

Global School-based Student Health Survey


Ministry of Health and Social Development Republic of Seychelles

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## Seychelles 2007

## Global School-

 based Student Health Survey
## Short Report

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## Table of Contents

Introduction, Methods and Demographics ..... 3
Results ..... 3

1. Overweight and Dietary Behaviours ..... 4
2. Physical Activity ..... 6
3. Cigarette Smoking ..... 7
4. Alcohol and Other Drugs Use ..... 8
5. Sexual Behaviours that Contribute to HIV Infection, Other Sexually Transmitted Infections and
Unintended Pregnancy ..... 10
6. Bullying ..... 11
7. Mental Health ..... 12
8. Protective Factors ..... 13
Acknowledgments ..... 14
References ..... 15
Appendix I- 2007 Seychelles Fact Sheet, Age 13-15 years
Appendix II - Tables of Prevalence of Risk Behaviours, Age 11-17 years
Appendix III - Correlations Between Selected Risk Behaviours, Age 13-15
Appendix IV - 2007 Seychelles GSHS Questionnaire

## Executive Summary

## Introduction

Risk behaviours in children such as unhealthy dietary patterns, sedentary behaviours, cigarette smoking, alcohol and drugs use, sexual behaviours that contribute to sexually transmitted diseases and bullying can have large impact on current and later health status. The prevalence of such behaviours has not been assessed recently in Seychelles. The purpose of this survey was to assess the prevalence of several risk behaviours and protective factors, and related characteristics, amongst students aged 11 to 17 years in Seychelles.

## Methods

The Global School-based Student Health Survey (GSHS) was based on a standard methodology, developed by the World Health Organisation in collaboration with the Centres of Disease Prevention and Control (Atlanta) and other international agencies, which was applied in all participating countries. The GSHS was conducted in Seychelles in October 2007. A two-stage cluster sampling strategy was used to produce a representative sample of the students attending all S1-S5 classes. The self-administered and anonymous questionnaire was completed by 1432 of the 1747 eligible students (participation rate of $82 \%$ ). Results are provided for both students aged 13-15 years (see Appendix I, Appendix III) and 1117 years (most results in this report and Appendix II).

Main results among students aged 11-17 years

- Overweight and dietary behaviours: $22 \%$ of all students were overweight or obese (boys $19 \%$, girls $24 \%$ ). Less than half ( $45 \%$ ) of all students reported to eat the recommended amount of 5 or more portions of fruits or vegetables per day.
- Physical activity: Only $15 \%$ of all students spent 30 minutes or more per day walking or riding a bicycle to and from school. More than half of all students (54\%) reported sitting activities during at least 3 hours per day.
- Tobacco use: $17 \%$ of all students smoked cigarettes on at least one day during the past 30 days. The prevalence was higher in boys than in girls ( $23 \% \mathrm{vs} .11 \%$, respectively).
- Alcohol and other drugs use: $58 \%$ of all students drank alcohol on at least one day during the past 30 days. $25 \%$ of boys and $7 \%$ girls ever tried cannabis. $10 \%$ of all students reported to have ever tried cocaine, heroine, or ecstasy ( $12 \%$ of boys and $7 \%$ of girls).
- Sexual behaviours that contribute to HIV infection, other sexually transmitted infections and unintended pregnancy: $26 \%$ of all students ever had sexual intercourse. Among sexually active students, $57 \%$ reported to have used a condom the last time they has sexual intercourse.
- Bullying: $47 \%$ of all students reported to have been bullied during the past 30 days.
- Mental health: $17 \%$ of all students reported to have seriously considered attempting suicide during the past 12 months.
- Protective factors: $33 \%$ of all students reported to have missed school or class without permission during the past 30 days.


## Conclusion

The substantial prevalence of several risk behaviours among adolescents indicates a need to further design and implement programs and policies, in schools and in other pertinent settings, in order to promote healthy lifestyles among children and adolescents.

## Introduction, Methods and Demographics

## Introduction

## Background

Few surveys using a standard methodology have assessed risk behaviours among children and adolescents in Seychelles.
In the past decade, an adapted version of the Health Behaviour in School-aged Children (HBSC) was administered to all 534 students of all S3 classes of 4 secondary schools in Seychelles in 2001 (1). The Global Youth Tobacco Survey (GYTS) was conducted among 13-15 years students in 2002 and in 2007 (2-5). A few questions on selected behaviours (smoking, drinking, etc) are also part of an ongoing school based surveillance system applied in all ~6000 students in 4 grades examined every year since 1998 (6).
This Global School-based Student Health Survey (GSHS) conducted in 2007 is the most recent attempt to collect information on the prevalence of a wide range of risk behaviours in adolescents and related characteristics in Seychelles.

