

# Health-promoting schools initiative in Oman

## A WHO case study in intersectoral action



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## **Executive summary**

Health and education are inextricably linked, with schools providing a setting that can be used to improve students' health in addition to providing education.

The Health-Promoting Schools Initiative in Oman was started as a part of the World Health Organization (WHO) global initiative in 2004. It aims to create a healthier environment and lifestyle in schools and in society. The initiative was designed to address many challenges, especially the unhealthy lifestyle emerging among school students.

The preparatory phase involved establishment of management teams at the national, governorate and school levels with representation from ministries of health and education. During the academic year 2004/2005, all school teams received orientation about the concept, its objectives and components and development of a relevant plan of action. The initiative was implemented in 19 schools for four academic years (2004/2005–2008/2009).

An external evaluation revealed the positive impact of the initiative on the knowledge, practice and attitudes of the students towards a healthier lifestyle in addition a high level of ownership by students and teachers of the initiative. The main success factors identified during the evaluation were pre-existing intersectoral collaboration between the Ministry of Health and the Ministry of Education, and commitment and support from policy-makers. The main challenges were the high turnover of trained teams and insufficient budget allocation. These challenges were taken into consideration in the expansion phase when all schools worked to integrate the components of the initiative into their general plan of action and to make use of the resources available to schools.

## **1. Introduction**

The WHO Centre for Health Development located in Kobe, Japan (WKC) launched a project in 2012 to collect case studies that have involved intersectoral action and that aim to improve health and its underlying determinants. The Health-Promoting Schools Initiative (HPSI) in Oman was selected by the WHO Regional Office for the Eastern Mediterranean as a good example of intersectoral action that can be replicated in other countries of the Region.

To promote public health, an improvement of the social, economic, cultural and physical environment is needed, together with development of individual skills and of community knowledge. In addition, the building of partnerships with government sectors, nongovernmental organizations and civil society is essential to achieving outcomes that are intended to have a positive impact on public health.

Schools are an important social setting that can be used to improve community health in general and the health of schoolchildren in particular. The Health-Promoting Schools Initiative is one of the measures implemented through joint planning between different sectors to enhance the quality of life of the Omani population.

This document outlines the initiative in Oman from 2004 to 2008. It describes the health status of school-age children and the initiative in terms of mechanisms, tools that were used in improving intersectoral action, monitoring and evaluation, and lessons learnt.

## **2. Methodology of the case study**

The study was carried out during 2012 using the guidelines jointly developed by the Regional Office and WKC. The school health adviser and director of community-based initiatives at the Ministry of Health in Oman were contacted and asked to provide in-depth information on the process of development and implementation of the Health-Promoting Schools Initiative in Oman. A desk review was carried out to analyse the documents available, including meeting minutes, plans of action, progress reports, guidelines and the evaluation report of the initiative.

## **3. Background information**

### **3.1 Sociodemographic status**

Oman is located in the south-eastern corner of the Arabian Peninsula. Oman is divided into 11 administrative governorates that are further sub-divided into 61 wilayats (districts). The health system in Oman is divided into four levels: national, governorate, wilayat and local. All the policies and strategies for public health programmes are planned and developed at the same four levels.

According to the 2010 census, the population was 2 340 815, of whom 23.9% were expatriates. The Omani population is a young population. About 12.0% of the population are under 5 years and 34.5% under 15 years. Only 3.8% is 60 years or over. (1)

The economy of Oman is showing a growing trend. It depends mainly income from oil and gas exports which account for over 80.3% of government revenues. The

expenditures of the Ministry of Health and of Ministry of Education account for 5% and 9.5%, respectively, of the total government expenditure. (2,3) Free education and health services are provided to all Omanis. In addition, the government also gives direct financial support to disadvantaged people. (4)

Urbanization is increasing. Approximately 1 in 10 persons lived in urban areas in 1970 compared to 1 in 10 in 2005. Such change has affected lifestyles and exposed large segments of the population to increased behavioural and environmental risk factors.

### **3.2 Health status**

Economic and social developments have resulted in rapid and significant changes in morbidity and mortality patterns over the past four decades. Pregnancy-related mortality and morbidities, preventable diseases of childhood and other communicable diseases appear to be well managed and controlled.

The diseases related to lifestyle and changing age structures of the population have begun to reveal morbidity patterns similar to those of developed countries. Currently, more than 75% of the disease burden in Oman is attributed to noncommunicable diseases, especially cardiovascular diseases. (1) Results from the World Health Survey (2008) indicated that 40.3% and 33.6 % of adults suffer from hypertension, and elevated cholesterol level, respectively. (5) The prevalence of diabetes among adults is 12.3% and tobacco consumption is 14.7%. According to WHO, noncommunicable diseases can be prevented by reducing key behavioural risks including tobacco use, physical inactivity and unhealthy diet. (6)

Different studies had been conducted in Oman to measure the prevalence of risky behaviours among school students of different age groups. Studies have shown that adolescents and youth are exposed to many risk factors such as unhealthy diets, physical inactivity, and smoking.

### **3.3 Education status**

Basic education in Oman is organized into two cycles: the first cycle covers grades 1 to 4 and the second cycle grades 5 to 10. These two cycles are followed by 2 years of secondary education. Pre-school education is provided to children less than 6 years old by both the private and public sectors and supervised by the Ministry of Education and Ministry of Social Affairs. (7)

Schools in Oman have good infrastructure and are well equipped with learning aids and computers. Each school has an open place for physical activity and a school canteen.

