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The methodology of health education programs in schools—Qualitative study

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KEYWORDS
Health education programs;
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Abstract
Objective: To assess strengths and weaknesses of the methodology of health education programs, carried out in the period 2010–2020, in schools in Serbia.
Design: Qualitative study, a thematic analysis approach.
Site: Representatives of Public Health institutions, Serbian biggest nongovernmental organization, Youth organization, Ministry of education and municipality.
Participants: Nine professionals working in the field of Public Health and Health education.
Method: Focus group gathered nine health and non-health professionals in 2022 year. Focus group was recorded, transcribed verbatim, coded and analyzed by three research team members. A coding template evolved through the analysis, providing the expansion of key concepts. Themes were, one by one, extracted, encoded, classified as the smallest units and interpretive, thematic analysis was applied.
Results: Although the Focus group in our study identified among other advantages, support of Health sector to Educational sector as crucial, it emphasized as well following weaknesses: Analyzed health education programs were implemented insufficiently as a separate process in schools, did not have the image of programs shared and integrated into community; Health education needs of schoolchildren, parents, and teachers should be examined prior the education implementation; Well-educated interdisciplinary educators have to be strengthened and supported; Parents participation is necessity; Standards and good practice guidelines are needed, and those developed through Health Promoting Schools program could be practiced.

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Conclusion: It is necessary to support cross-curricular competence, where health education should be integrated into all school subjects, and should go far beyond the school, grow into a culture of community life, which will interconnect all stakeholders in strong Public Health network.

PALABRAS CLAVE
Programas de educación en salud;
Escuelas;
Evaluación;
Metodología

Metodología de los programas de Educación de la Salud en las escuelas. Estudio cualitativo

Resumen
Objetivo: Evaluar fortalezas y debilidades de la metodología de los programas de Educación para la Salud, implementada en el período desde 2010 hasta 2020 en las escuelas de Serbia.
Diseño: Estudio cualitativo, enfoque de análisis temático.
Emplazamiento: Representantes de instituciones de salud pública, la organización no gubernamental más grande de Serbia, organización juvenil, municipio y Ministerio de Educación.
Participantes: Nueve profesionales que trabajan en el campo de la Salud Pública y la Educación de la Salud.
Método: El grupo focal reunió a 9 profesionales sanitarios y no sanitarios en 2022. El grupo focal fue grabado, transcrito palabra por palabra, codificado y analizado por 3 miembros del equipo de investigación. Una plantilla de codificación evolucionó a través del análisis, proporcionando la expansión de conceptos clave. Los temas fueron, uno por uno, extraídos, codificados, clasificados en unidades más pequeñas y se aplicó un análisis temático interpretativo.
Resultados: Aunque el grupo focal de nuestro estudio identificó, entre otras ventajas, el apoyo del sector de la salud al sector educativo como crucial, también enfatizó las siguientes debilidades: los programas analizados de Educación de la Salud fueron implementados de manera incompleta, como un proceso separado en las escuelas, no tenían la imagen de programas compartidos e integrados a la comunidad. Antes de implementar el programa deberían examinarse las necesidades de educación sanitaria de estudiantes, padres y profesores. Es necesario fortalecer y apoyar a los educadores interdisciplinarios bien formados. La participación de los padres es esencial. Se necesitan normas y pautas de buenas prácticas y se pueden poner en práctica las desarrolladas a través del programa de *Health Promoting School*.
Conclusión: Es necesario apoyar la competencia entre asignaturas, donde la Educación de la Salud debe integrarse en todas las asignaturas escolares, y salir de la escuela, para crecer a una cultura de vida en la comunidad, que conectará mutuamente a todas las partes interesadas en una fuerte red de Salud Pública.

