

# **GLOBAL SCHOOL-BASED HEALTH SURVEY**

**KUWAIT - 2011**

**GSHS KUWAIT, 2011**

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## Executive Summary

In 2001, WHO, in collaboration with UNAIDS, UNESCO, and UNICEF, and with technical assistance from the US Centers for Disease Control and Prevention (CDC), initiated development of the Global School-based Student Health Survey (GSHS). Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students.

The purpose of the GSHS is to provide accurate data on health behaviours and protective factors among students to:

- D Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- D Allow international agencies, countries, and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors; and
- D Establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion.

### Methodology:

The 2011 Kuwait GSHS was a school based cross sectional survey targeting the 13 to 15 year age group. Grade 8-10 classes were selected because they contained the target groups. All six governorates that shape up the Kuwait demography were included in the study design. The 2011 Kuwait GSHS employed a two-stage cluster sample design to produce a representative sample of students in grades 8-10 in all governorates. The first-stage sampling frame consisted of all governmental schools in the six governorates containing any of the grades 8-10 classes.

Schools were selected with probability proportional to school enrollment size. The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All classrooms in each selected school were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS. Students completed the self-administered questionnaire during one classroom period after attaining written consents from their parents along with verbal consents from the students.

The questionnaire addressed the following topics: Respondent demographics, Hygiene, Mental health, Dietary behaviours, Physical activity, Protective factors, Students' knowledge about HIV infection, Tobacco use, Violence and unintentional injury, and Alcohol and other drug use. Survey procedures were designed to protect student privacy by allowing for anonymous and voluntary participation.

## **Results:**

The school response rate was 97%, and the student response rate of 88% with an overall response rate of 85%. A total of 2674 students participated in the survey.

**Dietary behavior:** The study revealed that only 2.4% of students were underweight; 50.6% of students were overweight, and 22.6% were obese.

During the 30 days preceding the study, more than one third of students usually ate fruits two or more times per day, 19% ate vegetables three or more times per day, 75% drank soft drink 1 or more times per day, 45% took their breakfast most of the time or always, and 36% drank milk two or more times /day.

**Hygiene:** The percentage of students who usually cleaned or brushed their teeth less than one time per day during the past 30 days was 14.6%. Only around 6% of students reported that they never or rarely wash their hands either before eating or after using the toilet. The students showed high level of hygiene almost the same between male and female students.

**Mental Health:** Around 19% of students most of the time or always felt lonely and 20% were worried most of the time or always to an extent that they couldn't sleep during the past 12 months. About 17% of students reported that they actually attempted suicide during the last 12 months and only 3% reported having no close friends.

**Physical activity:** About 21% of students were physically active for a total of at least 60 minutes per day on **five or more** days during the past seven days. Male students were significantly more physically active than female students.

**Protective factors:** Around 58% of students missed classes or school without permission on one or more of the past 30 days. More than half of students reported that their parents or guardians checked to see if their homework was done most of the time or always during the past 30 days. Overall, 76% of students, their parents or guardians most of the time or always supported and encouraged them during the past 30 days. The study illustrated that parents showed significant positive support towards the females more than the males.

**HIV related knowledge:** More than three quarters of students had ever heard of HIV infection or the disease called AIDS. Overall, 42.5% of students were taught in any of their classes during this school year about HIV infection or AIDS.

**Tobacco use:** Overall, 17.6% of students smoked cigarettes on one or more days during the past 30 days. Among students who smoked cigarettes during the past 12 months, 68.8% of students tried to stop smoking cigarettes during the past 12 months. Overall, 22.5% of students had parents or guardians who used any form of tobacco. Smoking tobacco was significantly more practiced among male students than females.

**Violence and unintentional injuries:** about one third of students were physically attacked one or more times during the past 12 months. Overall, 44.1% of students were seriously injured one or more times during the past 12 months. Male students experienced more violence and unintentional injuries significantly more than female students.

**Alcohol and other drug use:** More than half of students, who watched television, videos, or movies, reported seeing actors drinking alcohol. About 11% and 16% of students saw advertisements about alcohol in sports/social events and on television respectively. Overall, the prevalence of Students who were taught in any of their classes during this school year the problems associated with drinking alcohol is 47.3%.

Regarding drug use, about 3% of students reported using marijuana or amphetamines or methamphetamines during their lives. Male students showed significantly higher experience with this drug use than did female students.

**Recommendations:**

- Health campaigns aiming to raise the awareness of adolescents about drawbacks of involvement in risk behavior such as smoking, unintentional injuries and others.
- Encouraging physical exercise among adolescents to be part of their daily life.
- Enhancing healthy lifestyle habits especially that related to food habits.
- Arranging of regular meeting with adolescents' parents to raise their awareness about changes that happen during the period of adolescence of their children and how to deal with these changes in a positive way.
- Regular monitoring of the adolescents through repeating the research every couple of years to evaluate the risk behaviours and the intervention methods for overcoming these behaviours.