In the academic year 2010/2011, the total number of schools was 1430, comprising 1040 governmental schools, 3 schools for children with disability and 387 private schools. (8) The total number of students was 588 472, representing 25.1% of the population according to the 2010 census data. (9)

### **3.4 Noncommunicable disease-related risk factors among school-age groups**

#### **Tobacco consumption**

Smoking is a major cause of preventable morbidity and mortality in Oman. The Global Youth Tobacco Survey (GYTS), conducted in 2003 revealed that approximately 1 in 10 students (16.2% of males and 1.8% of females) in grades 8–10 in Oman were current



cigarettes smokers. Of students in grades 8–10 9.9% (16.6% of males and 2.8% of females) were current shisha smokers while 9.1% (15.3% of males and 2.7% of females) were current users of smokeless tobacco. (10)

### **Unhealthy nutritional habits**

An adolescent health survey in 2001 showed that more than two thirds of adolescents had good nutritional knowledge but a quarter of them did not eat healthy foods (see Annex 1). (11)

### **Physical inactivity**

The same adolescent health survey (2001) showed that only 50% of males and 18.3% of females practised physical activity. Furthermore, females who practised physical activity only did so as part of school sports. (11)

## **4. School health programme**

The school health programme started in 1972 with basic services, and was well established in the fourth five-year national development plan (1991–1995). It is characterized by preventive health measures provided in schools by part-time physicians and nurses employed by the Ministry of Health and a referral system between schools and the primary health facilities within the catchment area of the school.

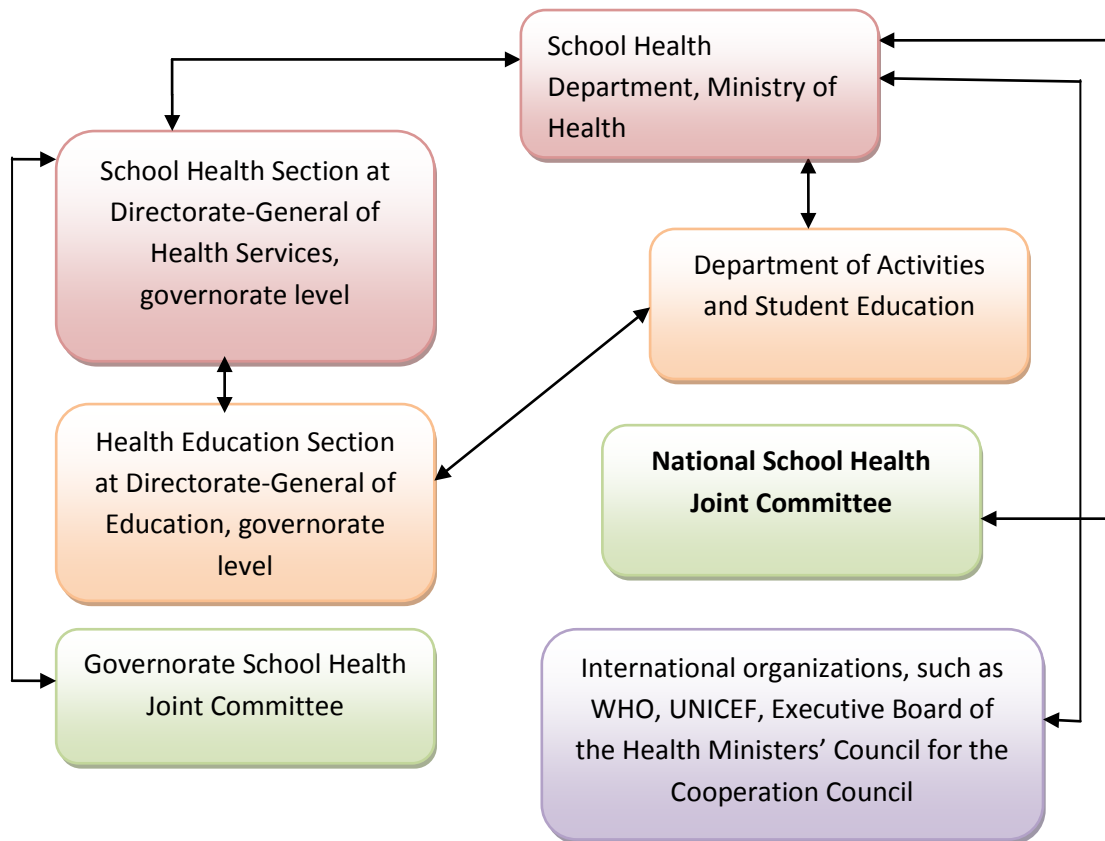
The school health programme is one of the most successful examples of intersectoral collaboration in Oman. A central school health joint committee was formulated in 1992 to advocate, develop strategies and plans, monitor, evaluate and provide technical support to the school health programme. The committee is chaired by the Ministry of Health with representatives from the Ministry of Education, Ministry of Regional Municipalities and Muscat Municipality, and meets at least twice a year.

A similar joint committee was also established in each governorate chaired by the Director-General of Health Services with representatives from the Directorate-General of Health Services, Directorate-General of Education and Directorate-General of Municipalities (Fig. 1).

