



ORIGINAL ARTICLE

Global School-Based Student Health Survey 2016-Bahrain: Mental health

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Abstract

Background: The Global school-based student health survey (GSHS) was developed to help countries measure and assess students' health behaviors and protective factors. This report discusses results from the first GSHS carried out in Bahrain during 2015-2016 by the Ministry of Education in collaboration with World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC).

Methods: The GSHS includes students aged 13-17 years and employed a two-stage sample design involving a school and class level. 64 public and private schools were sampled out of 162 schools, and 320 classes of students in grades 7-11 were selected. Students completed a questionnaire addressing mental health, protective factors, sexual behaviors, violence, and unintentional injury.

Results: 7,143 (89%) of the 8,068 sampled students completed the questionnaire. Of the students who responded, 3,685 (51.1%) were males, and 5,843 (84.5%) were between the ages of 13 to 17 years old. 27.2% of students were physically attacked, 41.4% were in a physical fight, and 28.6% were bullied one or more times during the past 12 months. 38.1% of the students never or rarely wore a seatbelt when in a car, and 30.7% never or rarely wore a helmet when riding a bicycle. 16.2% of students felt lonely most of the time or always, and 15.2% seriously considered attempting suicide during the past 12 months.

Conclusion: The study reported rates of violence, physical fights, bullying, and unsafe practices among school -Age children. Raising awareness regarding mental health and emotional well-being, assessment and support among school children is vital.

Keywords: Bahrain, Mental health, School, School health, WHO

Introduction

The World Health Organization (WHO) and the Centres for Disease Control and Prevention (CDC), in affiliation with UNESCO, UNICEF, and UNAIDS,

developed the Global school-based student health survey (GSHS).¹ The GSHS is a relatively low-cost school-based survey that uses a self-administered questionnaire to obtain data on young people's

health behavior and protective factors related to the leading causes of morbidity and mortality among children and adults worldwide. The GSHS is a collaborative surveillance project designed to assess behavioral risk factors and protective factors among students ages 13 to 17 in 10 key areas.¹

The GSHS survey aids countries in identifying any deficits in the schooling system and mending them with new youth health programs and policies. The GSHS survey also advocates youth health promotion by developing priorities, establishing programs, and advocating for resources and measures that encourage healthy behavior and lifestyle choices. Further, it allows international agencies, countries, and others to compare countries regarding the prevalence of health behaviors and protective factors.²

More than 70 countries completed the GSHS.² This paper will discuss the results of mental health, sexual behavior, violence, and unintentional injury modules of the Global school-based student health survey conducted in Bahrain from 2015 to 2016 among school students aged 13-17.

The prevalence of violence, bullying, loneliness, depression and other mental issues are associated with increased incidence rates of suicide.² In a study that analyzed GSHS results regarding psychosocial circumstances in adolescents in 26 countries, the importance of reducing bullying and drug use and improving mental health was discussed as necessary in reducing the number of severe injuries in adolescents. The strongest association was between bullying and several mental health problems, including anxiety, depression, self-harm, and suicidal ideation.¹⁰

The prevalence of intermediate rates of violence, physical fights, bullying, and unsafe practices among youth in Bahrain showed similar and different findings when compared to the UAE and Maldives using a similar survey.^{2,6} Comparable rates of violence, physical fights, and suicide attempts have been reported in UAE. However, violence, physical fights, and bullying rates are reported to be higher in the Maldives. Concerning attempting suicide, 15.2% of students in Bahrain considered attempting suicide with female predominance.

This is comparable to UAE (13.0%) but lower than Maldives (19.9%).^{2,6}

Having a national survey that discusses these critical factors helps countries identify gaps to develop youth health programs and policies. This also allows educators and parents to advocate for resources and implement measures encouraging mental and emotional health among school children.

Since school years are a time of enormous growth, students are at an essential stage in developing lifelong skills that will enable them to make good decisions about lifestyle, learning, relationships, and self-sufficiency.

Purpose

This report discusses the results of mental health, sexual behavior, violence, and unintentional injury modules from the first Global school-based student health survey in Bahrain, which measures students' mental health disease risk and protective factors intending to promote mental health among school children and adolescents.

Methods

The GSHS is a school-based survey conducted primarily among students aged 13-17.³

Design and Sampling

This is a descriptive cross-sectional study in which we employed a two-stage cluster sample design and was done on two levels: School and class levels.

School Level – All schools that included grades 7 - 11 were added to the sample. Schools were selected systematically with probability proportional to enrolment in grades 7 - 11 using a random start. This resulted in the sampling of 64 schools out of 162 schools (32 public and 32 private schools).

