

Meeting Report

First International Conference on School Health: October 19–20, 2011, Shiraz, Iran

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The First International Conference on School Health was held by the Health Policy Research Center of Shiraz University of Medical Sciences in collaboration with the World Health Organization (WHO), the Iranian Academy of Medical Sciences, and Ministries of Education and Health in the historical city of Shiraz on October 19th and 20th, 2011. The aim of this conference was to provide an up-to-date overview of major issues of school health that included environmental health, screening programs, mental health, life skills, student-based nutritional programs, physical activity in schools, the promotion of healthy life and health literacy in schools and providing students with the opportunity to be health volunteers. Several international and national experts were invited with the intent to increase the scientific content of the congress as well as to share their experiences and research findings, which were applicable to national programs. Overall, 720 abstracts in different fields of school health were sent to the congress out of which 282 were selected for presentation (35 oral and 247 poster presentations).

During the congress, a brief report of a health-promoting school in Asia and the Pacific was given by Dr. Manuel Torres de Lara from the WHO country office in Iran. He described health-promoting schools according to WHO as environments for emotional and social well-being, and reproductive health and population education. Oral health promotion, prevention of HIV/AIDS and STDs, promotion of physical activity, skills-based health and life skills education, proper physical environment, tobacco use and violence prevention were also categorized as characteristics and aims of health-promoting schools. He introduced some successful health interventions in Australian schools that have led to improved health status of children, which included taxes on unhealthy food and beverages, a front-of-pack traffic light nutrition labeling, reduction of advertising of junk food and beverages to children, school-based programs to decrease television viewing and school-based programs for obese children. It was reported that traffic-light nutrition labeling and junk-food tax have resulted in reductions in mean weight for children. In traffic-light labeling there was a 1.3 kg reduction in their mean weight [95% uncertainty interval (UI): 1.2; 1.4] and the junk-food tax had a 1.6 kg reduction in their mean weight (95% UI: 1.5; 1.7). It was also found that both interventions were effective and cost-saving. However, increased alcoholic

beverage tax was not associated with reductions in alcohol-related problems amongst teenagers. In 2008 each of the 190 health-promoting primary schools across Australia received a grant from the government to cover infrastructure costs and to build a kitchen and garden. In the end, establishing relationships with key allies in the community such as the local city council, church groups, the National Heart Foundation, the School Injury Prevention Project, and the parent community were recommended for better success of health-promoting schools.

The role of diet and exercise in the prevention and treatment of chronic disease in children was discussed by Dr. Nick Bellissimo from Mount Saint Vincent University, Canada. Milk consumption promotes fat loss and improves insulin sensitivity. Cereal fiber consumption is associated with healthier body weight and improvements in components of the metabolic syndrome. He also indicated that short duration, moderate intensity exercise promotes negative energy balances while resistance training decreases body fat and increases insulin action in children and adolescents. The combined effect of aerobic and strength training is superior in reducing body fat and improving glycemic control in adolescents. Evidence-based approach to school health was also discussed in this section. Dr. Bellissimo reported that several school-based programs for promoting physical activity and fitness among school children have been implemented in Canada. He cited several lines of evidence that school-based physical activity intervention have been associated with increased duration of daily physical activity, decreased television viewing, increased VO₂ max, and decreased blood cholesterol levels. However, these programs have been found to be ineffective regarding the duration of physical activity during leisure time, blood pressure, and body mass index (BMI). He also reported that educational interventions for promoting health habits were associated with decreased daily minutes of TV viewing, a decrease in BMI percentile accompanied by increased servings of fruits/vegetables and daily steps.

Challenges and Opportunities of Health-Promoting Schools in the Eastern Mediterranean Region (EMR) were discussed by Dr. Sahar Abdou, Director of the Oman School Health Program and WHO/EMRO advisor. She has stated that efforts to improve school performance while ignoring health are ill-conceived, as are health improvement efforts that ignore education. Close collaboration between health and education authorities are required to ensure full primary education for all children and eliminate gender disparities in primary and secondary education. The main challenges of school health in the EMR are poverty, illiteracy, conflicts, emergencies, natural disasters, educational gaps and high school dropout in some countries, in addition to unemployment and rapid demographic and epidemiological shifts. The Oman School Health

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Program links health and education issues, provides a safe, healthy and supportive environment, promotes and empowers healthy life styles among the school community (students, school staff and parents), collaborates with the local community and engages parents and families in promoting their health. For instance, she has reported that implementing gender-specific school-based tobacco prevention programs along with a focus on the overall social context of tobacco use has been associated with decreased smoking prevalence among adolescents. The success factors of the School Health Program in Oman were the results of the commitment between the higher authorities in the Ministries of Health and Education, as well as a partnership between these two ministries and concerned sectors and international organizations. She recommended that health and education policies should be reviewed, updated and coordinated to ensure strengthened national efforts for the development and expansion of health-promoting schools. In Oman, each school has one expert nurse and a supervisor for the school health program. Each school is awarded a golden, silver, or bronze medal based on its adherence to the protocols. Evaluations are performed each three years, which results in positive competition between schools. The major weakness of this program has been its small scale, in that it has covered only 19 schools.

