

Challenges in Developing Health Promoting Schools' Project: Application of Global Traits in Local Realm

Behrouz Fathi¹, *Hamid Allahverdipour², Abdolreza Shaghaghi¹, Ahmad Kousha¹, Ali Jannati³

¹Department of Health Education and Promotion, Tabriz University of Medical Sciences, Tabriz, 14711, Iran

²Road Traffic Injury Prevention Research Center, Tabriz University of Medical Sciences, Tabriz, 14711, Iran

³Tabriz Health Services Management Research Center, Tabriz University of Medical Sciences, Tabriz, 14711, Iran

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*Corresponding Author:

Hamid Allahverdipour

Tel: +98 411 3344731

e-mail:

allahverdipourh@tbzmed.ac.ir

ABSTRACT

Background: Despite the importance of student health and school hygiene as an aspect of the infrastructure of community health, few feasibility studies have been conducted on school health programs in developing countries. This study examined possible barriers to and challenges of such programs from the executive perspective in East Azerbaijan Province in Iran.

Methods: This qualitative study used the content analysis approach to recognize barriers to and challenges of health promoting school program from the executive perspective. Fourteen experts were selected in the areas of children and adolescents and school health, physical education and school headmasters. Data were collected using semi-structured interviews and analyzed using the content analysis method.

Results: Five themes were extracted as major barriers and challenges: 1. Intra- and inter-sectorial collaboration; 2. Policy and rule formulation; 3. Infrastructure and capacity; 4. Human resources; 5. Community involvement.

Conclusion: The localized version of the current health promoting school program had major faults. If this program is considered to be a healthcare system priority, it should be revised to set effective policies for implementation and to sustain school health programs based on the capacities and objectives of each country.

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Introduction

Integrated, comprehensive and strategic school health programs have greater potential to achieve good results.¹ In 1980, World Health Organization (WHO) orientation toward developing healthy structures instead of focusing only on individual behaviors founded a comprehensive approach for the health promotion activities.^{2,3} The Health Promoting Schools' (HPS) initiative was implemented in 1995 by collaboration of the

health promotion, education and communication sectors, the intra-sectorial school health working group, and the regional office of WHO.⁴ This initiative highlights capacity development and encouragement of participation, for health which all have been accepted as powerful prerequisites to promote health and empowerment in schools.^{2,3} HPS addresses the relationship between health and education which is clearly re-

flected in the Health for All and Education for All goals of the United Nations and also in the social model of health which was corner stone of the Ottawa Charter.^{4,5} Attention and application of the principles of the Ottawa Charter in schools and the focus has been put on the development of health promotion structures led to the establishment of HPS.^{2,6}

HPS has been developed by WHO over the last decade and is being implemented globally.² Studies on the experiences of participating countries in the HPS have resulted to varying results and challenges. The most important identified challenges were the mobilization of human resources and facilities to implement the initiative, inclusion of societies as whole identities, policy makers, public, private and non-governmental sectors and, also students, their parents and teachers.⁷ In the first meeting of the Caribbean HPS Network, the main obstacles to attain HPS aims were defined as the lack of continuous funding, insufficient and unstable governmental support, inappropriate development of HPS national networks, limited involvement, and restricted access to education and continuing education.⁸ The need to strengthen collaboration between the education and health sectors, technical support, and insufficient funding were among the major challenges listed by the European HPS Network.⁹ Leiger et al. (2001) referred to the insufficient preparedness of teachers and educational institutions in terms of health issues, shortage of time and resources, and weakness of facilities as the greatest barriers to achieve HPS goals.¹⁰ In the Eastern Mediterranean Regional Office (EMRO), HPS member countries addressed the insufficient funding and technical expertise, lack of awareness among the political leaders about the program, and also lack of infrastructures as key issues.¹¹ HPS has now been adopted in all EMRO countries, except for Afghanistan and Libya and through using different methods many local networks have been established during the past decade.^{2,11} In Bahrain, HPS is organized by a committee comprising representatives from

WHO and the Ministry of Health. In Jordan, the committee comprises representatives from the Ministry of Health and Education and is directed by the School Health Director-General of the Ministry of Health. Authorities in Lebanon sought help from private and governmental sectors and international organizations to implement the program.¹¹

In Iran, with a population of about 75 million and a total of 13 million students, the initiative was first practiced in 2007. A joint agreement between the Ministry of Health and Medical Education (MOHME) and Ministry of Education (MOE) was signed and led to establishment of School Health Management System and also Schools' Ranking Plan to support and monitor local HPS programs that are exploited within the network of the country's schools.⁵ The HPS initiative was first exercised as a pilot program in East Azerbaijan Province at 36 schools in 2009-2010 and later it was expanded to 700 schools in 2011-2012.