There is also continuous coordination at the national and governorate level between the School Health Department at the Ministry of Health and the Department of Activities and Student Education at the Ministry of Education, especially in advocacy, mobilizing resources, planning, monitoring and evaluation of school health activities throughout Oman.

The School Health Department coordinates with the different international organizations such as the World Health Organization, United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA) and the Executive Board of the Health Ministers' Council for the Cooperation Council for technical and financial support.

The school health nurses are key persons in implementing most Health-Promoting Schools Initiative interventions. The main role of the school health nurse is to perform needs assessment and a plan of action for student awareness-building on health-related matters, provide health services and maintain student records, and ensure a healthy



**Fig. 1. Organizational structure for collaboration between the School Health Department of the Ministry of Health and other sectors, including international organizations (12)**

environment in coordination with the school administration. The School Health Section at the governorate level regularly assesses the training needs of nurses to improve their capacities. A database for school health exists within the Ministry of Health health information system and common health problems among students, the environmental status of schools and immunization coverage are reflected in the annual statistical book of the Ministry of Health. In 2011, the Ministry of Health jointly with the Ministry of Education developed a five-year plan to recruit a full time nurse for every government school in Oman.

## 5. Intersectoral action for health promotion

Health promotion is the process of enabling people to take control of the determinants of health, in order to improve their health, and is not the responsibility of the health sector alone. Intersectoral action for health is a collaboration of different sectors to integrate health concerns in policies, programmes and activities across sectors for better quality of life.

Many approaches towards implementing intersectoral action for health promotion exist in Oman. These initiatives have facilitated the collaborative action across the different sectors. The most common examples are the Baby Friendly Initiative (1992) in which the Ministry of Health collaborated with community volunteers to promote breastfeeding, and flour fortification with iron and folic acid (1997) in which the Ministry of Health, Ministry of Commerce, WHO and UNICEF collaborated. Other examples of collaboration

by the Ministry of Health with different government sector, nongovernmental organizations and the community are community-based initiatives such as the wilayat (district) health committees (1999), Nizwa Healthy Lifestyle Project (1999), Sur Healthy city (2002), Qalhat Healthy village (2002) and healthy villages and neighbourhoods programmes in 6 wilayats of Muscat Governorate (2004). The Health-Promoting Schools Initiative was based on the successful experiences of the National School Health Programme, a joint endeavour of the Ministries of Health and Education.

## **6. Health-Promoting Schools Initiative (HPSI)**

### **6.1 Initiation of the Health-Promoting Schools Initiative in Oman**

The Health-Promoting Schools Initiative was initiated in Oman as a part of the global WHO initiative. The initiative was technically supported by the Regional Office. The concept was discussed in the joint school health committee meeting in response to the results of different studies, observations and reports that revealed multiple challenges facing schools, especially unhealthy behaviours among students including tobacco consumption, unhealthy diet and physical inactivity.

Oman implemented the initial phase of the Health-Promoting Schools Initiative in 19 schools in 2004/2005 targeting all grades.

#### **Vision:**

Better health for the school community

#### **Mission:**

Working together for health-promoting schools. The main objectives of the initiative are to: (13)

1. Link health and education systems
2. Provide a safe, healthy and supportive environment
3. Promote and empower the health and well-being of both students and staff
4. Collaborate with the local community and engage parents and families in health promotion
5. Integrate health-promoting schools interventions into the school's ongoing activities.

#### **Strategies:**

1. Advocacy for sensitizing local community leaders, schools authorities and families
2. Building partnerships and promoting intersectoral actions
3. Reviewing strategies and policies based on evidence
4. Creating a national network of health-promoting schools

#### **Main components:**

Oman followed the WHO Regional Office for the Eastern Mediterranean model for a health-promoting schools initiative in line with Ministry of Education national policies for health promotion and well-being. The main components were:

1. Skills-based health education
2. Health services including screening
3. School physical environment
4. Psychological support

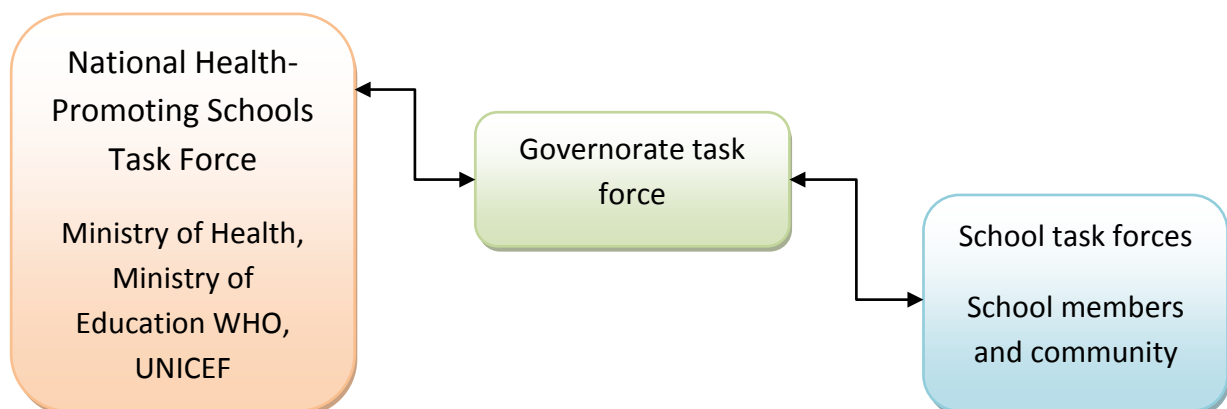
5. School nutrition
6. Health and physical education
7. Promotion of health of school staff
8. Community participation.