## ***BACKGROUND***

Adolescence is a developmental period marked by increased health risk-taking and uniqueness behaviours. This marked increase in risk-taking usually is particular to this age period and does not occur at any other point in the lifespan and has been called one of the greatest behavioural changes that occur within adolescence. Additionally, adolescence is marked by an increase in injury and mortality rates; in fact, mortality rates increase almost double the rate of preadolescent period during this developmental period. This rise in mortality has been related to adolescents' increased engagement in maladaptive health risk-taking behaviours, such as substance use, violence, risky driving practices, and unsafe sexual behaviours. Maladaptive risk-taking is hazardous with little or no chance for secondary gain and refers to the risky behaviours that should be discouraged among most adolescents. In fact, statistics on motor vehicle crashes, risky sexual behaviours, binge drinking and crime demonstrate that adolescents engage in more risk behaviours than any other age group, including children. Studies also revealed that involvement in a risk behavior is usually accompanied with more involvement in other risk behaviours.

The population distribution in Kuwait according to the 2010 Kuwait statistics shows that the total number of children enrolled in schools in the age period of 13-15 years was 91466 students. This number constitutes a proportion of about 35% from the total adolescent Kuwaiti population of the same year. The Gross Enrollment Rate in intermediate level schools is almost 100% in Kuwait.

Ensuring that children are healthy and are able to learn is an essential component of an effective education system. Good health and nutrition are not only essential inputs but also important outcomes of basic education of good quality. Education of good quality can lead to better health

and nutrition outcomes for children, especially girls, and thus for the next generation of children as well. In addition, a safe and secure school environment can help protect children from health hazards, abuse and exclusion.

## **INTRODUCTION**

In 2001, WHO, in collaboration with UNAIDS, UNESCO, and UNICEF, and with technical assistance from the US Centers for Disease Control and Prevention (CDC), initiated development of the Global School-based Student Health Survey (GSHS).

Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students. This report describes results from the first GSHS conducted in Kuwait by the Ministry of Health in the academic year 2010-2011.

The purpose of the GSHS is to provide accurate data on health behaviours and protective factors among students to:

- Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- Allow countries, international agencies, and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors; and
- Establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion.

The GSHS is a school-based survey conducted primarily among students aged 13-15 years. It measures behaviours and protective factors related to the leading causes of mortality and morbidity among youth and adults in Kuwait. The survey consists of ten modules which cover:

- Ø□ Dietary behaviours
- Ø□ Hygiene
- Ø□ Mental health
- Ø□ Physical activity
- Ø□ Protective factors
- Ø□ HIV-Related Knowledge
- Ø□ Tobacco use
- Ø□ Violence and unintentional injury
- Ø□ Alcohol use
- Ø□ Drug use

## **METHODS**

The 2011 Kuwait GSHS was a school based cross sectional survey designed to cover all the governmental schools in all the six governments in Kuwait in grades eight, nine and ten as per the Ministry of Education structures.

### **Sampling**

The 2010 Kuwait GSHS employed a two-stage cluster sample design to produce a representative sample of students in grades 8, 9 and 10. The first-stage sampling frame was performed on the school level. It consisted of all governmental schools of boys and girls containing grades 8, 9, and 10 in the six governments in Kuwait were included in the sampling frame. Grades eight, nine and ten classes were selected because they contained the target groups

of the 13 to 15year age groups. Enrolment of schools was obtained from the Ministry of Education. Schools were selected systematically with probability proportional to school enrollment size. A total of 31 schools (16 girls' schools and 15 boys' schools) were selected to participate in the Kuwait GSHS study in the academic year 2010-2011. Thirty schools participated with 97% response rate.

The second stage of sampling was performed on the class level. Randomly selected intact classrooms (using a random start) from each school took place. All classrooms in each selected school were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS. A total of 2,674 students of the 3,051 sampled students completed questionnaires with a response rate of 88%. The overall response rate (school response rate \*student response rate) was 85%.

### **Survey Administration &Ethical consideration**

Permission to carry out the survey was obtained from the Ministry of Health who then applied to the Ministry of Education for permission to carry out the survey. Consent was also obtained from the Regional Directors of Education. These consent forms were then used to obtain permission from the schools. No difficulties were faced once the school heads saw the confirmation letters from the regional offices. Letters were sent to all heads of schools inviting them to participate in the GSHS. Signed replies from all schools, confirming agreement of school enrollment in the study were received by the survey coordinator. Another letter was designed and sent to all schools confirming getting signed consent forms from parents of students to allow them participate in the study.

A pilot study was implemented to ensure understanding of the questionnaire by the students. The results of the pilot study ensured high-level of students' understanding and acceptance of the questionnaire.

Students completed the self-administered questionnaire during one classroom period and recorded their responses directly on a computer-scannable answer sheet. Follow up was made by the survey investigators to ensure quality control of data collection.

Survey procedures were designed to protect student privacy by allowing for anonymous and voluntary participation. Confidentiality for the students was guaranteed by ensuring that they did not write their names on the forms and members of staff at the schools were asked to excuse themselves at the time of questionnaire administration.

