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Incorporating an Innovative Health Promoting Model Into Lebanese Public Schools: Impact on Adolescents' Dietary and Physical Activity Practices—Comparison of HPS With Other Public and Private Schools in Lebanon

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Abstract

Background: The Health Promoting School Initiative (HPSI) was launched by the World Health Organization (WHO) in 1995 based on the concept of an interrelationship between education and health. In 2010, WHO supported the Lebanese Ministry of Education and Higher Education (MEHE) and established a network of 10 Health Promoting Schools (HPS). This study was undertaken to address the extent to which the HPS model was able to enhance the health of adolescents and prepare them to respond to evolving health challenges. **Method:** A cross-sectional survey was carried out during the academic year 2011–2012 and involved a comparison between the 10 HPS networks and 10 other public and private schools, with a total of 2,105 students (Grades 6–9). The Youth Risk Behavior Survey (CDC, 2011) and anthropometric measurements were used for data collection. **Results:** Findings revealed that the current school health program (SHP) failed to address issues of concern to adolescents, with prevalence of risk behaviors related to dietary and exercise practices. Neither the HPS nor control schools had a strong impact on students' health behaviors. **Conclusion:** Revision of the health education curriculum is strongly needed to integrate issues concerning healthy nutrition and physical activity. Expected learning outcomes need be designed to match students' age, grade level, and developmental milestones. The HPS network needs reassessment for project outcomes.

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Keywords

health education; health promotion; health promoting school; school health program; health behavior; risk behavior

Schools offer unique settings where children and adolescents of all cultural backgrounds spend several years together. Adolescents are usually subject to pressures from peers with strong influences related to puberty and increasing need for independence and autonomy. Negative influences such as violence, family conflicts, drugs and alcohol, teenage pregnancy, absence of love and affection, and little attention at home or school strongly impact their lives (O' Rourke, 1996). These influences may translate into immediate physical and psychosocial problems or have long-term consequences that affect their chances to lead fulfilling and healthy lives (License, 2004; O' Rourke, 1996). Health Promoting School (HPS) communities participate to ensure that identified health needs are holistically and collaboratively addressed through the comprehensive HPS framework: curriculum, teaching, and learning; school organization, ethos, and environment; and partnerships and services (World Health Organization [WHO], 1995). This framework is intended to move health education and promotion from being a single and detached health activity delivered in classrooms to a setting-based model that focuses on healthier and supportive environments (WHO, 1996).

Health Promoting Schools: The Framework

The HPS framework is intended to provide guidance and support to schools and health authorities, with essential stakeholder partnerships. It recognizes the needs of students, teachers, parents, health care personnel, and the local community to participate actively in shaping and implementing school health promotion programs and policies (WHO, 1995). Within this framework, the students' experience at school is considered crucial in shaping health behaviors during and beyond adolescence (Figure 1).

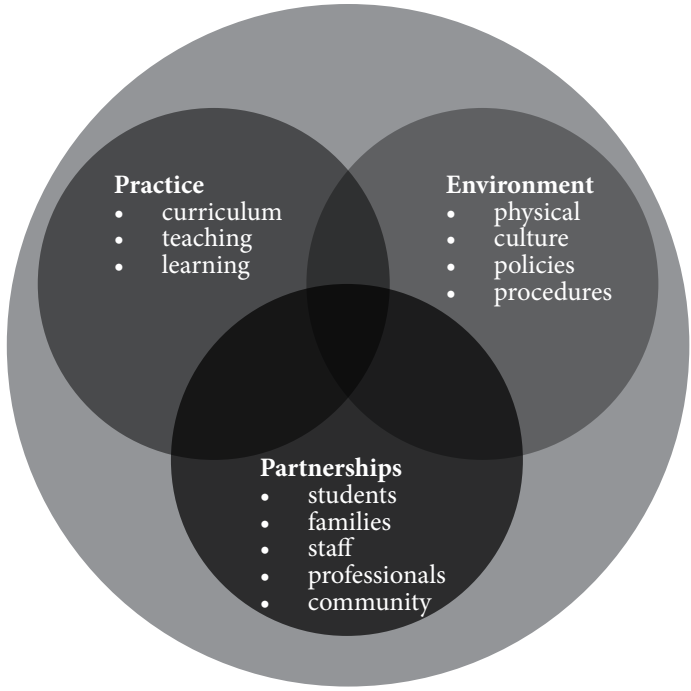

Figure 1. Health Promoting School framework. Adapted from *WHO Expert Committee on Comprehensive School Health Education and Promotion,* by World Health Organization, 1995, Geneva, Switzerland: Author.

Health Promoting Schools in Lebanon: National Experience

School health has been known in Lebanon since April 1920, when an act toward this effect was issued when the country was still under the French colonization. This act mandated that all schools be subject to health inspection, perform physical examinations, and ensure that students receive their recommended vaccinations and have their health records completed. It was not until 1993 that Ministerial Decision Number 1/129 was issued for the foundation of the National Committee for School Medicine.

Lebanon has had a unique experience in school health led by nongovernmental organizations and international agencies that provide services across the country. Their activities include provision of medical screening, provision of healthy meals, and organization of campaigns for oral health and hygiene (WHO, 2005). An important milestone was Act Number 10227/97, on May 8, 1997, which developed the Lebanese Integrated Health Curriculum, from KG to G12. Based on Ministerial Resolution Numbers 71/m/98 and 73/m/98, the

national school health program (SHP) was launched in November 1998 and included health and environmental messages integrated within curricular and extracurricular activities. However, revision of official school books for health and environmental content revealed several handicaps and lack of consistency in the flow of some subjects across grade levels (Makhoul, 2000). Moreover, school surveys demonstrated that more effort should be invested in the domains of various health practices, including accidents and injury prevention (WHO, 1999b).

The SHP was reinforced through a memorandum of understanding between the Ministry of Public Health (MPH), Ministry of Education and Higher Education (MEHE), and WHO in 2006 for mobilizing the commitment of both ministries by strengthening national ownership of the program, improving the use of national health data, and fostering participation of the private sector (WHO, 2010). Alarming data about Lebanese adolescents were obtained from the Global School-Based Health Survey (GSHS; WHO, MEHE, MPH, & Centers for Disease Control and Prevention [CDC], 2005). It revealed prevalence of alcohol (20%) and other drugs (3.4%); poor dietary behaviors with obesity (5%) and overweight (23.3%); mental health issues (15.8% entertaining suicidal thoughts); violence (45.9%); and bullying (33.9%) among seventh, eighth, and ninth grade students. Reassessment of the Lebanese Integrated Health Curriculum was recommended, as was content editing for risk behaviors that need to be addressed at earlier ages. The Global Youth Tobacco Survey (GTYS) by Saade, Abou Jaoude, Afifi, Warren, and Jones (2005) revealed that 60.1% of adolescents aged 13–15 years use tobacco and the need for urgent awareness programs to stop the growing smoking epidemic. In 2008, the Pompidou Group and Saint Joseph University survey for Lebanese Grade 9 students demonstrated that 60% were already smoking, 85% knew about weed, and 22% reported knowing someone who used it. Prevention and skills training must be initiated as early as possible during the complementary school cycles.