Class Level - The sampling frame included all classes in each selected school. All students in the sampled classrooms were eligible to participate in the GSHS. Therefore, 320 classes were included. A total of 8,672 students in grades 7-11 were approached, and 7,143 completed the questionnaires. After data editing, seven thousand one hundred forty-one students were included, with 3,685 male and 3,884 female students.

Core questionnaire modules & core-expanded questions

GSHS created a self-administered questionnaire involving three components: Core Modules, Core Expanded questions, and Country Specific questions. The questions are translated into the appropriate language of instruction for the students and pilot tested for comprehension. All questions share common characteristics to enhance the flow of the survey and understanding by the student.

The ten core modules address the leading causes of morbidity and mortality among children and adults worldwide: dietary behaviors, drug use, hygiene, mental health, physical activity, protective factors, sexual behaviors, tobacco use, violence, and unintentional injury.

The Total Number of Questions is 67, with 47 questions from the core questionnaire modules and 20 from the core-expanded and country-specific questions. Students self-reported their responses to each question on a computer-scannable answer sheet.

In this study, we will report the results of mental health, sexual behavior, violence, and unintentional injury.

Data analysis

All data processing (scanning, cleaning, editing, and weighting) was conducted at the US Centers for Disease Control. The weighing factors associated with each questionnaire are provided at this link:<https://extranet.who.int/ncdsmicrodata/index.php/catalog/654>.

We used descriptive statistics (frequencies and percentages) to describe the sociodemographic characteristics of survey respondents. The Stata

software program that took into consideration the complex sample design (strata, cluster, and weights) was used to compute prevalence estimates and 95% confidence intervals of the risk factors in the 10 core modules (dietary behaviors, drug use, hygiene, physical activity, tobacco use) with their sex distribution.

Results

Sixty-four sampled schools participated, and 7,143 (89%) of the 8,068 sampled students completed questionnaires; 7,141 were usable after data editing.

Demographics

The overall response rate was 89%. Of the students who responded, 3,685 (51.1%) were males, and 3,449 (48.9%) were females. 5,843 (84.5%) were between the ages of 13 to 17 years old, and 90 (1.8%) were 18 or older. 1,504 (24.1%) were 16 or 17 years old, and 1,204 (13.8%) were 12 or younger. 1,572 (21.9%) students were in Grade 7, 1,618 (21.2%) grade 8, 1,530 (20.3%), grade 9, 1,276 (20.3%) grade 10, and 1,139 (16.3%) grade 11. Overall, 79.7% of the students were Bahraini, while 20.3% were non-Bahraini.

Violence, unintentional injury, and physical Fight

In Bahrain, 27.2% of students were physically attacked one or more times during the past 12 months. Male students (64.9%) are more likely than female students (35.1%) to have been physically attacked.

Table 1 showed that 41.4% of students were in a physical fight one or more times during the past 12 months. Male students (66.0%) are likelier than female students (34.0%) to have been in a physical fight.

Table 1: Violence and unintentional injury

Item	Total (%)	Males (%)	Females (%)
Were physically attacked one or more times during the past 12 months	2,032 (27.2%)	1,318 (64.9%)	714 (35.1%)
Were you in a physical fight one or more times during the past 12 months	2,863 (41.4%)	1,889 (66.0%)	974 (34.0%)
Were bullied one or more times during the past 30 days	1,919 (28.6%)	1,139 (59.4%)	780 (40.6%)

Among students who were bullied during the past 30 days, those who were bullied most often by being kicked, pushed, shoved around, or made fun of because of race, religion, sex, body look, or by being left out of activities	1,062 (15.6%)	655 (61.8%)	407 (38.2%)
Were you seriously injured one or more times during the past 12 months	2,799 (44.9%)	1,711 (61.1%)	1,088 (38.9%)
Among students who were seriously injured during the past 12 months, those that had injuries including concussion/head injury, bad burn, being poisoned, or something else.	1,376 (22.1%)	729 (53.0%)	647 (47.0%)
Among students who were seriously injured during the past 12 months, a significant cause of most serious the past 12 months, a significant cause of most serious injury included motor vehicle accident, falling, being attacked, or was in a fire	796 (10.4%)	532 (66.8%)	264 (33.2%)
Among students who were seriously injured during the past 12 months, a major cause of most serious	1,577 (26.9%)	922 (58.5%)	655 (41.5%)

Bullying

Overall a total of 28.6% of the students were bullied one or more times during the past 30 days. Male students, 59.4%, are more likely to be bullied compared to female students, 40.6%.

Among students, 15.6% were bullied most often by being kicked, pushed, shoved around, or made fun of because of race, religion, sex, body look, or being left out of activities—male students accounting for 61.8% compared to female students 38.2%.