### **GSHS Questionnaire**

The Kuwait GSHS questionnaire contained 69 questions. The questionnaire addressed the following topics:

- Ø  Respondent's demographics
- Ø  Respondent's anthropometric measurements (weight and height)
- Ø  Dietary behaviours
- Ø  Hygiene
- Ø  Mental health
- Ø  Physical activity
- Ø  Protective factors

- Ø  HIV-Related Knowledge
- Ø  Tobacco use
- Ø  Violence and unintentional injury
- Ø  Alcohol use
- Ø  Drug use

The questionnaire was developed by the survey investigators with assistance from MOE. WHO (HQ) and CDC provided assistance in developing and updating the questionnaire. Consultations for the final version of the questionnaire were obtained from representatives from the Ministry of Health and Ministry of Education. (Appendix 1).

### **Data Analysis**

The data set was cleaned and edited for inconsistencies. Missing data were not statistically imputed. Software that takes into consideration the complex sample design was used to compute prevalence estimates and 95% confidence intervals. GSHS data are representative of all students attending grades 8,9,10 in KUWAIT.

A weighting factor was applied to each student record to adjust for non-response and for the varying probabilities of selection. The weighted results can be used to make important inferences about the priority health-risk behaviors and protective factors of all students in grades 8, 9, and 10.

## Results

### I. Demographics

The demographic characteristics of the sample are described in the following table.

Table 1. Demographic characteristics of the sample KUWAIT, 2011.

	Sex		Age			Grade			
	Males	Females	12 or younger	13-15	16 or older	8	9	10	Other
<b>KUWAIT</b>	52.3	47.7	1.9	85.4	12.8	33.9	31.5	32.1	2.4

### II. Dietary Behaviours

Table 2. BMI and dietary behaviours, by sex, KUWAIT, 2011.

Behaviour or Health Outcome	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Underweight <sup>1</sup>	2.4 ( 1.8 - 3.3 )	2.7 ( 1.8 - 3.9 )	2.1 ( 1.3 - 3.4 )	No
Overweight <sup>2</sup>	50.6 ( 47.4 - 53.8 )	54.8 ( 50.2 - 59.3 )	46.1 ( 41.7 - 50.7 )	No
Obese <sup>3</sup>	22.6 ( 19.1 - 26.7 )	25.9 ( 20.1 - 32.7 )	19.2 ( 16.0 - 22.8 )	No
Went hungry most of the time or always because there was not enough food in their home during the past 30	9.3 ( 7.6 - 11.4 )	10.6 ( 8.7 - 12.7 )	7.8 ( 5.3 - 11.4 )	No

days				
Usually ate fruit two or more times per day during the past 30 days	35.6 ( 32.8 - 38.6 )	37.8 ( 33.5 - 42.4 )	33.0 ( 30.0 - 36.3 )	No
Usually ate vegetables three or more times per day during the past 30 days	19.3 (16.4 - 22.6 )	22.1 ( 17.9 - 26.9 )	16.1 ( 13.0 - 19.8 )	No
Usually ate fruits and vegetables five or more times per day during the past 30 days	21.9 ( 18.8 - 25.4 )	25.2 ( 21.0 - 29.9 )	18.2 ( 14.5 - 22.6 )	No
Usually drank carbonated soft drinks one or more times per day during the past 30 days	74.5 ( 71.3 - 77.5 )	75.2 ( 70.5 - 79.4 )	73.6 ( 68.9 - 77.8 )	No
Ate food from a fast food restaurant on three or more days during the past 7 days	48.4 ( 43.1 - 53.7 )	49.1 ( 42.3 - 56.0 )	47.7 ( 39.9 - 55.7 )	No
Students who ate breakfast most of the time or always during the past 30 days	44.7 ( 41.7 - 47.8 )	52.1 ( 48.5 - 55.7 )	37.0 ( 33.0 - 41.1 )	Yes
Students whose main reason for not eating breakfast was there was not always food in their home	0.6 ( 0.4 - 1.2 )	1.1 ( 0.5 - 2.0 )	0.2 ( 0.1 - 0.7 )	No
Students who usually drank milk or ate milk products two or more times per day during the past 30 days	36.2 ( 32.9 - 39.6 )	44.7 ( 40.4 - 49.1 )	27.0 ( 24.1 - 30.2 )	No
Students who did not have a source of clean water for drinking at school	26.9 ( 23.1 - 31.2 )	36.9 ( 31.5 - 42.7 )	16.1 ( 13.1 - 19.7 )	Yes
Students who brought water from home to drink while they were at school	52.7 ( 46.4 - 58.9 )	43.3 ( 35.0 - 52.0 )	63.1 ( 53.3 - 71.9 )	Yes

\*95% confidence interval.

<sup>1</sup><-2SD from median for BMI by age and sex.

<sup>2</sup>>+1SD from median for BMI by age and sex.

<sup>3</sup>>+2SD from median for BMI by age and sex.

In **KUWAIT**, 2.4% of students were underweight, 50.6% of students were overweight, and 22.6% were obese.

Overall, 9.3% of students went hungry most of the time or always because there was not enough food in their home during the past 30 days.

Overall, 35.6% of students usually ate fruit, such as apple, banana or orange, two or more times per day during the past 30 days.

Overall, 19.3% of students usually ate vegetables, such as lettuce, cucumber or carrots, three or more times per day during the past 30 days.