## 6.2 Mechanisms for implementation

**Preparatory phase:** Establishment of the health-promoting schools task force groups at different levels (different from the joint committee) (Fig. 2).

**At the national level:** the National Health-Promoting Schools Task Force was established by an administrative decree (3/2004) issued by the Under-Secretary of Health Affairs at the Ministry of Health on 8 November 2004. The Ministry of Health, Ministry of Education, WHO and UNICEF are represented in this task force with the following terms of reference:

1. Develop a plan of action
  2. Develop guidelines and advocacy materials
  3. Conduct of training for health and education staff
  4. Set evaluation indicators and declare schools as health-promoting schools according to evaluation criteria and certification level.
- At the governorate level: A governorate task force with representatives from the Ministry of Health and Ministry of Education was established to assist schools in planning, conducting training, supervising and assessing the initiative.
  - At the school level: school task forces were created, chaired by the school headmaster or his/her deputy, including a school nurse, social worker, health supervisor teacher, students, parents and local community members. In most schools, the social worker coordinates the initiative.



**Fig. 2. Organizational structure of health-promoting schools teams**

## **Role of the different sectors**

### *Ministry of Health and Ministry of Education*

The School Health Department at the Ministry of Health was the coordinating body of the National Health-Promoting Schools Task Force and worked collaboratively with the Ministry of Education, WHO and UNICEF to:

- develop a plan of action for the initiative
- develop three guidelines (implementation, training and assessment) advocacy materials, logo and theme
- conduct advocacy campaigns
- build capacity of school teams
- launch the initiative in a national event
- evaluate and document the initiative
- develop the national health-promoting schools network
- conduct regular national forums
- coordinate with other relevant sectors, such as municipalities and media

### *WHO*

The main role of WHO was to provide technical and financial support, especially in capacity-building of school teams, facilitating national forums, developing the website and producing a documentary film.

### *UNICEF*

UNICEF provided technical and financial support for the national assessment team, printing the guidelines, conducting national forums and evaluating the impact.

### *Other partners*

Other partners, such as parents' councils, community, municipalities and the private sector, played an active role in planning and implementation at the school levels. The Wali (Governor) chaired the school team in one of the schools. Annex 2 shows some examples of partners' contributions.

## **Selection of schools and development of national plan of action**

The National Health-Promoting Schools Task Force performed situation analysis and needs assessment for implementing the initiative (Fig. 3).



**Fig. 3. The National Health-Promoting Schools Task Force at work**

Nineteen schools, two schools from each governorate (8 in urban and 11 in rural areas), were selected to implement the initiative initially. Selection was based on school type (sex of pupils, level and geographical distribution) in addition to school administration commitment. The schools selected were 8 boys and 8 girls (grades 5–12) and 3 mixed sex schools (grades 1–4).

A WHO short-term consultant was invited in 2004 to assist the nationals in developing plans of action, guidelines and conducting training of trainers.

### Production of materials

A special logo for the initiative was produced with the theme “Together for health promoting schools” (Fig. 4).



Fig. 4. Logo and slogan of the Health-Promoting Schools Initiative

### Production of guidelines

The National Health-Promoting Schools Task Force developed a guideline for school teams, training manual and monitoring tool.

### Production of advocacy materials

Two leaflets and one poster were produced in addition to newspaper articles and television and radio interviews with national and schools teams (Fig. 5).



Fig. 5. Advocacy materials produced for the Health-Promoting Schools Initiative

### **Capacity-building of school teams**

A five-day training of trainers workshop was conducted in November 2004 with the financial and technical support of WHO Regional Office for the Eastern Mediterranean and UNICEF. Forty master trainers were targeted to be able to:

- recognize the concept, objectives and components of the Health-Promoting Schools Initiative
- conduct situation analysis and prioritize health problems in schools
- set objectives and develop plan of action
- monitor and evaluate interventions.

At the governorate level, a total of 22 workshops (2 per governorate) were conducted by the master trainers to train school teams. A total of 400 participants were trained.

### **Launch of the initiative**

The initiative was launched in December 2004 under the auspices of the Under-Secretary of the Ministry of Education for Education and Curricula in the presence of high-level officials and technical teams from different sectors. This was followed by a national conference with wide participation from international organizations and Arab countries.

### **Implementation phase**

After launching the initiative, the 19 schools started to implement their plans. Most of the interventions focused on raising awareness about key health issues and providing a supportive environment for health promotion. Parents' councils played a major role in implementation of these activities in collaboration with other stakeholders. Annex 2 shows detailed interventions conducted in schools based on the initiative components. However, continuous supervision and capacity-building were provided by the governorate health-promoting schools team during implementation.

### **Establishment of the national Health-Promoting Schools Initiative network**

A national health-promoting schools network was established to ensure exchange of experiences between participating schools through:

- Regular meetings of the health-promoting schools forum with wide participation from the Ministries of Health, Education, Social Affairs and Religious Affairs, municipalities and academia. During forums, schools shared their experiences, challenges and way forward.
- Establishment of a website ([www.schoolhealthoman.com](http://www.schoolhealthoman.com)) under the theme of "My health in my school". The website helped students and concerned people to discuss and explore their views and knowledge, especially lifestyle, adolescent and youth issues.
- Exchange visits between schools in different governorates to exchange experiences.

