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SCHOOL HEALTH SERVICES IN THE CITY OF ZAGREB – DO WE MEET ADOLESCENTS' NEEDS?

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SUMMARY

Background: *School health services (SHS) have in Croatia long tradition, established organizational structure, defined program and educated staff. The program is limited to the preventive activities. The aim of the study was to investigate the satisfaction of the children, school staff and parents with existing school health services in the City of Zagreb.*

Subject and methods: *The structured questionnaire was sent to the primary and secondary schools in the City of Zagreb, which were selected using random sample method. The questionnaires were anonymous and filled in supervised by class masters. In the secondary schools the structure of schooling was respected. Questionnaires were filled by 448 pupils from primary, 551 from secondary schools, by 596 parents and 595 teachers.*

Results: *In primary schools pupils rated SHS more available and accessible, staff complaisant and responsible, counselling being useful and justified, confidentiality respected higher than pupils from secondary schools ($p<0.001$). Teachers from primary and secondary schools perceived SHS as valuable school partners (88.9% and 82.3%). Teachers from primary and secondary schools (88.9% and 88.1%) and parents (78.3% and 67.5%) stated that SHS could not be replaced by GPs or paediatricians. Primary school pupils felt that most common problems were injuries and vocational counselling, secondary school pupils assessed behavioural and sexual related problems as mostly challenging. Satisfaction with the SHS response to the most challenging problems was rated higher by teachers from primary schools ($p<0.001$ for learning difficulties, chronic diseases, bullying and vocational counselling), by parents for learning difficulties and vocational counselling, but no significance was found for pupils' satisfactions.*

Conclusion: *SHS in Zagreb are recognized as vital and necessary partners for schools, available and accessible for pupils, teachers and parents, especially for primary schools. Counselling is highly rated by all respondents, confidentiality considered as respected, and the problem of the most common challenges as successfully solved.*

Key words: *school health services – availability - young people – confidentiality – prevention - Croatia*

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INTRODUCTION

The adolescence is period in human life between the onset of puberty and the adulthood, starting from 10-13 yrs and lasting till 18-19 yrs. It is often considered as an emotionally and physically intensive and very stressful period. Beyond all the physical, emotional and social transformations, in adolescence the behavioural patterns are formed and lifestyles accepted. Social and economic development affected morbidity and mortality all over the world (Patton and al.2009). The leading causes of adolescent mortality are accidents (death from unintentional injury), followed by neoplasms (Coric & Miller 2013). Additional morbidity is related to risky behaviour including substance use (tobacco, alcohol and drugs), risky sexual behaviour, poor nutrition and inadequate physical activity. One third of adolescents engage in at least one of these high-risk behaviours. The beginning of many mental health disorders is in adolescence. This is not true just for the serious mental health problems, but for the variety of the health behaviours that may influence the adult behaviour, even the onset of diseases in the adult life (Evans et al. 2005).

Surveys done in the past several decades using nationally representative samples revealed that more than 85% of adolescents in Croatia have used alcohol in the last 30 days and more than 50% have engaged in binge drinking (i.e., consuming more than five drinks in one sitting) in the same period of time (Hibell et al. 2011).

Tobacco use also is common during adolescence. Lifetime use of tobacco has decreased over the past decade, but 70% of adolescents have used tobacco at least once. The reported lifetime use of marijuana decreased between 2003 and 2007 and since then has been stabilized (Hibell et al. 2011).

Croatian adolescents are less engaged in the early sexual intercourse in comparison to other European countries and the condom use, although rather high (82% of 15 yrs. old used condom at the last intercourse), could be higher to be on the safe side for the STI prevention (Currie et al 2012, Kuzman et al. 2007).

In the European strategy for child and adolescent health and development is stated: "Children are our investment in tomorrow's society. Their health and the way in which we nurture them through adolescence into adulthood will affect the prosperity and stability of countries in the European Region over the coming decades". Although document does not imply specific separate services for school children and youth, it is suggested that youth-friendly counselling and health services for reproductive and mental health and other health problems are needed (WHO 2005).

Today the health care for school children and youth is aiming at enabling young people's undisturbed growth and physical, mental and emotional development. The main tasks are focused not only at physical morbidity, but at the complex contextual influences in childhood

and adolescence (WHO 2012). For developmental as well as epidemiological reasons, young people need youth-friendly models of primary care. Over the past two decades, much has been written about problems and barriers young people face in accessing health care (Tylee et al. 2007).