Serious Injury

44.9% of students were seriously injured one or more times during the past 12 months. Male students (61.6%) are more likely than female students (38.9%) to have been seriously injured. 10.4% due to motor vehicle accidents, falling, being attacked, or being in a fire; 26.9% had injuries that included something falling on them or hitting them, breathing something terrible. In all of the above, male students were more affected by injuries than female students (58.5% vs. 41.5%).

Table 2: Students Safety

Item	Total (%)	Males (%)	Females (%)
Had someone threatened or injured them with a weapon such as a knife, a razor, or club on school property one or more days during the past 30 days	552 (9.5%)	402 (72.8%)	150 (27.2%)
Among students who rode a bicycle during the past 30 days, the percentage of students who never or rarely wore a helmet when riding a bicycle	2,065 (30.7%)	1,552 (75.2%)	512 (24.8%)
Among students who rode a bicycle during the past 30 days, the percentage of students who sometimes, most of the time or always wore a helmet when riding a bicycle	670 (8.6%)	454 (67.8%)	216 (32.2%)
Among students who rode in a car or other motor vehicle driven by someone else who never or rarely wore a seatbelt	2,333 (38.1%)	1,140 (48.9%)	1,193 (51.1%)
Among students who rode in a car or other motor vehicle driven by someone else who sometimes, most of the time, or always wore a seatbelt	4,067 (53.3)	2,176 (53.5%)	1,891 (46.5%)

Students Safety

The results showed that 30.7% of the students who rode a bicycle during the past 30 days never or rarely wore a helmet when riding a bicycle. Male students, 75.2%, compared to female students, 24.8%. Overall, 38.1% of the students never or rarely wore

a seatbelt when in a car or other motor vehicle driven by someone else. In comparison, 53.3% of the students sometimes, most of the time, or always wore a seatbelt when in a car or other motor vehicle driven by someone else—male students 53.5% and female students 46.5%.

Table 3: Mental Health

Item	Total (%)	Males (%)	Females (%)
Most of the time or always felt lonely during the past 12 month	1,060 (16.2%)	422 (39.8%)	638 (60.2%)
Had no close friends	410 (5.8%)	191 (46.6%)	219 (53.4%)
Most of the time or always was so worried about something that they could not sleep at night during the past 12 month	990 (16.3%)	366 (35.2%)	674 (64.8%)
Seriously considered attempting suicide during the past 12 months	953 (15.2%)	434 (45.1%)	528 (54.9%)
Made a plan about how they would attempt suicide during the past 12 months	949 (14.3%)	426 (44.9%)	523 (55.1%)
Attempted suicide one or more times during the past 12 months	819 (13.2%)	411 (50.2%)	408 (49.8%)

Loneliness/Depression

16.2% of students felt lonely most of the time or continuously during the past 12 months. Male students (39.8%) are less likely to feel lonely than female students (60.2%). 5.8% of students have no close friends. Among those (46.6%) are male, and 53.4% are female students.

Overall, 16.3% of students felt so worried about something that they could not sleep at night most of the time or continuously during the past 12 months.

Male students (35.2%) are less likely to be worried and unable to sleep than female students (64.8%).

Suicidal Behavior

Table 3 showed that 15.2% of students seriously considered attempting suicide during the past 12 months, while 13.2% attempted suicide one or more times during the past 12 months. Male students (50.2%) and female students (49.8%) were almost equally affected.

Table 4: Experience at home and school

Item	Total (%)	Male (%)	Female (%)
Reported that most of the students in their schools were kind and helpful most of the time or always the past 30 days	4,463 (64.9%)	2,104 (47.1%)	2,359 (52.9%)
Parents or guardians checked to see if their homework was done most of the time or continuously during the past 30 days	3,530 (51.8%)	1,981 (56.1%)	1,549 (43.9%)
Parents or guardians understood their problems or worries most of the time or continuously during the past 30 days	3,719 (51.9%)	1,914 (51.5%)	1,805 (48.5%)
Parents or guardians knew what they were doing with their free time most of the time or continuously during the past 30 days	4,112 (55.2%)	2,074 (50.4%)	2,038 (49.6%)

Students whose parents went through their things without their approval most of the time or continuously in the past 30 days	765 (9.7%)	427 (55.8%)	338 (44.2%)
Students whose parents or guardians give them attention and listen to them most of the time or always in the past 30 days	4,426 (61.1%)	2,320 (52.4%)	2,106 (47.6%)
Students whose parents are separated	524 (8.0%)	286 (54.6%)	238 (45.4%)
Students who spend an hour or more sitting and watching television, playing computer games, talking with friends, or doing other sitting activities, such as studying or using any electronic device like iPad	5,995 (83.9%)	2,965 (49.5%)	3,030 (50.5%)

Experience at home

The results show that 51.8% 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. Male students (56.1%) are more likely to report their parents or guardians checking if their homework is done than female students (43.9%).