The GSHS 2010 figures were still alarming, highlighting the need for serious consideration of the national SHP. The rate of students who had their first alcohol drink before the age of 14 was 87.5%. Almost one fourth were overweight (24.1%), 6.7% were obese, and 60.2% consumed carbonated beverages. Approximately one third did not practice any physical activity during the past 12 months of the survey. National figures for childhood obesity revealed that 22.5% of boys and 16.1% of girls were overweight (Sibai et al., 2003). Chakar and Salameh (2006, 2007) further demonstrated this problem among adolescents in Lebanese schools. Moreover, Salameh and Barbour (2011a, 2011b) revealed high rates of obesity and diabetes among Lebanese adolescents (11–18 years old). Alarming rates (10.3%) of abnormal random fasting blood sugar (> 140 mg/dl) were documented. Boys had higher rates than girls did on the

overweight dimension (4.7% vs. 1.3%) and higher risk on the obesity dimension (26.7% vs. 10.7%).

The Lebanese School Health Strategy was developed to improve the health status of children and school personnel, to provide a safe learning environment for students and workplace for staff, and to reinforce the relationship between education and health professionals and the community (Republic of Lebanon, MEHE, 2009). In 2010, the MEHE and the WHO undertook a joint activity to establish a network of 10 HPS. The aim of this pilot project was to transfer public schools from implementing the routine SHP to be health promoting and to reinforce partnerships between the education and health sectors. Thirty-five teaching and administrative staff were trained regarding objectives of the HPS model, its scope, and their role in implementation and sustainability. Training included application of the SHP, support for the school health worker, and implementation of at least one activity per year. However, no studies have been done to date to evaluate the effectiveness of the training and efficiency of the HPS network in preventing and/or reducing risk behaviors among students or school populations. The objective of this research was to evaluate the impact of these interventions on students' behaviors related to dietary physical activity practices.

Method

Research Design

This research was implemented to explore school health services, students' practices regarding diet and physical activity, and the extent to which the HPS was promoting adolescents' well-being. It was carried out during the academic year 2011–2012 and involved a comparison between 10 public schools, which constitute the HPS network, and 10 other public and 10 private schools. Control schools were chosen from the same geographic regions (10 regions) as the HPS and were matched for size and student characteristics (age, gender, and grade levels). A quantitative research design was used to implement the survey questionnaires. Anthropometric measures were also taken to validate subjective data.

Sampling Procedure

The study was a school-based survey of Lebanese public and private schools. Schools containing Grades 6–9 and having more than 50 students in the designated grade levels were included in the sampling frame. A two-stage cluster sample design was used to produce a representative sample of students. All students within the selected grade levels were eligible to participate by responding to the survey questionnaire. The response rate was 96.2%, with 2,188 questionnaires distributed and 2,105 collected.

Research Instruments

The Youth Risk Behavior Survey (YRBS) developed by the CDC (2011) was used with permission and was translated to the Arabic language. The survey consisted of 47 multiple-choice questions addressing prevalent risk behaviors. For the purpose of increasing compliance rate, culturally sensitive items were deleted. The MEHE requested removing questions that dealt with sexual practices, contraception, and drug addiction, which are still considered taboo issues. Eleven questions were deleted from the questionnaire (see Appendix). It was pilot tested in one randomly chosen public school, few questions were revised, and the questionnaires were back translated to validate content. Original and translated versions were then matched to ensure accuracy of translation.

Height and weight measurements were undertaken on a random number of schools from the sample, and all students within the selected grade levels were included (703 students). These were obtained for purposes of triangulation with subjective data and used to compute anthropometric measures based on the International Obesity Task Force (IOTF, 2005) guidelines. Values were then used to compute the BMI for students in the designated sample.

Approval of the MEHE was obtained before the study was initiated. Participants were assured that data would be used for research purposes only with no penalty for nonparticipation. All schools accepted to participate in the survey and appointments were arranged for data collection extending from November 2011 to June 2012. Anonymity and confidentiality of all respondents were respected.

Data Analysis

The questionnaires were auto-completed in 30–45 minutes in the presence of the surveyor, who provided support as needed. Height and weight measurements were obtained during the same visit. Collected data were grouped and analyzed using SPSS for parametric statistics. All variables were described as frequencies and percentages for categorical variables and as means and standard deviations for continuous variables. Data were described in univariate, bivariate, and multivariate analyses to document change in patterns of students' attitudes and behaviors following the implementation of HPS in Lebanese public schools.

For bivariate analysis, the chi-square test was used to compare between group percentages, and an ANOVA was used to compare quantitative variables between two or more groups, respectively. Multivariate analysis was carried out to identify multiple predictor variables on the occurrence of the dependent variables under investigation, using a backward descending regression. Sociodemographic characteristics were used as independent potential confounding variables.

Results

Participants' Demographic Data

All students in the school sample Grades 6–9 participated in the survey. Participants' ages ranged between 10 and 15 years, with females constituting 58.9% of the sample. Overall, the number of participants was 749 in private schools, 675 in HPS, and 678 in public non-HPS, with $p < 0.001$. Respondents were almost evenly distributed among Grades 6–9 in public schools (HPS and non-HPS).

Participants' reported heights ranged from 59–201 cm and weights ranged from 23–167 kg. Corrected measures of height and weight revealed a significant difference across schools of the sample regarding sample height. Private schools had higher mean height of 156.611 cm, with $p < 0.001$. Moreover, BMI values revealed that males in public schools (HPS and non-HPS) had higher values for normal weight (69% and 74.9%, respectively). Males in private schools had higher values for overweight (23.3%). Females in private schools, on the other hand, had higher values for normal weight (73%), and higher values of overweight were reported in public schools (22%). Our findings were not significant for neither male ($p = 0.037$) nor female ($p = 0.366$) students, as shown in Table 1.