The school health services have in Europe and in Croatia long tradition. School health care programs aiming at the prevention, the early detection and the appropriate treatment of ill-health in the young population contributed strongly and consistently to the decreasing mortality and morbidity rates in this age group during the last decades. School health care contributes strongly to young people achieving their full potential on physical, cognitive, emotional and psychosocial levels (Lancic 2009). The first school physician was appointed in 1840 in Sweden. The first school physician in Croatia was appointed in Zagreb, in 1893. In 1923 in Zagreb was established the first school medicine office, as an independent health institution for 5,000 pupils (Kesic 1961, Loncar Dusek 1994, Hofgräff & Fatović-Ferencic 2012). Across the time, the school medicine offices became responsible for the comprehensive health care for the school children, being part of the primary health care. The professionals working in the offices were school medicine specialists and nurses. The medical specialization for physicians started as a three-year postgraduate education in 1951 and is existing till now days (today the specialization lasts 4 years and is titled "school and adolescent medicine").

Beginning of the 90ties brought the changes in the health laws and by-laws. All citizens were entitled to the free choice of personal practitioner in the primary health care, meaning that school children could choose a paediatrician or general practitioner as a person responsible for curative part of the care. This lead to the disintegration of the comprehensive health care school health offices had provided and according to the Minister of health decision school health offices have been disintegrated in 1997. School health services became part of the institutes of public health, providing preventive health care measures according to the annual plan and program. Curative part of the care was shifted to the local paediatrics or general practitioners' offices (Prebeg 1998).

At the present, school health services are situated in 21 County Institutes of Public Health, with the National Public Health Institute having central and coordinating role. School health services embrace altogether approximately 180 medical teams with school medicine specialist and nurse, being responsible for 3,800-4,000 school children and youths. The areas of work embrace a wide range of preventive measures, the annual program being developed and enacted at the national level, according to Health Care Measure Plan and Program (OG126/2006).

To emphasize are the following activities: preventive health check-ups and other preventive examinations; screening; vaccination; counselling for pupils, parents and school staff; health education; care for pupils with special needs integrated in the learning process. In addition, school doctors are often involved in multidisciplinary projects at the national or local level. Being aware that today organization and content of the school health services in Croatia have advantages but disadvantages as well, we wanted to explore the perception of the services by the population whom the care is devoted to.

Aims of the Study

To investigate perception and differences in perception of school health services among pupils, parents and teachers in primary and secondary schools.

SUBJECT AND METHODS

We investigated the satisfaction of the children, school staff and parents with existing school health ser in the City of Zagreb. A questionnaire was constructed containing 21 questions, slightly different in wording for different groups. Primary and secondary schools were randomly selected, preserving in the secondary schooling rate of different school programs (gymnasiums, vocational and industrial schools). Questionnaires were filled by 478 8th grade pupils from primary, 551 1st grade pupils from secondary schools, by 595 teachers (327 from primary and 278 from secondary schools) and 596 parents (289 from primary and 307 from secondary schools). The response rate was 81% for primary schools and 78% for secondary χ schools.

The questions common for all respondents were: „Do you know the name of your school doctor/school doctor of my child/of my school"; "Do you know the address of the school health service (SHS)". Possible answers were „yes", no" and "not sure". Than the following statements were listed to all respondents: „The SHS office is available and accessible"; „Working hours are convenient"; „I do think that counselling in SHS is reasonable and useful"; „Physician is complaisant and willing to help/is responsible"; „Nurse is complaisant and willing to help/responsible". Pupils were asked whether confidentiality in SHS is respected and parents whether they turn to the SHS with confidence. Pupils were asked whether they attended check-ups regularly, and teachers and parents whether they obtained necessary information after check-ups. Parents and teachers were asked whether SHS could have been easily replaced by paediatricians or general practitioners and whether contacts with SHS were insufficient and ineffective. Teachers were asked whether SHS were necessary partners for schools. The possible answers ranged in the 5-point scale from „agree completely" to „disagree completely".