Overall, 51.9% of students reported that their parents or guardians understood their problems and worries most of the time or always during the past 30 days.

Table 4 showed that 55.2% of students reported that their parents or guardians knew what they were doing with their free time most of the time or continuously during the past 30 days.

The results showed that 61.6% of the students reported that their parents or guardians gave them attention and listened to them most of the time or continuously in the past 30 days. Male students (52.4%) are slightly more likely to report that than female students (47.6%).

Overall, 83.9% of the students spent an hour or more sitting and watching television, playing computer games, talking with friends, or doing other sitting activities such as studying or using electronic devices like iPads.

Discussion

This study presents findings from the 2015-2016 Bahrain Global School-based Student health survey. The survey results have identified the prevalence of mental health, violence, suicidal behavior, bullying,

and safety among adolescent-age school children. GSHS is the first comprehensive national survey concerning health behaviors and protective factors conducted among students in grades 7-11.

The prevalence of violence, physical fights, bullying, and unsafe behaviors (such as not wearing helmets and seat belts) is more significant among male students. In contrast, mental health issues are more prevalent among female students, which aligns with the literature.⁸ Using the same survey, comparable violence and physical fights among school children have been reported in UAE⁵, whereas higher rates were reported in Oman and UK.^{6,7} The prevalence of violence, mental health issues, alcohol, and substance abuse was correlated with increased suicide rates.^{5,6} About 13% of students attempted suicide with almost equal sex distribution, which is lower than international figures and could be attributed to the strictly forbidden ruling on suicide in Islam “And do not kill yourselves [or one another]. Indeed, Allah is to you ever Merciful [Qur’an 4: 29]”.^{2,7} Concerning attempting suicide, 15.2% of students considered attempting suicide with female predominance. This is comparable to UAE (13.0%) and Jordan (15.1%)^{5,6} but lower than England (25%).⁷

A strong relationship has also been found between adolescent bullying and mental, social, and physical health outcomes in victims of bullying.^{10,11} Adolescent bullying is associated with an increase in serious injuries, drug use, and rates of attempted suicide.¹¹ While there are differences in every region, the association between adolescent bullying

and suicidal ideation is recognized globally. Adolescents who are frequently exposed to bullying are twice as likely to develop depression in early childhood when compared with adolescents who were not exposed.¹¹

Several studies discuss the importance of emotional well-being during adolescence, particularly among females.⁸ Several factors are contributing to a decline in emotional well-being which includes the lack of physical and emotional safety at school and home, a family history of psychiatric disorders, drug or alcohol use, and socioeconomic factors.⁹ Hence in order to ensure the physical and mental well-being of adolescents, focusing on social relationships, safety, and cognitive well-being is crucial.

In Bahrain, the Ministry of Education and the Ministry of Health established the National School Health Program in 2003 with similar objectives (MOH & MOE, 2003).⁴ The National School Health Program ensured health education, prevention, and promoting of a healthy lifestyle in early childhood and adolescent development through community and school-based health services.⁴

One of the limitations of this study is the lack of follow-up questions that inquire about the reasons for some of the items in the survey, for example, missed classes, feeling lonely, and having no friends. Exploratory, qualitative studies are needed to better understand the reasons for these mental and emotional experiences. Another limitation is the lack of clear descriptions and definitions of items in various domains, which resulted in different interpretations. For example, 40% of students said they were bullied at some point in the last year, but when a more detailed description of bullying was given in the follow-up question, this rate dropped to 15%.

Conducting this study allows us to bridge the gaps regarding the mental health of adolescents in Bahrain. This also allows both the Ministry of Health and the Ministry of Education to support students and their families and introduce early intervention programs in schools. This is recommended to achieve education and awareness about mental health among adolescents. Collaboration between teachers, parents, practitioners, and policymakers

is fundamental. Future studies discussing issues such as types of bullying, mental health aspects of autism and ADHD, and safety among adolescent-age school children in Bahrain should further be conducted. This is crucial to ensure adolescents' physical and mental well-being, which influences their social relationships, safety, and cognitive well-being.

Conclusion

The study reported rates of violence, physical fights, bullying, and unsafe practices among school -Age children. Raising awareness among children and adolescents regarding the importance of mental health and emotional well-being is vital in preventing all forms of violence. Further collaborative work needs to be integrated into the National School Health Program to ensure adequate health education, prevention, and promotion of safe environments and practices among children and adolescents of all ages.

Access Conditions

- GSHS data release and publication policies and procedures are based on the following guiding principles:
- GSHS data are owned by the official country-level agency (ex., Ministry of Health) conducting or sponsoring the survey.
- Public health and scientific advancement are best served by an open and timely exchange of data and data analyses.
- The privacy of participating schools and students must be protected.
- Data quality must be maintained.

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