Bruening AR, Coronado F, Auld EM, Benenson G, Simone MP (2018) Health Education Workforce: Opportunities and Challenges. *Prev Chronic Dis* 15: E89.
31. Herlitz L, MacIntyre H, Osborn T, Bonell C (2020) The sustainability of public health interventions in schools: a systematic review. *Implement Sci* 15: 4.
32. Bennett EA, Cunningham C, Molloy JC (2016) An evaluation of factors which can affect the implementation of a health promotion programme under the Schools for Health in Europe framework Eval Program *Plann* 57: 50-54.
33. Borzucka-Sitkiewicz K, Kowalczywska-Grabowska K, Gawlik D, Lamczyk D (2017) Teachers' Opinions on Health Education Implementation in Polish Lower and Upper Secondary Schools. *The New Educational Review* 47: 151-161.
34. Boguslawski M (2018) Factors contributing to implementation of comprehensive school health education: A cross-sectional study (Unpublished dissertation). Indiana University, Bloomington. ProQuest Dissertations Publishing, 2018. 10982741
35. Schuler RB, Saksvig IB, Nduka J, Beckerman S, Jaspers L, et al. (2018) Barriers and Enablers to the Implementation of School Wellness Policies: An Economic Perspective. *Health Promot Pract* 19: 873-883.
36. Darlington JE, Violon N, Jourdan D (2018) Implementation of health promotion programmes in schools: an approach to understand the influence of contextual factors on the process? *BMC Public Health* 18: 163.
37. Day ER, Sahota P, Christian SM (2019) Effective implementation of primary school-based healthy lifestyle programmes: a qualitative study of views of school staff. *BMC Public Health* 19: 1239.

38. Hudson GK, Lawton R, Hugh-Jones S (2020) Factors affecting the implementation of a whole school mindfulness program: a qualitative study using the consolidated framework for implementation research. *BMC Health Serv Res* 20: 133.
39. Petrakos G, Saratsis Y (2000) Regional Inequality in Greece. *Papers in Regional Science* 79: 57-74.
40. Bartsokas C, Jelastopulu E (2020) Health resources allocation inequalities in a deprived Greek region: Differences between primary care and hospital sector. *Achaiki Iatriki* 40: 38-43.
41. Paakkari L, Tynjala P, Kannas L (2010) Student teachers' ways of experiencing the objective of health education as a school subject: A phenomenographic study. *Teaching and Teacher Education* 26: 941-948.
42. Lucarelli JF, Alaimo K, Mang E, Martin C, Miles R, et al. (2014) Facilitators to promoting health in schools: is school health climate the key? *J Sch Health* 84: 133-140.
43. Meyer JP, Becker TE, van Dick R (2006) Social identities and commitments at work: Toward an integrative model. *Journal of Organizational Behavior* 27: 665-683.
44. Maring FE, Koblinsky AS (2013) Teachers' challenges, strategies, and support needs in schools affected by community violence: a qualitative study. *J Sch Health* 83: 379-388.
45. Adamowitsch M, Gugglberger L, Dur W (2017) Implementation practices in school health promotion: Findings from an Austrian multiple-case study. *Health Promot Int* 32: 218-230.
46. Göksoy S, Akdağ KS (2014) Primary and Secondary School Teachers' Perceptions of Workload. *Creative Education* 5: 877-885.
47. Toli T, Sourtzi P, Tsoumakas K, Kalokerinou-Anagnostopoulou A (2013) Association between Knowledge and attitudes of educators towards epilepsy and the risk of accidents in Greek schools. *Epilepsy Behav* 27: 200-203.
48. Karakiozis K, Foulidi X, Papakitsos EX, Papanousi C, Theologis E, et al. (2016) Detection of training needs of the teachers of the Department of Public Administration. West Attica in the context of the implementation of the School Activities programs. *Erkyna, Review of Educational-Scientific Issues* 11: 157-171.
49. Kourmousi N, Koutras V (2018) School Health Education: suggestions of international organizations and modern operation of the institution in Greece.
50. Jourdan D (2012) The formation of the actors of education in the middle school. Toulouse: University Editions of the Sud "cole et Santé Collection. 401 p.
51. Prelock AP, Hutchins LT (2018) Children with Learning Disabilities or Specific Learning Disorders. *Clinical Guide to Assessment and Treatment of Communication Disorders* 65-74.
52. Sheiham A, Watt RG (2000) The common risk factor approach: a rational basis for promoting oral health. *Community Dent Oral Epidemiol* 28: 399-406.