There is however, insufficient evidence about the achievements of the plan and to the best of our knowledge this study is the first systematic attempt to investigate pros and cons of the executed program to identify potential barriers and challenges HPS initiative have encountered within the past years in Iran.

Materials and Methods

This qualitative content analysis was performed in 2012-2013 to identify the impediments and challenges exist to establish HPS initiative in Iran. The participants were 14 lay informants including eight school health, three physical education experts and three school headmasters. They were selected using targeted sampling method within a framework of individuals who had a minimum of two years' experience in development of the program.

Multi method data collection was applied using semi-structured person-to-person interviews, telephone interviews and also electronic mails as described by Meho^{12,13} to

reach data saturation. The interviews were performed by a trained researcher with five years of experience in conducting interviews. Each interview began with a general question such as: "What is your opinion of the HPS program?" and continued with follow-up questions to achieve a deeper understanding for instance by asking "What challenges and barriers you have realized in implementation of this program?"

The duration of each interview varied based on the progress made in probing the interviewee's opinions and lasted from 20 min to 1 h. The interviews were continued until data saturation and repetition of concepts. The person-to-person interviews and electronic correspondences were recorded or documented after obtaining informed consent of the study participants. Notes were taken by the interviewer during the interviews and were transcribed immediately and codified afterwards. For the interviews by electronic mail, an initial file composed of questions similar to those asked during telephone and person-to-person interviews accompanied by completion instructions was sent to the participants. The selected persons were those willing to take part in the study and actually responded the questions and returned the questionnaire. Their initial responses were carefully scrutinized and a second file containing more specific questions appropriate to the views of the participant was sent for clarification. After ensuring maximal data acquisition about experiences of all participants, their responses were codified.

Concurrent data accumulation and analysis was performed by content analysis based on precise examination of whole texts of the interviews. The extracted codes contained the meanings of important expressions in participant statements and their experiences were classified based on context similarity and proportionality.

The four criteria recommended by Lincoln and Guba were used to confirm the reliability of the data.¹⁴ Researcher credibility, member check, and peer check methods were used to confirm credibility.^{15,16} The in-

terviews were conducted by interviewers who were familiar with the program through professional engagement. The texts of the interviews and the extracted codes were reviewed by two experts who collaborated with the researchers to assure consistency of the researcher's understanding with that of others. To enhance the credibility of the data, the texts of the interviews were returned to the participants with the initial codes so that they could determine if the codes were relevant to their experiences.

An audit trial was used to provide confirmability.¹⁵ All study procedures were documented and the documentation was protected and retained throughout the research project. External checks were performed to ascertain the dependability of data.¹³ In this method, study reports and notes were given to a researcher with working experience in qualitative studies and who was not engaged in the present study to determine the similarity of his results with those of the researchers. To test the transferability of the data, targeted samples were selected from different program executives within different districts and from provincial managerial and administrative levels.

Ethical considerations

This paper was prepared based on the findings of a research project as the Master of Science in Public Health Education and Promotion thesis at the Faculty of Health in Tabriz University of Medical Sciences. The study was approved by the ethics committee of the university. The study aims, methods of interviewing, confidentiality of provided data and the participants' right to exit the study at any point were explained for the participants and their informed consent to participate was obtained before initiation of the interviews.

Results

The study data were based on the participants' experiences in implementing HPS with regard to five main prerequisites for

achieving the program goals: (1) Intra-sectorial and outer-sectorial collaboration; (2) Policy-making and rule formulation; (3) Infrastructure and capacity; (4) Human resources; (5) Community involvement.

Outer-sectorial and intra-sectorial collaboration

The participants believed that coordination and collaboration problems were present at the intra-sectorial, inter-sectorial and outer-sectorial levels of the Ministries of Education and Health and Medical Education, as the main administrators of the program, from the lowest to the highest managerial levels. Lack of actual commitment to collaborate with stakeholder organizations, lack of coordination between the partner administrating organizations and lack of full understanding among stakeholders about program implementation details were listed by the participants.