The experience of health-promoting schools in Iran was also presented in this seminar. At the end of 2010, more than 700 health-promoting schools have been established and accredited by the joint committees of the Ministries of Health and Education. In 2011–2012 it is planned that the number of these schools would be increased to 12000 nationwide. The appropriate infrastructures for such a huge increase have been established by both ministries. In a report on the strength and weakness of health-promoting school activities in Iran, the tobacco use preventive measure, the environmental health especially safe water and safe deposition of wastes were among the major strengths. Weak points were health promotion in families and healthy nutrition. It was reported that school-based oral health intervention has resulted in improved gingival health in Iranian preadolescents, particularly when combined with parent education. It was also reported that school-based interventions in Iranian high school girls (integration of the health promotion model and selected constructs from the trans-theoretical model) has resulted in increased physical activity and better physical activity behavior after six months.

Other speakers emphasized the cooperation between the Ministries of Health and Education for achieving the main goals of health-promoting schools. The Islamic Republic of Iran could be an example of this coordinated approach to school health. The screening program upon entrance to schools that has covered 91% of the target population of approximately 3,000,000 nationwide is one the most developed programs that has been in place for over two decades. Other success stories include the free milk program for all elementary and junior high schools, iron supplements for female students, and integration of health knowledge into textbooks; all of which have resulted in a nationally improved health outcome among students. For instance, severe malnutrition, which had a prevalence of 20% over the past three decades, has decreased to less than 5%.

Challenges were also reported including the inequalities between different provinces, districts, and even different parts of a city. Another weakness which was noted in this seminar was the lack of timely data on all health outcomes. Evidence-based policy making still requires additional improvement on managing real and current

problems and not focusing on past problems. The issue of mental and social health needs more consideration. Despite some success in the early childhood development program, particularly in remote rural areas, there are still many issues necessary for enhanced input into schools.

The poster presentations were classified into four categories that included: 1) healthy life style and health-promoting schools; 2) nutrition and physical activity; 3) screening programs; and 4) school environmental health. According to the posters, approximately 9% of teenagers are regular, active cigarette smokers, while 11% are clinically addicted to materials other rather than cigarettes, including opiates. It was also reported that up to 12% of Iranian children suffer from psychological disorders, 17.3% of children have iron deficiency anemia, and 28% are zinc deficient. The prevalence of musculoskeletal pains associated with heavy school-bags and inappropriate school-desks was reported to be as high as 49%–84%. The most important concern in Iranian school health programs was considered to be the shortage of experts in the field of school health and lack of intra- and intersection coordination and cooperation.

The Congress' resolution included important recommendations for improvement of school health in Iran. Effective cooperation and coordination between the Ministries of Health and Education was the main point of the resolution. Establishment of health-promoting schools, providing surveillance systems in schools, periodic screening and examination of school-children and establishment of a referral system, providing adequate experts and physicians for the program, organizing applied school health research in the Ministry of Education, approval of standard school-bags and school-desks according to the age and educational level of children, promoting school-children nutritional status, supporting school-children both physically and mentally by holding appropriate programs and counseling sessions, organizing psychology and psychiatry centers for school-children, enriching the educational textbooks by health education and issues, promoting school-children's knowledge and attitudes towards health issues, as well as providing a healthy school environment were other concerns included in the resolution.

The congress ended with the best presentations receiving an award (a 20,000,000 Rial (approximately equal to 1100 USD) research grant for each winner) and an invitation to the future Annual Congress of School health from the President of the Congress. The best presentation compared the environmental health status in primary schools in different districts in the city of Isfahan, which revealed lower environmental, mental, and physical health in rural areas compared to rural districts. The other awarded presentation evaluated the correlation between nutrition behaviors and anthropometric measures in high school girls from Shiraz. They found that approximately 80% of participants suffered from bad nutritional habits, which were associated with both obesity and underweight in Iranian teenager girls. All participants were asked to adapt more applicable research projects in order to provide the health system with additional evidence for promoting school health.

It is clear that the issue of school health is not only about the current health status of children and adolescents, but also about the future health of the nation. For this reason, in this millennium we should have additional investment on this important issue.