### **Monitoring and evaluation mechanisms and tools**

Evaluation was crucial for assessing the effectiveness of the initiative and identifying opportunities for improvement and expansion. The Health-Promoting Schools Initiative was evaluated at process level, to evaluate progress in implementation and at the

impact level, to evaluate the effectiveness of the initiative in changing knowledge, attitudes and behaviours of the school community.

### Process evaluation (14)

The schools that meet the relevant criteria (see Table 1) are awarded bronze, silver or gold certificates. An assessors' guideline was developed and field-tested twice to ensure validity. The tool has nine modules for measuring achievements at three levels.

1. Self-assessment: to be conducted at the school level. This is a continuous process that helps the schools to monitor their progress and refine activities.
2. Assessment at the governorate level: to be conducted by the Health-Promoting Schools Initiative governorate teams to assess the implementation of the initiative in the schools.
3. Assessment at the national level: to be conducted by the Health-Promoting Schools Initiative national task force to determine which schools have fulfilled the criteria for gold certification (Table 1).

The results of the assessment showed that the initiative had positive impact on school environments and staff health. It also strengthened collaboration between the School Health and Community-Based Initiatives departments at the Ministry of Health and Department of Activities and Students' Education at the Ministry of Education, in addition to building partnerships with civil society, WHO and UNICEF. Other important strengths noted were enhanced responsibility among school members (students and staff), with improved decision-making and leadership skills.

### Impact evaluation (15)

A knowledge, attitudes, practice and behaviour study was conducted in 2008 to assess the impact of through comparing schools implementing the Initiative with schools not implementing it ('conventional' schools) to assess:

- students' knowledge and attitude regarding healthy lifestyle
- healthy lifestyle among students and school staff including diet, tobacco use, physical activity and personal hygiene
- school adjustment and relation among schoolchildren, the perception of school staff of their role in promoting healthy behaviour among students.

**Table 1. Level of certification**

Award	Criteria
Bronze	One year implementation and excellent scores in at least 6 components <sup>a</sup>
Silver	Two years implementation and excellent scores in at least 7 components
Gold	Three years implementation and excellent scores in all components as well as providing support to another school to be a health-promoting school

<sup>a</sup> Major components of the Health-Promoting Schools Initiative: skills-based health education, school nutrition, school physical environment, psychological support, physical education, promoting health of school staff and community links



The static group comparison design was employed. The study was conducted in 15 health-promoting schools and 15 matching conventional schools comprising grades 8 and 9. A total sample of 1535 students and 844 school staff participated in the study. Three tools were used to collect data including a self-administered questionnaire directed to students and school staff and an observational checklist to observe student's purchases from the school canteen.

The results showed that students in health-promoting schools had significantly more favourable practices than those in conventional schools regarding eating breakfast, vegetables and fruit (Annex 1). Overall, 41.1% of students in health-promoting schools ate breakfast 6–7 days a week versus only 37.2% in conventional schools. About 24.2% of students in health-promoting schools ate vegetables 3 or more times/day versus 19.2% in conventional schools while 34% of students in health-promoting schools ate fruit 3 or more times/day versus 28.6% in conventional schools. These differences between health-promoting schools and conventional schools were found to be statistically significant.

Although there was a higher level of knowledge about nutrition, physical activity, hygiene and tobacco use in health-promoting schools, there was no difference between the two groups of schools regarding other dietary practices, exercising and sedentary life, hygienic practices or tobacco use. One of the interesting results found was that students in health-promoting schools felt a greater sense of ownership towards their schools, 69.7% compared with 65.1% in conventional schools, while 65.1% of students in health-promoting schools felt themselves to be a part of their schools compared with 58.2% in conventional schools.

Concerning school staff, the results showed that 53.9% of staff in health-promoting schools had attended training in promoting healthy lifestyle and 56.6% had found the training very beneficial compared with 42% and 43.5% in conventional schools, respectively. More favourable dietary and hygienic practices were observed among school staff of health-promoting schools. About 44.8% and 40% of school staff in health-promoting schools eat fruit and vegetables three times or more per day, respectively, compared with 40% and 36.5% in conventional schools.

School staff of health-promoting schools showed a stronger perception about the role of the school and school staff in promoting a healthy lifestyle among students. Overall, 68.5% of school staff in health-promoting schools strongly agreed that schools play a role in promoting healthy behaviours among students compared with 52.9% in conventional schools.

The study concluded that positive outcomes and benefits have been achieved by the health-promoting schools initiative. The study recommended enhancement and expansion of the Initiative to other schools.

### **Financial mechanisms**

The Ministry of Health, Ministry of Education, international organizations (WHO and UNICEF), private sector and community jointly covered the cost of the activities (see Annex 3). The private sector sponsored some activities, such as national workshops, for the forums to exchange experiences. At the schools level, the activities were funded by

school budgets and contributions from parents' councils and community members. The Budget was mainly spent on capacity-building, advocacy campaigns, development of guidelines, health education materials and the website.

### **6.3 Impact**

The Health-Promoting Schools Initiative has clearly met its objectives. It encouraged building of partnerships between the health and education sectors with other governmental and nongovernmental sectors, United Nations organizations and the community. It encouraged development of a supportive environment, including empowerment of both students and staff in taking responsibility for their health. Health promotion interventions have now become part of school activities.

