Chapter 11

School Health Services

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Abstract

Models of Child Health Appraised (MOCHA) defines school health services (SHSs) as those that exist due to a formal arrangement between educational institutions and primary health care. SHSs are unique in that they are designed exclusively to address the needs of children and adolescents in this age group and setting.

We investigated SHSs have been provided to schools and how they contribute to primary healthcare services for school children. We did this by mapping the national school health systems against the standards of the World Health Organization, and against a framework measuring the strength of primary care, adapting this from an existing, adult-focused framework.

We found that all but two countries in the European Union and European Economic Area have SHSs. There, however, remains a need for much greater investment in the professional workforce to run the services, including training to ensure appropriateness and acceptability to young people. Greater collaboration between SHSs and primary care services would lead to better coordination and the potential for better health (and educational) outcomes. Involving young people and families in the design of SHSs and as participants in its outputs would also improve school health.

Keywords: School health services; children; adolescents; primary care; Europe, organization, content

Introduction

School Health Service (SHS) is an important aspect of primary care for children. We define SHS as health services provided to enrolled pupils by healthcare professionals and/or allied professionals, such as social workers, health visitors, counsellors, psychologists and dental hygienists, irrespective of the site of service provision. The services should be mandated by a formal arrangement between the educational institution and the provider healthcare organisation (Baltag & Saewyc, 2017). SHS generally focuses on promoting and protecting health and well-being, early diagnosis, preventing and controlling of diseases of pupils. SHS can be school-based, community-based or integrated in primary care. There are two countries that do not have SHS. This does however not mean that these two countries do not have health services for school age children at all. These two countries have only organized the health services for children in a different way; for example via other healthcare providers or healthcare organizations in primary care, that are often closely linked to the school system. Because valuing health services for school age children not provided by SHS professionals is not the aim of this part of the study, we are not able to provide an evaluation of this kind of care.

SHSs play a number of different roles:

- SHSs have the opportunity to reach a large group of pupils and influence their health behaviour during different stages of life (Baltag, Pachyna, & Hall, 2015; Bersamin, Garbers, Gaarde, & Santelli, 2016).
- Evidence exists that when SHSs are available, pupils are more likely to access health care and thus eliminate barriers to access to care (Anderson & Lowen, 2010; Bains & Diallo, 2016; Bersamin et al., 2016).
- High-quality SHS is related to positive health and educational outcomes in disadvantaged pupils (Bersamin et al., 2016; Knopf et al., 2016).
- SHS may have an important role in supporting children with chronic illnesses, such as diabetes. Integrating care needs of these children may help pupils to stay at school and prevent missing school (Leroy, Wallin, & Lee, 2017). SHS might also reduce the use of other healthcare services such as emergency care or hospitalisation (Bersamin et al., 2016).

In this chapter, we present the comparison of MOCHA findings on SHS with the WHO quality standards in SHS and competence for SHS professionals (Hoppenbrouwers et al., 2014).

Methods

Data on SHS were collected in 30 European countries from the MOCHA country agents. These data describe the organisational structure and process of functioning of health systems. Data collection comprised a number of steps. We first adapted the Primary Health Care Activity Monitor for Europe (PHAMEU) framework for primary care for adults to SHS for children and adolescents (Jansen et al., 2018). The original PHAMEU framework focuses on primary

care for the general population, whereas the framework applicable for the MOCHA project has to focus especially on primary care for children and adolescents. In accordance with the PHAMEU framework, the organisational structure of SHS is divided into three structure dimensions: governance, economic conditions and workforce development and in four process delivery dimensions: access, continuity, coordination and comprehensiveness. Each dimension is detailed in features that are in turn specified into indicators.

In order to adapt the structure and process dimensions of the PHAMEU framework into a framework applicable for exploring health systems for children and adolescents, we undertook two steps: (1) we reviewed the literature on structure and process dimensions for SHS and (2) we discussed the results of step 1 with experts and asked them which dimensions, features or indicators to add to or remove from the PHAMEU-framework in order to make it more applicable for children and adolescents. This resulted in the adjusted PHAMEU framework applicable for children and adolescents.

