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Review Article

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Healthy Schools Framework in Saudi Arabia: A Narrative Review

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ABSTRACT

The Healthy School (or Health-Promoting School as a term used by WHO and other countries) is a whole-school approach to promoting health in a school setting. Healthy Schools and Health-Promoting Schools frameworks extend around the globe are important strategies that provide opportunities to improve the health of children and adolescents and to tackle health inequalities in the population. Two decades since the Healthy Schools framework was advocated in Saudi Arabia. This paper sets out to review relevant literature and reports related to Healthy Schools in Saudi Arabia. Very few studies have been conducted to assess the Health Schools framework. The findings showed that there is a gap between the ideal concepts of the Healthy Schools framework and current implementation. Promoting healthy diet and physical activity as a starting point for wider implementation. Providing financial resources and ongoing capacity-building opportunities for the teachers and associated school staff. Collaboration between the health and education sectors is required to provide a prolonged framework for monitoring and evaluating the healthy schools outcomes.

Key words: *Healthy school, Health-promoting school, School health promotion, School health education*

INTRODUCTION

Children and adolescents need to have opportunities to maintain their health to learn in safe and healthy environments. Healthy children gain better academic achievements which, are associated with improved health in adulthood [1]. Experiences during the early years including access to education and health are considered crucial for a person's later development [2]. In addition, most premature deaths and disabilities are related to preventable health behaviors that are often adopted at an early age and extend into adulthood [3].

Schools provide a way of reaching many children and adolescents, and they are encouraging settings for promoting health [4]. Many health promotion initiatives have been developed to equip schools to promote the health of their students, teachers, and local communities. Health promotion in schools provides opportunities to improve the health of children and adolescents and to tackle health inequalities in the population. Healthy Schools and Health-Promoting School frameworks spread around the globe as important approaches for promoting health in schools. In Saudi Arabia, it has been two decades since the Healthy School framework was advocated. Therefore, this paper sets out to review relevant literature and reports related to Healthy Schools in Saudi Arabia.

Health-promoting school initiative

The health-Promoting School initiative was first recognized at a World Health Organization (WHO) European Conference in Scotland in the early eighties. It has since been advocated as an effective framework for health promotion in the school setting [5]. In 1986, the Ottawa Charter for Health Promotion provided a ground for schools to be considered as settings for enabling children and adolescents to be healthy and empowered, and

linked to families and communities. In consistency with this direction, in 1995 WHO launched the Global School Health initiative to involve more schools that can be described as "Health-Promoting Schools". WHO defined a Health-Promoting School as "a school that is constantly strengthening its capacity as a healthy setting for living, learning and working" [6]. Other terminologies, such as Healthy School and Comprehensive School Health, share the essential elements of Health-Promoting Schools. These elements include healthy school policies, health education, school physical environment, school medical care services, the social environment of the school, and partnerships with family and community [7, 8] **(Table 1)**. Therefore, Health-Promoting School has been described as a whole-school approach to promoting health that recognizes the holistic view of the interrelationship between health and education [9].

Table 1. Key elements for Health-Promoting School framework [8]

Element	Indicators
Healthy Policies	Healthy food & healthy canteen Physical activity Save & Secure setting environment
Healthy Physical Environment	Students' safety Fire safety & Control emergencies Healthy setting for students & staff
Healthy Social Environment	Supportive care and trust environment Encouraging positive attitude & behavior Prevent & control unacceptable behavior
Health Education Skills	Ensuring opportunities for all students to actively engage in the health topic Providing training for teachers in health promotion & developing healthy school Providing health education resources for students& teachers
Links with Community	Involving families & local community people in school activities Consults surrounding community people for advice on Healthy School development
Health Care Service	Providing emergency & primary medical care services Early medical screening

The WHO Health-Promoting Schools initiative offers a mechanism for the integration of different elements that combined education and health [10]. The initiative undertakes four ways in creating Healthy Schools: building the capacity to advocate for enhanced school health activities; building networks and alliances for the development of Health-Promoting Schools; supporting national capacities; and encouraging research to improve school health outcomes [6].