#### **Main success factors**

A number of factors facilitated the intersectoral action and contributed to the success of the health-promoting schools in Oman:

- pre-existing intersectoral collaboration between the Ministry of Health and Ministry of Education, high authorities' commitment and support at all levels;
- the decentralization strategy adopted by the Ministry of Health in 1990 which facilitated decision-making at different levels;
- adoption of some mechanisms to strengthen intersectoral action such as having shared vision, participatory decision-making, negotiation and maintaining positive working climates;
- well established parents' councils in all schools and continuous technical support from WHO and UNICEF; and
- readiness and willingness of the community to discuss and participate in solving school health problems.

#### **Challenges**

Two important challenges were faced: 1) schools were involved in other similar projects or initiatives; and 2) frequent turnover of the health-promoting schools teams necessitated re-training with the limited budget. To overcome these challenges, the schools were advised to integrate all the elements and actions of the Health-Promoting Schools Initiative into their working plans as core components. In the expansion phase of the initiative, the National Health-Promoting Schools Task Force introduced the twinning approach to assist schools in proper utilization of resources.

#### **Lessons learnt**

Schools are important settings for comprehensive health promotion interventions. A setting approach has proved to be effective in promoting a healthy working and living environment, integrating health promotion in the daily activities of the setting and working collaboratively with the community. Following are some key lessons learnt.

- A well-established organizational structure ensured a high degree of commitment from different partners and encouraged support from key stakeholders, such as school staff, and proper training.
- Documentation of students' health and health behaviour facilitated the needs assessment and prioritization, ensuring the availability of baseline data.

- Successful intersectoral collaboration can be achieved if it is based on a mutual understanding of the roles and responsibilities.
- Development of a common understanding of the Initiative among all partners was obtained by sharing planning, information and best practices through regular meetings, website and annual forums.
- Partnership with different international organizations, such as WHO and UNICEF, was essential for technical support.

## **7. Conclusion**

The Health-Promoting Schools Initiative is an effective approach in promoting the health of students, school staff and subsequently the community. Interventions that promote healthy eating, physical activity and mental health targeting students and their families were most effective when they involved parents and surrounding community.

This case study briefly discussed some of the issues to be considered when implementing the Health-Promoting Schools Initiative. These issues were related to the comprehensive integrated nature of the intervention, the school/family/community partnership, political and financial support and evaluative research to support implementation.

The Health-Promoting Schools Initiative provided opportunities to partners not only in the education sector but also in other government sectors as well as nongovernmental sectors, the community and United Nations organizations. Strong relationships with all school stakeholders are needed to create health-supporting environments and develop healthy policies, curriculum, resources, or any other aspect of health promotion work.

Supportive policies from policy-makers in the Ministry of Health and Ministry of Education were key success factors of the initiative. To ensure the bottom-up approach and enhance the ownership, such initiatives should start from the school itself, adapted and facilitated later by decision-makers. Proper advocacy is very important in raising awareness of schools and assisting schools to choose to be health promoting. A twinning approach helps schools to exchange experience and ensures proper use of resources. It also facilitates the expansion process.

Implementation of the initiative assisted in increasing knowledge and changing positive behaviours of students and staff regarding healthy lifestyle. The initiative also assisted in creating ownership and connection among teachers towards their schools. The evaluation study recommended that all schools in Oman should be health-promoting.

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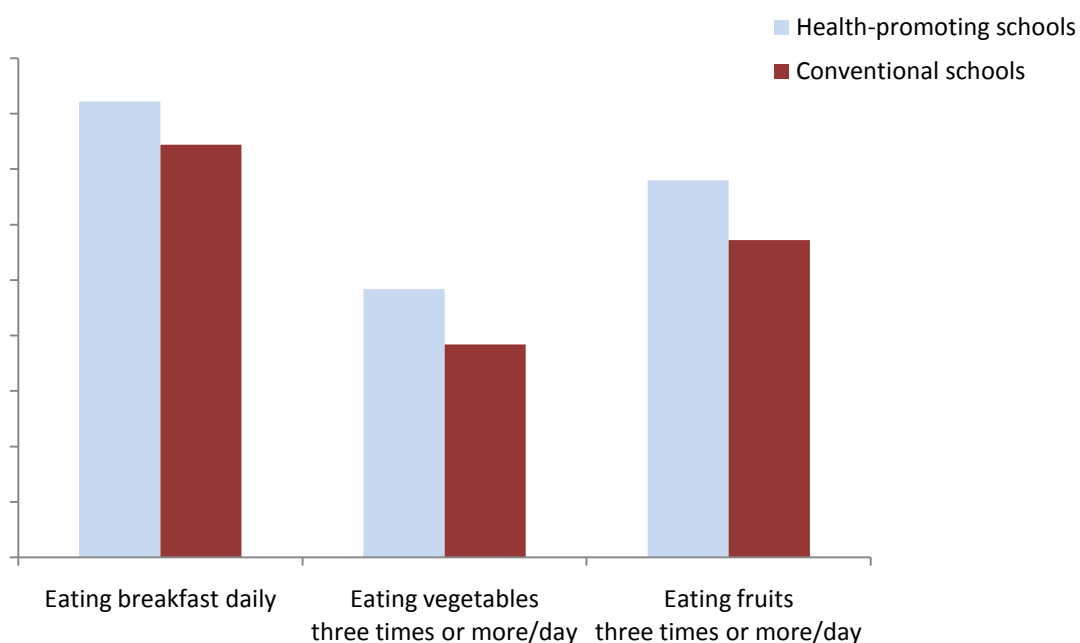
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## Annex 1.