Based on this adjusted PHAMEU framework, we collected data on the dimensions across 30 European countries via the MOCHA country agents and from existing databases. We analysed the data in order to describe the organisational structure in the 30 countries. In the final step, we compared our data with that of the WHO for quality standards in SHS and competence for SHS professionals (Hoppenbrouwers et al., 2014). The framework consists of standards that are assumed to be beneficial for the health of school-aged children and adolescents.

The main quality standards are as follows:

- *Standard 1*: an intersectoral national or regional normative framework involving the ministries of health and education and based on children's rights is in place to advice on the content and conditions of service delivery of SHS.
- *Standard 2*: SHSs respect the principles, characteristics and quality dimensions of child- and adolescent-friendly health services and apply them in a manner that is appropriate to children and adolescents at all developmental stages and in all age groups. Principles of accessibility, equity and acceptability also apply to the way in which SHSs engage with parents.
- *Standard 3*: SHS facilities, equipment, staffing and data management systems are sufficient to enable SHS to achieve their objectives.
- *Standard 4*: collaboration between SHS, teachers, school administration, parents and children, and local community actors (including healthcare providers) is established and respective responsibilities are clearly defined.
- *Standard 5*: SHS staff have clearly defined job descriptions, adequate competences and a commitment to achieving SHS quality standards.
- *Standard 6*: a package of SHS services based on priority public health concerns is defined, supported by evidence-informed protocols and guidelines. The service package encompasses population-based approaches, including health promotion in the school setting, and services developed on an approach based on individual needs.

- *Standard 7*: a data management system that facilitates the safe storage and retrieval of individual health records, monitoring of health trends, assessment of SHS quality (structure and activities) and research is in place. Additional specifications are listed below, where appropriate.

We collected data on the most essential features and indicators of SHSs by means of two questionnaires, which were sent at two different time points (July 2016 and April 2017). The aim of the two questionnaires was to develop a good understanding of the most essential features and indicators of the MOCHA-adapted PHAMEU framework regarding SHS.

The first questionnaire was a replication of a previously conducted European-wide survey, which was carried out by the World Health Organization in 2009 (Baltag & Levi, 2013; World Health Organization, 2010a). The aim of the replication study was to understand how SHS is organised in 2016 and the differences in the two time points.

A second questionnaire was sent to the country agents, which asked additional questions that were not part of the first questionnaire. The second questionnaire asked about issues such as governance, organisation and service delivery models, staffing, content of the SHS and main challenges each country faced in the organisation and delivery of SHS.

Results

Functions of School Health Services

Of the 30 EU/EEA countries, all have SHS, except for Spain and Czech Republic. In terms of health priorities, all countries' SHSs considered lifestyle-related issues to be a priority for pupils. These included subjects such as physical activity, healthy eating and tackling substance abuse. SHSs are involved in the development and implementation of specific programmes to improve children's health and discuss these issues. In the following text, we present the comparison of the MOCHA findings with the WHO framework for SHS (Hoppenbrouwers et al., 2014).

How School Health Services Are Governed and Organised

In the majority of the countries, the development of what is described by the WHO Framework as the 'content and scope', 'workforce' and 'funding' of SHS is a shared responsibility of national and local, and health and education authorities (Standard 1). The involvement of both sectors and both levels (national and local) is important for successful SHSs. National health and educational authorities may provide political and financial support and facilitate the development and implementation of SHS. The regional or local health and educational authorities can tailor the service to the needs of the local population and thereby increase responsiveness. Involvement of both levels may therefore take the best of both, but needs also coordination and good dialogue between authorities (World Health Organization, 2010b). In addition, almost half of the countries

had a policy to ensure that SHS facilities, equipment, staffing and data management systems are sufficient to enable SHS to achieve their objectives.