Introduction

Along with the habits children and young people acquire in the family, the school plays a key role in health education and creating behavioral styles that support healthy development, growth, and life.[1–3] The importance of health education in schools is based on the essential association between health and education: healthy children will be educated more efficiently, and good education and good health will enable the achievement of better academic, social, and economic goals.[4–6]

Different hazards are recognized as health risks that school children and young people are exposed to low levels of physical activity, unhealthy dietary behavior, substance abuse, violence, and factors influencing mental health.[7–9] Therefore, health education in schools should cover topics related to all risk factors and risky behaviors, and the methodology of health education should be specially adapted to the population of school children. An example of an innovative initiative in improving access to health education for school children is the ''European Network of Health Promoting Schools'' (ENHPS) project launched by three international organizations – the European Commission (EC), WHO Regional Office for Europe and the Council of Europe (CE) which connected several European countries and hundreds of schools in order to create in schools a favorable health environment where both schoolchildren and school staff take measures for the benefit of their physical, mental and social health.[10–12] Although many European countries, including several countries in the region, were involved in the Health Promoting Schools (HPS) program, many developing countries and Serbia were not recruited for the program. Consequently, since 2010, health education in schools has been implemented in Serbia through two

Table 1 General and specific aims, expected results, indicators and programs topics of the health education programs in the schools of the Republic of Serbia.

Programs of health education in primary and secondary schools		
General aim	Specific aims	Expected results
• Acquiring knowledge in health education • Gaining children's attitudes and behavior styles that will lead to good health improving health education in schools • Achieving cooperation between school, family and community with the aim of improving children's Health.	• Education in the field of health education • Training children in order to gain attitudes and behavioral styles that will lead to good health • Training of educators in the field of health education of children in schools • Motivating children, educators, and wider community for a healthy lifestyle and environmental protection.	• Increased knowledge in the field of health education • Acquired attitudes and behavioral styles, among children, that will lead to good health • Trained educators in the field of health education of children in schools • Motivated children, educators and wider community for a healthy lifestyle and environmental protection.
Programs indicators • The existence of a unique concept of health education in school curricula, i.e. programs • The percentage of primary and secondary schools in which health education has been introduced • The percentage of children covered by health education programs • The number of educators engaged in health education programs		
Health education topics Proper nutrition, physical activity and health, body care, health and the environment, development of skills to resist social pressure, substance abuse (smoking, alcohol, drugs), safe behavior, reproductive health and AIDS, communication and relationships with others, environmental education, correct use of health services.		

programs developed at the national level. The general and specific objectives of programs were defined, as well as the expected results, indicators, and topics of the programs (Table 1) in charge health facilities.

For all schools in the country, these programs were organized and conducted by a network of Public Health institutes (24 institutes), primary health centers, and schools. The educators of health education were health workers from primary health centers (mostly medical doctors and nurses trained in health education) and teachers and assistants (psychologists/pedagogues) from schools. Health education topics were addressed through lectures, workshops, campaigns, and other activities adjusted to the age groups.

The results of the International Research on the Health Behavior of schoolchildren in the Republic of Serbia (Health Behavior in School-aged Children Survey) conducted in 2017/2018,[13] as well as reports on the implementation of health education programs for primary and secondary schools for the period 2010–2020, in the Nisava District[14] raise the question of whether and to what extent the existing program and the way of implementation are following the Health and educational needs and challenges that school children are exposed.

This paper aimed to present the results of the evaluation of health education programs methodology, which were carried out in 2010–2020 year in primary and secondary schools of the Nisava district of the Republic of Serbia to enable a deep understanding of the strengths and weaknesses of programs and provide recommendations of global interest for further work in health education for schoolchildren.

Methodology

Design, settings and Focus group participants

A Focus group was organized as a very initial phase of the health education program's in-depth evaluation at the end of the ten-year implementation of health education programs intended for primary and secondary schoolchildren in the Nisava district. It was organized in order to enable professionals from a range of disciplines, with different approaches, to have an open discussion, to collaborate, create cohesion and unity, and grow their reflection together, but as well, due to their professional positions, to connect scientific and local knowledge, to support, promote and advocate further implementation of children's health education in a modern and evidence-based manner. Although, in this exploratory phase of research, a Focus group was chosen as a qualitative method to obtain broader understanding of the researched topics, in-dept interviews are planned as the next step that will aid understanding individual perspectives. The Focus group was held in December 2022, with the theme *''Health education for children and youth – vision of the future''*, and gathered professionals working in the field of health education and formal education of school children in the Republic of Serbia. The experts with more than 15 years of working experience in the field of interest were selected according to at least one of the following criteria: (a) working at the university or in a public health institution, as a researcher or in the implementation of different health programs, (b) working with

Table 2 Focus group topics.