Overall, 21.9% of students usually ate fruits and vegetables five or more times per day during the past 30 days.

Overall, 74.5% of students drank carbonated soft drinks, such as Pepsi, Coca Cola or 7 Up, one or more times per day during the past 30 days.

Overall, 48.4% of students ate food from a fast food restaurant, such as McDonalds, Burger King or Pizza Hut , on three or more days during the past 7 days.

Overall, 44.7% of students who ate breakfast most of the time or always during the past 30 days.

Overall, 0.6% of students whose main reason for not eating breakfast was there was not always food in their home.

Overall, 36.2% of students usually drank milk or ate milk products two or more times per day during the past 30 days.

Overall, 26.9% of students did not have a source of clean water for drinking at school.

Overall, 52.7% of students brought water from home to drink while they were at school.

### III. Hygiene

Table 3. Hygiene-related behaviours, by sex, KUWAIT, 2011.

Question	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Usually cleaned or brushed their teeth less than one time per day during the past 30 days	14.6 (12.5 - 17.0 )	20.6 ( 17.9 - 23.6 )	7.7 ( 5.0 - 11.8 )	Yes
Never or rarely washed their hands	6.8	6.2	7.6	No

before eating during the past 30 days	( 5.1 - 9.0 )	( 4.7 - 8.1 )	( 4.7 - 12.1 )	
Never or rarely washed their hands after using the toilet or latrine during the past 30 days	5.9 ( 3.9 - 8.8 )	5.6 ( 5.0 - 6.4 )	6.3 ( 2.7 - 13.7 )	No
Never or rarely used soap when washing their hands during the past 30 days	3.3 ( 2.6 - 4.2 )	4.3 ( 3.2 - 5.9 )	2.2 ( 1.5 - 3.3 )	No
Among students who washed their hands at school during the past 30 days, the percentage who never or rarely used soap to wash their hands	55.5 (51.3 - 59.7)	53.8 (46.6 - 60.9)	57.1 (52.5 - 61.7)	No

\*95% confidence interval.

In **KUWAIT**, the percentage of students who usually cleaned or brushed their teeth less than one time per day during the past 30 days was 14.6%.

Overall, 6.8% of students never or rarely washed their hands before eating during the past 30 days.

Overall, 5.9% of students never or rarely washed their hands after using the toilet or latrine during the past 30 days.

Overall, 3.3% of students never or rarely used soap when washing their hands during the past 30 days.

Overall, among students who washed their hands at school during the past 30 days, 55.5% never or rarely used soap to wash their hands.

The students showed high level of hygiene almost the same between male and female students.

#### IV. Mental Health

Table 4. Mental health issues among students, by sex, KUWAIT, 2011.

Behaviour	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Most of the time or always felt lonely	18.7	13.6	24.3	Yes

during the past 12 months	(16.5 - 21.0)	( 10.9 - 16.9 )	( 21.3 - 27.4 )	
Most of the time or always were so worried about something that they could not sleep at night during the past 12 months	20.2 (17.9 - 22.8)	16.2 ( 12.4 - 20.9 )	24.6 ( 22.6 - 26.7 )	Yes
Ever seriously considered attempting suicide during the past 12 months	19.9 (16.8 - 23.5)	18.7 ( 13.5 - 25.4 )	21.3 ( 18.5 - 24.4 )	No
Made a plan about how they would attempt suicide during the past 12 months	14.0 (11.4 - 17.0)	14.2 ( 9.7 - 20.2 )	13.8 ( 12.1 - 15.6 )	No
Actually attempted suicide one or more times during the past 12 months	17.3 (14.7 - 20.2)	16.3 ( 11.8 - 22.2 )	18.3 ( 16.7 - 19.9 )	No
Had no close friends	3.3 ( 2.4 - 4.6 )	3.8 ( 2.4 - 6.0 )	2.8 ( 2.0 - 4.1 )	No

\*95% confidence interval.

In **KUWAIT**, 18.7% of students most of the time or always felt lonely during the past 12 months.

Overall, 20.2% of students most of the time or always were so worried about something that they could not sleep at night during the past 12 months.

Overall, 19.9% of students ever seriously considered attempting suicide during the past 12 months.

Overall, 14.0% of students made a plan about they would attempt suicide during the past 12 months.

Overall, 17.3% of students actually attempted suicide one or more times during the past 12 months.

Overall, 3.3% of students had no close friends.

The study illustrated that female students were significantly suffering from anxiety and feeling lonely more than male students. The great majority of students is social and has friends.

## V. Physical Activity

Table 5. Physical activity among students, by sex, KUWAIT, 2011.