All groups were asked whether they sought help in specific areas from the SHS, and if yes, how they would rate the received help and support ranging from 1 to 5. The possible challenges were learning difficulties,

chronic diseases, nutrition and physical activity, reproductive health, injuries, behavioural problems, bullying, vocational counselling.

The results were presented in frequency tables. The significance was tested through Fisher's Exact Test and Independent sample t-test, using IBM SPSS22 statistics program.

RESULTS

The name of school doctor was best known to the primary school teachers (82.6%), and less known to the secondary school pupils (7.8%) (Table 1). Every fourth pupil from the primary as well as from the secondary school was not sure about the school doctor's name. Pupils from primary schools (both genders) rated higher than secondary school pupils the SHS availability, working hours' convenience and physicians' and nurses' complaisant and willing to help ($p<0.001$) (Table 2). Regarding counselling, confidentiality and health education lessons difference was not significant. More than 60% of pupils perceived counselling as useful and confidentiality respected. Health education lessons were found interesting by 45.0% pupils from primary and 41.7% pupils from secondary schools. Primary school pupils attended check-ups more regular than secondary school pupils ($p<0.001$). The lowest rating was for the working hours - 39.2% and 31.9%; $p<0.001$.

Analysed by the gender, males in primary school found SHS more available and working hours more convenient, but attended check-ups less regularly than females ($p<0.001$) (Table 3). In perception of the SHS staff's behaviour and attitudes and confidentiality in SHS were no significant gender differences. Usefulness of counselling in SHS and of health education lessons females rated higher than males (74.5 and 64.5; $p=0.01830$; 51.0 and 38.1; $p<0.001$). Gender differences

Table 1. Pupils, parents and teachers who know name of the school doctor

I know the name of the school doctor	Pupils primary schools N (%)	Pupils secondary schools N (%)	Teachers primary schools N (%)	Teacher secondary schools N (%)	Parents primary schools N (%)	Parents secondary schools N (%)
Yes	188 (39.4)	43 (7.8)	262 (82.6)	162 (58.0)	195 (67.5)	108 (35.2)
No	189 (39.5)	376 (68.2)	23 (7.3)	88 (31.7)	69 (23.9)	159 (51.8)
Not sure	101 (21.1)	132 (24.0)	32 (10.1)	28 (10.3)	25 (8.7)	40 (13.0)
Total	478 (100.0)	551 (100.0)	317 (100.0)	278 (100.0)	289 (110.0)	307 (100.0)

Table 2. Pupils from primary and secondary schools who agree/strongly agree on the SHS availability, staff behavior, check-ups attendance, counselling, confidentiality and health lessons

	Pupils primary schools Agree/strongly agree N (%)	Pupils secondary schools Agree/strongly agree N (%)	P
SHS available and accessible	286 (58.7)	190 (34.5)	<0.001
Working hours convenient	191 (39.2)	176 (31.9)	<0.001
Physician in SHS complaisant and willing to help	352 (73.3)	299 (54.3)	<0.001
Nurse in SHS complaisant and willing to help	341 (71.3)	298 (54.1)	<0.001
I attend check-ups regularly	434 (90.4)	430 (78.0)	<0.001
Counselling in SHS is reasonable and useful	334 (69.7)	362 (65.7)	0.16817
In SHS confidentiality is respected	326 (68.2)	342 (62.1)	0.03981
Health lessons held by SHS are useful and interesting	215 (45.0)	230 (41.7)	0.23069

Table 3. Pupils from primary schools, by gender who agree/strongly agree on the SHS availability, staff behaviour, check-ups attendance, counselling, confidentiality and health lessons

	Primary schools males Agree/strongly agree N (%)	Primary schools females Agree/strongly agree N (%)	P
SHS available and accessible	131 (58.7)	190 (34.5)	<0.001
Working hours convenient	191 (39.2)	176 (31.9)	<0.001
Physician in SHS complaisant and willing to help	158 (72.5)	190 (74.5)	0.61724
Nurse in SHS complaisant and willing to help	149 (68.7)	187 (73.6)	0.23553
I attend check-ups regularly	192 (84.2)	236 (92.5)	<0.001
Counselling in SHS is reasonable and useful	140 (64.5)	190 (74.5)	0.01830
In SHS confidentiality is respected	142 (65.4)	180 (70.9)	0.20669
Health lessons held by SHS are useful and interesting	82 (38.1)	130 (51.0)	<0.001