Research shows that learning and health are interconnected; healthy children are likely to gain better learning outcomes [7]. The health-Promoting School framework has been shown to have clear benefits for health and education [11]. Moreover, there are overwhelming pieces of evidence to demonstrate that the Health-Promoting School framework is effective in improving the school's hygienic environment, physical activities, healthy eating, mental health, and health policies [9]. Cochrane analysis of the Health-Promoting School framework showed benefits in some aspects like reduction in students' Body Mass Index, improvement in physical activity, increase in the consumption of fruits and vegetables, decrease in cigarette smoking, and decrease in incidents of bullying [12]. In addition, Lee *et al*. [11] identified key indicators with high significant impact on a wide range of health aspects among students. Those key indicators can be considered as another key education objective. In a systematic review conducted by Stewart-Brown [13] to assess the effectiveness of the Health-Promoting School framework in improving the well-being and health of children and adolescents; he argued that there is evidence to support the effectiveness of some aspects of Health-Promoting School. Moreover, Leger *et al*. [14] showed in their review the effectiveness of health promotion interventions in improving students health behaviors and wellbeing.

The Health-Promoting School framework has been implemented in many countries. In Europe, The European Regional Office of the WHO, the Council of Europe, and the Commission of the European Communities jointly established the European Network for Health Promotion Schools [5]. In North America, the Comprehensive School Health Program principle is more common than the Health-Promoting Schools [15]. Also, other networks

were launched such as; the Australian Health Promoting Schools Association [16], the Western Pacific Region of the WHO [8], Asia, The Middle East, Africa, and Latin America [17]. Although the literature shows that implementation of the Healthy Schools or Health-Promoting Schools framework varies between countries, three key domains were commonly adopted: health education curriculum; healthy physical and social environments of the school; and interaction between the school and the local community.

Health-related status in Saudi Arabia

The population in Saudi Arabia exceeds 34 million and is at an early stage of transition into aging [18]. The report of the 2019 World Health Survey in Saudi Arabia showed that 93 % of respondents have insufficient intake of fruits and vegetables, 80% have insufficient physical activity, and 12% were current tobacco smokers (20% in males and 2% in females). The prevalence of overweight and obesity were 38% and 20%, respectively. The percentage of respondents with raised serum cholesterol was 43% of respondents. Overall, the percentage of respondents with low hemoglobin was 50%, and approximately 14% of respondents have raised blood pressure [19].

On the other hand, more than one-third (32%) of the population in Saudi Arabia is in the 0-19 dependency age group [18]. Research shows that children and adolescents have a considerable prevalence of unhealthy behaviors. In a large national survey among school students, across all the Saudi Arabia regions, 12,575 adolescents participated [20]. The results of the survey showed that 28 % of adolescents have a chronic health problem, 14% have symptoms of depression, thirty percent are overweight or obese, more than ninety-five percent have vitamin D deficiency, 15 % were underweight, and ten percent were anemic [21]. In addition, various unhealthy behaviors such as; tobacco use, unhealthy diet, physical inactivity, violence, insufficient safety precautions, and bullying, were extremely prevalent [20]. Regarding dietary behaviors, only 55% were found to consume breakfast daily, 54% had at least one serving of fruit/vegetable intake per day, 38% reported drinking at least two sugary drinks, and 22% drank one energy beverage daily. Regarding physical activity, almost 50% of boys were physically inactive, the higher absence of physical activity was among girls, and 40% of adolescents spent 2 hours per day watching television [22]. Regarding behaviors related to traffic safety, only 14% reported seat belt use sometimes or always, and 35% had ever been in a road accident. Regarding bullying and violent behaviors, 25% reported exposure to bullying at school during the 30 days preceding the study, and 20% were involved in physical violence at school or community during the preceding year. Concerning tobacco and substance use, 16% had ever smoked cigarettes, and Sixteen percent reported solvent sniffing in the preceding month. Lastly, bronchial asthma was the most prevalent with 29%, and 24% of adolescents reporting difficulty in access to health care services [20].