Behaviour	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Were physically active for a total of at least 60 minutes per day on <b>five or more</b> days during the past seven days	20.7 (17.6 - 24.2)	30.3 ( 25.5 - 35.5 )	10.3 ( 8.2 - 12.9 )	Yes
Were physically active for a total of at least 60 minutes per day on <b>all seven</b> days during the past seven days	15.4 (12.7 - 18.5)	22.9 ( 18.7 - 27.7 )	7.1 ( 5.4 - 9.3 )	Yes
Did not walk or ride a bicycle to or from school during the past seven days	69.8 (66.4 - 72.9)	55.3 ( 50.6 - 59.9 )	85.7 ( 83.0 - 88.0 )	Yes
Went to physical education class on <b>three or more</b> days each week during this school year	45.9 (42.4 - 49.5)	55.0 ( 51.0 - 58.9 )	35.7 ( 31.3 - 40.4 )	Yes
Went to physical education class on <b>five or more</b> days each week during this school year	39.0 (36.0 - 42.2)	47.2 ( 43.4 - 51.1 )	29.6 ( 25.9 - 33.6 )	Yes
Spent three or more hours per day during a typical or usual day doing sitting activities	53.2 (48.5 - 57.8)	49.0 ( 41.6 - 56.5 )	57.7 ( 52.8 - 62.4 )	No
Students who did stretching exercises on three or more days during the past 7 days	29.6 (26.9 - 32.5)	36.2 ( 32.6 - 39.9 )	22.5 ( 18.2 - 27.5 )	Yes
Students who were taught in any of	77.1	73.5	81.2	Yes

their classes during this school year the benefits of physical activity	(74.4 - 79.6)	( 70.0 - 76.7 )	( 78.7 - 83.5 )	
Students who were taught in any of their classes during this school year about preventing injury during physical activity	49.1 (45.7 - 52.4)	52.6 ( 46.7 - 58.3 )	45.8 ( 42.6 - 49.1 )	No

\*95% confidence interval.

In **KUWAIT**, 20.7% of students were physically active for a total of at least 60 minutes per day on **five or more** days during the past seven days.

Overall, 15.4% of students were physically active for a total of at least 60 minutes on **all seven** days during the past seven days.

Overall, 69.8% of students did not walk or ride a bicycle to or from school during the past seven days.

Overall, 45.9% of students went to physical education class on **three or more** days each week during this school year.

Overall, 39.0% of students went to physical education class on **five or more** days each week during this school year.

Overall, 53.2% of students spent three or more hours per day during a typical or usual day doing sitting activities, such as **watching television, video games or surfing the internet**.

Overall, 29.6% of students did stretching exercises on three or more days during the past 7 days.

Overall, 77.1% of students were taught in any of their classes during this school year the benefits of physical activity.

Overall, 49.1% of students were taught in any of their classes during this school year about preventing injury during physical activity.

Male students were significantly more physically active than female students.

## VI. Protective Factors

Table 6. Protective factors among students, by sex, KUWAIT, 2011.

Protective Factor	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	

Missed classes or school without permission on one or more of the past 30 days	57.9 (53.2 - 62.5)	53.8 ( 47.4 - 60.1 )	62.2 ( 55.8 - 68.1 )	No
Reported most of the students in their school were kind and helpful most of the time or always during the past 30 days	59.1 (54.2 - 63.8)	51.7 ( 45.7 - 57.7 )	66.9 ( 60.3 - 72.8 )	Yes
Parents or guardians checked to see if their homework was done most of the time or always during the past 30 days	54.1 (50.7 - 57.4)	58.3 ( 52.2 - 64.2 )	49.4 ( 46.5 - 52.3 )	No
Parents or guardians understood their problems and worries most of the time or always during the past 30 days	39.3 (36.6 - 42.1)	43.6 ( 39.2 - 48.2 )	34.5 ( 30.4 - 38.9 )	Yes
Parents or guardians really knew what they were doing with their free time most of the time or always during the past 30 days	37.8 (35.1 - 40.5)	41.9 ( 36.7 - 47.2 )	33.0 ( 30.1 - 35.9 )	Yes
Parents or guardians went through their things without their approval never or rarely during the past 30 days	70.3 (68.1 - 72.4)	67.0 ( 64.0 - 69.9 )	73.8 ( 71.2 - 76.1 )	Yes
Students whose parents or guardians most of the time or always comforted them during the past 30 days	70.1 (67.2 - 72.8)	69.3 ( 64.4 - 73.8 )	70.8 ( 67.8 - 73.6 )	No
Students whose parents or guardians most of the time or always supported and encouraged them during the past 30 days	76.0 (73.4 - 78.3)	74.2 ( 70.5 - 77.7 )	77.6 ( 74.4 - 80.6 )	No

\*95% confidence interval.

In **KUWAIT**, 57.9% of students missed classes or school without permission on one or more of the past 30 days.

Overall, 59.1% of students reported that most of the students in their school were kind and helpful most of the time or always during the past 30 days.

Overall, 54.1% of students reported their parents or guardians checked to see if their homework was done most of the time or always during the past 30 days.

Overall, 39.3% of students reported their parents or guardians understood their problems and worries most of the time or always during the past 30 days.

Overall, 37.8% of students reported their parents or guardians really knew what they were doing with their free time most of the time or always during the past 30 days.

Overall, 70.3% of students reported their parents or guardians went through their things without their approval never or rarely during the past 30 days.

Overall, 70.1% of students, their parents or guardians most of the time or always comforted them during the past 30 days.

Overall, 76% of students, their parents or guardians most of the time or always supported and encouraged them during the past 30 days.