among pupils in secondary schools were less obvious (Table 4). Males found SHS more available (p<0.001), working hours more convenient (p=0.01128). Females attended check-ups more regularly (p=0.0294) and found counselling more useful (p=0.02370). Regarding SHS staff behaviour, health education lessons and confidentiality were no gender differences. Teachers from primary schools rated higher SHS availability, working hours' convenience, SHS staff behaviour and appropriate information after check-ups (p<0.0001) (Table 5). In perception of SHS as necessary partners for schools, for counselling and SHS participation in health education were no differences. Teachers were asked whether SHS could have been replaced by paediatricians or GPs and 35% and 33% answered positively, others did not approve of the suggestion; that contacts with SHS are insufficient and ineffective thought only 21% and 24.5%. SHS as necessary partners for schools perceived 88.9% teachers from primary and 82.3% form secondary schools (p=0.0231).

The greatest differences in SHS perception were found between parents from primary and secondary schools (Table 6). For all variables perception was more positive (p<0.001) by parents from primary school (SHS availability, working hours, staff behaviour, information after check-ups, counselling and health education usefulness and confidence in addressing SHS). That contact with SHS are insufficient and ineffective thought 28.2% parents from primary and 33.8% from secondary schools, and that SHS could have easily been replaced by paediatricians or GPs thought 21.7% parents from primary and 32.5% from secondary schools (p<0.001). Only for perception of the contacts with SHS was no difference (28.2% and 33.8% thought that contacts were insufficient and ineffective).

The questions all four groups were asked were presented in Table 7. The primary school teachers rated the SHS availability as the highest (71.2%), secondary school pupils the lowest (34.5%). Parents in primary schools rated the availability higher (68.5%) than parents in secondary schools (46.6%). Teachers and parents from primary school found the working time quite satisfactory, teachers and parents from secondary school rated convenience of working time lower. Pupils generally found the working hours not satisfactory enough. The physicians' complaisance and willing to help was perceived the highest by teachers, parents and pupils in primary schools (81.4%, 79.2% and 73.3%). A similar situation was with the perception of nurses, but parents and teachers from primary schools rated nurses even higher than physicians. That counselling in SHS is very useful agreed all groups of respondents - the highest

Table 4. Pupils from secondary schools, by gender who agree/strongly agree on the SHS availability, staff behaviour, check-ups attendance, counselling, confidentiality and health lessons

	Secondary schools males Agree/strongly agree N (%)	Secondary schools females Agree/strongly agree N (%)	P
SHS available and accessible	111 (40.4)	76 (29.2)	<0.001
Working hours convenient	103 (37.5)	71 (27.3)	0.01128
Physician in SHS complaisant and willing to help	140 (50.9)	143 (57.3)	0.34341
Nurse in SHS complaisant and willing to help	147 (53.5)	145 (55.8)	0.59096
I attend check-ups regularly	205 (74.6)	214 (82.3)	0.02943
Counselling in SHS is reasonable and useful	168 (61.1)	183 (70.4)	0.02370
In SHS confidentiality is respected	169 (61.5)	163 (62.7)	0.20669
Health lessons held by SHS are useful and interesting	110 (40.0)	112 (43.1)	<0.001

Table 5. Teachers from primary and secondary schools who agree/strongly agree on the SHS availability, staff behaviour, check-ups information, SHS as school partners, counselling, confidentiality and health lessons

	Teachers primary schools Agree/strongly agree N (%)	Teachers secondary schools Agree/strongly agree N (%)	P
SHS available and accessible	226 (71.2)	153 (55.1)	<0.001
Working hours convenient	207 (65.7)	123 (44.2)	<0.001
Physician in SHS complaisant and willing to help	258 (81.4)	182 (65.5)	<0.001
Nurse in SHS complaisant and willing to help	265 (83.6)	171 (61.5)	<0.001
I exchange necessary information after check-ups	236 (74.4)	133 (48.1)	<0.001
Contacts with SHS insufficient and ineffective	66 (21.0)	68 (24.5)	0.30648
SHS necessary partners for schools	280 (88.9)	229 (82.3)	0.02318
SHS could easily be replaced by pediatricians or GPs	35 (11.1)	33 (11.9)	0.77210
Counselling in SHS is reasonable and useful	281 (89.2)	239 (86.0)	0.23148
SHS participation in the health education reasonable and useful	285 (89.2)	240 (86.3)	0.24853