Focus groups topics	
Analysis of the current situation	What have we done so far in the field of health education for school children and has it yielded results? Did and how did we measure the satisfaction of users of the health education program?
Methodology of implementing health education for school children	What was the methodology of implementation of health education programs in primary and secondary schools? Recommendations for improving the methodology – health education as a new school subject or are there some other models more acceptable? What do young people want? What does the school want and can do?
Program providers/health educators	Who are the providers of health education, and who are the lecturers? Who coordinates health education work in schools? Can our school be the right place for healthy growing-up and support?
Stakeholder network and community role	Who is in the health education network? How to connect and coordinate the network: children, youth, parents/family, teachers/school, community?

schoolchildren, (c) working in the field of community health improvement. They were contacted by email and phone; all invited participants accepted participation. Considering that mixed-gender groups will tend to improve the quality of discussion and its outcomes, the following Public Health professionals, six women and three men, took part in the Focus group:

1. As moderator of the Focus group, Head of the Center for Health Promotion of Districts Public Health Institute.
2. Three Health professionals working in the field of Health promotion and education from three Public Health institutes.
3. Program Director of the largest Non-government organization (NGO) in the country.
4. President of the Society for Cognitive Behavioral Theory and Practice – Special pedagogue and psychotherapist.
5. Educational Advisor at the Regional Department of the Ministry of Education – Psychologist.
6. Director of one of the most prominent NGOs that gathers the media in the region.
7. Vice-president of the Youth organization in the City.
8. Manager from the Regional Development Agency.

As recommendations and measures related to the COVID-19 epidemic were still in force, the Focus group was organized as a Zoom meeting lasting 3 h. The agenda of the Focus group and the accompanying material[13,14] were prepared in advance and forwarded to all participants of the Focus group before the scheduled appointment.

Focus group topics

In the process of the Focus group design, based on available scientific and professional data, available epidemiological indicators, examples of good practice from developed countries and Serbia, as well as based on experience in working with children and young people,[15,16] the following topics were defined (Table 2).

Foremost, all Focus group participants agreed with the defined topics and work methodology in the Focus group. The Focus group was conducted in such a way as to initiate interaction between all participants. The group was led by a trained, experienced moderator, without hierarchical connections with participants, whose impartiality was considered sufficient, and who facilitated the discussion to gain extent and depth from participants' responses.

Data analyses

Focus group was recorded, transcribed verbatim, coded and analyzed using a thematic analysis approach.[17,18] Once the preliminary categorization phase was completed, three research team members read and coded each transcript in detail. A coding template evolved through the analysis, expanding key concepts. One by one, themes were extracted, encoded, and classified as the smallest units, and interpretive analysis was done. The process involved each of the researchers independently passing the verbatim transcripts, noting keywords and important observations. The interpretation of information was affected by the evaluation objectives and the themes that arose from the data. Finally, the researchers combined, compared and analyzed their independent remarks.

Results

Analyzing *the Current situation in the health education of school children*, the participants of the Focus group underlined the results of the International Health Behavior in School-aged Children Survey, conducted in 2017/2018 in Serbia[13] and quoted: ''*there are many harmful effects, risk factors, inadequate behavior, that school children are, with high rates, still exposed to*''.

The Health professional working in public health institution quoted as follow: ''*No realistic indicators have been defined for measuring the quality of health education and satisfaction with the health education programs. The existing European Standards for Health Promoting Schools were not used either*''.

Educational Advisor quoted as follows: *''Throughout the implementation of programs, the needs of schoolchildren, parents, and teachers were not examined''*.

As an explanation of what young people want and what the school can do, the second Health professional added: *''The needs of young people are a reflection of the environment, and as their environment is pretty much ''virtual world'', which was especially emphasized during the pandemic/epidemic of COVID 19, it is necessary to enter their market of interesting things and provide health education in authentic way''*.

Representative of the Youth organization emphasizes: *''The Health education that was carried out in the analyzed ten-year period had not the image of a program, movement, or initiative integrated in the community, but represents a lukewarm approach, held just in schools without involvement of schoolchildren and youth in the design of programs''*.