Table 1

Comparison of Female and Male Students' BMI Across Public HPS, Public Non-HPS, and Private Schools: Academic Year 2011–2012

	School category					
BMI category	**Public HPS *n* (%)**	**Public non-HPS *n* (%)**	**Private *n* (%)**	**Total *n* (%)**	**χ^2**	***p***
Male BMI						
Thin	14(5.6)	14(7.8)	14(4.2)	42(5.5)	13.128	
Normal	174(69)	134(74.9)	214(64.8)	522(68.6)	47.683	
Overweight	46(18.3)	21(11.7)	77(23.3)	144(18.9)	19.669	
Obese	18(7.1)	10(5.6)	25(7.6)	53(7)	13.013	
TOTAL	**252(100)**	**179(100)**	**330(100)**	**761(100)**	**13.421**	**0.037**
Female BMI						
Thin	14(3.7)	13(3.4)	6(1.8)	33(3)	8.712	
Normal	262(69.3)	256(67)	236(73)	756(69.6)	37.606	
Overweight	84(22.2)	84(22)	64(19.6)	232(21.4)	42.608	
Obese	18(4.8)	29(7.6)	18(5.5)	65(6)	10.107	
TOTAL	**378(100)**	**382(100)**	**326(100)**	**1086(100)**	**6.539**	**0.366**

Cut values adapted from Cole et al. (2000), IOTF Childhood Obesity Working Group.

Diet Practices and Physical Activity

Most male students reported regular physical activity for 1–2 days during the week, with no significant differences among schools. Females in private schools reported more engagement in physical activity for at least 1–2 days during the past 7 days of the survey (43.7%), with $p < 0.001$ as documented in Table 2.

Table 2

Comparison of Physical Activity Behavior Across Public HPS, Public Non-HPS, and Private Schools: Females—Academic Year 2011–2012

	School category					
Physical activity behavior	**Public HPS 403–404 (%)**	**Public non-HPS 455–458 (%)**	**Private 356–357 (%)**	**Total 1215-1218 (%)**	χ^2	*p*
Activity During Past 7 Days					**31.067**	**< 0.001**
None	139(34.2)	188(41.5)	87(24.2)	414(34)		
1–2 Days	143(35.1)	155(34.2)	157(43.7)	455(37.3)		
3–4 Days	58(14.3)	58(12.8)	51(14.2)	167(13.7)		
5–6 Days	23(5.7)	23(5.1)	23(6.4)	69(5.7)		
All 7 Days	**44(10.8)**	**29(6.4)**	**41(11.4)**	**114(9.4)**		
TV Watching Hours					**28.749**	**< 0.001**
Don't Watch TV	29(7.1)	61(13.2)	25(7)	115(9.3)		
1 ≤ Hr	94(23)	150(32.4)	113(31.5)	357(29)		
2–3 Hr	173(42.4)	150(32.4)	142(39.6)	465(37.8)		
4 ≥ 5 Hr	112(27.5)	102(22)	79(22)	293(23.8)		

Females in private schools also reported spending more time (4 ≥ 5 hr/day) on electronic games than did their colleagues in other schools of the sample (12.3%), with $p < 0.001$.

In addition, they reported engaging in physical education for at least 1–2 days/week (60.7%), with $p < 0.001$. The figures for males were not significant on these variables. No significant differences were observed among students (males and females) with respect to participating in team sports, as shown in Table 3.

Table 3

Comparison of Physical Activity Behavior Across Public HPS, Public Non-HPS, and Private Schools: Females—Academic Year 2011–2012

Physical activity behavior	School category: Public HPS 403–404 (%)	Public non-HPS 455–458 (%)	Private 356–357 (%)	Total 1215–1218 (%)	χ^2	*p*
Electronic Games					**29.745**	**< 0.001**
Don't Play Games	149(37)	187(40.8)	96(26.9)	432(35.5)		
1 ≤ Hr	152(37.7)	181(39.5)	152(42.6)	485(39.8)		
2–3 Hr	76(18.9)	66(14.4)	65(18.2)	207(17)		
4 ≥ 5 Hr	26(6.5)	24(5.2)	44(12.3)	94(7.7)		
Physical Education Days					**40.913**	**< 0.001**
None	**189(46.8)**	**237(52.1)**	**117(32.9)**	**543(44.7)**		
1–2 Days	205(50.7)	204(44.8)	216(60.7)	725(51.4)		
3–4 Days	4(1)	10(2.2)	8(2.2)	22(1.8)		
5 Days	6(1.5)	4(0.9)	15(4.2)	25(2.1)		
4 ≥ 5 Hr	112(27.5)	102(22)	79(22)	293(23.8)		

Multivariate analysis was used to analyze student dietary practices. When we adjusted for obesity with sociodemographic characteristics and receiving health education, the relationship between HPS and obesity remained significant. Students in higher grades ($p < 0.001$) and students who used fasting ($p = 0.013$), vomiting, and laxative products ($p=0.013$) were more likely to be obese (Table 4).

Table 4
Multivariate Analysis for Obesity: (r^2 = %14)

Variable	OR_a / Exp (β)	CI (95%)	*p*
School Type			
Public HPS			**0.016**
Public Non-HPS	1.33	0.76–2.32	**0.324**
Private	2.05	1.18–3.57	**0.011**
Age (years)	1.54	1.35–1.75	**< 0.001**
Fasting for Hours	1.55	1.09–2.19	**0.013**
Vomiting/Laxatives	2.28	1.19–4.35	**0.013**
Student Participation in Sports Events	0.52	0.28–0.99	**0.046**
Using School Premises for Sports Events	0.42	0.20–0.87	**0.020**
Administrative/Evaluative Methods for Physical Activity	0.50	0.30–0.82	**0.002**
HE Training on Diet	5.62	2.30–13.72	**< 0.001**

When the we adjusted the "watching TV" habit to sociodemographic characteristics and receiving "health education," the results revealed that students in non-HPS schools watched TV less compared to those in HPS ($p = 0.002$). Obligatory physical education at school (though failed to reach significance, $p = 0.083$) and utilizing school premises for community sports events were found to be in favor of less "TV watching," with $p < 0.001$ as revealed in Table 5.