Table 6. Parents from primary and secondary schools who agree/strongly agree on the SHS availability, staff behaviour, check-ups information, contacts with SHS, counselling, confidentiality and health lessons

	Parents primary schools	Parents secondary schools	P
	Agree/strongly agree		
	N (%)	N (%)	
SHS available and accessible	195 (68.5)	142 (46.6)	<0.001
Working hours convenient	183 (63.5)	137 (45.2)	<0.001
Physician in SHS complaisant and responsible	229 (79.2)	162 (53.1)	<0.001
Nurse in SHS complaisant and responsible	234 (81.0)	157 (51.5)	<0.001
I obtain necessary information after check-ups	190 (66.2)	138 (45.2)	<0.001
Contacts with SHS insufficient and ineffective	80 (28.2)	103 (33.8)	0.13489
SHS could easily be replaced by pediatricians or GPs	63 (21.7)	99 (32.5)	<0.001
Counselling in SHS is reasonable and useful	237 (82.3)	202 (66.2)	<0.001
I address SHS with confidence	156 (54.7)	127 (41.6)	<0.001
SHS participation in the health education reasonable and useful	223 (76.9)	192 (63.0)	<0.001

Table 7. Pupils, teachers and parents from primary and secondary schools who agree/strongly agree on the SHS availability, staff behaviour, counselling and health education

	Pupils primary schools	Pupils secondary schools	Teachers primary schools	Teacher secondary schools	Parents primary schools	Parents secondary schools
	Agree/strongly agree					
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
SHS available and accessible	286 (58.7)	190 (34.5)	226 (71.2)	153 (55.1)	195 (68.5)	142 (46.6)
Working hours convenient	191 (39.2)	176 (31.9)	207 (65.7)	123 (44.2)	183 (63.5)	137 (45.2)
Physician in SHS complaisant and responsible	352 (73.3)	299 (54.3)	258 (81.4)	182 (65.5)	229 (79.2)	162 (53.1)
Nurse in SHS complaisant and responsible	341 (71.3)	298 (54.1)	265 (83.6)	171 (61.5)	234 (81.0)	157 (51.5)
Counselling in SHS reasonable and useful	334 (69.7)	362 (65.7)	281 (89.2)	239 (86.0)	237 (82.3)	202 (66.2)
SHS participation in the health education useful/interesting	215 (45.0)	230 (41.7)	285 (89.2)	240 (86.3)	223 (76.9)	192 (63.0)

rating by teachers from primary schools (89.2%). The greatest disparity occurred regarding the perception of SHS participation in health education. Teachers and parents assessed the SHS participation in health education reasonable and useful, and only 45.0% pupils from primary and 41.7% from secondary schools found health lessons held by SHS interesting.

When asked about common reasons for contacting SHS beyond regular group activities, the greatest percentage of pupils from primary schools contacted SHS for vocational counselling (39.2%), for secondary school pupils the most common reason were chronic diseases (52.6%) (Table 8). Teachers in primary schools found the most important reasons for SHS help learning difficulties (62.1%), teachers from secondary schools sexual and reproductive health 45.9%. Parents from primary schools asked help and advice most often for vocational counselling (27.5%), and parents from secondary schools for chronic diseases (15.2%).

The respondents rated their satisfaction with the services regarding the most common issues at the five-point scale (Table 9). The satisfaction among primary school pupils was the highest for vocational counselling (4.1), injuries (3.8) and then nutrition and sexual health (3.7); for secondary school pupils for injuries (3.8), sexual and reproductive health and behavioural problems (3.6). There was no difference between ratings measured by t-test. Teachers from primary schools rated the highest chronic diseases (4.1), nutrition and injuries (4.0), teachers from secondary schools were mostly satisfied with the help regarding sexual health (4), chronic diseases and nutrition (3.6). The difference was found for most issues, teachers from secondary schools being less satisfied for learning difficulties, chronic diseases, bullying and vocational counselling ($p<0.001$) and for nutrition, injuries and behavioural problems ($p<0.005$). Parents from primary schools rated care for chronically ill children as the highest (4.0), being more satisfied with solving learning difficulties, behavioural problems and vocational counselling ($p<0.001$) than parents from secondary schools.