Equity and Access

In the countries that have SHS, theoretically we can assume that most pupils have access to health services in schools. In the majority of the participating countries, there were no great variations in SHS between regions and there are often national regulations for SHS, which means that if followed, equity of access is increased. We also asked the MOCHA country agents to identify the policies on school dropouts and on vulnerable pupils in their country. Half of the countries had a comprehensive policy: in most cases, this existed as interprofessional meetings to discuss school absenteeism and dropout, guidelines for schools to improve integration and education of pupils and opportunity for vulnerable pupils or pupils who drop out to see a doctor.

The accessibility of SHS may be influenced by the way it is organised: SHS can be school-based, a distinct structure in the health system, or offered by providers in primary care. In most countries SHS provision is a mixture of types or organisation. For example, school based mixed with primary care involvement in countries like Estonia, Finland and Poland or a distinct structure mixed with primary care involvement in countries like Germany, Ireland and Portugal. Baltag and Levi (2013) hypothesised that the proximity of SHS to the children (school-based SHS) may increase accessibility of SHS. Table 11.1 shows the indicators of access to SHSs.

Quality Assurance

Quality management infrastructure contains a number of mechanisms that need to be in place to assure adequate quality of care. In more than half of the countries, quality management infrastructure is safeguarded by working with clinical recommendations, regulation and/or standard sets, as reflected in the WHO framework Standard 2 principle effectiveness. In most of these countries, the quality recommendations or standards were performed by SHS themselves or by external inspection. It was less common for the results of the quality assessments to be published. A limitation of the MOCHA investigation was that we could only ask about the presence or absence of standards, but not the type or aim of the existing standards and therefore have no information on the quality of the standards.

Collaboration

SHS tasks are very complex and comprehensive, and for them to work effectively, it requires good collaboration between professionals, for example with other primary healthcare professionals. The WHO Standard 4 (Hoppenbrouwers et al., 2014) aims to encourage and highlight collaboration between SHS professionals, teachers, school administration, parents and children and local community actors (including other healthcare providers). The MOCHA study focused on cooperation between SHS and other forms of primary care services, for which in about

Table 11.1. Essential indicators of access of SHS.

Country	National Availability of SHS					Geographic Access
	Healthcare Providers[a]	Time SHS Providers Spent in School	Possibility of Individual Contact from School Entry to Graduation	Organisation of SHS Provision[b]	Room Available for Use by School Health Personnel	Shortage of SHS Staff
Austria	Doctor	Half time bigger schools/regularly to once a year	Once a year	Distinct	Partly	some
	Other	Once a year				
Belgium-F	Nurse/other	Once/twice a week	As often as needed/ 3–9 times	Distinct	Yes and no	Some
	Doctor	On demand				
Belgium-W	Nurse	Once/twice a week	As often as needed/ 3–9 times	Distinct	Yes and no	Some
	Doctor/other	On demand				
Bulgaria	Nurse	Once/twice a week	As often as needed	School based/ PC	Yes	Some
	Doctor	Depends on no pupils				
Croatia	Nurse/doctor	Once/twice a week	As often as needed	Distinct	No	Some
Cyprus	Nurse/doctor/ other	Once/twice a week	3–9 times	Distinct	Yes	Some
Czech Republic	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Some

Denmark	Nurse/doctor/ other	Depends on no pupils	As often as needed/ 3–9 times	School based	Yes	Some
Estonia	Nurse	Depends on no pupils	Once a year	School based/ PC	No	Some
Finland	Nurse/doctor Other	Part time	As often as needed/ once a year	School based/ PC	Yes	Some
France	Nurse Other	–	As often as needed/ three times or less	School based/ distinct	No	Some
Germany	Doctor Other	Part time	3–9 times	Distinct/PC	Yes	Some
Greece	Other	–	3–9 times	PC	No	–
Hungary	Nurse/doctor	Once/twice a week	3–9 times	School based/ PC	Yes	Some
Iceland	Nurse Doctor	Depends on no pupils (> 800) Once a year	As often as needed	School based	Yes	Some
Ireland	Nurse/doctor	Once/twice a month	3–9 times	Distinct/PC	Yes	Some
Italy	Doctor/other	–	3–9 times	Distinct/PC	No	Some
Latvia	Nurse/other Doctor	Fulltime Part time	As often as needed	School based/ PC	Yes	Some
Lithuania	Nurse	Depends on no pupils	As often as needed	School based/ PC	Yes	Some