Table 5
Multivariate Analysis for Watching TV for 2 Hours or More per Day

Variable	OR_a / Exp (β)	CI (95%)	*p*
School Type			
Public HPS			**0.01**
Public Non-HPS	0.66	0.51–0.86	**0.002**
Private	0.80	0.59–1.08	**0.15**
Gender	1.63	1.27–2.10	< **0.001**
School Bullying	1.39	0.97–1.98	**0.075**
Ecstasy Inhalers	1.88	1.40–2.53	< **0.001**
Playing Electronic Games			
Don't Play Games			< **0.001**
1 ≤ Hr	1.79	1.38–2.34	< **0.001**
2–3 Hr	3.87	2.74–5.46	< **0.001**
4 ≥ 5 Hr	8.00	4.74–13.51	< **0.001**
Weight Description			
Below Weight			< **0.001**
Ideal Weight	1.45	1.11–1.91	**0.006**
Above Weight	2.16	1.54–3.01	< **0.001**
Obligatory Physical Education	**0.56**	**0.29–1.08**	**0.083**
Using School Premises for Sport Events	**0.65**	**0.51–0.83**	< **0.001**

Results revealed that risk behaviors were similar among students in all types of schools, indicating no advantage of HPS over others in the sample.

Discussion

Obesity among adolescents was found to be associated with negative psychosocial and health problems such as diabetes and hypertension, which interfere with school performance (Daniels et al., 2005). Musaiger (2004) demonstrated this fact and marked an increase in obesity rates among adolescents ranging from 7% to 45%, relating this to poor health practices, also. Our rates revealed that males in public schools (HPS and non-HPS) had higher values for normal weight (69% and 74.9%, respectively), and those in private schools had higher values for overweight (23.3%). Females in private schools, on the other hand, had higher values for normal weight (73%) and overweight (22%). Findings were not significant for male nor female students (Table 1).

Our findings corroborate with Chakar and Salameh (2006) regarding the prevalence and risk of obesity. They reported an obesity rate of 7.5% and risk of obesity of 24.4% among 12,299 adolescents. They highlighted the importance

of early recognition and management of this condition during adolescence. Findings also corroborate with the GSHS (WHO et al., 2010) in which 24.1% of adolescents reported being overweight and 6.7% obese. Fazah et al. (2010) revealed similar national Lebanese rates for overweight of 22.5% among male and 12.4% among female adolescents and recommended the implementation of effective strategies to increase physical activity and health-related practices for better quality of life. High prevalence rates of overweight and obesity were also reported for boys (22.5%, 7.5%) and girls (16.1%, 3.2%) by Sibai et al. (2003), who recommended implementation of interventions at community and individual levels to promote weight control measures.

Multivariate analysis demonstrated that students who belong to schools that allow use of their premises for physical activities ($p = 0.002$) and who participate in community sports events ($p < 0.046$) were less likely to be obese (Table 5). Schools that had administrative procedures and evaluative methods for physical activity were protective against student obesity ($p = 0.002$; Table 4). Although 49.6% of our male and 51% our female youth sample reported having ideal body weights, 33.6% of males and 45.2% of females revealed their desire to lose weight, especially in private schools, highlighting the role of media on youth's self-image. Adolescents regardless of school type had similar health practices leading to elevated BMI figures. This demonstrates the importance of integrating them as effective partners in SHP.

Participation in regular physical activity can help young people build and maintain body weight, reduce body fat, and eliminate feelings of depression and anxiety, thus improving school performance (Strong et al., 2005). It helps adolescent students develop the knowledge, attitudes, and skills necessary to adopt an active lifestyle (Dishman et al., 2005). Physical activity was better practiced by females in private schools (43.7%), with $p < 0.001$ (Table 2). On the other hand, 44.7% of our female participants did not attend regular physical education classes, especially those in HPS (46.8%) and non-HPS (52.1%), with $p < 0.001$ (Table 3). Rates for male students were not significant across schools.

Screen games are considered sedentary activities associated with obesity and negative consequences on the health and performance of adolescents (Kaur, Choi, Mayo, & Harris, 2003). The more adolescents indulge in watching TV and using the computer, the more they become physically and socially inactive. Fazah et al. (2010) further demonstrated that normal weight adolescents were more active than their obese peers and correlated more screen time with high obesity and overweight. This corroborates with our results that 37.8% of female students reported watching TV for 2–3 hours daily, more so in HPS ($p < 0.001$; Table2). Also 39.8% reported playing electronic games for at least 1 hour daily, more so in private schools ($p < 0.001$; Table 3). Multivariate analysis demonstrated that when we adjusted "watching TV" habit with sociode-

mographic characteristics and receiving "health education," students in non-HPS schools tended to watch TV less compared to HPS students ($p = 0.002$). Moreover, female students ($p = 0.002$) playing electronic games for hours was associated with longer TV watching hours. Obligatory physical education at school and the possibility of utilizing school premises for community sports events ($p < 0.001$) were found to be in favor of less "TV watching" (Table 5). Also alarming was the consumption of steroids (2.6–3.3%) and enhancers (5–5.7%) by males and females across different schools of the sample, which needs to be further examined.

Unhealthy weight control behaviors including fasting, taking dietary products, or inducing vomiting were observed in all three types of schools in our sample. Engaging in such behaviors may result in physical and psychological health problems and eating disorders such as anorexia, bulimia, and stunted growth (Golden et al., 2003). These health conditions negatively affect school performance because they cause high levels of stress and depression (Neumark-Sztainer & Hannan, 2000; Salameh & Barbour, 2011a, 2011b). Prevalent dietary habits include consumption of fast food, sugar-sweetened beverages, and caffeine-rich drinks. Such foods were associated with long-term health consequences including overweight among adolescents, decreased bone density, and dental decay (Tahmassebi, Duggal, Malik-Kotru, & Curzon, 2006). Effort should be exerted within a supportive school environment to teach nutrition education that includes concepts that promote healthy eating.