Table 8. Pupils, parents and teachers from primary and secondary schools who used SHS for common adolescents' problems

	Pupils primary schools N (%)	Pupils secondary schools N (%)	Teachers primary schools N (%)	Teacher secondary schools N (%)	Parents primary schools N (%)	Parents secondary schools N (%)
Learning difficulties	89 (18.3)	268 (48.6)	194 (62.1)	70 (24.7)	56 (19.5)	46 (14.8)
Chronic diseases	94 (19.3)	290 (52.6)	184 (59)	107 (37.8)	67 (23.3)	47 (15.2)
Nutrition and physical activity	136 (27.9)	230 (41.7)	182 (58.3)	105 (37.1)	54 (18.8)	41 (13.3)
Sexual and reproductive health	121 (24.8)	235 (42.6)	188 (60.3)	130 (45.9)	53 (17.8)	44 (14.2)
Healthy lifestyle	150 (30.8)	220 (39.9)				
Getting certificates	133 (27.3)	238 (43.2)				
Injuries	159 (32.6)	229 (41.6)	167 (53.5)	84 (33.2)	63 (22)	47 (15.2)
Behavioural problems	90 (18.5)	216 (39.2)	188 (60.3)	96 (33.9)	46 (16.2)	37 (12)
Bullying and violence	95 (19.5)	205 (37.2)	160 (51.3)	79 (27.9)	45 (15.6)	35 (11.3)
Vocational counselling	191 (39.2)		179 (57.3)	72 (25.9)	79 (27.5)	46 (14.8)

Table 9. Satisfaction of pupils, parents and teachers from primary and secondary schools with the SHS response to the common adolescents' problems (scale 1-5)

	Pupils primary schools	Pupils secondary schools	Teachers primary schools	Teacher secondary schools	Parents primary schools	Parents secondary schools
Learning difficulties	3.2	3.2	3.8**	2.7**	3.9**	2.5**
Chronic diseases	3.1	3.0	4.1**	3.6**	4.0	3.6
Nutrition and physical activity	3.7	3.5	4.0*	3.6*	3.6	3.1
Sexual and reproductive health	3.7	3.6	4.1	4.0	3.8	3.1
Injuries	4.0	3.8	4.0*	3.5*	3.9	3.4
Behavioural problems	3.4	3.6	3.7*	3.1*	3.7*	2.7*
Bullying and violence	3.5	3.4	3.6**	2.7**	3.4	2.8
Vocational counselling	4.1		3.9**	2.7**	4.1**	3.1**

** $p<0.001$ * $p<0.005$

DISCUSSION

Among young people, health should be considered in its widest sense, in line with the WHO definition of health as not merely the absence of disease, but a state of complete physical, psychological, and social well-being (EU 2009). That means that it is necessary to make health-service youth friendly and to ensure that the health services for young people are being provided in the right manner. To be considered adolescent friendly, health services should be accessible, acceptable, equitable, appropriate and effective (WHO 2012). For the provision of the services in the line with this recommendation, at the national level is necessary to have legislation framework and organizational structure (Kuzman, Hoppenbrouwers, Juricic 2008). There are great variations in organization, structure, content and staff in SHS in European countries (Wieske et al. 2012). In some countries (Finland, Slovenia, Macedonia, Norway, Great Britain) the school health services are responsible for the comprehensive health care for schoolchildren and university students, providing preventive and curative care as well. If SHS are oriented toward the preventive activities only, it is necessary to have defined content and program. According to the survey results among 11 European countries, in Belgium, Netherlands, Germany, Croatia, Switzerland and Hungary the activities are undertaken according to the annual program and are mainly focused to the preventive measures.

The existing school health services in Europe employ a wide range of professionals - medical doctors, nurses, psychologists, social workers. The common characteristic of the majority of countries is that for being fully engaged in these services, medical doctors have to have specific education, consisting of post-graduate study or special competences training, sub-specialization in school medicine or independent specialization in school and adolescent medicine (Hoppenbrouwers et al. 2007). WHO together with EUSUHM (European Union for School and University Health and Medicine) developed a European framework for quality standards in SHS and competences for school health professionals (WHO 2014).