Healthy schools in Saudi Arabia

Almost twenty years since the Health-Promoting Schools initiative was advocated in Saudi Arabia. In 2002, the Health-Promoting Schools framework was adopted, and during that time, two phases were completed. In phase one, the Health-Promoting School framework was introduced to School Health Departments in the regions through several meetings and workshops [23]. In 2003, School Health Departments in the regions started the pilot phase by implementing a Health-Promoting School framework in one of their schools. The pilot phase recruited nearly 72 schools. The Health-Promoting Award Scheme was set to guide and improve the implementation of the framework. It covered eight elements: school health services; health education for students; school environment (physical and social); health education for school staff; relations with the surrounding community; food safety; physical activity; mental health; and counseling services [24].

Very few studies have been conducted to assess the Health-Promoting School framework in Saudi Arabia. A survey by Alzahrani [25] looked into the progress and experiences in implementing Health-Promoting Schools across Saudi Arabian regions. The key findings of the survey emphasized the significant increase in the number of schools that implemented the Health-Promoting School framework. The percentages of schools that implemented the Health-Promoting School framework were 65% of primary schools, 21% of intermediate schools, and 14% of secondary schools. The core perceived strengths of the Health-Promoting School framework were increasing the health awareness of students and improving the schools' physical environment. The most common activity addressed was traditional health education. Schools' social environment and health policy were not among the key elements of the Health-Promoting School Award Scheme. The main weaknesses were a lack of financial resources and professional training. Lastly, there was a limitation in the evaluation of Health-Promoting School elements.

In Makkah city, Elamin *et al*. [26] conducted a study to assess the implementation of seven components of the Health-Promoting School framework. They found that eighty percent of the targeted activities in Health-promoting Schools were health education activities. In addition, 85 % of healthy school environment requirements were achieved. Large improvements in students' behaviors were considered great achievements. The main weaknesses were limitations in canteens' food services, lack of medical care services in schools, and the absence of school links with local communities.

Another survey was conducted in the Qassim region to evaluate the implementation of the Health-Promoting Schools framework from the perspective of teachers who supervised the program in the schools. The respondents reported the need for expanding the program's implementation, more training for teachers, increasing incentives, and financial support [27].

Similarly, another study was conducted in the Aseer region to assess the Health-Promoting Schools framework from the perspectives of program supervisors in the schools. The supervisors reported there was a need for expanding the program's implementation and increasing the financial resources [28].

RESULTS AND DISCUSSION

The World Bank report for Saudi Arabia indicates that economic and nutrition transitions in Saudi Arabia have increased the incidence of diabetes by 94 %, heart diseases by 54 %, cancers by 50 %, and chronic respiratory diseases by 48 % among the working-age population [29]. The major risky behaviors (smoking, unhealthy diet, and physical inactivity) contribute to the occurrence of the four major non-communicable diseases in Saudi Arabia [29]. Research shows that most behavioral risk factors adopted in adulthood are almost initiated in early life [3]. In addition, healthy behaviors can be established in children and adolescents, and these behaviors tend to become a healthy lifestyle in later life.

There is real concern about the escalating trend of unhealthy behaviors among children and adolescents in Saudi Arabia such as smoking tobacco, physical inactivity, sedentary habits, and unhealthy diet (less consumption of vegetables and fruits, and high consumption of sugars). And most of these behaviors play a key role in the pathogenesis of obesity in children and adolescents [30-32]. The Health-Promoting School has been identified as the most effective approach to promoting healthy behaviors in children and adolescents which, in turn, improves development and health in later life [7]. Although the Healthy School framework in Saudi Arabia has been adopted for promoting health among children and adolescents, studies showed that there is a gap between the ideal concepts of Healthy Schools and current implementation. Moreover, the sustainability of a Healthy Schools framework has not yet been achieved. Therefore, there is an urgent need to reinforce this approach at a high level in both the health and educational sectors. The health and education authorities need to collaborate effectively to implement a Healthy Schools framework.