As one of the study participants addressed (physical education expert): *“The plan requires official participation of municipalities, governorate, and all other relevant organizations; however, this has not been practically and officially pursued.”*

According to the study participants' point of view the main program lacks the required coordination and interaction for inter-sectorial collaboration. The national health system experts were in believes that the Ministry of Education failed to actively accept the responsibilities that are needed for program execution. Simultaneously experts in the Ministry of Education referred to the direct responsibility of the National Health Care System to implement the program and that the ministry was unsuccessful in observing all its obligations.

One of the school health officers stated that: *“The school administrators do not consider HPS as a part of their duties sphere. The middle and high level authorities of the Ministry of Education also are feeling in the same way and believe that the program implementation is the responsibility of the health sector.”* This idea was heralded also in the expressions of a schools headmaster who stated that: *“The main duty domain of the*

schools' personnel is education and adhering to the educational curriculum for which they have been trained and have the required expertise. Providing health for the society is totally within the mission and responsibility of Health Care System as expecting the involvement of health care systems in formal educational activities of schools is an unreasonable expectation.”

Policy-making and rule formulation

Policy-making and rule formulation have double impact on the program execution from the perspective of the participants. Most of the participants agreed with the general policies of the program, but insisted that the original administrative guidelines had not been adapted to existing cultural considerations and were not a suitable tool for translating theory into practice.

One of the interviewed school health officers told that: *“This program is desirable in theory, but lacks suitable tools to translate theory into practice. It appears that the existing instructions do not help to operationalize the goals and missions satisfactorily.”*

The participants believed that a disproportionate number of new policies and decisions were inconsistent and contradictory to existing program and had a negative impact on execution of the program. If the program is considered to be reflected in policies, new policies should support it.

Another school health officer stated that: *“With the establishment of the new educational grading system [6 years of primary and 6 years of secondary school] the health offices in many schools implementing the program have practically been turned to classrooms and thus the program structure has changed.”*

Inadequacy in ranking of HPS practicing schools and doubts about appraisal of the validity of the program may negatively affect proper execution of the program by influencing the quality of appraisal.

According to one of the school health officer's point of view to have a reliable ranking system in HPS initiative: *“There must be a standard, faultless, useful and concise checklist in which the meaning of each question is clear and ranking is performed in accordance with predefined*

expectations; appropriate measures must be adopted to prevent subjective judgments by the evaluators.”

An overall agreement was seen amongst the respondents' on absence of a specific mechanism for reconsideration of rules and policies, stakeholder participation in major policy-making and concise definitions of the duties of the organizations involved. Lack of a codified system of incentives for adequate performance and deterrents to poor performance in the managerial level to encourage fulfillment of the duties was also reported. An insufficient transparent operational solution to achieve some of the program goals was another perceived shortcoming by the study participants. The involuntary nature of the program, inadequate criteria for selection of the HPS and optional increase in the number of participating schools were major challenges from the participants' perspectives.

Lack of integrity in the HPS project was highlighted by one of the school health officers differently: *“We are witnessing negligence with regard to the cases of non-compliance with the guidelines. For example, have any regulations been approved and disseminated for the assessment of every individual practicing staff in the program?”* As another school health officer complained: *“No distinctions made between five-star school executives and those of other schools in the program appraisal; no measures have been taken to motivate the successful program executives.”*

Infrastructures and capacities

Most of the participants were in believe that the existing infrastructures and facilities are not ready for implementation of such a program in most of the schools. In some cases, there is not even a platform in place for the program initiation. Such a conclusion was reflected in a physical education expert's explanation that: *“The necessary platform for execution of the program does not exist in our schools. For example, the instructions for the school environment designing require at least a green space, which, unfortunately, we have not and there is no possibility to have it in near future.”*