Table 11.1. (*Continued*)

Country	National Availability of SHS					Geographic Access
	Healthcare Providers[a]	Time SHS Providers Spent in School	Possibility of Individual Contact from School Entry to Graduation	Organisation of SHS Provision[b]	Room Available for Use by School Health Personnel	Shortage of SHS Staff
Luxembourg	Nurse/medical doctor/social worker	–	As often as needed/ 3–9 times	Distinct/PC	Yes	Severe
Malta	Nurse/doctor/ other	Once/twice a month	3–9 times	Distinct/PC	Yes	Severe
Netherlands	Nurse, Doctor Other	Time spent differ	As often as needed	Distinct	No	Some
Norway	Nurse/doctor Other	Part time	3–9 times	School based	Yes	Severe
Poland	Nurse Other	Fulltime (>800), part time (>400), once/twice a week (<400)	As often as needed/ 3–9 times	School based/ PC	Yes	Some
Portugal	Nurse Doctor/other	Once/twice a week Once/twice a month	As often as needed/ at least five times/ year	Distinct/PC	Yes	Some

Romania	Nurse/doctor/ some dentist	Full/part time depends on no pupils	As often as needed	School based/ PC	Yes	Some (severe in rural and small cities)
Slovakia	Doctor/other	Full or part time/ on demand	As often as needed	PC	No	Severe
Slovenia	Doctor/other	Periodically	As often as needed	Distinct	Yes	Severe
Spain*	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	–
Sweden	Nurse/doctor/ other	Depends on no pupils	As often as needed	School based	Yes	Some
UK ENG	NA	–	As often as needed	School based/ distinct/PC	Yes	Adequate
UK NI	–	–	–	–	–	–

[a]**Nurse** School nurse, **Doctor** School doctor, **Other** Other health care providers, such as health care assistant

[b]**School based** SHS is based in schools, **Distinct** SHS is a distinct structure, SHS personnel not based in schools, **PC** SHS offered by primary health care providers

*Spain: Health care for school-aged children in Spain (curative, preventive and health promotion issues) is integrated into primary care services and coordinated with the school system, although it is not formally a School Health System

half of the countries, formal national recommendations were formulated. Some countries have regulations for the exchange of information between SHS and other healthcare professionals, and some countries have formal agreements on cooperation and division of tasks between the different services. Half of the countries do have formal recommendations that support inter-professional working within SHS.

Tasks, Roles and Competence of SHS Staff

Standard 5 of the WHO framework states the need for SHS professionals to have job descriptions, competences and a commitment to achieve SHS quality standards. In MOCHA, this standard was operationalised by paying attention to composition of the SHS team, existence of job descriptions, knowledge and skills of SHS providers and the ratio of SHS provider-to-pupil.

In the vast majority of the participating countries, SHS is provided by a multidisciplinary team of health professionals, consisting most often of at least a school nurse and a school doctor. In almost half of the countries, this team is supplemented by other types of health professionals. We found no norms in the literature regarding the composition of the most effective SHS teams, but we did so regarding the important role of the school nurse (Council on School Health, 2008).

SHS providers have a clearly defined and written job description in more than half of the countries. We do not know whether this description distinguishes only task and roles of SHS providers or also describes their contact and communication with primary care services, which is – according to the WHO (2010b) – also an important aspect of a good functioning SHS. Table 11.2 shows the essential indicators of the school health workforce (see also Chapter 13).

Baltag and Levi (2013) hypothesised the importance of dedicated school health personnel, referring to experienced and trained healthcare providers who are also perceived by children and adolescents as familiar and accessible. The knowledge and skills of SHS providers are acknowledged as important factors to enable the SHS to function optimally (Hoppenbrouwers et al., 2014). SHS providers in only one-third of the countries were reported to be adequately trained, and specialisation in SHS is required for employment in only half of the countries. SHS providers in one-third of the countries have access to supervision and feedback on their performance.