### Table A1.1 Nutrition knowledge and practice of adolescents

Nutritional habits: knowledge and practice		
	Males (%)	Females (%)
Knowledge that vegetables with green leaves protect from diseases	68.1	78.3
Knowledge that deficiency of some nutritional elements causes many diseases	71.5	77.2
Adolescents who consume vegetables or salads at least one time on the day prior to the survey	77.7	71.1
Adolescents who consume milk and its derivatives at least one time on the day prior to the survey	84.0	74.7
Adolescents who consume potato chips and chocolate at least one time on the day prior to the survey	59.8	79.6

### Table A1.2 Nutritional habits of students in health-promoting and conventional schools, 2008



**Annex 2.****Table A2.1 Examples of partners' contributions in health-promoting schools**

<b>Name of school</b>	<b>Contribution of other partners</b>
All health-promoting Schools	Municipalities played a role in promoting the school physical environment through regular monitoring of water sources, proper disposal of waste and in participating in environmental health education sessions
Wadi Al Maawel Girls school	Parents' council supplied the school with treadmill to help in reduction of obesity among school girls
Um Zer Al Ghafaria Girls school	Parents' council supplied the school with different equipments for physical activities. All women were invited to utilize school premises for physical activity.
Ibra School	Parents' council, in coordination with private sector, provided a free of charge healthy breakfast for all students for one year
Most schools	Community assisted schools in shading of the school yards to protect the students from the sun

**Table A2.2 Selected interventions conducted in schools participating in the Health-Promoting Schools Initiative**

Component	Selected interventions	Expected outcomes	Challenges	Monitoring Indicators	Stakeholders
Skills-based health education	<ul style="list-style-type: none"> <li>• Formation and training students' groups for health education on different health issues</li> <li>• Development of health education materials</li> <li>• Conduct of health competitions among students</li> <li>• Utilization of activity lessons to teach students health issues.</li> <li>• Implementation of different health campaigns such as anti- tobacco campaign, oral health and personal hygiene</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement in students' knowledge, attitude and practice KAP</li> </ul>	<ul style="list-style-type: none"> <li>• Limited time</li> <li>• Limited resources</li> </ul>	<ul style="list-style-type: none"> <li>• Number of meetings of health groups</li> <li>• Number of trained students</li> <li>• Number of peer educators</li> <li>• Number of health education materials developed and used.</li> <li>• Percentage of students with healthy practices (measured through a questionnaire)</li> </ul>	<ul style="list-style-type: none"> <li>• School health staff</li> <li>• Teachers</li> <li>• Social workers</li> <li>• Parents</li> </ul>
Health services	<ul style="list-style-type: none"> <li>• Assigning school health nurse (full time/part time)</li> <li>• Establishing well-equipped a clinic at schools</li> <li>• Documenting student health information</li> <li>• Physical screening including vision, hearing and oral examination</li> <li>• Establishing referral to PHC</li> <li>• Providing school immunization according to Expanded Programme of Immunization in Oman</li> </ul>	<ul style="list-style-type: none"> <li>• Early detection of diseases</li> <li>• Ensuring proper management</li> <li>• Reduction in morbidity among school students</li> </ul>	<ul style="list-style-type: none"> <li>• Limited male nurses for boys</li> <li>• School nurses are overwhelmed with many activities as each nurse is responsible for 2-3 schools</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of school health nurse</li> <li>• Availability of school health clinic</li> <li>• Percentage of students who have health record</li> <li>• Percentage of students who were physically screened</li> <li>• Immunization coverage</li> </ul>	<ul style="list-style-type: none"> <li>• School health staff</li> </ul>

Component	Selected interventions	Expected outcomes	Challenges	Monitoring Indicators	Stakeholders
School physical environment	<ul style="list-style-type: none"> <li>• Development of emergency preparedness plan and training of school staff on it</li> <li>• Increase green areas within the school environment.</li> <li>• Shading school yard</li> <li>• Regular monitoring of drinking water and waste management.</li> <li>• Ensure availability of facilities for students with disabilities</li> <li>• Conduct of cleaning campaigns within schools and communities</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement in the physical school environment</li> </ul>	<ul style="list-style-type: none"> <li>• Limited financial resources</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of emergency preparedness plan</li> <li>• Percentage of students and staff trained on the plan</li> <li>• Availability of safe drinking water</li> <li>• Availability of facilities for disabled students</li> <li>• Presence of shaded school yards</li> </ul>	<ul style="list-style-type: none"> <li>• Municipality</li> <li>• Parents' council</li> <li>• Private sector</li> <li>• School staff</li> <li>• School health staff</li> </ul>
Psychological support	<ul style="list-style-type: none"> <li>• Health education campaigns regarding different psychological issues including violence and substance abuse.</li> <li>• Ensure availability of a trained social worker.</li> <li>• Strengthening relationship between social worker, school staff and families in managing different psychological problems</li> <li>• Development of a plan for social entertainment</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of students mental health</li> </ul>	<ul style="list-style-type: none"> <li>• Social workers overwhelmed with many tasks</li> <li>• Limited cooperation of families in promoting mental health due to its sensitivity</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of programmes to promote mental health</li> <li>• Number of trained social workers</li> <li>• Availability of entertainment plan</li> </ul>	<ul style="list-style-type: none"> <li>• Parents' council</li> <li>• Social workers</li> <li>• School health nurse</li> </ul>
School nutrition services	<ul style="list-style-type: none"> <li>• Health education activities for dietary and food safety measures such as peer education , healthy dish competition between students</li> </ul>	<ul style="list-style-type: none"> <li>• Improve the dietary habits</li> </ul>	<ul style="list-style-type: none"> <li>• Unavailability of kitchens and dining halls in all schools</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of students with good knowledge on nutrition</li> <li>• Percentage of students who ate vegetables 5 times or more per day</li> </ul>	<ul style="list-style-type: none"> <li>• Municipality</li> <li>• Private sector</li> </ul>