Sports and social events are mostly sponsored by fast-food and beverages companies. Students tend to interpret such advertising to mean that their school endorses the use of such products (Wilox et al., 2004). Alverman and Hagwood (2000) recommended providing students with media literacy skills, to counteract unhealthy attitudes and practices. Poor nutritional content of food sold during school-sponsored events jeopardizes formal health education regarding healthy nutrition within school curricula (Ozer, 2007). Easy access to nonnutritious snack foods through vending machines and school shops or canteens, combined with limited time allocated to eating a full meal, lead students to select nonnutritious snacks. Along these lines, Mahfouz et al. (2011) reported an obesity rate for adolescents (11–19 years) of 23.2% among boys and 29.4% among girls in Saudi Arabia. They recommended the need for a national education program to prevent and control obesity among adolescents. Barriers within the school environment undermine the effectiveness of HPS initiatives and interfere with program implementation and achievement of desired outcomes. Nasereddine et al. (2012) reported the mean BMI values for 2,004 subjects in 1997 and 3,636 in the 2009 among different age and gender groups over 12 years. They reported that the prevalence of overweight appeared stable over the study period among the 6–19 years age group (20.0% vs. 21.2%). The prevalence of obesity, however, increased significantly from 7.3% to 10.9%, with

annual rates of change of about 4.1%. They highlighted the alarming increase in obesity prevalence and recommended policies and strategies to counteract this trend. Moreover, Sukarieh and Sidani (2014) reported BMI cutoff points for overweight and obese of 8.9% and 5.1% for males and 12.7% and 3.8% for females. Females had higher scores on emotional and binge eating and were more likely to engage in dramatic dieting and weight loss attempts because of family, peer, and media pressures. Males, on the other hand, were more likely to engage in weight gain attempts. Boys and girls were equally unhappy about their body shape, with 59.4% of girls and 56% of boys expressing their desire to lose weight. These figures support our findings of 33.6% of female and 45.2% of male adolescents revealing dissatisfaction with their image and desire to lose weight.

Absence of information about strengths and weaknesses of the current SHP and time constraints regarding data collection considering that students' official exams were scheduled in mid-May 2012 were among study limitations, together with biases inherent in self-report methodology. Reported data are cross-sectional; therefore, no conclusions regarding the direction of causality can be drawn. Moreover, generalizations cannot be made to youth in other settings such as technical schools or to school dropouts considering that these populations may have higher levels of risk behaviors.

Conclusion

There is a need to study education and health trajectories and the degree to which they intertwine and influence each other and the life of individual students through different stages of development. Evidence gathered from this study reveals poor investment at all levels for implementation, sustainability, and evaluation of this comprehensive school initiative. Added is the absence of follow-up and process evaluation, rendering health education, services, and activities within all schools dependent to a great extent on intuition and individual initiatives. Such initiatives cannot have long-term longevity, because they cannot be duplicated, reproduced, or tailored to needs of specific adolescent groups and communities. Thus, national policies and guidelines should be developed and reinforced to transcend circumstantial obstacles and render the HPS model applicable for different schools and communities.

References

Alverman, E., & Hagwood, C. (2000). Critical media literacy: Research, theory, and practice in "new times." *Journal of Educational Research, 93,* 93–205.

Centers for Disease Control and Prevention. (2011). *Healthy school: Healthy youth!* Retrieved from National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health website: http://www.cdc.gov/HealthyYouth/mentalhealth/index.htm

Chakar, H., & Salameh, P. (2006). Obesity in Lebanese private schools adolescents. *European Journal of Public Health, 16,* 648–651.

Chakar, H., & Salameh, P. (2007). Growth and obesity in Lebanese private school children. *Le Journal Medical Libanais, 55,* 75–82.

Cole, T., Bellizzi, M., Flegal, K., & Dietz, H. (2000). Establishing a standard definition for child overweight and obesity worldwide: International survey, IOTF Childhood Obesity Working Group. *BMJ, 320*, 1240.

Daniels, S. R., Arnett, D. K., Eckel, R. H., Gidding, S. S., Hayman, L. L., Kumanyika, S., . . . Williams, C. L. (2005). Overweight in children and adolescents: Pathophysiology, consequences, prevention, and treatment. *Circulation, 111,* 1999–2012.

Dishman, R. K., Motl, R. W., Saunders, R., Felton, G., Ward, D. S., Dowda, M., & Pate, R. R. (2005). Enjoyment mediates effects of a school-based physical-activity intervention. *Medicine and Science in Sports and Exercise, 37,* 478–487.

Fazah, A., Jacob, C., Moussa, E., El-Hage, R., Youssef, H., & Delamarche, P. (2010). Activity, inactivity, and quality of life among Lebanese adolescents. *Journal of International Pediatrics, 52,* 573–578.

Golden, N., Katzman, D., Kreipe, S., Stevens, S., Sawyer, S., Raes, J., . . . Rome, E. (2003). Eating disorders in adolescence. *Journal of Adolescent Health, 33,* 496–503.

International Obesity Task Force. (2005, March). *EU platform on diet, physical activity, and health.* Briefing paper prepared in collaboration with the European Association for the Study of Obesity, Brussels, Belgium.

Kaur, H., Choi, S., Mayo, M., & Harris, J. (2003). Duration of television watching is associated with increased body mass index. *Journal of Pediatrics, 143,* 506–511.

License, K. (2004). Promoting and protecting the health of children and young people. *Child Care Health and Development, 30,* 623–635.

Mahfouz, A., Abdelmoneim, I., Khan, Y., Daffalla, A., Diab, M., Al-Gelban, S., & Moussa, H. (2011). Obesity and related behaviors among adolescent school boys in Abha City, Southwestern Saudi Arabia. *Journal of Tropical Pediatrics, 54,* 120–124.

Makhoul, J. (2000). *Results of school books revision on health and environmental education curricula.* Beirut, Lebanon: Education Center for Research and Development, WHO, UNESCO.

Musaiger, A. (2004). Overweight and obesity in the Eastern Mediterranean region: Can we control it? *East Mediterranean Health Journal, 10,* 789–793.

Nasereddine, L., Naja, F., Chamieh, M. C., Adra, N., Mehio, A., & Hwalla, N. (2012). Trends in overweight and obesity in Lebanon: Evidence from two national cross-sectional surveys (1997 and 2009). *Public Health Nutrition, 14*, 1578–1580.

Neumark-Sztainer, D., & Hannan, J. (2000). Weight-related behaviors among adolescent girls and boys. *Archives of Pediatric and Adolescent Medicine, 154,* 569–577.

O'Rourke, T. (1996). A comprehensive school health program to improve health and education. *Education, 116,* 490–495.

Ozer, E. (2007). The effects of school gardens on students and schools: Conceptualization and considerations for maximizing healthy development. *Health Education and Behavior, 34,* 846–863.

Pompidou Group & Saint Joseph University. (2008). *Awareness and practices related to addictive substances among school children in Lebanon in 2008.* Beirut, Lebanon: USJ, Department of Asocial and Family Medicine, MedSPAD Lebanon.

Republic of Lebanon, Ministry of Education and Higher Education. (2009*). Function of the school health worker from KG to grade 12 in public schools* (Circular Number 16/m/2009). Beirut, Lebanon: Author.

Republic of Lebanon, Ministry of Education and Higher Education, & Ministry of Public Health. (2009). *School health strategy* (Resolution Number 11/1661). Beirut, Lebanon: Author.