CONCLUSION

As a starting point, every school in Saudi Arabia should have a supportive and attractive infrastructure for the learning and health of students. In addition, the key elements of a Healthy School framework are needed as a starting area for wider implementation. More specifically, the health promotion interventions for a healthy diet and physical activity. Promoting a healthy diet includes healthy food and drink policy, and a healthy school canteen (a canteen that provides healthy food choices). Promoting physical activity includes organized and non-organized physical activities, providing a playground and time for playing cooperative sports games. Moreover, developing a national Healthy School framework scheme and comprehensive monitoring and evaluation tool for the Healthy School's framework is essential and needs collaboration between both the education and health sectors. Lastly, providing financial resources and ongoing capacity-building opportunities that complement the fundamental role of the teacher and associated school staff.

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REFERENCES

1. WHO U. Making every school a health-promoting school–global standards and indicators. Geneva: World Health Organization. 2021.
2. World Health Organization. Improving early childhood development: WHO guideline. World Health Organization; 2020.
3. Kristensen PL, Wedderkopp N, Møller NC, Andersen LB, Bai CN, Froberg K. Tracking and prevalence of cardiovascular disease risk factors across socio-economic classes: a longitudinal substudy of the European Youth Heart Study. BMC Public Health. 2006;6(1):1-9.
4. Mahmoud IM, Alruwaili AH, Alsharif MM, AlQubali HF, Alsharif ZA, Alanazi WK, et al. Management of Adolescent Malnutrition with Physical Exercise: Systematic review. Arch Pharm Pract. 2020;1:115-9.
5. Rogers E, Moon AM, Mullee MA, Speller VM, Roderick PJ. Developing the 'health-promoting school'--a national survey of healthy schools awards. Public Health. 1998;112(1):37-40.
6. Jones JT, Furner M, WHO Global School Health Initiative, World Health Organization. Health-Promoting Schools: A healthy setting for living, learning and working. World Health Organization; 1998.
7. Langford R, Bonell C, Jones H, Pouliou T, Murphy S, Waters E, et al. The World Health Organization's Health Promoting Schools framework: a Cochrane systematic review and meta-analysis. BMC Public Health. 2015;15:130. doi:10.1186/s12889-015-1360-y
8. WHO Regional Office for the Western Pacific (WHO/WPRO). Regional Guidelines: Development of Health-Promoting Schools-A Framework for Action. WHO Regional Office for the Western Pacific: Manila. 1996.
9. Lee A. Health-promoting schools: evidence for a holistic approach to promoting health and improving health literacy. Appl Health Econ Health Policy. 2009;7(1):11-7. doi:10.2165/00148365-200907010-00002
10. Promoting health through schools. Report of a WHO Expert Committee on Comprehensive School Health Education and Promotion. World Health Organ Tech Rep Ser. 1997;870:i-vi, 1-93.
11. Lee A, Lo ASC, Keung MW, Kwong CMA, Wong KK. Effective health promoting school for better health of children and adolescents: indicators for success. BMC Public Health. 2019;19(1):1088. doi:10.1186/s12889-019-7425-6
12. Langford R, Bonell CP, Jones HE, Pouliou T, Murphy SM, Waters E, et al. The WHO Health Promoting School framework for improving the health and well-being of students and their academic achievement. Cochrane Database Syst Rev. 2014;(4):CD008958. doi:10.1002/14651858.CD008958.pub2
13. Stewart-Brown S. What is the Evidence on School Health Promotion in Improving Health Orpreventing Disease And, Specifically, what is the Effectiveness of the Health Promoting Schools Approach?. World Health Organization: Copenhagen; 2006.
14. Leger LS, Kolbe L, Lee A, McCall DS, Young IM. School health promotion. InGlobal perspectives on health promotion effectiveness 2007 (pp. 107-124). Springer, New York, NY.
15. Deschesnes M, Martin C, Hill AJ. Comprehensive approaches to school health promotion: how to achieve broader implementation? Health Promot Int. 2003;18(4):387-96. doi:10.1093/heapro/dag410
16. Booth ML, Samdal O. Health-promoting schools in Australia: models and measurement. Aust N Z J Public Health. 1997;21(4 Spec No):365-70. doi:10.1111/j.1467-842x.1997.tb01716.x
17. Lee A, Cheng FF, Fung Y, St Leger L. Can Health Promoting Schools contribute to the better health and wellbeing of young people? The Hong Kong experience. J Epidemiol Community Health. 2006;60(6):530-6. doi:10.1136/jech.2005.040121
18. GASTAT. Population Estimates in the Midyear of 2021. 2022 [cited 2022 12/2022]; Available from: https://www.stats.gov.sa/en/43.
19. MOH, World Health Survey Saudi Arabia 2019 (KSAWHS). Ministry of Health (MOH): Riyadh. 2020.
20. AlBuhairan FS, Tamim H, Al Dubayee M, AlDhukair S, Al Shehri S, Tamimi W, et al. Time for an Adolescent Health Surveillance System in Saudi Arabia: Findings From "Jeeluna". J Adolesc Health. 2015;57(3):263-9. doi:10.1016/j.jadohealth.2015.06.009
21. Motlagh AR, Shojaeizadeh D, Azam K, Kaboli NE. Adolescent Obese Females and Quality of Lifestyle: An Examination of Anthropometric and Socio-Economic Factors in Tehran-Iran. Entomol Appl Sci Let. 2020;7(4):66-70.