The core set of competences reflects seven roles of the CanMEDS model developed by the Royal College of Physicians and Surgeons in Canada (RCPSC 2005, WHO 2014). According to the document, SHS expert needs to act as SHS expert, professional, communicator, collaborator, manager, health advocate and scholar.

The satisfaction with SHS is very difficult to compare between countries due to thegreat diversity of the organization and services delivered. According to the results of our survey, the differences of the perception exist between pupils, parents and teachers from primary and from secondary schools. In primary schools all groups of respondents found accessibility higher, working hours more convenient, SHS staff more complaisant and willing to help. The SHS accessibility and availability in Croatia should have been generally very high, as for the each school medical staff consisting of the school doctor and nurse is appointed. But the contacts with schools, school staff, parents and pupils are more frequent in primary than in secondary schools, so the perception of the availability is understandably higher.

Working hours also contribute to the perception of the accessibility. Although SHS work from morning till evening alternating mornings and afternoons in shifts (every second day), satisfaction with the working hours was rather low. Majority of Croatian parents work through the morning, and it might be that the reason for the low perception. It is interesting that pupils in secondary school were less satisfied with the working hours. The possible explanation could be that pupils in secondary schools should travel to the school and SHS is basically not always located near the school itself, so for some of them to visit SHS was not convenient during working days. The SHS staff behaviour was rated by teachers as very high (from primary and secondary schools as well). Teachers according to the results, clearly recognized SHS as welcomed partners in the necessary care for school children. They rated the communication a very good, information exchange as satisfactory and only every fifth of them considered contacts with SHS as insufficient and ineffective.

In the systems where SHS are represented by school nurses (i.e. US, Great Britain), research showed that school system collaboration issues need more school nurse involvement (Winland & Shannon 2004). It was stated that school nurses need to improve their visibility regarding school system collaboration, and in the classroom and individual pupil education. Results indicated that staff would be more satisfied if they had more nursing support in the classroom and more nurse time in their building. In a way it supports our results (regardless the professionals involved), because in primary schools where contacts are more frequent and activities more intensive, perception was higher and more positive. Although SHS in Croatia underwent organizational changes and provide preventive care only, when asked about the possibility of replacing them with paediatricians or GP offices, teachers and parents were against the idea. When comparing the answers, the least positive responses were from teachers from primary schools and the vague answers were from parents from secondary schools.

One of the reasons for SHS less favourable perception from pupils and parents from secondary school could be the time of the survey. The survey was done at the beginning of the spring semester, meaning that in many first year classes in secondary schools regular check-ups have not been done yet, so many pupils had not met SHS staff. Assessing some of the activities the majority of pupils and grown-ups were in favour of the SHS counselling. Counselling in SHS is aiming at risk behaviour, healthy lifestyle, but also at learning difficulties and mental health problems. It is encouraging that counselling is recognized as useful and needed activity. Physicians should specifically target these risk factors with preventive counselling, although adolescents may be reluctant to initiate discussions about risky behaviours because of confidentiality concerns. The key to providing relevant and useful preventive counselling for adolescent patients is developing the trust necessary to discuss the specific issues that impact this age group (General Medical Council 2007).

It is interesting to observe the difference among the respondents' groups about health education. Health education has been provided by SHS staff for several decades already, and since 2012 became part of the regular curriculum. There is evidence to suggest that sexuality education is most effective when based on curriculum-based programs and comprehensive life skills-based approaches. Further efforts to ensure that such programs are available and that their development, content and implementation follow internationally agreed standards based on best practices are likely to produce benefits (Patrick 2011). When perception among pupils was analysed, the gender differences were found. Females in primary and secondary schools found SHS less available and health education lessons more interesting. As health education embraces sexuality education among other issues, it might be that girls were more interested in the themes. Health behaviours and patterns of access to health services among adolescents and young people tend to follow clearly identified gender-specific determinants. Policies targeting adolescents and young people that reflect these gender-specific determinants, and which are informed by sex-disaggregated data, are likely to be more effective (Patrick 2011).

