WORLD HEALTH ORGANIZATION
EUROPE

Pairing Children with Health Services

The results of a survey on school health services in the WHO European Region

ABSTRACT

This publication presents the results of the survey on school health services (SHS) organization in the WHO European Region. Data from 37 Member States on school health services governance, organizational aspects and service delivery models, staffing, content and main challenges are presented. The results reveal that overall school health services are largely available in Member States, and the organizational arrangements are such that make it possible, in principle, for a pupil to access SHS when there is a need. Although challenges and solutions for SHS strengthening are very much country specific, there are common opportunities to improve the relevance of the service to pupils' health and development needs. They lie in making the access to and quality of school health services more even within the countries and for all groups of young people, to better align the content of SHS with health priorities, to improve workforce knowledge and skills by putting in place specialized training programmes, and more active involvement of families/carers and teachers in school based health promotion programmes. Health systems issues such as inadequate funding, shortage of personnel employed in the SHS, insufficiently defined position of SHS in the educational institutions, and unclear division between the responsibilities of school nurses, school doctors and GPs/family doctors needs to be addressed to improve SHS. To tackle the existing challenges there is a strong need to advocate the importance of SHS with the relevant authorities, using data on the effectiveness of the school health services. Guidelines, recommendations, standards and tools for capacity building, performance assessment and service organization may support Member States in their endeavours, as well as cross-countries experience sharing.

Keywords

SCHOOL HEALTH SERVICES – organization and administration - trends
HEALTH SERVICES ACCESSIBILITY
QUALITY OF HEALTH CARE
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Summary of the survey results and implications for actions

1. **Governance:** Ministries of health and local health authorities are the most frequently mentioned as responsible for school health services (SHS) scope and content, personnel employment, training and supervision, and funding. Quite often, one or several of these functions are shared with the ministry of education and other bodies. The functions of overseeing the scope and content of the services and personnel employment, training and supervision are often split between different agencies. This has implications for the need of good coordination between them in order to ensure, for example, that personnel skills are up to the requirement of the scope of the service. If various agencies share a responsibility within a single function, the need for coordination and good dialogue is no less important. Knowing “who is doing what” helps tailor advocacy messages to the right agency. The fact that in many countries[1] SHS are funded in a different way than the general health care provision may require more flexibility from the ministries of health on how to advocate for sustainable and adequate financing.

2. **Availability and accessibility**: The survey reveals that the availability of SHS in the WHO European Region is high, and the organizational arrangements are such that make possible in principle, for pupils to access SHS when there is a need. Out of 37 respondent countries only 3 have no school health services. About half of the respondent countries mentioned that SHS organization and provision is more or less homogeneous within the country and there are no great variations between regions/districts/municipalities. In 41% responses indicated that variations in the SHS organization and provision may exist, even if national regulations should be followed, and reasons for variations vary. Respondents pointed to the uneven access to SHS within the country as an issue of concern. One of the explanations for reported variations may lie in the degree of autonomy that local authorities have in SHS provision. While local autonomy makes possible better tailoring of the services to specific needs of a given population, mechanisms should be in place to ensure that decentralization of SHS does not prevent pupils from certain areas and certain groups to access high quality services.

3. **Content:** In the last five years SHS reforms have been going on in half of the countries; in consequence, in each third case it is perceived that the quality of the services offered to the pupils have improved considerably. However, despite the fact that the nature of the health problems have been changing over the last decade and there are new problems that the young people have to face nowadays (e.g. life style health related issues, mental health), one quarter of the respondents pointed out that last revision took place more than ten years ago. In 41% of respondent countries the link between priority health and development problem of pupils, and SHS content, is at best partial. There seems to be a gap between the activities currently performed by SHS and those that are perceived as priority. Despite the fact that evidences question the effectiveness of many types of screenings traditionally performed by SHS, screenings are still their major preoccupation. The survey didn’t reveal, however, whether screenings are used for early detection of certain conditions only or used “in a package” as an opportunity for health promotion. Respondents pointed that more prominence should be given to health promotion activities and individual counselling/health dialogues. Consequently, the majority of respondents (76%) think there is a need to revise SHS in their country. The most quoted subjects for revision were the scope and content of the service, health

[1] For convenience, hereafter we will use interchangeably the term “respondent(s)”, “respondent country(ies)”, “country(ies)”. We will refer to “countries” as a group of countries that are represented in the survey and answered a particular question, and not as a group of Member States of the WHO European region.

outcomes SHS contribute to, personnel-to-pupil ratios, the role of the General Practitioner (GP)/family doctor team, and the job description of the SHS personnel.

4. **Staff and skills:** Staff shortage and unequal distribution across the country, inexistent "entry" training in most of the respondent countries, and inadequate training to perform tasks related to health promotion and linkages with parents, teachers and community services are listed as main problems. 80% of respondents consider that current personnel-to-pupil ratios are inadequate, 92% of countries consider that there is either some, or severe, shortage in SHS personnel, and two thirds consider that SHS personnel is either somewhat, or not trained, on how to deal with specific issues of adolescents. In 60% of countries no specialization is needed as prerequisite for employment.

5. **Main challenges and support required:** The main challenges that SHS face today, according to the respondents, are lack of adequate funding (reported by nearly 80% of the respondents), insufficient involvement of families/carers or teachers in the health promotion programmes, shortage of SHS personnel and its inadequate training, uneven access to SHS across country, and inequalities in access to services for some groups of young people. To tackle the challenges, respondents think it is absolutely necessary to advocate the importance of SHS with the relevant authorities within the countries; particularly useful in this respect would be gathering data on the effectiveness of the school health services. More work needs to be done to clarify the position of SHS in the educational institutions, and establish a clearer division between the responsibilities of school nurses, school doctors and GPs/family doctors. WHO may support Member States, according to respondents, by issuing guidelines/ recommendations, facilitating experience sharing among countries, show the evidence about SHS effectiveness, advocate the importance of SHS with the decision-makers, provide assistance in capacity building, formulating regulations and setting up standards, and develop tools for the evaluation of SHS' performance.

Introduction

Schools are currently the best (perhaps the only) institution that reaches the majority of adolescents on an almost everyday basis. School health services (SHS) are therefore well-placed to contribute to adolescent health and development. However, their potential is underexplored. The experience of the Schools for Health in Europe (SHE), an European initiative including 43 countries in the European Region, shows that SHS is an excellent asset for a health promoting approach, but that requires a different skills set for school health personnel, especially taking into account that nowadays health priorities and needs of adolescents changed greatly in last 20 years. The primary care nature of school health services, as being the first point of contact with health systems for many adolescents, needs to be better exploited, and linkages with community services and integrated approach to health promotion should be strengthened.

In order to generate evidence about SHS organization in WHO European Region, its content and relevance to pupils needs, the degree of the orientation towards health promotion and its primary health care approach, the WHO Regional Office for Europe conducted a questionnaire-based survey in Member States.

Survey methodology

Questionnaires were designed in a health system framework and were looking at issues like governance, organization and service delivery models, staffing, content of the SHS and main challenges.

They were sent to 52 Member States. We targeted the Government Chief Nurses (GCN) as per the WHO directory URL: http://www.euro.who.int/nursingmidwifery/partner/ChiefNurses and national focal points in the ministries of health for child and adolescent health. For countries where we had no relevant contacts in WHO directories, we contacted the WHO Country Offices and WHO Collaborating Centres to identify persons in the government that had the expertise necessary to fill in the questionnaire, individually or in a team.

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Results

Response rate and participating Member States

The response rate was 71% and the below results are drawn from 40 filled questionnaires from 37 Member States, Fig. 1 (2 questionnaires from the United Kingdom, one referring to Northern Ireland only, the other to the United Kingdom in general, and 3 questionnaires from Switzerland, from the cantons of Geneva, Vaud and Zurich). From Belgium the questionnaire referred to Flanders, and from Bosnia Herzegovina to the Republic of Srpska.