Component	Selected interventions	Expected outcomes	Challenges	Monitoring Indicators	Stakeholders
	<ul style="list-style-type: none"> <li>• Revision and amendments of the school canteen polices</li> <li>• Close supervision and monitoring of school canteen</li> <li>• Conduct of competition to prepare a healthy dish</li> <li>• Free healthy food to underprivileged children with the support of private sector</li> </ul>	<ul style="list-style-type: none"> <li>• malnutrition Reduction among students</li> </ul>	<ul style="list-style-type: none"> <li>• leading to provision of food to schools through outside suppliers</li> <li>• Limited control of food quality</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of students who eat breakfast daily</li> <li>• Percentage of under privileged students who received nutrition support</li> </ul>	<ul style="list-style-type: none"> <li>• School staff</li> <li>• Parents</li> </ul>
Physical education	<ul style="list-style-type: none"> <li>• Delivery of health messages to students and staff regarding importance of physical activity</li> <li>• Increase physical education time at school</li> <li>• Allocate an appropriate indoor/outdoor place for physical activity</li> <li>• Supply physical activity equipments</li> <li>• Conduct of evening physical activity classes for mothers</li> </ul>	<ul style="list-style-type: none"> <li>• Increase KAP regarding physical activity</li> <li>• Reduction in overweight and obesity among students</li> </ul>	<ul style="list-style-type: none"> <li>• Physical activity is not a priority in school curriculum</li> <li>• Time allocated for physical activities usually utilized for teaching other subjects</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of students who physically active for at least 60 minutes per day</li> <li>• Availability of facilities for physical activity in the school</li> <li>• Number of mothers who attend the evening classes for physical activity</li> </ul>	<ul style="list-style-type: none"> <li>• Parents' council</li> <li>• Private sector</li> <li>• Physical education teachers</li> <li>• School health nurse</li> </ul>
Promotion of health of school staff	<ul style="list-style-type: none"> <li>• Development of health education programmes to school staff</li> <li>• Regular physical screening programme including blood pressure, blood sugar and anthropometric measurements,</li> </ul>	<ul style="list-style-type: none"> <li>• Increase KAP regarding different health issues</li> <li>• Reduction in morbidity among school staff</li> </ul>	<ul style="list-style-type: none"> <li>• Staff are usually overwhelmed with their work</li> <li>• Limited resources</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of school staff with good knowledge and healthy practices</li> <li>• Percentage of staff who attend health education sessions</li> <li>• Percentage of staff who have regular check up</li> </ul>	<ul style="list-style-type: none"> <li>• School staff</li> <li>• School health nurse</li> </ul>
Community link	<ul style="list-style-type: none"> <li>• Conduct of different activities targeting the community such as open days for resource mobilization among community members</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen community participation</li> </ul>	<ul style="list-style-type: none"> <li>• Limited resources</li> <li>• Less cooperation of parents</li> </ul>	<ul style="list-style-type: none"> <li>• Number of parents' council meetings</li> <li>• Number of activities conducted to parents and community</li> </ul>	<ul style="list-style-type: none"> <li>• Parents' council</li> <li>• Community members</li> <li>• Private sector</li> </ul>

### Annex 3. Budget breakdown of the initiative

Activity	Budget (US\$)	Source
One national training of trainers workshop	15 000	WHO, UNICEF, Ministry of Health and Ministry of Education
One evaluation training workshop	5000	Ministry of Health and Ministry of Education
20 governorate training workshops ( one per each governorate)	20 000	Ministry of Health and Ministry of Education
Printing of advocacy materials	4000	UNICEF
Printing of HPSs guidelines	5000	UNICEF
Conduct of first forum	8000	UNICEF, Ministry of Health and Ministry of Education
Conduct of second forum	40 000	UNICEF, Ministry of Health, Ministry of Education and private sector
Evaluation study	8000	UNICEF and Ministry of Health
Cost of the evaluation process	5000	Ministry of Health and Ministry of Education
Implementation of school activities	The activities were implemented from the school allocated budget and contribution of parents' council and community members.	

The WHO Centre for Health Development located in Kobe, Japan (WKC) launched a project in 2012 to collect case studies that have involved intersectoral action and that aim to improve health and its underlying determinants. The Health-Promoting Schools Initiative (HPSI) in Oman was selected by the WHO Regional Office for the Eastern Mediterranean as a good example of intersectoral action that can be replicated in other countries of the Region.