Regarding *Methods of Health education for school children,* the Pedagogue from Society for Cognitive Behavioral Theory and Practice, considering reports on the implementation of health education programs for the period 2010–2020, in the Nisava District, provided by district's Public Health Institute, quoted as follows: *''Giving ex cathedra lectures was the most common form of work; in recent years, the workshop form of work started to be more applied; campaigns were scarcely designed or were not organized at all. There were no organized free extracurricular activities. School children did not participate in decision-making regarding Health education content''*.

The manager from the Regional Development Agency recommended an improvement of methodology, as follows: *''In addition, Health education was not part of a broader Public Health approach. There is no public advocacy (''let's talk about it'') on current health education topics. Health education should be interlaced into the subject curricula, permeated by its activities through the life of the school and the work of teachers''*.

All Focus group participants enthusiastically agreed that a change in the methodology of implementing health education is needed in accordance with good examples and experiences while respecting the specifics of each country's characteristics and the broader environment. They acknowledged the following program strengths: continuity of program implementation, application of a unique approach in all schools; strong assistance of the Health sector through engagement of a well-educated health force from primary level of health (medical doctors and trained nurses).

Regarding *Identifying the main Health educators*, the educational Advisor from the Ministry of Education quoted as follows: *''The Health educators in schools were mostly health workers, psychologists, pedagogues, nevertheless teachers were insufficiently involved, or maybe was not recognized in reports. Parents take part in the work of the school through Parental councils and sporadically at the invitation of teachers, but their role in health education is not recognized. There is a shift of responsibility from children to parents, parents to teachers, and educational institutions, and vice versa''*.

Special pedagogue and psychotherapist added: *''Parents should be informed on children's needs, consulted when choosing methods, invited to participate in activities to build a sense of belonging to the program, understand why it is good for their children, and support their children in activities''*.

Concerning the *Stakeholder network and the role of the community*, the representative of one of the biggest NGOs participants quoted as follow: *''Although schools cooperated with health institutions at the primary level of health care, all other stakeholders from the community were just sporadically involved. Health education programs in schools remain ''lonely islands'', initiatives with no strength or impact. There is no awareness of the wider community on the role of all stakeholders in this process''*. This was recognized by Focus group participants as the utmost weakness of analyzed health education programs. The representative of the Youth organization in the City quoted as follow: *''Should not forget the power of the media, and possibility to foster programs implementation in the community through media campaign. Well-known individuals in the community should be involved in the promotion of health education''*.

Moderator of Focus group quoted as follows: *''The process of networking between institutions and organizations works better if there are signed cooperation agreements''*.

The saturation of the discourse was reached through Focus group and draw directions for further evaluation steps that will gain detailed insights, through in-depth interviews with school children representatives, teachers, community representatives, and other program participants.

Discussion

Social ecology is a concept recognized in many researches as closely related to health education, as well in the Charter from Ottawa and the Health Promotion Conference (1986) calls for the joint action of individuals, communities, and society as a whole.[10] The Global Education 2030 Agenda and UNESCO strategy on education for health and well-being highlighted supporting national education sectors to make every school a health-promoting school through a whole-school approach.[19] Investing in healthy public policy is a key strategy, where a supportive environment needs to be created at the individual, social, and structural levels, and personal skills must be enthusiastically combined with health education and other strategies to achieve effectiveness.[20] The Focus group in our study identified, among other advantages, support of Health sector to the Educational sector as crucial for the sustainability of health education in schools. Contrariwise, the Focus group finding is the drawback of a two-way relationship between the school and community, which was recommended in a review of 35 school-based health promotion interventions held in Europe and the US.[21]

Programs were successful when health education was introduced through work on regular subjects,[22] as recommended by the Focus group. Cross-curricular competence should be strengthened and supported. Such values as enthusiasm, a sense of belonging, commitment to a common idea, a sense of fun, expediency, and responsibility for achieving the common goal – good health for children and good health for the community, should be advocated.[23]