Fig.1 Member States participating in the survey

Governance

Ministries of Health and Local health authorities are responsible, in the majority of the countries, for the SHS organization (70% and 51% respectively, Table 1).
Table 1. Authorities responsible for SHS organization (scope and content of service)

	Ministry of Health	Ministry of Education	Local Health Authorities	Local Education Authorities	Other authority
Albania	x				
Armenia	x				
Austria					
Azerbaijan	x	x			x
Belgium (Flanders)	x	x			x
Bosnia Herzegovina (Republic of Srpska)	x	x	x		
Bulgaria	x				
Croatia	x				
Cyprus	x				
Denmark			x		
Estonia	x				x
Finland	x		x		
Georgia					
Hungary			x		x
Iceland			x		
Israel	x	x	x		
Italy	x	x	x	x	
Kazakhstan	x		x		
Latvia	x	x	x	x	
Lithuania	x	x			
Luxembourg	x				
Malta	x				
Netherlands	x		x	x	
Northern Ireland	x		x		
Norway	x				x
Portugal			x		
Republic of Moldova	x				
Romania	x				x
Slovenia	x		x		
Spain	x	x	x	x	
Sweden	x	x	x	x	
Switzerland Geneva		x			
Switzerland Vaud			x	x	
Switzerland Zurich			x	x	
Tajikistan			x	x	
The former Yugoslav Republic of Macedonia	x				x
United Kingdom			x		

Local health authorities are responsible for SHS personnel employment, training and supervision in 46% of participating countries, Ministry of Health in 43%, another authority in 41% of the countries (Table 2).

Table 2. Authorities responsible for SHS personnel employment, training and supervision

	Ministry of Health	Ministry of Education	Local Health Authorities	Local Educational Authorities	Other authority
Albania			x		
Armenia	x		x		
Austria		x			x
Azerbaijan	x	x			x
Belgium (Flanders)					x
Bosnia Herzegovina (Republic of Srpska)	x				
Bulgaria			x		x
Croatia	x	x			x
Cyprus	x				
Denmark			x		
Estonia	x				x
Finland		x	x		x
Georgia					
Hungary					x
Iceland			x		
Israel	x	x	x		
Italy			x		
Kazakhstan				x	
Latvia			x	x	x
Lithuania			x		x
Luxembourg	x		x		
Malta	x				
Northern Ireland					x
Netherlands	x	x			x
Norway					x
Portugal	x				
Republic of Moldova	x	x		x	
Romania	x		x		x
Spain	x				
Slovenia	x				
Sweden			x	x	
Switzerland Geneva		x			
Switzerland Vaud			x		x
Switzerland Zurich			x	x	
Tajikistan			x		
The former Yugoslav Republic of Macedonia	x				
United Kingdom			x		

18 respondents (49%) stated that the ministry of health is the authority responsible for the financing of SHS (Table 3), 12 (32%) said the authorities responsible are the local health

authorities. Both the ministry of health and local health authorities are responsible for SHS funding in 6 countries (16%).

Table 3. Authorities responsible for the funding of SHS

	Ministry of Health	Ministry of Education	Local Health Authorities	Local Educational Authorities	Other authority
Albania	x				
Armenia	x		x		
Austria					x
Azerbaijan	x	x			x
Belgium (Flanders)		x			
Bosnia Herzegovina (Republic of Srpska)	x		x		
Bulgaria					x
Croatia					x
Cyprus	x				
Denmark			x		
Estonia			x		x
Finland	x		x		
Georgia					
Hungary					x
Iceland	x				
Israel	x	x	x		
Italy					
Kazakhstan	x		x	x	
Latvia				x	
Lithuania				x	
Luxembourg	x				x
Malta	x				
Netherlands	x		x		
Northern Ireland	x		x		
Norway					x
Portugal	x				
Republic of Moldova				x	
Romania	x				
Slovenia	x				
Spain	x				
Sweden				x	
Switzerland Geneva		x			
Switzerland Vaud			x		x
Switzerland Zurich			x	x	
Tajikistan			x		
The former Yugoslav Republic of Macedonia	x				
United Kingdom			x		

In 35% of respondent countries, SHS are funded in a different way than general health care provision (Table 4).

Table 4. Are the SHS funded in the same way as general health care in your country?

SHS funded in the same way as general health care provision	SHS funded in a different way than the general health care provision
Albania	
Armenia	
Azerbaijan	
Bosnia Herzegovina (Republic of Srpska)	Austria
Croatia	Belgium (Flanders)
Cyprus	Bulgaria
Denmark	Georgia
Estonia	Israel
Finland	Latvia
Hungary	Lithuania
Iceland	Netherlands
Italy	Romania
Kazakhstan	Sweden
Malta	Switzerland Geneva
Northern Ireland	Switzerland Vaud
Norway	Switzerland Zurich
Portugal	
Republic of Moldova	
Slovenia	
Spain	
Tajikistan	
The former Yugoslav Republic of Macedonia	
United Kingdom	
Luxembourg	

For the countries that answered that SHS are funded differently from the general health care provision, some examples are given in Table 5.

Table 5. Source of funding of SHS for selected countries

Austria	Regional/Municipality budget
Belgium	SHS is fully funded by Ministry of Education, while general health care provision is paid partially by the patient and social insurance
Bulgaria	Municipality budget
Georgia	School budget
Israel	Independent provider organization
Latvia	local government
Lithuania	Municipality budget
Romania	General Budget by the Ministry of Health /general health care statutory health insurance
Sweden	Municipality budget
Geneva	Budget only from the educational department
Vaud	Cantons and communes
Zurich	taxes /fee for service partially covered by health insurance

SHS organization and provision within the countries are more or less homogeneous and there are no great variations between regions/districts/municipalities in about half of the responses (Table 6). In the next biggest group of countries (41%), variations in the SHS organization and provision may exist, even if national regulations should be followed. In latter cases, the reasons for variations vary: in Denmark and Lithuania this is because municipalities have some degrees

of autonomy, in Norway this is because of uneven capacity, in Hungary it is related to the lack of proper consultations rooms in some areas of the country. In the Netherlands, the SHS is part of the preventive youth health programme, whose aim is to follow the development of all children from 0-19; and municipalities add activities which are targeted to specific risk groups or to specific health problems in the area and the local public health service offers a health education programme in cooperation with the school.

Table 6. Variations in SHS provision within the countries

No great variations in SHS between regions/districts/ municipalities	Regions/districts/municipalities have a great deal of autonomy	National regulations should be followed, but still variations exist
Albania	Georgia	Austria
Armenia	Italy	Denmark
Azerbaijan	Sweden	Estonia
Belgium (Flanders)	Switzerland Geneva	Finland
Bosnia Herzegovina	Switzerland Zurich	Hungary
Bulgaria		Israel
Croatia		Latvia
Cyprus		Lithuania
Denmark°		Netherlands*
Iceland		Norway
Kazakhstan		Romania
Malta		Slovenia
Northern Ireland		Spain
Portugal		Sweden
Republic of Moldova		United Kingdom
Switzerland Vaud		
Tajikistan		
The former Yugoslav Republic of Macedonia		

Denmark, Sweden and the Netherlands are good examples of why variations may exist even if national guidance is in place (this is also why Denmark and Sweden put themselves into two categories). In Denmark, the National Board of Health has published guidelines in accordance with legislation. The guidelines concerning the preventive health schemes for children and adolescents are followed by the 98 municipalities in Denmark; variations exist as to how many classes the municipality decides shall have general access to the SHS and as to the methods used in SHS. The school law in Sweden states that there should be a school health care doctor and nurse for the pupils. There is no regulation on the time needed. There is therefore a great difference according to the nation and even between schools in the same municipality.