Saade, G., Abou Jaoude, S., Afifi, R., Warren, C., & Jones, N. (2005). Patterns of tobacco use: Results from the 2005 Global Youth Survey in Lebanon. *Eastern Mediterranean Health Journal, 14,* 1280–1289.

Salameh, P., & Barbour, B. (2011a). Obesity-associated distress in Lebanese adolescents: An exploratory look at a large cohort of students. *Eastern Mediterranean Health Journal, 17,* 949–959.

Salameh, P., & Barbour, B. (2011b). Pattern of obesity and associated diabetes in Lebanese adolescents: A pilot study. *Eastern Mediterranean Health Journal, 17,* 226–230.

Sibai, A. M., Hwalla, N., Adra, N., & Rahal, B. (2003). Prevalence and covariates of obesity in Lebanon: Findings from the first epidemiological study. *Obesity Research, 11,* 1353–1361.

Strong, W. B., Malina, R. M., Blimkie, C. J., Daniels, S. R., Dishman, R. K., Gutin, B., . . . Trudeau, F. (2005). Evidence-based physical activity for school-age youth. *Journal of Pediatrics, 146,* 732–735.

Sukarieh, M., & Sidani, R. (2014). Prevalence of and gender differences in weight, body, and eating related perceptions among Lebanese high school students: Implications for school counseling. *Journal of Social and Behavioral Sciences, 159,* 184–191.

Tahmassebi, J., Duggal, M., Malik-Kotru, G., & Curzon, M. E. J. (2006). Soft drinks and dental health: A review of the current literature. *Journal of Dental Research, 34*(1), 2–11.

Wilox, L., Kunkel, D., Cantor, I., Dowrick, P., Linn, S., & Palmer, E. (2004). *Report of the APA Task Force on Advertising and Children.* Washington, DC: American Psychological Association.

World Health Organization. (1995). *WHO Expert Committee on Comprehensive School Health Education and Promotion.* Geneva, Switzerland: Author.

World Health Organization. (1996). *School health promotion: Series 5. Regional guidelines: Development of health promoting schools—A framework for action.* Manila, Philippines: Author.

World Health Organization. (1999a). *Improving health through schools: National and international strategies.* Geneva, Switzerland: Author.

World Health Organization. (1999b). *Information series on school health. Creating an environment for emotional and social well-being.* Geneva, Switzerland: Author.

World Health Organization. (2005). *Bangkok Charter for health promotion in a globalized world: Sixth Global Conference on Health Promotion.* Geneva, Switzerland: Author.

World Health Organization. (2010). *Regional Office for the Eastern Mediterranean, WHO Collaborative Program.* Retrieved November 4, 2010, from http://www.lebemro.who.int/collaborativeprogramme-school.htm

World Health Organization, Ministry of Education, Ministry of Public Health, & Centers for Disease Control and Prevention. (2005–2010). *Global school-based student health survey.* Beirut, Lebanon: WHO Representative Office for Lebanon.

Appendix

2011 MIDDLE SCHOOL YOUTH RISK BEHAVIOR SURVEY

This survey is about health behavior. It has been developed so you can tell us what you do that may affect your health. The information you give will be used to improve health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do.

Completing the survey is voluntary. Whether or not you answer the questions will not affect your grade in this class. If you are not comfortable answering a question, just leave it blank.

The questions that ask about your background will be used only to describe the types of students completing this survey. The information will not be used to find out your name. No names will ever be reported.

Make sure to read every question. Fill in the ovals completely. When you are finished, follow the instructions of the person giving you the survey.

Thank you very much for your help.

DIRECTIONS

Use a #2 pencil only.

- **Make dark marks.**
- **Fill in a response like this: A B C D**
- **If you change your answer, erase your old answer completely.**

1. How old are you?
   a. 10 years old or younger
   b. 11 years old
   c. 12 years old
   d. 13 years old
   e. 14 years old
   f. 15 years old
   g. 16 years old or older
2. What is your sex?
   a. Female
   b. Male

3. In what grade are you?
   a. 6th grade
   b. 7th grade
   c. 8th grade
   d. Ungraded or other grade
4. Are you Hispanic or Latino?
   a. Yes
   b. No
5. What is your race? (Select one or more responses.)
   a. American Indian or Alaska Native
   b. Asian
   c. Black or African American
   d. Native Hawaiian or Other Pacific Islander
   e. White

The next 4 questions ask about safety.

6. When you ride a bicycle, how often do you wear a helmet?
   a. I do not ride a bicycle
   b. Never wear a helmet
   c. Rarely wear a helmet
   d. Sometimes wear a helmet
   e. Most of the time wear a helmet
   f. Always wear a helmet
7. When you rollerblade or ride a skateboard, how often do you wear a helmet?
   a. I do not rollerblade or ride a skateboard
   b. Never wear a helmet
   c. Rarely wear a helmet
   d. Sometimes wear a helmet
   e. Most of the time wear a helmet
   f. Always wear a helmet
8. How often do you wear a seat belt when riding in a car?
   a. Never
   b. Rarely
   c. Sometimes
   d. Most of the time
   e. Always

9. Have you ever ridden in a car driven by someone who had been drinking alcohol?
    a. Yes
    b. No
    c. Not sure

The next 3 questions ask about violence-related behaviors.

10. Have you ever carried a weapon, such as a gun, knife, or club?
    a. Yes
    b. No
11. Have you ever been in a physical fight?
    a. Yes
    b. No
12. Have you ever been in a physical fight in which you were hurt and had to be treated by a doctor or nurse?
    a. Yes
    b. No

The next 2 questions ask about bullying. Bullying is when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way.

13. Have you ever been bullied on school property?
    a. Yes
    b. No
14. Have you ever been electronically bullied? (Include being bullied through e-mail, chat rooms, instant messaging, Web sites, or texting.)
    a. Yes
    b. No

The next 3 questions ask about attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide or killing themselves.

15. Have you ever seriously thought about killing yourself?
    a. Yes
    b. No

16. Have you ever made a plan about how you would kill yourself?
    a. Yes
    b. No
17. Have you ever tried to kill yourself?
    a. Yes
    b. No

The next 8 questions ask about tobacco use.