The participants also stated that calculation of the required funding to implement

the program was not done satisfactorily and that an inadequate assessment of the existing capacity and potentials was performed before implementing the program. Shortage of the facilities and resources required, limited or insufficient allowances to reconstruct or refurbish the outdated schools' buildings that need repairment, and sub-standard physical space in the schools were among the main stated challenges to run HPS. Lack of a robust organizational platform to adequately execute the program and a shortage of time to work with students were other referred challenges for the program implementation. As one of the interviewed headmasters pinpointed: *“Implementation of such a program requires correct assessment and provision of resources. This program is extremely costly and the schools cannot cover the expenditure with their present per capita budgets. In addition, the expectation of covering such expenses through inviting contributions from the students' parents is unrealistic. We struggle to supply our basic educational needs.”*

Human resources

The study participants explained that the human resources required for the program execution do not exist in either the ministries of Education or the Health and Medical Education. For example, a school health supervisor, adviser or psychologist is not employed by most schools, and personals of the National Health System lack the capability and capacity to participate in the program because they are already overburdened by their work load. In the participants' opinions, in most cases, the existing workforce lack the skills that are required to be employed in positions other than their own areas of specialty.

One of the school health officers stated that: *“In addition to the fact that there is an insufficient workforce for program execution in the schools, the existing personnel sometimes lack the required qualifications and expertise. For example, the vocational teacher is pushed into service as the health supervisor.”*

Confusion about the actual goals of the program on the part of the partners and stakeholders, and the reluctance of school

principals and health care practitioners to implement the program are other drawbacks. Such a misconception is perfectly reflected in the expressions of a physical education expert that: *"We received the programs without having accurate and complete understanding about what is consisted; this is why we are unable to meet the requirements and everyone goes his own way."*

Public participation

Failure to encourage public involvement and lack of specific policies to its support is a major challenge explained by the majority of participants. They approached the issue from different perspectives. They believed that, on the macro scale and within the program bodies, the tasks and policies to encourage participation of the partners and stockholders failed to achieve their goals. There was disengagement among the governorates and governors as the upper level authorities of policy-making in provinces and townships and inadequate attention to the regional culture when executing the program. The participants also referred to the lack of collaboration between parents as stakeholders, poor communication of information and lack of a culture of programmed work as some issues relating to the society involvement in the program. In the participants' opinions, lack of a culture of collective participation and working in groups was a major drawback to participate in the program, which is also behind the ignorance of health issues in general by the program executives.

A school health officer stated that: *"Collective participation in the program is too weak. . . Where is the national broadcasting network [IRIB: Islamic Republic of Iran Broadcasting Organization] involvement? This is the country's most influential mass media. What is the position of citizens in this program?"*

There is perceived inconsistency and lack of cooperation in execution of the program among the different departments of the ministries of Education and Health and Medical Education. Different groups of experts in these administrative departments lack com-

mitment and a sense of responsibility toward the program, although they are major stakeholders. As one of the studied physical education expert said: *"Expert groups, although they are obviously procedural stakeholders in the program, show no involvement, participation or sense of responsibility towards the program."*

Discussion

The findings of this study show that from the experts' viewpoints, a number of factors are major impediments to implement the HPS, including lack of community involvement and intra-sectorial and inter-sectorial collaboration, inadequate infrastructure, capacity and human resources, and inconsistent policy-making, regulations, and management approach. Although no published study exists on the program implementation in Iran, the experiences of other countries can be referred to for comparison purposes. The participants' experiences with intra and inter-sectorial collaboration reflected problems with coordination and collaboration within and also between the ministries of Education and Health and Medical Education that are the main administrative authorities of the program in the ministerial and local levels.

Understanding that access to good health is a multi-factorial phenomenon and all sectors of society are directly responsible for promoting good health is critically important. The European HPS Network emphasized the need for strengthening cooperation between the education and health sectors as the main challenge of the program.¹⁷ Inchley et al. studied implementation of the HPS in Scotland and showed that collaboration and integrity are significant factors in development of the program.¹⁸ Bruce et al. concluded that a pivotal need exist to increase resource allocation to support HPS in schools and adopt coordinated approaches and strong leadership in the education and health sectors.¹⁹ As long as the involved organizations have a patchy performance and not collaborate with other organizations and do not follow the state comprehensive pro-

gram for health, the HPS will continue to be hindered.

Proper policy-making and legislation can provide sustainability for health promotion programs. Participants emphasized this as a basic challenge of program implementation. They believed that the new policies and decisions did not support the program, and they were, in fact, contradictory to the program goals. Although compulsory nature of the program could help its development, but lack of an efficient system for selection of schools to participate in the program, may prevent the program's expansion in whole society.