Different documents underlined the importance of a ''health literate child'' as the goal to be pursued; the child should develop functional, interactive and critical health ''literacy'', as well as ''media competence and literacy'' in order to develop cognitive and social that will help to raise basic knowledge about various health topics and develop personal independence, as well emotional intelligence.[24] Peer education is seen as a significant concept. Media literacy, which is increasing among children in the analyzed programs,[13] is no less important since it implies the possibility of critical review in terms of recognizing correct, useful and incorrect ''bad'' messages.[20] Our findings, in agreement with studies,[25] recognize that media could ''raise'' these activities to a level that Health Promotion is a widely recognizable concept, a culture of life. Additionally, Focus group participants observed the importance of integrating media and digital learning solutions in the health education process. Significant findings, lacking in analyzed programs but recognized by our Focus group participants, indicate the importance of well-educated interdisciplinary educators and the participation of parents in health education programs.[26,27] Local health networking is recognized again as a key element of support for parental participation and Family Health promotion.[28,29]

Creating a strong network of partners, from the cooperation of the educational and Health sectors to the networking of all interested parties in the community, represents the strongest basis for introducing health education. Focus group participants pointed out that standards, specific indicators, tools for satisfaction assessment and good practice guidelines are needed, and those developed through the HPS Program could be practiced. They also emphasized the strength of programs through the existing partnership between the Ministry of Health and the Ministry of Education, similar to the evaluation of HPS results.[28,29]

The limitation of this study is that representatives of the target population group, school children, were not included in the research, which is strongly recommended in further work. The single Focus group is also a limitation of the study. We considered that the population's homogeneity allowed us to identify key themes and issues relevant to our research objectives.

Conclusion

Health education of school children, as a concept that has the potential to improve global health, should grow into a culture of community life, which will interconnect children, parents, teachers, health workers, students and universities, non-governmental sector, youth organizations, sport organizations, media and all other stakeholders in the community. It is necessary to advocate cross-curricular competence, where health education should be integrated into all school subjects, regular and optional, through various topics, but to be a part of free extracurricular activities, as well, to ameliorate the impact of inequality on health at school-age children. Developing a holistic approach, with intersectoral action and inter-organizational partnerships at all levels, and creating a supportive environment will enable school children to take an active role even as peer educators. Further research should be implemented in standardization and health literacy validation, emphasizing global differences and specificities of countries and regions.

What is known about the topic?

- Health education is perceived as essential for children's growth and key factor for improving global health. Schools are the optimal settings where educational health-related interventions could be systematically implemented.

What does this study add to the literature?

- The survey pointed out that health education for school children, supporting cross-curricular competence, should be integrated into all school subjects with different health topics, and provided through free extracurricular activities, as well. It should be integrated into the culture of the community life, with inter-organizational partnerships at all levels.

What are the implications of the result?

- No matter in which country are, schools should be widely and systematically involved in a appropriate path to become ''health-promoting schools'' according to recommendations set by WHO.

Ethical considerations

Ethics approval was not required as no biomedical intervention was performed; experimentation on animals, human subjects and clinical trial were not included. All data shown in the tables also are shown in the text of the Results section and discussed in the Conclusions.

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Authorship contributions

R. Marković conceived the study and was in charge of overall direction and planning, methodology development, Focus group organization, participation in Focus group, has written the article. Ignjatović collaborated in the acquisition, analysis and interpretation of the data, has written the draft of the article, contributed to the final version of the manuscript. A. Višnjić reviewed and revised the article critically for important intellectual content, contributed to the final version of the manuscript. M. Stojanović collaborated in the acquisition, analysis and interpretation of the data, and approved the final manuscript as submitted. M. Apostolović collaborated in the acquisition, analysis and interpretation of the data, has written the draft of the article. S.

Otašević participated in design the analyses, methodology development, reviewed and revised the article critically for important intellectual content and approved the final manuscript as submitted.

Transparency declaration

The corresponding author, Assist. Prof. Dr. Roberta Marković, in the name of the rest of the signatories, declares that the data and information contained in the study are precise, transparent and honest; that no relevant information has been omitted; and that all the discrepancies among authors have been adequately resolved and described.

Conflicts of interests

The corresponding author, Assist. Prof. Dr. Roberta Marković, in the name of the rest of the signatories, declares that there is no conflict of interests.

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