18. Have you ever tried cigarette smoking, even one or two puffs?
    a. Yes
    b. No
19. How old were you when you smoked a whole cigarette for the first time?
    a. I have never smoked a whole cigarette
    b. 8 years old or younger
    c. 9 years old
    d. 10 years old
    e. 11 years old
    f. 12 years old
    g. 13 years old or older
20. During the past 30 days, on how many days did you smoke cigarettes?
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days
21. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?
    a. I did not smoke cigarettes during the past 30 days
    b. Less than 1 cigarette per day
    c. 1 cigarette per day
    d. 2 to 5 cigarettes per day
    e. 6 to 10 cigarettes per day
    f. 11 to 20 cigarettes per day
    g. More than 20 cigarettes per day

22. During the past 30 days, how did you usually get your own cigarettes? (Select only one response.)
    a. I did not smoke cigarettes during the past 30 days
    b. I bought them in a store such as a convenience store, supermarket, discount store, or gas station
    c. I bought them from a vending machine
    d. I gave someone else money to buy them for me
    e. I borrowed (or bummed) them from someone else
    f. A person 18 years old or older gave them to me
    g. I took them from a store or family member
    h. I got them some other way
23. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?
    a. Yes
    b. No
24. During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days
25. During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days

The next 2 questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

26. Have you ever had a drink of alcohol, other than a few sips?
    a. Yes
    b. No
27. How old were you when you had your first drink of alcohol other than a few sips?
    a. I have never had a drink of alcohol other than a few sips
    b. 8 years old or younger
    c. 9 years old
    d. 10 years old
    e. 11 years old
    f. 12 years old
    g. 13 years old or older

The next 2 questions ask about marijuana use. Marijuana also is called grass or pot.

28. Have you ever used marijuana?
    a. Yes
    b. No
29. How old were you when you tried marijuana for the first time?
    a. I have never tried marijuana
    b. 8 years old or younger
    c. 9 years old
    d. 10 years old
    e. 11 years old
    f. 12 years old
    g. 13 years old or older

The next 4 questions ask about other drugs.

30. Have you ever used any form of cocaine, including powder, crack, or freebase?
    a. Yes
    b. No

31. Have you ever sniffed glue, breathed the contents of spray cans, or inhaled any paints or sprays to get high?
    a. Yes
    b. No
32. Have you ever taken steroid pills or shots without a doctor's prescription?
    a. Yes
    b. No
33. Have you ever taken a prescription drug (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription?
    a. Yes
    b. No

The next 4 questions ask about sexual intercourse.

34. Have you ever had sexual intercourse?
    a. Yes
    b. No
35. How old were you when you had sexual intercourse for the first time?
    a. I have never had sexual intercourse
    b. 8 years old or younger
    c. 9 years old
    d. 10 years old
    e. 11 years old
    f. 12 years old
    g. 13 years old or older
36. With how many people have you ever had sexual intercourse?
    a. I have never had sexual intercourse
    b. 1 person
    c. 2 people
    d. 3 people
    e. 4 people
    f. 5 people
    g. 6 or more people

37. The last time you had sexual intercourse, did you or your partner use a condom?
    a. I have never had sexual intercourse
    b. Yes
    c. No

The next 5 questions ask about body weight.

38. How do you describe your weight?
    a. Very underweight
    b. Slightly underweight
    c. About the right weight
    d. Slightly overweight
    e. Very overweight
39. Which of the following are you trying to do about your weight?
    a. Lose weight
    b. Gain weight
    c. Stay the same weight
    d. I am not trying to do anything about my weight
40. Have you ever gone without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?
    a. Yes
    b. No
41. Have you ever taken any diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight? (Do not include meal replacement products such as Slim Fast.)
    a. Yes
    b. No
42. Have you ever vomited or taken laxatives to lose weight or to keep from gaining weight?
    a. Yes
    b. No

The next 5 questions ask about physical activity.

43. During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)
    a. 0 days
    b. 1 day
    c. 2 days
    d. 3 days
    e. 4 days
    f. 5 days
    g. 6 days
    h. 7 days
44. On an average school day, how many hours do you watch TV?
    a. I do not watch TV on an average school day
    b. Less than 1 hour per day
    c. 1 hour per day
    d. 2 hours per day
    e. 3 hours per day
    f. 4 hours per day
    g. 5 or more hours per day
45. On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Include activities such as Xbox, PlayStation, Nintendo DS, iPod touch, Facebook, and the Internet.)
    a. I do not play video or computer games or use a computer for something that is not school work
    b. Less than 1 hour per day
    c. 1 hour per day
    d. 2 hours per day
    e. 3 hours per day
    f. 4 hours per day
    g. 5 or more hours per day

46. In an average week when you are in school, on how many days do you go to physical education (PE) classes?
    a. 0 days
    b. 1 day
    c. 2 days
    d. 3 days
    e. 4 days
    f. 5 days
47. During the past 12 months, on how many sports teams did you play? (Count any teams run by your school or community groups.)
    a. 0 teams
    b. 1 team
    c. 2 teams
    d. 3 or more teams

The next 3 questions ask about other health-related topics.

48. Have you ever been taught about AIDS or HIV infection in school?
    a. Yes
    b. No
    c. Not sure
49. Has a doctor or nurse ever told you that you have asthma?
    a. Yes
    b. No
    c. Not sure
50. Do you still have asthma?
    a. I have never had asthma
    b. Yes
    c. No
    d. Not sure

This is the end of the survey.
Thank you very much for your help

Healthy Appearances in Lebanese Schools – 2011 Youth Risk Behavior Survey

DIRECTIONS

- **Circle the correct answer**
- **USE a pencil only.**
- **If you change your answer, erase your previous answer completely.**

1. How old are you?
   a. 10 years old or younger
   b. 11 years old
   c. 12 years old
   d. 13 years old
   e. 14 years old
   f. 15 years old or older
2. What is your sex?
   a. Female
   b. Male
3. In what grade are you?
   a. 6th grade
   b. 7th grade
   c. 8th grade
   d. 9th grade
4. How tall are you without your shoes?
   _____ m _____ cm
5. How much do you weigh without your shoes?
   _____ kg _____ gm

The next questions ask about safety.

6. When you ride a bicycle, how often do you wear a helmet?
   a. I do not ride a bicycle
   b. Never wear a helmet
   c. Rarely wear a helmet
   d. Sometimes wear a helmet
   e. Most of the time wear a helmet
   f. Always wear a helmet

7. When you use a rollerblade or ride a skateboard, how often do you wear a helmet?
   a. I do not rollerblade or ride a skateboard
   b. Never wear a helmet
   c. Rarely wear a helmet
   d. Most of the time wear a helmet
   e. Always wear a helmet
8. How often do you wear a seat belt when riding in a car?
   a. Never
   b. Rarely
   c. Sometimes
   d. Most of the time
   e. Always
9. Have you ever ridden in a car driven by someone who had been drinking alcohol?
   a. None
   b. Once
   c. 2 or 3 times
   d. 4 or 5 times
   e. 6 or more times

The next questions ask about violence-related behavior.