Apparently, the current guidelines have not provided adequate practical solutions to achieve the goals of the program and failed to promote stakeholder involvement in major decision-makings. This mainly resulted from ambiguities in definition of the duties and organizational roles of the participating organizations. Organizational performances are indicative of an organization support from the health initiatives and its commitment in application of all capacities to sustain health programs. The policies should provide top-down support and empowerment needed to encourage change in systems and, to some extent, among the individuals working within the systems. Development of organizational capacity to promote health in schools is time-consuming and requires the development of structure, external support, policies, resources and professional development.²⁰

Capacity building and Infrastructural preparedness are intrinsic in ensuring success of the HPS. The study participants thus correctly referred to the importance of preparedness of the infrastructures and facilities as prerequisites for successful implementation of the program in Iran. Inadequacies in funding, lack of sufficient attention to the existing potential capacities before program execution, failure to recognize differences between the actual and potential capacities in the regions, shortage of resources and lack of a robust platform for program execution were all addressed as drawbacks in

successful implementation of the program. Infrastructures exist in developed and developing countries are different and so HPS implementation in these countries must be considered separately. But obviously, each country should create its own infrastructures to provide health for children at an appropriate level as a basic right.

Inchley et al. highlighted the local conditions, backgrounds, and common features that may help schools to adapt themselves with the HPS approach. They suggested that adequate financing was a critical factor in implementing the HPS program.¹⁸ Xin-Wei et al. studied schools in Xingyang Province in China and reported that one school withdrew from the program because it was located in a poor neighborhood.²¹ Lack of continuous or sufficient funding was indicated as major weaknesses by the European HPS Network and the Eastern Mediterranean member countries.^{11,17}

Yoshimura et al. found that HPS in Lao PDR located in urban and semi-urban schools had more advantages than those in rural in terms of a healthy school environment, health and nutrition services, and prevention and control of infectious diseases. Although suburban and rural schools showed better community and school participation, in general they found broad differences among urban, semi-urban and rural schools, and reported fundamental differences among them in terms of the status of HPS.²² Brown et al. systematically reviewed schools in Ottawa and concluded that none of them were able to implement all the Ottawa Charter components or the HPS approach,²³ which is same conclusion with that of Lynagh et al. in 1997.²⁴ Eastern Mediterranean HPS member countries reported insufficient technical capacity and insufficient or lack of required infrastructure as the main problems to implement the program within their countries. These findings confirm the existing gaps between actual local capacities and the required prerequisites that need to be focused.

The findings also indicated shortcomings in human resources both qualitatively and

quantitatively as major challenge of the HPS program and therefore urgent needs in having enough number of experienced personnel to help HPS. Lack of motivation to collaborate in implementation of the program among the existing workforce of the ministries of Education and Health and Medical Education reflects absence of the most required commitment among top and middle level authorities. Liger et al.¹⁷ also addressed inadequate preparedness of the teachers and the educational institutions as an obstacle to achieve the goals of the HPS in most countries.¹⁰

A sizable number of the participants stated that failure in attaining community involvement and a lack of reinforcing policies at the macro level and also within the program prevent successful implementation of the program. This is concurrent with the experienced challenges by the Caribbean HPS Network in which involvement of the community, engagement of political policymakers, public, private and governmental sectors in addition to parents and teachers in HPS program were shown to be most important.⁸ If the participants are organized effectively, they can create a bridge between the general policies and all interactions in the practicing societies to develop the program. When mutual consent is created, opportunities for positive social change in personal, regional and national levels will be established.²⁵

Conclusions

The pilot implementation of the HPS in East Azerbaijan Province suffers major deficiencies. After three years of the program initiation, careful investigation of the study participants' experiences indicated that involving the public to tackle the health problems is possible through the HPS program. However, success in achieving such a goal requires a fundamental reassessment of the macro-policies and strengthening of supports from the program. Parallel activities that waste resources and therefore decrease their effectiveness should be avoided to al-

low the HPS program to be effective and sustainable in reaching ultimate health goals of the country.

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Competing interests

The authors declare that they have no competing interests.