22. Karpov VY, Medvedev IN, Komarov MN, Dorontsev AV, Kumantsova ES, Mikhailova OG. Possibilities of Students' Health Improvement through Physical Training in the Aquatic Environment. J Biochem Technol. 2021;12(4):67-71.
23. AGSH, The Health Promoting Schools Programme. Administration General of School Health (AGSH): Riyadh; Saudi Arabia. 2002.
24. AGSH, The health promoting schools project. Administration General of School Health (AGSH): Riyadh; Saudi Arabia. 2006.
25. Alzahrani SG. Evaluation of Health Promoting Schools Programme in Saudi Arabia. J Health Sci Medicine. 2022;5(4):89-96. doi:10.31014/aior.1994.05.04.250
26. Bushara MO, Ganbi M, Elqarni M, Terkstani A, Lihyani R, AlHassani B, et al. Evaluation of health promoting schools in Makkah city, Saudi Arabia. Int J Commun Med Public Health. 2017;4:2234. doi:10.18203/2394-6040.ijcmph20172812
27. Almusnad S, Aldaghaem K. Evaluation of health-promoting schools program from the perspectives of teachers in public schools in Qaseem region, Saudi Arabia. Coll Educ J. 2015;30(3):113-52.
28. Alziyad M. The status of implementation of health-promoting schools program from the perspectives of teachers in public schools in Aseer region, Saudi Arabia. J Educ Psychol Sci. 2018;2(1):55-73.
29. Alqunaibet A, Herbst CH, El-Saharty S, Algwizani A, editors. Noncommunicable Diseases in Saudi Arabia: Toward Effective Interventions for Prevention. World Bank Publications; 2021.
30. Al-Hazzaa HM, Albawardi NM. Obesity, Lifestyle Behaviors, and Dietary Habits of Saudi Adolescents Living in Riyadh (ATLS-2 Project): Revisited after a Ten-Year Period. Life (Basel). 2021;11(10):1078. doi:10.3390/life11101078
31. Alzahrani SG. Patterns of Unhealthy Behaviors among School-Aged Students in Riyadh City, Saudi Arabia. Int J Pharm Res Allied Sci. 2022;11(2):131-7. doi:10.51847/8o9aTou7OO
32. Alasqah I, Mahmud I, East L, Usher K. Patterns of physical activity and dietary habits among adolescents in Saudi Arabia: A systematic review. Int J Health Sci (Qassim). 2021;15(2):39-48.