In the Netherlands, the SHS is part of the preventive youth health programme. The aim of the programme is to follow the development of all children (physically, socially, and emotionally) from 0-19 in order to identify risks and take action when necessary. In addition to the national part of the programme, municipalities add activities which are targeted to specific risk groups or to specific health problems in the area. In addition to the programme, the local public health service offers, in cooperation with the school, a health education programme.

Organization of service provision

The majority of the respondent countries, 56%, have reported that their SHS are based in schools with half of them also having providers from primary care facilities involved in SHS provision (Table 7).

Table 7. Organization of SHS provision

A. SHS is school based	B. SHS is a distinct entity/structure in the health system but SHS personnel are not based in the school; they perform visits in schools from the catchment area according to existing plans/ schedules	C. Certain health services to pupils are offered by health care providers based in primary health care facilities	D. Mixture of A and C	E. Mixture of B and C	F. There is no SHS in the country
Austria Denmark Georgia Iceland Kazakhstan Latvia Northern Ireland Norway Republic of Moldova Sweden Switzerland- Geneva Canton	Belgium (Flanders) Croatia Cyprus Israel Italy Malta Netherlands Slovenia Spain United Kingdom	Bosnia-Herzegovina (Republic of Srpska) Portugal	Albania Armenia Azerbaijan Bulgaria Estonia Finland Hungary Lithuania Romania Switzerland- Vaud Canton Tajikistan	Luxembourg Switzerland-Zurich Canton The former Yugoslav Republic of Macedonia	Czech Republic Slovakia Kyrgyzstan

In most of the cases (59%) SHS personnel tend to work in a team. In countries in which primary care providers and/or specialists are involved in SHS provision, in half of the cases health care providers periodically visit pupils in school, and in half of the cases pupils go periodically to the GP/family doctor's office and/or health care specialists. In 30% of the countries the SHS personnel do not have a room available for use in every school.

In 50% of the countries which took part in the survey, pupils get in contact with the SHS personnel as often as needed; however, 9% responded that pupils have a chance of contact with SHS personnel just three times from entry to graduation, or less (Fig. 2).

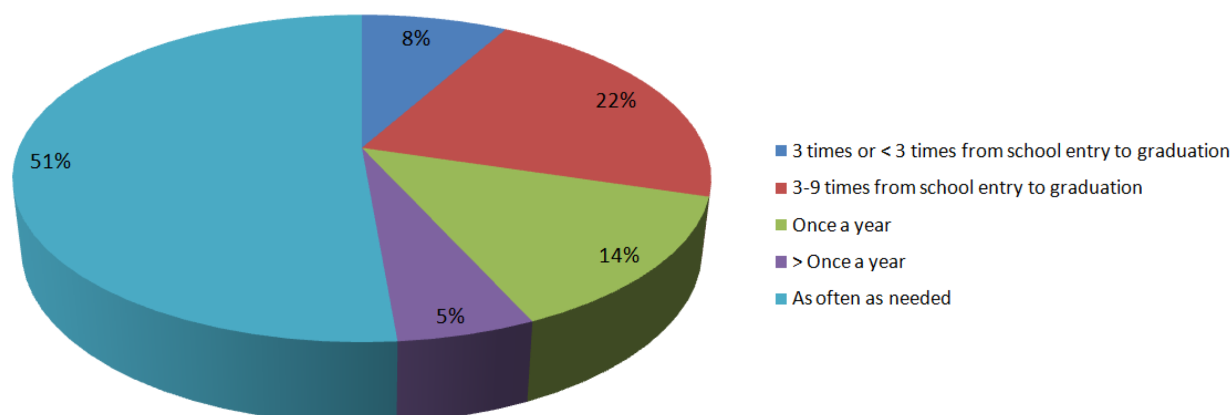

Fig. 2. How often EACH pupil has the opportunity for individual contact with SHS personnel

Target group and priority health and development needs

Generally, the pupils covered by the service provision are those aged 6 to 18, but in some countries, children in pre-school age can also benefit from the services, and in some cases the offer is extended until the age of 20 (Table 8).

Table 8. Age groups covered by the SHS

Albania	3-18
Armenia	6-17
Austria	6-18
Azerbaijan	All age groups
Belgium (Flanders)	2.5-18
Bosnia Herzegovina (Republic of Srpska)	6-19
Bulgaria	6-19
Croatia	6.5-26
Cyprus	6-18
Denmark	6-16
Estonia	6-19
Finland	7-15
Georgia	6-18
Hungary	3-18
Iceland	6-16
Israel	6-15
Italy	0-18
Kazakhstan	All age groups
Latvia	1.5-3 and 7-18
Lithuania	6-19
Luxembourg	4-18
Malta	3-11
Netherlands	0-19
Northern Ireland	4-16 or 4-18 to pupils with special needs
Norway	6-20
Portugal	3-18
Republic of Moldova	6-18
Romania	3-university
Slovenia	6-19
Spain	6-16
Sweden	6-19
Switzerland Geneva	0-18
Switzerland Vaud	4-20
Switzerland Zurich	4-16
Tajikistan	adolescents from vulnerable families that are subject to active follow-up
The former Yugoslav Republic of Macedonia	6-19
United Kingdom	4-18

The priority health and development needs of the pupils are life-style health related issues, mental health and behavioural problems, mentioned by 97%, 86% and 76% of the participants respectively (Table 9).

Table 9. Priority health and development needs of the pupils

	Life-style related issues	**Mental health**	**Behavioural problems**	**Other (specify)**
Albania	x	x	x	
Armenia	x	x	x	x
Austria	x	x	x	Psychosocial health, oral health
Azerbaijan			x	
Belgium (Flanders)	x	x	x	Social problems, physical impairments, development disorders (mental-intellectual, language, motor)
Bosnia Herzegovina /Republic of Srpska)	x	x		
Bulgaria	x	x	x	
Croatia	x	x	x	Reproductive health, speech disorders/ learning difficulties, growth and development disorders
Cyprus	x	x	x	
Denmark	x	x		
Estonia	x	x	x	
Finland	x	x	x	Stress symptoms
Georgia	x		x	
Hungary	x	x		Paediatric oncology
Iceland	x	x	x	
Israel	x	x		
Italy	x	x	x	Vaccinations
Kazakhstan	x	x		
Latvia	x	x	x	Socioeconomic problems
Lithuania		x		
Luxembourg	x	x	x	
Malta	x		x	
Netherlands	x	x	x	Physical development, cognitive development, social aspects of health
Northern Ireland	x	x	x	

	Life-style related issues	**Mental health**	**Behavioural problems**	**Other (specify)**
Norway	x	x		Developmental needs
Portugal	x			
Republic of Moldova	x	x		Chronic conditions, developmental conditions
Romania	x	x	x	
Slovenia	x	x	x	
Spain	x		x	
Sweden	x	x	x	
Switzerland Geneva	x	x	x	
Switzerland Vaud	x	x	x	Infectious diseases
Switzerland Zurich	x	x	x	
Tajikistan	x	x	x	
The former Yugoslav Republic of Macedonia	x	x	x	
United Kingdom	x	x	x	

Content of the service

In the majority of countries (59%) there is an explicit link between the content of SHS and priority health and development needs of adolescents; however in 38% this link is only partial.