## VII. HIV-Related Knowledge

Table 7. HIV-related knowledge, by sex, KUWAIT, 2011.

HIV-Related Knowledge	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Ever heard of HIV infection or the disease called AIDS	76.3 (72.2 - 80.0)	73.2 ( 66.0 - 79.3 )	79.6 ( 76.4 - 82.5 )	No
Taught in any of their classes during this school year about HIV infection or AIDS	42.5 (39.7 - 45.5)	42.9 ( 39.1 - 46.8 )	42.4 ( 38.4 - 46.4 )	No
Taught in any of their classes	39.6	41.6	37.5	No

during this school year how to avoid HIV infection or AIDS	(36.8 - 42.6)	( 38.3 - 45.1 )	( 32.8 - 42.4 )	
Ever talked about HIV infection or AIDS with their parents or guardians	31.6 (28.4 - 34.9)	32.0 ( 27.9 - 36.5 )	31.3 ( 26.7 - 36.3 )	No

\*95% confidence interval

In **KUWAIT**, 76.3% of students had ever heard of HIV infection or the disease called AIDS.

Overall, 42.5% of students were taught in any of their classes during this school year about HIV infection or AIDS.

Overall, 39.6% of students had been taught in any of their classes during this school year how to avoid HIV infection or AIDS.

Overall, 31.6% of students ever talked about HIV infection or AIDS with their parents or guardians.

## VIII. Tobacco Use

Table 8. Tobacco use among students, by sex, KUWAIT, 2011.

Behaviour	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Among students who ever smoked cigarettes, those who first tried a cigarette before age 14 years	78.0 (70.3 - 84.1)	84.1 ( 79.8 - 87.6 )	61.0 ( 43.4 - 76.2 )	Yes
Smoked cigarettes on one or more days during the past 30 days	17.6 (14.3 - 21.5)	26.0 ( 20.4 - 32.5 )	8.2 ( 5.6 - 11.9 )	Yes
Used any tobacco products other than cigarettes on one or more days during the past 30 days	6.7 ( 5.1 - 8.8 )	10.8 ( 8.1 - 14.1 )	2.5 ( 1.5 - 4.2 )	Yes
Used any tobacco on one or more days during the past 30 days	18.7 (15.3 - 22.6)	27.4 ( 21.8 - 33.9 )	9.0 ( 6.3 - 12.8 )	Yes

Among students who smoked cigarettes during the past 12 months, those who tried to stop smoking cigarettes during the past 12 months	68.8 (58.2 - 77.7)	73.5 ( 67.9 - 78.4 )	-	
Reported people smoked in their presence on one or more days during the past seven days	59.6 (55.5 - 63.5)	60.6 ( 53.4 - 67.4 )	58.2 ( 55.2 - 61.1 )	No
Had parents or guardians who used any form of tobacco	22.5 (19.3 - 26.0)	18.7 ( 13.9 - 24.7 )	26.6 ( 23.6 - 29.8 )	No
Students who thought they definitely or probably would not smoke a cigarette during the next 12 months	83.8 (80.6 - 86.6)	79.4 ( 74.5 - 83.5 )	88.7 ( 84.2 - 92.1 )	Yes
Students who definitely or probably would not smoke a cigarette if one of their best friends offered them one	82.8 (79.4 - 85.7)	81.1 ( 76.2 - 85.2 )	84.8 ( 79.6 - 88.8 )	No

\*95% confidence interval.

In **KUWAIT**, among students who ever smoked cigarettes, 78.0% of students first tried a cigarette before age 14 years.

Overall, 17.6% of students smoked cigarettes on one or more days during the past 30 days.

Overall, 6.7% of students used any tobacco products other than cigarettes on one or more days during the past 30 days.

Overall, 18.7% of students used any tobacco on one or more days during the past 30 days.

Among students who smoked cigarettes during the past 12 months, 68.8% of students tried to stop smoking cigarettes during the past 12 months.

Overall, 59.6% of students reported people smoked in their presence on one or more days during the past seven days.

Overall, 22.5% of students had parents or guardians who used any form of tobacco.

Overall, 83.8% of students thought that they definitely or probably would not smoke a cigarette during the next 12 months.

Overall, 82.8% of students definitely or probably would not smoke a cigarette if one of their best friends offered them one.

Smoking tobacco was significantly more practiced among male students than females.

## IX. Violence and Unintentional Injury

Table 9. Violence and unintentional injury among students, by sex, KUWAIT, 2011.