In most countries, information on the ratio of SHS provider-to-pupil was not available or depended on the size of school. This variable was therefore not easy to translate to a national level. All countries indicated that there is a shortage of SHS personnel, in some cases, severe. The American Academy of Paediatricians recommends a full-time school nurse in every school, a ratio of one school nurse per 750 students and a strong partnership among school nurses, school physicians, other school health personnel and paediatricians (Council on School Health, 2008), something that does not seem to be often achieved in Europe.

Table 11.2. Essential indicators of workforce in school health services.

	Type of SHS Providers		Tasks and Role of SHS Providers in Medical Care and as Liaison			Professional Status	Trained and Competent Staff			
Country	**SHS providers[1]**	**Working in a team**	**Tasks in medical care[2]**	**Availability of mental health emergencies[3]**	**Liaison role is clearly defined[4]**	**Clearly defined jobs**	**Adequate, somewhat or not trained**	**Training in emergency care[5]**	**Specialisation SHS is needed for employment**	**Access to supervision and feedback on performance**
Austria	B/C/D/E/H	No	Acute/ chronic	B/C/D	t/p/c	Partly	Somewhat	1/2/3/4	No	No
Belgium-F	A/B/C/D	Yes	Chronic	No	t/p	–	Somewhat	–	Yes[6]	–
Belgium-W	A/B/C/D	Yes	Chronic	–	t/p	–	Somewhat	–	Yes[6]	–
Bulgaria	A/B	Yes	Acute	Onsite help	No	Yes	Somewhat	–	No	Yes
Croatia	A/B/D	Yes	Chronic	No	t/p/h/c	Yes	Adequate	1/2/3	Yes	Yes
Cyprus	A/B/D	Yes	No	C	No	Yes	Adequate	1/3	Yes[7]	No
Czech R	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Denmark	A/B/C/E/F	No	No	–	p	No	Adequate	NA	Yes	No
Estonia	A	No	Chronic	Onsite help	h	No	Somewhat	1/2/3	No	No
Finland	A/B/D	Yes	All tasks	B	t/p/h/c	Yes	Somewhat	1/2/3	Yes	Yes
France	A/B/G	Yes	Med/ chronic	–	t/p/h/c	Yes	Adequate	NA	Yes	Yes
Germany	E/H	No	No	No	No	No	Somewhat	–	No	No
Greece	H	–	No	C	–	Yes	–	1/2/3	No	No
Hungary	A/B/E	NA	Acute/ chronic	No	h	Yes	Somewhat	1/2/3	Yes	No

Table 11.2. (*Continued*)

	Type of SHS Providers		Tasks and Role of SHS Providers in Medical Care and as Liaison			Professional Status	Trained and Competent Staff			
Country	**SHS providers[1]**	**Working in a team**	**Tasks in medical care[2]**	**Availability of mental health emergencies[3]**	**Liaison role is clearly defined[4]**	**Clearly defined jobs**	**Adequate, somewhat or not trained**	**Training in emergency care[5]**	**Specialisation SHS is needed for employment**	**Access to supervision and feedback on performance**
Iceland	A/B	No	All tasks	No	t/p/h	Yes	Somewhat	1/2/3	No	Yes
Ireland	A/B/E	Yes	Acute (only dentist)	No	t/p/h	Yes	Somewhat	3	No	Yes
Italy	H	Yes	No	C/D	t/p/h/c	No	Adequate	3	No	No
Latvia	A/B	No	All tasks	No	No	No	Somewhat	1/2/3/4	Yes	Differs
Lithuania	A/H	Yes	Acute/ chronic	No	t/h/c	No	Somewhat	1/2/3	No	No
Luxembourg	A/B/D/E	NA	Chronic	Onsite help	p/h	Yes	Somewhat	Yes	No	No
Malta	A/B/H	Yes	All tasks	No	t/p/h	Yes	Not	1/2/3	No	Yes
Netherlands	A/B/G	Yes	No	No	t/p/h/c	Yes	Adequate	NA	Yes	Yes
Norway	A/B/C/F	No	No	No	t/p/h/c	Yes	Adequate	1/2/3	Yes	Differs
Poland	A/E/H	Yes	All tasks	No	t/p/h/c	Yes	Adequate	1/2/3	Yes[7]	Yes
Portugal	NA	Yes	Chronic	Onsite help	t/p/h/c	Yes	Somewhat	1/2/3	No	Yes
Romania	A/B/E	No	All tasks	No	p/h	Yes	Somewhat	1/2/3	Yes	No
Slovakia	H	NA	Med/ acute	No	No	No	Not	4/ 5	No	No