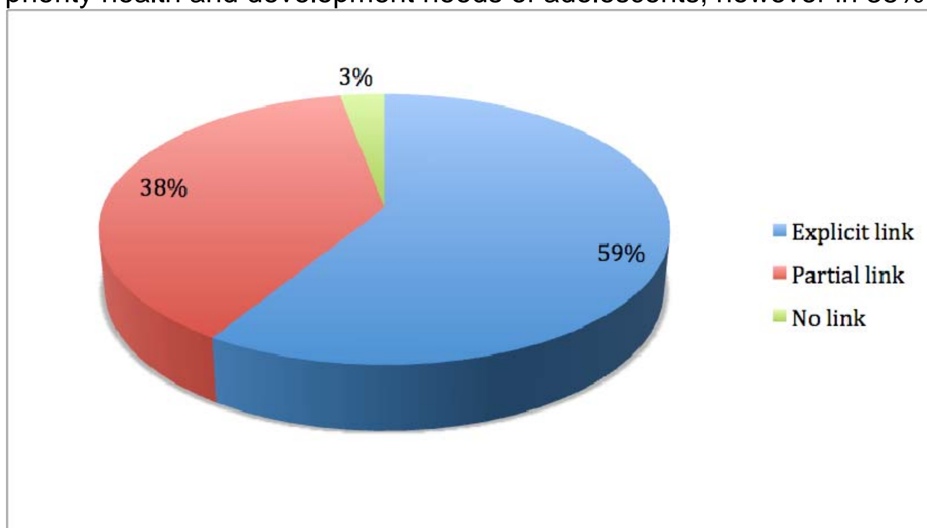

Fig. 3. Link between the content of SHS and priority health and development needs of the pupils

Screenings are performed in all countries except Bulgaria, Georgia, Norway and Spain. Almost a third of countries reported that SHS perform 6 screenings out 7 listed below (Fig. 4).

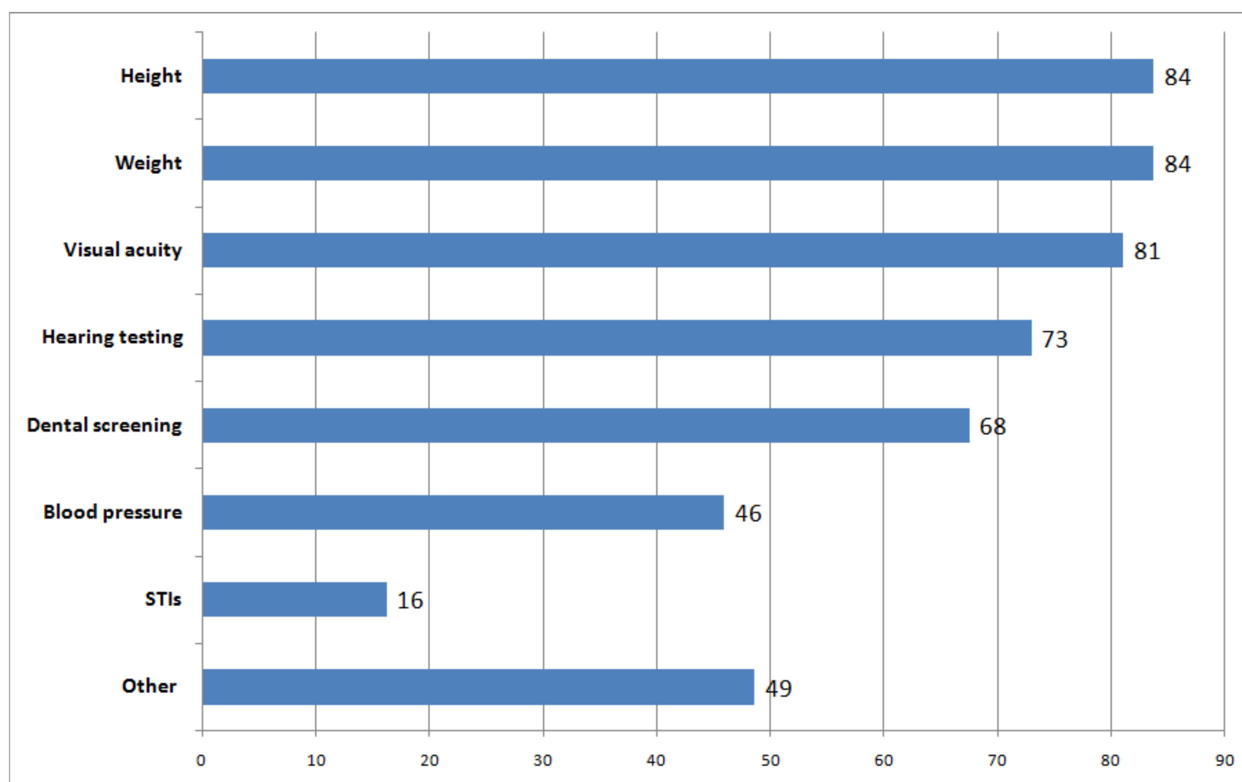

Fig. 4. Screenings performed in Member States as part of SHS provision

Apart from those listed in the questionnaire, other types of screenings were indicated by respondents. In the "other" screenings the most frequently reported was the scoliosis screening, followed by developmental screening (Table 10).

Table 10. Screenings performed in Member States as part of SHS provision

	Height	Weight	Visual acuity	Hearing testing	Blood pressure	Dental screening	STIs	Other
Albania	x	x				x		
Armenia	x	x				x		
Austria	x	x	x	x	x	x	x	Heart and Lung examination (not regularly)
Azerbaijan	x	x	x	x	x	x		Auscultation, vaccinations, skin, body temperature, examination of the mouth
Belgium (Flanders)	x	x	x	x		x		Puberty, scoliosis and posture, vaccination status
Bosnia Herzegovina	x	x	x	x	x	x		
Bulgaria								
Croatia	x	x	x	x	x	x	x	Colour vision, anemia, proteinuria, posture (scoliosis), thyroid gland examination, sexual development, behaviour, risk sexual behaviour, mental health, hypercholesterolemia
Cyprus	x	x			x	x		Medical examination (heart murmurs, skeletal anomalies, external genitalia examination in males), clolur blindness, scoliosis
Denmark	x	x	x	x	x	x		
Estonia	x	x	x	x	x			
Finland	x	x	x	x	x	x		Scoliosis, posture and structure
Georgia								
Hungary	x	x	x	x	x	x		Thyroid gland examination
Iceland	x	x	x	x				
Israel	x	x	x	x			x	Immunizations
Italy			x			x		Orthopedic screening, mycrocytemia
Kazakhstan	x	x	x	x	x	x	x	Orthopedic, neurologic end endocrinological screenings
Latvia	x	x	x	x	x			
Lithuania	x	x	x	x	x	x		
Luxembourg	x	x	x	x	x	x		Orthopedic screening, psychological status and psychomotricity
Malta	x	x	x					Development screening, scoliosis
Netherlands	x	x	x	x			on demand	Physical development, speech and language development, psychosocial development
Northern Ireland	x	x	x					
Norway								
Portugal	x	x	x	x		x	x	
Moldova	x	x	x	x	x	x		Orthopedic, neurologic screenings
Romania	x	x	x	x	x	x		Neurologic, endocrinological screenings
Slovenia	x	x	x	x	x	x		Scoliosis, occupational orientation
Spain								
Sweden	x	x	x	x				BMI, scoliosis
Switzerland Geneva	x	x	x	x		x		Scoliosis
Switzerland Vaud			x	x		x		
Switzerland Zurich	x	x	x	x	x	x		Development screening
Tajikistan	x	x	x	x		x		
Yugoslav republic of Macedonia	x	x	x	x		x		Blood and urine samples
UK	x	x	x	x				

In the majority of countries (80%), the school keeps and updates information concerning the health status of the pupils.

The main health promotion activities carried out by the SHS is group/classroom health promotion, which includes sexual education in all countries, with the exception of Georgia, Israel, Malta and Romania, and individual counselling and health dialogues (Fig. 5).