References

1. St Leger L. Protocols and guidelines for health promoting schools. *Promot & Educ* 2005;12:145-147.
2. Mũkoma W, Flisher AJ. Evaluations of health promoting schools: a review of nine studies. *Health Promot Int* 2004;19:357-268.
3. Clift S, Jensen BB. The health promoting school: international advances in theory, evaluation and practice. Denmark: Danish Education University Press;2005.
4. Jones JT, Furner M. WHO's Global School Health Initiative: Health Promoting-schools: a Healthy Setting for Living, Learning and Working: World Health Organization, Division of Health Promotion, Education and Communication, Health Education and Health Promotion Unit. Geneva: WHO; 1998.
5. Motlagh M, Chitchian M, Dashti M, Moslemi M, Aminaei T, Ardalan G, et al. Guidline for the implementation of the health promoting schools in Islamic Republic of Iran. 2nd ed. Tehran: Ministry of Health, Office of Adolescent Health;2011.[In Persian]
6. Whitehead D. The health-promoting school: what role for nursing? *J Clin Nurs* 2006;15:264-271.
7. Ippolito-Shepherd J, Cerqueira MT, Ortega DP. Health-Promoting Schools Initiative in the Americas. *Promot Educ* 2005;12:220-229, 180. [In Spanish]
8. Ippolito-Shepherd J, Mantilla Castellanos L, Cerqueira MT. Health promoting schools:

- strengthening of the regional initiative. Strategies and Lines of Action 2003-2012 (No. 4). Washington, DC: WHO, *Health Promotion Series*, 2003.
9. Rasmussen VB, Rivett D. The European Network of Health Promoting Schools—an alliance of health, education and democracy. *Health Educ (Lond)* 2000;100:61-67.
 10. St Leger L. Schools, health literacy and public health: possibilities and challenges. *Health Promot Int* 2001;16:197-205.
 11. WHO/EMRO. Report on the Consultation on health-promoting schools in the Eastern Mediterranean Region sanaa, Republic of Yemen 12-14 December 2005. Geneva: World Health Organisation Regional Office for the Eastern Mediterranean Cairo;2006.
 12. Meho LI. E-mail interviewing in qualitative research: A methodological discussion. *J Am Soc Inf Sci Technol* 2006;57:1284-1295.
 13. Adib hajbagheri M, Parvizi S, Salsali M. Qualitative Research Method. 2nd ed. Tehran: Boshra; 2010. [In Persian]
 14. Polit DF, Beck CT. Essentials of nursing research: Appraising evidence for nursing practice. 8 th ed. USA: Wolters Kluwer Health/ Lippincotte Williams & Wilkins; 2013.
 15. Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information* 2004; 22:63-75.
 16. Krefting L. Rigor in qualitative research: The assessment of trustworthiness. *Am J Occup Ther* 1991; 45:214-222.
 17. Barnekow Rasmussen V. The European Network of Health Promoting schools—from Iceland to Kyrgyzstan.. *Promot Educ* 2005;12:169-172.
 18. Inchley J, Muldoon J, Currie C. Becoming a health promoting school: evaluating the process of effective implementation in Scotland. *Health Promot Int* 2007;22:65-71.
 19. Bruce E, Klein R, Keleher H. Parliamentary inquiry into health promoting schools in Victoria: analysis of stakeholder views. *J Sch Health* 2012;82:441-447.
 20. Sprechmann S, Pelton E. Advocacy tools and guidelines: Promoting policy change. USA: Cooperative for Assistance and Relief Everywhere, Inc. (CARE) Atlanta; 2001.
 21. Xin-Wei Z, Li-Qun L, Xue-Hai Z, Jun-Xiang G, Xue-Dong P, Aldinger C, et al. Health-promoting school development in Zhejiang Province, China. *Health Promot Int* 2008;23:220-230.
 22. Yoshimura N, Jimba M, Poudel KC, Chanthavisouk C, Iwamoto A, Phommasack B, et al. Health promoting schools in urban, semi-urban and rural Lao PDR. *HealthPromot Int* 2009;24:166-176.
 23. Stewart-Brown S. What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach? Geneva: WHO Regional Office for Europe; 2006.
 24. Lynagh M, Schofield MJ, Sanson-Fisher RW. School health promotion programs over the past decade: a review of the smoking, alcohol and solar protection literature. *Health Promot Int* 1997;12:43-60.
 25. Macnab A. The Stellenbosch consensus statement on health promoting schools. *Glob Health Promot* 2013;20:78-81.