Slovenia	A/B/C/D/E	Yes	All tasks	C	t/p/h/c	Yes	Adequate	No	Yes	Yes
Spain*	Not applicable	Not applicable	Not applicable	C	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Sweden	A/B/C/D	No	All tasks	–	t	Yes	Adequate	1/2/3	Yes[7]	No
UK ENG	–	Yes	Chronic	No	–	Yes	Adequate	3	Yes	Yes
UK NI	–	–	–	–	–	Yes	–	3	–	Yes

Notes: [1]*A* – School nurse, *B* – School doctor, *C* – Psychologist, *D* – Social worker, *E* – Dentist, *F* – Physical therapist, *G* – Healthcare assistant and *H* – Other.
[2]*Med* – Administration of medication, *Acute* – Provision of care in case of injury or acute illnesses, *Chronic* – Management of pupils with chronic illnesses, *All* – Task in all mentioned options and *No* – SHS is not involved in direct medical care.
[3]*Onsite help* – There is onsite help in schools, with immediate referral from the school nurse, *B* – There is specialist help available onsite the school, via the school nurse, *C* – Help is available within a few hours and *No* – Not equipped.
[4]*t* – Liaises with teachers, *p* – Liaises with parents, *h* – Liaises with other health services, *c* – Liaises with other community health services and *No* – No clearly defined roles.
[5]*1* – Benign injuries, *2* – Loss of consciousness, *3* – Emergency care, *4* – Other and *NA* – SHS doesn't provide emergency care.
[6]Only for school doctors.
[7]Only for school nurse.
*Spain: Health care for school-aged children in Spain (curative, preventive and health promotion issues) is integrated into primary care services and coordinated with the school system, although not formally a School Health System

Data Management

Early access to up-to-date information for providers of SHSs is essential to deliver high-quality care, and this is defined as a criterion in Standard 7 of the WHO framework. Eighteen of the 28 responding countries have a policy for schools to keep and update information concerning the health of children, and about one-third have a policy to ensure ease of access to this information.

Stakeholders' Involvement

A policy aimed at the involvement of stakeholders is a topic included in several WHO standards. We found that stakeholders' involvement is, in general, only weakly developed, especially as regarding the involvement of medical insurers and parents. Medical providers and children were more often, directly or indirectly involved, for example through identifying the needs of children by means of epidemiological data. A more active involvement of families, informal caretakers and teachers in SHSs was described to be a challenge by most country agents. MOCHA has described the importance of involving children and young people in services that address them (see Chapter 3), and the added value of involving stakeholders is increasingly recognised in the literature on school health (Baltag et al., 2015; World Health Organization, 2010b), in particular the benefits of involving children and adolescents (Anderson & Lowen, 2010; Jourdan et al., 2016).

Services Provided by School Health Services

SHSs provide a wide range of services in MOCHA countries that have a SHS. In the majority of countries, the providers are involved in medical care, particularly in the management of pupils with chronic illness and care in the case of injury or acute illness. Almost all countries' SHS took an active role in preventive care, in the form of screening, disease prevention and promoting good mental health. Differences exist, however. In the types of screenings which are undertaken in schools, visual acuity and weight/height/hearing screenings were performed by most countries, and STI screening was less often performed. Almost all responding countries performed disease prevention activities, such as vaccinations, referrals for health conditions, infection control, surveillance of school's hygiene conditions and emergencies handling. In addition, in more than two-thirds of the MOCHA countries, schools have a national policy on health-promoting schools, indicating that in many countries, a healthy setting for living, learning and working is seen as important (World Health Organization, 2018).