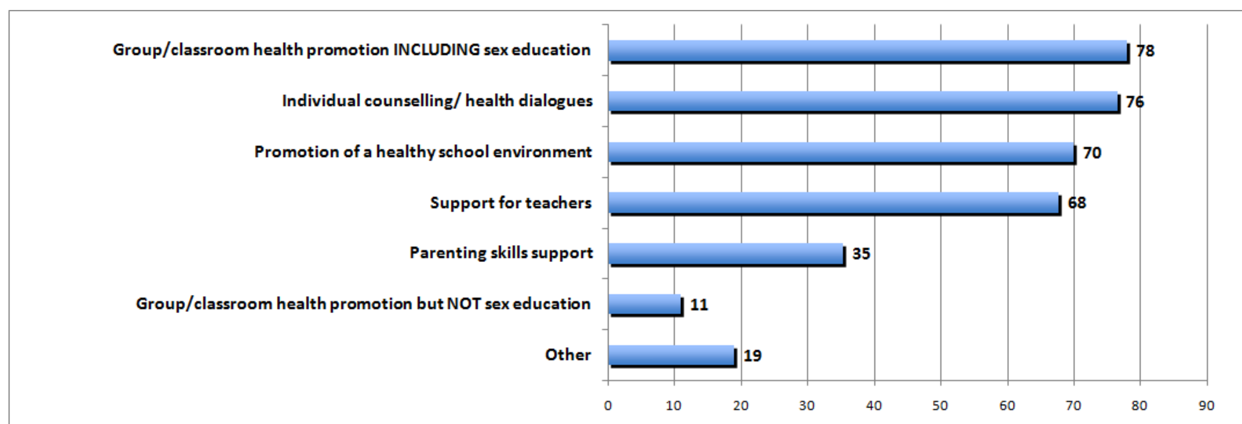

Fig. 5. Health promotion activities performed by SHS

Almost all respondents indicated that SHS are involved in developing and/or implementing specific programmes on health related issues (Fig. 6)

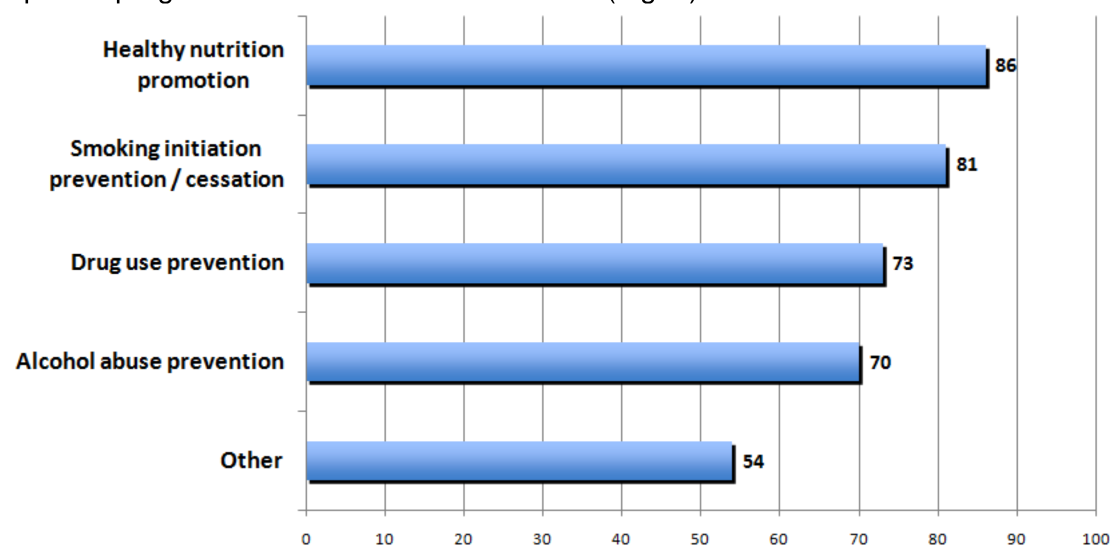

Fig. 6. Specific programmes developed and/or implemented by SHS

Involvement in vaccinations, referrals for health conditions, infection control and surveillance of the schools hygiene conditions are the major preoccupations in disease prevention and management category (Fig. 7)

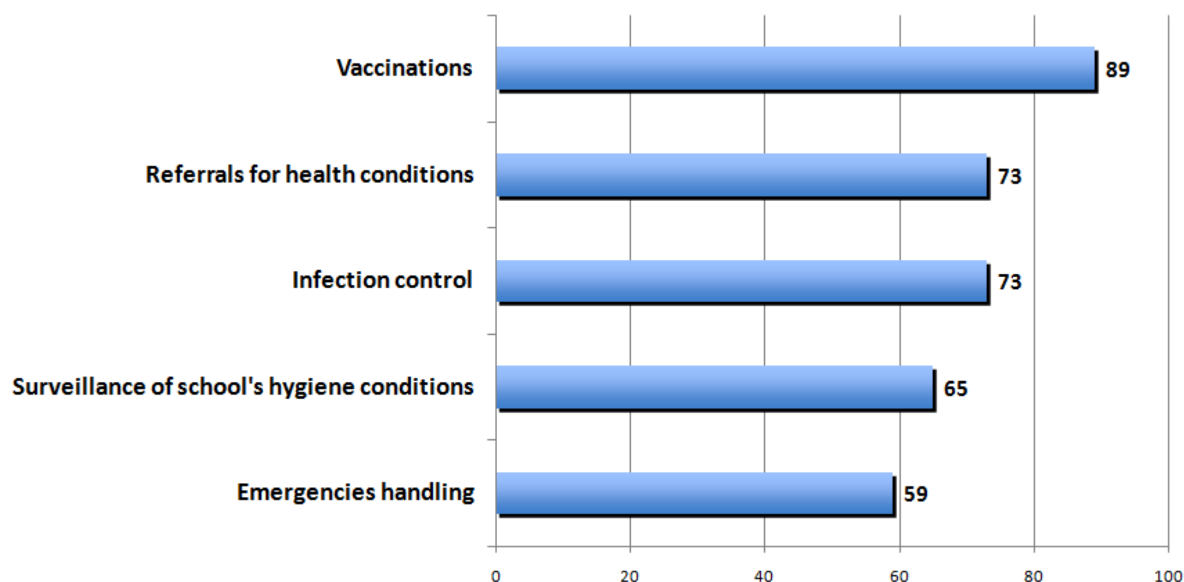

Fig. 7. Disease prevention and management activities performed by SHS

43% of the countries reported that SHS are involved in the management of pupils with chronic illnesses and special health care needs (such as asthma, diabetes, neurological conditions etc.). In about half of the countries SHS personnel are not involved in delivering direct medical care (49%).

On average, the majority of SHS personnel time is currently spent in screenings, with vaccination as second and group/classroom health promotion as third place. However, according to respondents, SHS personnel should spend more time in individual counselling/health dialogues, group/classroom health promotion and working with teachers and the community (the biggest gap is particularly felt in the field of health promotion); less time should be spent instead in immunizations, direct medical care, screenings and hygiene control.

76% of the respondents think that there is a need for revision of SHS scope/ content in their country, whereas 16% don't think there is need for a revision in the way SHS operates in their county (Fig. 8).