It is encouraging that pupils consider confidentiality in SHS as being respected. Confidentiality in adolescent counselling is very much discussed issue (Society for Adolescent Medicine 2004, English&Ford 2007). The concerns about confidentiality could be at least one of the reasons for not trying to obtain help when needed (Akinbami et al. 2003, Lehrer et al. 2007). However, health providers have to be flexible, because blind adherence to absolute confidentiality or absence of confidentiality is neither desirable nor required by ethic or law. It is therefore important that parents stated their confidence in SHS, because it reflected their belief that the staff will act in the best interest of a young person taking into account context and possible consequences.

The involvement in different health issues differs substantially in other surveys too, as it depends on the

health status, circumstances, staff competencies and environment. The reasons for addressing SHS reflect the common problems adolescents and their parents are facing through this period of life (WHO/UNFPA/ UNICEF 1999). As SHS in Croatia work closely with the school staff, learning difficulties were among most regular reasons for seeking help. The age of the respondents could have influenced the answers, as it seems that for parents and pupils from primary schools learning difficulties have been mostly solved, but for teachers from primary schools it still has been important issue. The same applied to chronic disease problems, by the end of primary schools all important activities regarding chronically ill children have already been undertaken and especially pupils did not find it very important. It is obvious that healthy lifestyle, nutrition and physical activity became important for pupils and parents, which reflects the growing number of overweight children and consequent population concern (Kuzman 2009, Kuzman Pavic Simetin, Pejnovic Franelic 2011). The overweight problem among children and youth indicates that risk factors for high BMI as physical inactivity and unhealthy diet are not the only important issues. Adolescents' self-perception is not in accordance to the actual weight and height, and that makes them vulnerable regarding self-esteem as well as life satisfaction assessment.

Youth-friendly sexual and reproductive health services are those that attract young people, respond to their needs, and retain young clients for continuing care Juntunen 2004). The activities are based on a comprehensive understanding of what young people in a given society or community want, and with respect for the realities of their diverse sexual and reproductive lives. The aim is to provide all young people with services they trust and which they feel are intended for them. Following the recommendation form comprehensive survey done through UNICEF initiative, within SHS in the City of Zagreb additional specialized counselling on sexual and reproductive health was organized. The responses from teachers and pupils reflected that these activities were accepted and used.

Behavioural problems are not rare through schooling years, but the beginning of secondary schooling could be very vulnerable period of adolescent life (Graovac et.al 2006). The changes of the school environment, classroom peers, necessity to change neighbourhood, sometimes to leave home – all this might be reflected in behavioural problems. Therefore, it is not uncommon that these problems were listed more in secondary than in primary schools.

Bullying is not an isolated event in the school classrooms and schoolyards. The complexity of this behaviour is indicated by the evidence that among children involved in bullying psychosomatic symptoms and poor family communication are more often registered. SHS are actively involved in solving problems connected to bullying and again teachers rated high their involvement (Kuzman, Pavic Simetin, Pejnovic Franelic 2011).

CONCLUSIONS

Perception of the SHS in the City of Zagreb differs from different population groups. Teachers from primary schools rated SHS in different aspects of the care as the highest and in secondary schools, assessed by pupils and parents, the perception was lower. Limitations of the study were just two generations of pupils asked to provide reflection and opinions, but this was done for practical reasons and in attempts to prove the distinction between primary and secondary schools. It would be useful to study more in depth the reasons for such change in perception among pupils, taking place just in one school year. Nevertheless, SHS as specific services for children and youth have advantages. Existing SHS network reaches not only cities and towns, but the most remote areas of Croatia, ensuring that each student and school have a school doctor. A defined program of preventive activities, financed by Compulsory Health Insurance provide the harmonized care for school children and adolescents, in line with professional recommendations. SHS are organized on the primary health care level, so pupils have direct approach to service. The close collaboration with schools proves that school is considered as a setting where children are easily available for health interventions, where is easy to follow the epidemiological situation and where health education programs might be successfully implemented. Confidentiality is respected and counselling ensure individual approach, in addition to the group activities undertaken in the school. SHS proved to be of a great help and support for school staff, but less for parents and quite low for secondary school pupils.

Common reasons for asking help from SHS prove that the intervention from their side is needed. Therefore, the model of comprehensive health care or at least more possibilities for intervention would provide an easier solution for pupils and parents improving possible impact on perception of the services by the population.

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