Another important part of the WHO framework is the respect for the principles, characteristics and quality dimensions of child- and adolescent-friendly health services and apply them in a manner that is appropriate to children and adolescents at all developmental stages and in all age groups, which is discussed in Chapter 12.

Discussion and Implications Regarding SHS

One of our most important findings is that of the 30 countries, all except two have a SHS. We compared our findings with the 'gold standard' of SHS, the WHO-framework for quality standards in SHS and competence for SHS professionals (Hoppenbrouwers et al., 2014). The majority of countries perform well against the framework in terms of having a shared responsibility between national and local governance, and health and education authorities for the development of the content and scope, workforce and funding of SHS. More than half of the countries also stand up well against the framework regarding quality management infrastructure, multidisciplinary team working and the establishment of a policy for schools to keep and update information concerning the health of children and having policy on easy access to this information. Encouragingly, also in more than two-thirds of MOCHA countries, schools have a national policy on being a health-promoting school (World Health Organization, 2018).

Nevertheless, there are two major concerns for European SHS when comparing with the WHO standards. A first major concern is a lack of policies to ensure that SHS facilities, equipment, staffing and data management systems are sufficient to enable SHS to achieve their objectives in most of the countries. Our country agents also expressed this concern in their feedback, specifically that

- There is some or a severe shortage of SHS professionals.
- SHS providers are not adequately trained.
- In only half of the countries, specialisation in SHS is needed for SHS professionals.

A second major concern regards the ease of collaboration between SHS professionals, teachers, school administration, parents and children and local community actors (including other healthcare providers). Only about half of the countries who responded as part of the MOCHA project have formal recommendations on effective collaboration between SHS and other forms of primary care or on interdisciplinary working within SHS. In addition, in only half of the responding countries, the multidisciplinary team – often consisting of a school nurse and a school doctor – is supplemented by other types of health professionals. Finally, involvement of families, informal caretakers and teachers in providing SHS is lacking or difficult to achieve in most of the countries.

Implications and Recommendations

This project has resulted in a valuable overview of the different features and indicators of which SHS in different countries exist. This provides many options for countries regarding alternatives for their current system. With this overview, it is possible for countries, to see how other countries have organised parts of the SHS and which options are preferred by most of the countries.

Recommendation 1

European countries should not only invest in more SHS professionals but also in adequately trained SHS professionals to robustly address the specific needs of school-aged children and adolescents (Ambresin, Bennett, Patton, Sanci, & Sawyer, 2013; Committee on Adolescence, 2008; Farre et al., 2015; Michaud & Baltag, 2015; Michaud, Weber, Namazova-Baranova, & Ambresin, 2018).

Recommendation 2

European countries should invest in collaboration between SHS and other primary care professionals. It might be hypothesised that particularly in the case of children with chronic disorders or multimorbidity, effective collaboration between SHS and primary and secondary care, but also with teachers, may offer a breadth of experience and optimise treatment, and thereby improve educational and health outcomes (Baltag & Levi, 2013; Hunt, Barrios, Telljohann, & Mazyck, 2015; Kamionka & Taylor, 2017; Kringos et al., 2013). Collaboration between SHS and the public health sector (and also with parents and adolescents, see recommendation 5) may lead to more integrated and coordinated care, which can result in more accessible and responsive care (Anderson & Lowen, 2010; Kamionka & Taylor, 2017).

Recommendation 3

More involvement of families (both parents and children/adolescents) in SHS policy is needed. Active involvement of parents and children/adolescents in the design, planning, implementation and evaluation of services is of great importance for an efficient and effective SHS (Anderson & Lowen, 2010; Brenner et al., 2017; Ingram & Salmon, 2010). A participatory approach involving children and adolescents focusing on the necessary conditions to reduce risk factors and enhance young people's health is seen as a useful way of optimally matching the policy to the needs and possibilities of children and adolescents (Brenner et al., 2017; Jourdan et al., 2016).

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