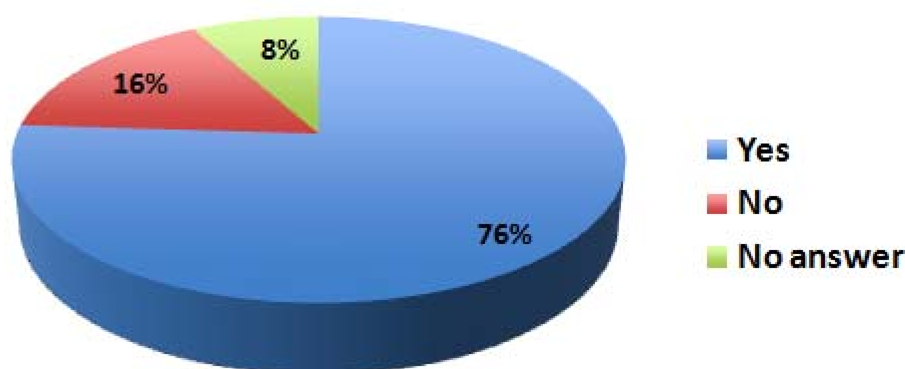

Fig.8. Do you think there is a need for revision of SHS scope and/or content in your country?

To the question "What do you think needs to be revised in the way SHS operates in your country?" (multiple answers could be given) 75% among the participants who answered said that there is a need for revision of SHS scope and content in their country, and that it is the kind of services delivered that should be revised; 64% mentioned the health and development outcomes the SHS contributes to; 64% the personnel-to-pupil ratios, 57% the role of general practitioner/family doctor teams; 46% the job description of SHS personnel; 21% gave another reason and 25% of the respondents did not give any answer.

Staff availability and distribution

In more than a half of the countries (59%), both the school nurse and the school doctor are involved in the service provision. The health care providers based in the schools are most frequently the school nurse, followed by the school doctor and the psychologist (Fig.9).

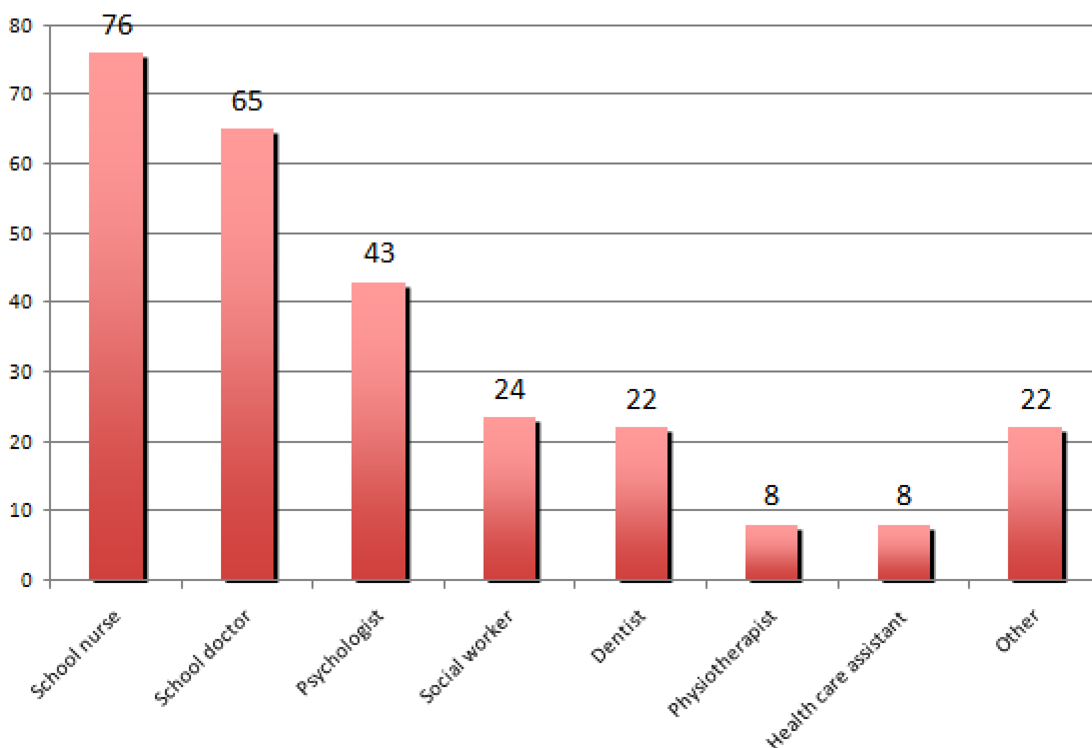

Fig. 9. The health care providers based in the schools

For the suggested composition of SHS team, respondents said that SHS content should be focalized more on the social aspects of health: psychologists and social workers are the professionals that should be given more prominence. The other important professionals to be involved are nutritionists, health promoters and health care specialists such as paediatricians or gynaecologists.

In most of the countries (92%), there is either some, or a severe, shortage in SHS personnel (Fig.10).

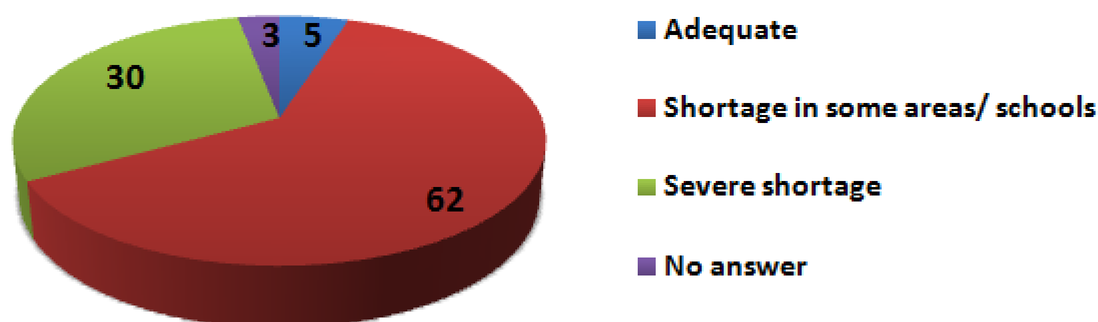

Fig. 10. Staffing of the SHS

An overview per countries is also provided (Table 11).

Table 11. Situation with the staffing of the SHS in each Member State

	Adequate	Shortage in some areas/schools	Severe shortage
Albania		■	
Armenia		■	
Austria			■
Azerbaijan	■		
Belgium (Flanders)		■	
Bosnia Herzegovina			■
Bulgaria		■	
Croatia		■	
Cyprus		■	
Denmark		■	
Estonia		■	
Finland		■	
Georgia		■	
Hungary		■	
Iceland		■	
Israel		■	
Italy		■	
Kazakhstan		■	
Latvia		■	
Lithuania		■	
Luxembourg			■
Malta			■
Netherlands	■		
Northern Ireland		■	
Norway			■
Portugal			■
Romania			■
Slovenia			■
Spain			
Sweden		■	
Switzerland Geneva			■
Switzerland Vaud		■	
Switzerland Zurich		■	
Republic of Moldova		■	
Tajikistan			■
The former Yugoslav Republic of Macedonia		■	
United Kingdom			■

As far as personnel-to-pupil ratios are concerned, 80% of the countries who provided an answer to this question stated that current ratios are not adequate to guarantee a quality SHS.

Some of the examples of currently employed ratios, and respondent opinion on what a more adequate ratio would be, are given in Table 12.