Behaviour	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Were physically attacked one or more times during the past 12 months	33.4 (30.6 - 36.3)	41.3 ( 37.9 - 44.8 )	24.8 ( 20.6 - 29.5 )	Yes
Were in a physical fight one or more times during the past 12 months	44.9 (41.3 - 48.6)	59.9 ( 55.9 - 63.9 )	28.6 ( 25.9 - 31.6 )	Yes
Were seriously injured one or more times during the past 12 months	44.1 (40.4 - 47.8)	55.6 ( 51.7 - 59.3 )	31.3 ( 27.5 - 35.4 )	Yes
Among students who were seriously injured during the past 12 months, those whose most serious injury was a broken bone or dislocated joint	23.8 (19.9 - 28.2)	26.4 ( 21.1 - 32.5 )	18.8 ( 14.4 - 24.2 )	No
Among students who were seriously injured during the past 12 months, those who most serious injury was caused by a motor vehicle accident or being hit by a motor vehicle	8.3 (6.5 - 10.5 )	9.3 ( 6.9 - 12.4 )	6.5 ( 4.5 - 9.4 )	No
Were bullied on one or more days during the past 30 days	28.3 (24.6 - 32.3)	36.2 ( 30.6 - 42.3 )	19.6 ( 17.5 - 22.0 )	Yes
Among students who were bullied	19.0	15.5	24.7	No

during the past 30 days, those who were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors	(13.4 - 26.3)	( 9.0 - 25.4 )	( 17.5 - 33.6 )	
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\*95% confidence interval.

In KUWAIT, 33.4% of students were physically attacked one or more times during the past 12 months.

Overall, 44.9% of students were in a physical fight one or more times during the past 12 months.

Overall, 44.1% of students were seriously injured one or more times during the past 12 months.

Among students who were seriously injured during the past 12 months, a broken bone or dislocated joint was the most serious injury among 23.8% of students.

Among students who were seriously injured during the past 12 months, a motor vehicle accident or being hit by a motor vehicle was the cause of the most serious injury among 8.3% of students.

Overall, 28.3% of students were bullied on one or more days during the past 30 days.

Among students who were bullied during the past 30 days, being hit, kicked, pushed, shoved around, or locked indoors was the most common form of bullying among 19.0% of students.

Male students experienced more violence and unintentional injuries significantly more than female students.

## X. Alcohol Use

Table 10. Alcohol use among students, by sex, KUWAIT, 2011

Behaviour	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Among students who watched television, videos, or movies, the percentage who most of the time or always saw actors drinking alcohol	53.4 ( 49.5 - 57.2 )	53.2 ( 48.7 - 57.6 )	53.7 ( 47.1 - 60.2 )	No
Among students who went to sports events, fairs, concerts, community events, or social gatherings, the	11.3 ( 9.4 - 13.5 )	16.1 ( 12.6 - 20.2 )	6.5 ( 5.2 - 8.1 )	Yes

percentage who most of the time or always saw advertisements for alcohol				
Among students who watched television during the past 30 days, the percentage who saw a lot of advertisements for alcohol when they watched television	16.3 ( 14.2 - 18.5 )	18.1 ( 15.2 - 21.4 )	14.3 ( 11.4 - 17.9 )	<b>No</b>
Among students who had used the internet during the past 30 days, the percentage who saw a lot of advertisements for alcohol on the internet	15.4 ( 13.2 - 18.0 )	19.5 ( 17.3 - 22.0 )	11.2 ( 7.8 - 15.7 )	<b>Yes</b>
Students who were taught in any of their classes during this school year the problems associated with drinking alcohol	47.3 ( 42.6 - 52.0 )	42.4 ( 36.1 - 49.1 )	52.7 ( 47.2 - 58.1 )	<b>No</b>

\*95% confidence interval.

In **KUWAIT**, among students who watched television, videos, or movies, 53.4% reported that most of the time or always saw actors drinking alcohol.

Among students who went to sports events, fairs, concerts, community events, or social gatherings, 11.3% reported that most of the time or always saw advertisements for alcohol.

Among students who watched television during the past 30 days, 16.3% reported that they saw a lot of advertisements for alcohol when they watched television.

Among students who had used the internet during the past 30 days, 15.4% reported that they saw a lot of advertisements for alcohol on the internet.

Overall, the prevalence of Students who were taught in any of their classes during this school year the problems associated with drinking alcohol is 47.3%.

A significant gender difference is observed in almost all behaviours with higher tendency towards negative behaviours among male students.

## XI. Drug Use

Table 11. Drug-use behaviours, by sex, KUWAIT, 2011

Behaviour	Total % (CI)*	Sex		Males Different Than Females (Yes or No)
		Male % (CI)	Female % (CI)	
Among students who ever used drugs, those who first used drugs before age 14 years	68.7 (56.1 - 79.1)			
Used drugs one or more times during their life	3.2 (2.5 - 4.0)	5.7 (4.6 - 7.1)	0.4 (0.1 - 1.4)	Yes
Used drugs one or more times during the past 30 days	3.1 (2.4 - 4.0)	5.6 (4.4 - 7.0)	0.3 (0.1 - 1.3)	Yes
Used amphetamines one or more times during their life	3.1 (2.2 - 4.3)	5.0 (3.6 - 6.9)	0.7 (0.2 - 2.3)	Yes

\*95% confidence interval.

In **KUWAIT**, among students who ever used drugs, 68.7% of students first used drugs before age 14 years.

Overall, 3.2% of students used drugs one or more times during their life.

Overall, 3.1% of students used drugs one or more times during the past 30 days.

Overall, 3.1% of students used amphetamines one or more times during their life.

Male students showed significantly higher experience with drug use than did female students.