10. Have you ever carried a weapon, such a gun, knife, or club?
    a. Yes
    b. No
11. Have you ever been in a physical fight?
    a. Yes
    b. No
12. Have you ever been in a physical fight where you were hurt and had to be treated by a doctor or nurse?
    a. Yes
    b. No

The next questions ask about bullying. Bullying is when one or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not considered bullying when two students of the same strength argue or fight or tease one another in a friendly way.

13. Have you ever been bullied on school campus?
    a. Yes
    b. No
14. Have you ever been electronically bullied? (Include being bullied through e-mail, text messaging, Web sites, etc…)
    a. Yes
    b. No

The next questions ask about suicide. Sometimes people feel depressed about the future that they may consider attempting suicide or do something to end their lives.

15. Have you ever seriously thought about killing yourself?
    a. Yes
    b. No
16. Have you ever put a plan about how you would kill yourself?
    a. Yes
    b. No
17. Have you ever tried to actually kill yourself?
    a. Yes
    b. No

The next questions ask about tobacco use, alcohol and other drug use.

18. Have you ever tried cigarette smoking, even one or two puffs?
    a. Yes
    b. No
19. How old were you when you smoked a whole cigarette for the first time?
    a. I have never smoked a whole cigarette
    b. 8 years old or younger
    c. 9 years old
    d. 10 years old
    e. 11 years old
    f. 12 years old
    g. 13 years old or older

20. During the past 30 days, on how many days did you smoke cigarettes?
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days
21. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?
    a. I did not smoke cigarettes during the past 30 days
    b. Less than 1 cigarette per day
    c. 1 cigarette per day
    d. 2 to 5 cigarettes per day
    e. 6 to 10 cigarettes per day
    f. 11 to 20 cigarettes per day
    g. More than 20 cigarettes per day
22. During the past 30 days, how did you usually get your cigarettes? (Select only one response.)
    a. I did not smoke cigarettes during the past 30 days
    b. I bought them from a convenience store, supermarket, shop or gas station.
    c. I bought them from a vending machine
    d. I gave someone else money to buy them for me
    e. I borrowed or took them from someone else
    f. A person 18 years old or older gave them to me
    g. I took them from a family member
    h. I got them some other way
23. Have you ever smoked cigarettes daily, that is, at least one cigarette everyday for 30 days?
    a. Yes
    b. No

24. During the past 30 days, on how many days did you use chewing tobacco or snuffs?
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days
25. During the past 30 days, on how many days did you smoke cigars, cigarellos, little cigars, or Arguile?
    a. 0 days
    b. 1 or 2 days
    c. 3 to 5 days
    d. 6 to 9 days
    e. 10 to 19 days
    f. 20 to 29 days
    g. All 30 days
26. Have you ever had a drink of alcohol, other than a few sips?
    a. Yes
    b. No
27. How old were you when you had your first drink of alcohol other than a few sips?
    a. I have never had a drink of alcohol other than a few sips
    b. 8 years old or younger
    c. 9 years old
    d. 10 years old
    e. 11 years old
    f. 12 years old
    g. 13 years old or older
28. Have you ever used marijuana?
    a. Yes
    b. No
29. Have you ever used any form of cocaine?
    a. Yes
    b. No

30. Have you ever sniffed glue, inhaled the contents of spray cans, or any paints?
    a. Yes
    b. No
31. During the current school year, did you receive instruction regarding the dangers of smoking, drinking alcohol or using drugs?
    a. Yes
    b. No

The next questions ask about body weight.

32. How do you describe your weight?
    a. Very underweight
    b. Slightly underweight
    c. About the right weight
    d. Slightly overweight
    e. Very overweight
33. Which of the following are you trying to do about your weight?
    a. Lose weight
    b. Gain weight
    c. Stay the same weight
    d. I am not trying to do anything about my weight
34. Have you ever gone without eating for 24 hours or more (fasting) to lose weight or to keep from gaining weight?
    a. Yes
    b. No
35. Have you ever taken any diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight? (Do not include meal replacement products such as Slim Fast.)
    a. Yes
    b. No
36. Have you ever vomited or taken laxatives to lose weight or to keep from gaining weight?
    a. Yes
    b. No

The next questions ask about physical activity.

37. During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)
    a. 0 days
    b. 1 day
    c. 2 days
    d. 3 days
    e. 4 days
    f. 5 days
    g. 6 days
    h. 7 days
38. On a regular school day, how many hours do you watch TV?
    a. I do not watch TV on an average school day
    b. Less than 1 hour per day
    c. 1 hour per day
    d. 2 hours per day
    e. 3 hours per day
    f. 4 hours per day
    g. 5 or more hours per day
39. On a regular school day, how many hours do you play video or computer games or use a computer for something that is not for school work? (Include activities such as Xbox, PlayStation, Nintendo, iPod, Facebook and the Internet.)
    a. I do not play video or computer games or use a computer for something that is not school work
    b. Less than 1 hour per day
    c. 1 hour per day
    d. 2 hours per day
    e. 3 hours per day
    f. 4 hours per day
    g. 5 or more hours per day
40. In an average week when you are in school, on how many days do you go to physical education classes (PE)?
    a. 0 days
    b. 2 days
    c. 3 days
    d. 4 days
    e. 5 days

41. During the past 12 months, on how many sports teams did you play? (Count any school teams, or community or neighborhood teams.)
    a. 0 teams
    b. 1 team
    c. 2 teams
    d. 3 or more teams
42. Have you ever taken steroid pills or injections without a doctor's proscription for the purpose of enhancing body shape?
    a. Yes
    b. No
43. Have you ever taken tranquilizers or enhancer drugs without a doctor's prescription to improve your physical performance?
    a. Yes
    b. No

The next questions ask about other health – related topics.

44. Have you ever been taught about AIDS or HIV infection in school?
    a. Yes
    b. No
    c. Not sure
45. During the current school year, did you receive education or instruction material concerning AIDS or HIV prevention?
    a. Yes
    b. No
46. Has a doctor or nurse ever told you that you have asthma?
    a. Yes
    b. No
    c. Not sure
47. Do you still have asthma?
    a. I have never had asthma
    b. Yes
    c. No
    d. Not sure

This is the end of the survey.
Thank you very much for your cooperation.