Table 12. Personnel-to-pupil ratios currently specified by existing regulations and ratios suggested by the respondents in order to ensure the quality of the SHS

	Ratios currently specified by existing regulations	Ratios deemed necessary to ensure the quality of SHS according to the respondents
Albania	Not specified	1:800 (nurse) 1:1500 (doctor)
Armenia	1:350 (nurse)	1:350 (nurse)
Austria	1 weekly hour per 60 pupils	1 weekly hour per 45 pupils
Azerbaijan	1:2000 (nurse); 1:1500 (doctor)	Not specified
Belgium (Flanders)	On the basis of the academic year and educational type each pupil receives a weighted coefficient. The personnel available for about 11.000 weighted pupils implies 1 manager, 1 doctor, 2 psycho-pedagogic consultants, 2 social workers, 2 paramedical workers (preferably nurse) and 1 administrative collaborator.	Due to lack of money, priorities of care should be set, because the number of pupils to be taken care of per professional is too high to cover all demands.
Bulgaria	1:800 (nurse), 1:2000 (doctor)	Not specified
Croatia	1 SHS team (school doctor & school nurse) per 5000 pupils	1 SHS team per 3000 pupils in primary and secondary schools or 5000 students
Cyprus	1:2000 (nurse); 1:7500 (doctor); 1:9800 (dentist)	1:1500 (nurse); 1:4500 (doctor); 1:4900 (dentist)
Estonia	1:600 (nurse); 1:7000 (doctor) but 1:200 (doctor) in draft legislation	1:600 or 1:200 in special schools (nurse)
Finland	1:600 (nurse) 1:2100 (doctor)	Previous ratios are deemed to be appropriate by the respondent
Georgia	1:1270 nurses /doctors	1/260
Iceland	1:800 (nurse)	1:500 (nurse)
Israel	Prior to the reform it had to be 1: 1500 (nurse) and 1:6000 (doctor)	1:1250 (nurse); the school doctor to pupils ratio would depend on the role of the school doctor within the school system.
Kazakhstan	1:600 (nurse); 1:2000 (doctor)	1:900 (doctor)
Lithuania	1 specialist every 1000 pupils	1 specialist every 500 (urban areas) or 200 (rural areas) pupils
Malta	1:2300 (nurse); 1: 6300 (doctor)	1:750 (nurse); 1: 1000 (doctor)
Netherlands	Not specified	The current situation is OK
Norway	One man-labour year per 1000 pupils in primary and lower secondary education schools. It is slightly less in upper secondary schools	The man-labour year should be increased 50 to 100% to ensure the quality of the SHS
Portugal	1 SHS team (school doctor & school nurse) every 2500 students	1 nurse in each school with more than 500 students
Romania	Kindergarten: one nurse every 60-100 kids Primary and secondary schools: one doctor/2000-2500 pupils, one nurse/800-1000 pupils University: one doctor every 3000 students and one nurse/1500 students. Dentists: one every 100-1500 pupils	Previous ratios are deemed to be appropriated by the respondent

	Ratios currently specified by existing regulations	Ratios deemed necessary to ensure the quality of SHS according to the respondents
Republic of Moldova	<250 pupils – 0.5 position health personnel; 251-500 pupils – 1 position health personnel; 501-750 – 1.5 positions health personnel; >750 pupils – 2 positions health personnel	1 position health personnel each 250 pupils. Should vary depend on the type of educational institution (kindergarten, primary school, secondary school)
Slovenia	1: 1995 (doctor)	1:1200-1500 pupils (doctor)
Spain	Not specified	1 school nurse per school
Sweden	40 weekly hours per 400 pupils (nurse); 40 weekly hours per 10.000 pupils (doctor)	40 weekly hours per < 400 pupils (nurse); 40 weekly hours per <4000 pupils (doctor); 40 weekly hours per <1000 pupils (psychologist); 40 weekly hours per <2000 pupils of 6-12 age years old or per <1000 pupils of 13-19 years old (social worker)
Switzerland Geneva	About 1:1900 (nurse); 1:10.000 (doctor); 1:6000 (health educator); 1: 20.000 (technician); 1:5000 (nutrition specialist)	1:700 (nurse); 1:5000 (doctor)
Switzerland Vaud	1:1800 (nurse)	1:1200 (nurse)
Tajikistan	1:4000	1:1000 – 1:500 1 doctor position + 1.5 nurse positions per 2000 pupils
The former Yugoslav Republic of Macedonia	1:1500 (nurse); 1:3000 (doctor)	1:1000 (nurse); 1:2000 (doctor)

There was no national information available with regard to the full or part time employment of SHS personnel, therefore 13,5% of the respondents did not answer this question. From the answers given, it looks like the school nurse is more often employed full time in school, as compared to the school doctor. Usually, if there is a full-time doctor based in school, there is also a school nurse.

Staff skills

Two thirds of respondents considered that SHS personnel is either only somewhat trained, or not trained, on how to deal with specific issues of adolescents. In 60% of the countries, no specialization in school health is needed as a prerequisite for employment (Table 13).

Table 13. What kind of education is a legal prerequisite for employment in School Health Care?

	No specialization in school health is needed	Specialization in school health is available and needed
Albania	■	
Armenia	■	
Austria	■	
Azerbaijan		■
Belgium (Flanders)		■
Bosnia Herzegovina (Republic of Srpska)	■	
Bulgaria	■	
Croatia		■
Cyprus	■	
Denmark		■
Estonia	■	
Finland		■
Georgia	■	
Hungary		■
Iceland	■	
Israel	■	
Italy	■	
Kazakhstan		
Latvia		■
Lithuania	■	
Luxembourg	■	
Malta	■	
The Netherlands		■
Northern Ireland°	■	■
Norway	■	
Portugal	■	
Romania	■	
Slovenia		■
Spain		
Sweden	■	■
Switzerland Geneva	■	
Switzerland Vaud	■	
Switzerland Zurich	■	
Republic of Moldova	■	
Tajikistan		■
The former Republic of Macedonia	■	
United Kingdom		■

°Northern Ireland and Sweden indicated both options. In Sweden, it depends on the professional: for nurses a degree in general practice, paediatrics or school health care is required in order to immunize. For doctors, no specialization is required but a specialization in paediatrics, child health or GP is preferred (there is also a possibility to acquire a specialist degree in school health care).

Where there is no specialization in school health required and available, in 68% respondents perceived that such a training would be necessary.

The role of SHS as liaison with teachers, parents and community services is underperformed. In less than half (40%), the liaison between the SHS personnel and teachers, parents and other health care services is clearly defined and happen systematically; while the liaison with other health community services is clearly defined only for 30% of respondents. In about two-thirds, SHS personnel is considered not adequately trained to liaise with parents and other community services.

Reforms and their content

Almost half (46%) of the countries have had a revision of the scope and/or content of the SHS organization within the last 5 years (Fig. 11), mostly triggered by the pupils' changing health needs, the need to pay more attention to health promotion and education and less to screening procedure, inequalities in health, new financial arrangements, and structural reform of the health care system.

A reform is ongoing at the moment in Cyprus, Denmark, Hungary and Northern Ireland.

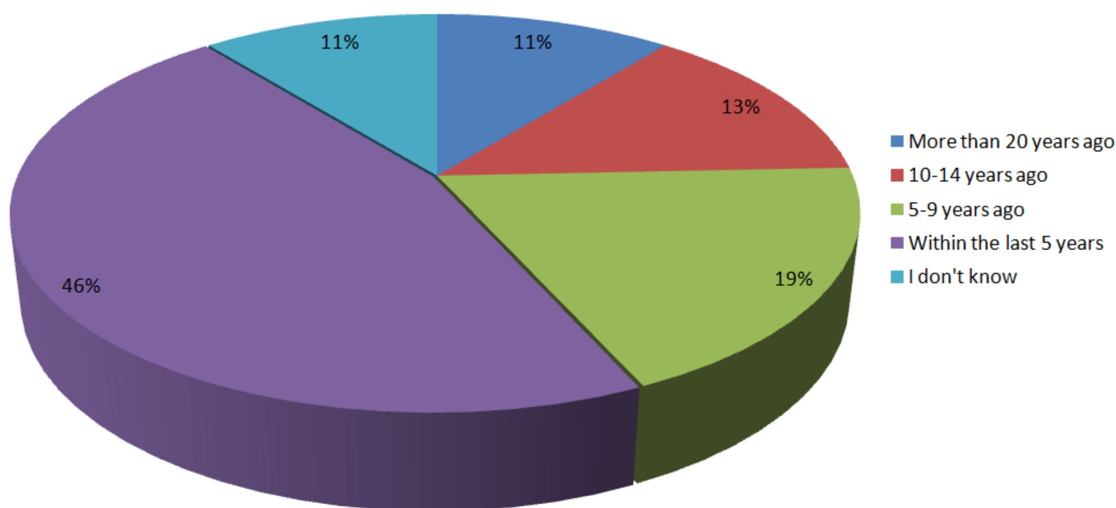

Fig. 11. When were the scope/ content of SHS organization last revised?