## Conclusions and Recommendations

### I. Conclusions:

- In this survey, unhealthy dietary habits with high rates of fast food consumption are a major lifestyle problem among teenagers.
- Low prevalence of physical activity significantly among females is a noticeable second adverse lifestyle habit among the students.
- Both the previous factors predisposed to the high rates of overweight and obesity significantly more among males than females. Obesity problem starts very early among teenagers and continues till adulthood.
- 
- Mental health problems are more prevalent among females than males. Overall, it is prevalent among good sector of students in these young age groups.
- Violence as a risk behavior is reported by a more than third of students. The problem is significantly more prevalent among male students.
- The study revealed that parents showed good support of their students and they are keen to comfort them.

### II. Recommendations:

In the light of the above study findings, we recommend the following:

- ✚ Increasing the number of hours specified for physical activity in schools. The action should take place by a regulation from the Ministry of education to all schools.
- ✚ Increasing the awareness in schools about healthy food choices. Arrangement of workshops for this matter is highly recommended.
- ✚ There is deliberate need to develop health campaigns that target school students to raise their awareness about the drawbacks and dangers of overweight and obesity on their future health.
- ✚ There is a vital need to focus on smoking prevention programs in schools as well as youth cessation programs.

- ✚ There is need to promote mental health and life skills development in schools curriculum. The community, teachers and health workers will need training on how to provide adolescent friendly mental health services. In-school peer counselor can be used to promote positive relationships among students.
- ✚ The survey showed high levels of physical fights, bullying and injuries. Multi-sector taskforces need to address these concerns. In addition there is need to review the curriculum content on first aid skills and accident prevention programs.
- ✚ Parents and guardians need to be supported and encouraged to continue talking about HIV and AIDS with their children.
- ✚ This survey reinforces the need to establish and reinforce intervention programs which are not only school based but involve the family structures, community prevention programs and government agencies to help prevent adolescent harmful practices.
- ✚ A follow up GSHS survey is essential to establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion. The Kuwait GSHS should include the dietary factors module in the next survey.

## **References**

1. Kelley, A. E., Schochet, T. and Landry, C. F. (2004). Risk taking and novelty seeking in adolescence. *Annals of the New York Society for Sciences*, 1021, 27-32. doi: 10.1196/annals.1308.003
2. Dahl, R. D. (2004). Adolescent brain development: A period of vulnerabilities and opportunities. In R. E. Dahl & L. P. Spear (Eds.), *Annals of the New York Academy of Sciences*. Vol. 1021. Adolescent brain development: Vulnerabilities and opportunities. New York: New York Academy of Sciences.
3. Steinberg, L. (2004). Risk taking in adolescence. What changes and why? *Annals of the New York Society for Sciences*, 1021, 51-58. doi: 10.1196/annals.1308.005
4. Poikolainen K, Tuulio-Henriksson A, Aalto-Setälä T, Marttunen M, Lonnqvist J. Predictors of alcohol intake and heavy drinking in early adulthood: a 5-year follow-up of 15-19 year-old Finnish adolescents, *Alcohol and Alcoholism*. 36(1): 85-88, 2001.
5. Hibell B, Andersson B, Ahlstrom S, Balakireva O, Bjarnason T, Kokkevi A, Morgan M. *The 1999 ESPAD Report: Alcohol and Other Drug Use Among Students in 30 European Countries*. Stockholm, Sweden: Council of Europe, 2000.
6. *Health and Health Behaviour Among Young People*. Currie C, Hurrelmann K, Settertobulte W, Smith R, Todd J, eds. Copenhagen, Denmark: WHO Regional Office for Europe, 2000.
7. Vince-Whitman C, Aldinger C, Levinger B, Birdthistle I. *School Health and Nutrition*. UNESCO: International Consultative Form on Education for All, 2001.
8. US Public Health Service. *The Surgeon General's Report on Nutrition and Health*. Washington, DC: US Department of Health and Human Services, US Public Health Service, 1988. (DHHS publication no. (PHS) 88-50210)
9. Department of Health and Human Services. *Oral Health in America: A Report of Surgeon General*. Rockville, MD: US Department of Health and Human Services. National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
10. WHO. *The World Health Report 2001 – Mental Health: New Understanding, New Hope*. Geneva, Switzerland: WHO, 2001.

11. WHO. Diet, Physical Activity and Health: Report by the Secretariat. Fifty-fifth World Health Assembly, Provisional agenda item 13.11, 2002.
12. Health and Health Behaviour Among Young People– Health Behaviour in School-Aged Children: A WHO Cross-National Study International Report. Currie C, Hurrelmann K, Settertobulte W, Smith R, Todd J, eds. Copenhagen, Denmark: WHO Regional Office for Europe, 2000.
13. Dishion TJ, Loeber R. Adolescent marijuana and alcohol use: The role of parents and peers revisited. *American Journal of Drug and Alcohol Abuse*. 11:11-25, 1985.
14. UNICEF, UNAIDS, WHO. Young People and HIV/AIDS – Opportunity in Crisis. New York, NY: UNICEF, 2002.
15. WHO. What in the World Works? International Consultation on Tobacco and Youth. Singapore, September 28-30, 1999
16. WHO. World Report on Violence and Health. Geneva, Switzerland: WHO, 2002.

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