In most countries that made a revision of SHS, respondents mentioned positive outcomes; in a few instances the situation worsened as a result of the reform (Table 14).

Table 14 Results of SHS revision

	When was SHS last revised	What triggered the revision	What was the content of the revision	What were the results
Albania	About 10-14 years ago	Financial and human resources needs	Official agreement signed by the ministry of Education and Ministry of Health	A unified regulation for the provision of School Health by the health care providers in the schools
Armenia	About 5 years ago	The need to abolish the school doctor and replace it with school nurse due to financial crisis and the consequent need to optimize the health care system	The development of youth-friendly services	Introduction of a pilot programme in "Fundamentals of Safety and Healthy Lifestyles" in the schools.
Austria	More than 20 years ago			
Azerbaijan	Within the last 5 years	Concerns for the pupils' health needs	Routine vaccinations and td	Reduced morbidity rates
Belgium (Flanders)	Started in 2000	The need of an integrative approach to obtain the well-being of the pupils	A fusion of the school health services with pedagogic services	Improved efficacy and effectiveness; saving of finances
Bosnia Herzegovina (Republic of Srpska)	About 5-9 years ago	The need of structural changes in the health system	-	-
Bulgaria	Within the last 5 years	The general health reform started in 2000	The transfer of certain activities (e.g. immunizations, medical checkups) from the School Doctor to the GP	-

	When was SHS last revised	What triggered the revision	What was the content of the revision	What were the results
Croatia	About 10-14 years ago	The revision of the entire health care system	No more curative services: after the reform only preventive services and health promotion have been offered	Reorientation towards counselling and health education and promotion activities
Cyprus	Since 2007 and going on at the moment	The pupils' changing health needs; the forthcoming introduction of a National Health Insurance Scheme; a 1999 WHO recommendation to upgrade the SHS	Structural changes (adequate human resources, IT); Capacity building (training and methodological changes); revision of the existing content	Outcomes awaited
Denmark	Going on	Health inequalities; the need to pay more attention to health promotion and health education and less to screening procedures; the need to emphasize the team work and to include GPs	Work in progress	Outcomes awaited
Estonia	Started in 2005	The general health reform started in 2001 and the changed pupils' health needs	Shift from direct medical care to health promotion and disease prevention	A change in the practical work in the SHS

	When was SHS last revised	What triggered the revision	What was the content of the revision	What were the results
Finland	About 5-9 years ago	The need to update old recommendations	The new guidelines concern: promotion of the school community welfare; health promotion, prevention of diseases, first aid and medical care in the schools; special teaching; privacy protection.	Implementation of the school health care
Georgia	Don't know	-	-	-
Hungary	Within the last 5 years and currently going on	The need to revise screenings procedures and data collections methods	Work in progress	Outcomes awaited
Iceland	Within the last 5 years	The need of more coordination and better quality of services.	More explicit guidelines	Better coordination and quality of services
Israel	Within the last 5 years	Financing arrangements and trends towards reducing the role of the government in the provision of services	SHS transferred to an external organization which is required to provide proof of provision of specific services.	No improvement but worsening of the situation: a school nurse is not based in the school anymore, now the school health team do not have regular contacts with the pupils or the staff
Italy	More than 20 years ago	-	-	-
Kazakhstan	Within the last 5 years	The need to improve the services delivered to pupils	-	-
Latvia	About 5-9 years ago	The general health care system reform	The regulatory act by the Cabinet of Ministers	Implementation of the services

	When was SHS last revised	What triggered the revision	What was the content of the revision	What were the results
Lithuania	Within the last 5 years	New financing mechanisms	The shift from individual health care to public health care	-
Luxembourg	More than 20 years ago	-	-	-
Malta	About 10-14 years ago	The need of a better organization in the SHS system	Introduction of standard development screening procedures and documentation in printed personal medical files	Early detections of health problems with subsequent early interventions
Netherlands	About 5-9 years ago	The need to guarantee equality in health	Change from regional programmes to one national programme	Implementation of the services
Northern Ireland	Ongoing at present	-	Work in progress	Outcomes awaited
Norway	About 10-14 years ago	The need to strengthen the psychosocial work in the SHS	Reduction of screening procedures and increased interventions for better mental health, life-styles related issues and interdisciplinary cooperation.	New programmes introduced and the health record system has been revised
Portugal	Within the last 5 years	The need of ensure a better quality of the services	The introduction of a new legislation (Government Dispatch nr. 12045/2006), the creation of dedicated spaces (offices) within the schools to bring the services closer to the needs	Pupils are far more open to come in contact with the SHS personnel; important results followed, like the reduction of teenage pregnancies

	When was SHS last revised	What triggered the revision	What was the content of the revision	What were the results
Republic of Moldova	Within the last 5 years	New financing arrangements	Revision of scope and content and the job description of SHS personnel	The regulatory framework has changes, the job description of SHS personnel has been revised as well as the training curriculum of health providers
Romania	About 5-9 years ago	Severe shortage of SHS personnel	Decentralization of the responsibility to local administrations and schools	Outcomes awaited
Slovenia	About 5-9 years ago	New financial arrangements	The specialization in school medicine was abandoned; services offered are now mostly curative	No investigation has been done
Spain	Don't Know	-	-	-
Sweden	Within the last 5 years	The need of a new document (the previous one was from 1998)	More focus on psychosomatic, behavioural problems, health promotion, pupils with special needs, psychosocial health and life styles health related problems	No investigation has been done
Switzerland-Geneva	Within the last 5 years	The pupils' changing health needs; organizational issues	Structural changes	Outcomes awaited

	When was SHS last revised	What triggered the revision	What was the content of the revision	What were the results
Switzerland-Vaud	Within the last 5 years	Political request	Shift from a medical model to a health promoting model; systematic examination performed by the doctors have been abandoned	Better response to the pupils needs
Switzerland-Zurich	-	-	-	-
Tajikistan	More than 20 years ago	-	-	-
The former Yugoslav Republic of Macedonia	Within the last 5 years	Concerns for pupil's health needs and new financial arrangements	Promotion of healthy life styles, sex education, family planning programs	Outcomes awaited
United Kingdom	Don't know	-	-	-

Challenges and support needed

The lack of adequate funding is most frequently mentioned as a challenge that SHS experience in a country (78%). Among other frequently mentioned challenges were: insufficient involvement of families/carers or teachers in the health promotion programmes (68%), shortage of personnel employed in SHS (65%) and its inadequate training (49%), uneven access to SHS provision across country (32%) and inequalities in access to services for some groups of young people (32%). The support needed pertains to availability of data on effectiveness of SHS to advocate with decision-makers (88%), regulations to establish the position of SHS in educational institutions (47%), and the need for a clearer division between the responsibilities of school nurses, school doctors and GP's/family doctors (35%). WHO support is seen in issuing guidelines/ recommendations (46%), facilitating experience sharing among countries(38%), show the evidence about SHS effectiveness (30%), advocate the importance of SHS with the decision-makers (24%), provide assistance in capacity building (19%), provide technical assistance in formulating regulations and setting up standards (14%), and develop tools for the evaluation of SHS' performance (11%).