## Purpose

The purpose of the GSHS is to provide accurate data on the prevalence of a wide range of health behaviours and protective factors among adolescents, and related characteristics, in order:

- To develop priorities, establish programs and policies in schools and in other pertinent settings, and advocate for relevant resources to promote health of adolescents,
- To assess trends over time in risk behaviours and protective factors for use in evaluation of such programs and policies.


## General framework of the GSHS

The GSHS is a school-based survey conducted among students aged 13-15 years, developed by the World Health Organization, in collaboration with UNAIDS, UNESCO and UNICEF and with technical assistance from the Centres for Disease Control and Prevention (CDC) (7). To date, 32 countries have implemented the GSHS.
Several countries have extended the age range of the eligible students participating in the GSHS in consideration that the prevalence of several considered risk behaviours change substantially during adolescence.

## Methods

## Sampling

In Seychelles, almost all children attend school up to the S4 grade ( $10^{\text {th }}$ year of school, excluding kindergarten) and around $80 \%$ attend school up to the S 5 grade. A two-stage sampling strategy based on all schools in the country (13 public and private schools) and all S1-S5 classes were used to produce a sample representative of all students attending S1 to S 5 grades.

## Participation

Of the 1747 eligible students, 1432 completed the questionnaire (participation rate of $82 \%$ ). Five students present in school (0.3\%) refused to complete the questionnaire. All other non-participants were not in class on the day of the survey.

## Data collection

Thirty-three survey administrators were trained for the conduct of the survey. Before the administration of the questionnaire, survey administrators measured weight and height of the students with a standard equipment and wrote down the values on a register. During the administration of the questionnaire, one survey administrator was present in each class, he or she asked the students to report their weight and height values on the answer sheet of the questionnaire. The 2007 Seychelles GSHS questionnaire
(Appendix IV, 8) was anonymous, self-administered at school and contained 70 close-ended questions ( 41 core questions and 29 additional questions) about dietary behaviours and overweight, physical activity, cigarette use, alcohol and drugs use, sexual behaviours, bullying, mental health, and protective factors.

## Analyses

Data were weighted for non-response and for the varying probabilities of selection. Analyses were made using EPI INFO and STATA 10. 95\% confidence intervals were calculated.

## Results

Results are presented by sex and age groups (11-12, 13-15 and 16-17 years). The answers were missing in as few as 5 students ( $0.3 \%$ ) for questions about fruits consumption and about age and in as many as 261 students (18\%) for questions about alcohol consumption.
Appendices I and II tabulate results with $95 \%$ confidence intervals for boys and girls aged 13-15 and 11-17, respectively.
Appendix III shows Spearman correlation coefficients between selected risk behaviours among boys and girls aged 13-15 years. This restricted age range was chosen in order to decrease confounding by age.

## Demographics

Table 1. Distribution of participants and weighted percentage by sex and age groups

|  | Total |  | Boys |  | Girls |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | $N$ | $\%$ | $N$ | $\%$ | $N$ | $\%$ |
| $11-12$ | 257 | 18.3 | 131 | 9.2 | 126 | 9.0 |
| $13-15$ | 922 | 60.4 | 430 | 30.3 | 492 | 30.2 |
| $16-17$ | 236 | 21.4 | 116 | 10.3 | 120 | 11.0 |
| Missing | 17 |  |  |  |  |  |
| Total | 1432 | 100.0 | 677 | 49.7 | 738 | 50.3 |

## 1. Overweight and Dietary Behaviours

## Background

Overweight in childhood is associated with several physiologic, metabolic, and psychological detrimental effects. In addition, overweight during childhood and adolescence tends to track into adulthood and increases the lifetime risk of cardiovascular, endocrine and osteoarticular diseases, and some types of cancer (10-13).

## Prevalence of overweight and obesity

Figure 1-1. Prevalence of overweight and obesity by sex and age (bars show the upper $95 \%$ confidence interval)


- Overweight and obesity were defined along the International Obesity Task Force definition (14).
- $21 \%$ of all students ( $19 \%$ of boys and $24 \%$ of girls) were overweight or obese. $14 \%$ of all, $13 \%$ of boys and $16 \%$ of girls were overweight but not obese and respectively $7 \%, 6 \%$ and $8 \%$ were obese.
- The prevalence was larger in this study than in previous data from a national examination survey in 2004 (6) in which $16 \%$ of boys and $21 \%$ of girls were overweight or obese. The higher prevalence in 2007 than in 2004 may be consistent with a secular increase in the prevalence of overweight (15-17) or with the possibility that some obese children avoided participating in the examination surveillance system (which would lead to underestimate the true prevalence of overweight in 2004).


## Intake of fruits and vegetables

Figure 1-2. Prevalence of students who ate five or more fruits or vegetables per day during the past 30 days


- $45 \%$ of all students reported to eat fruits or vegetables five or more times per day during the past 30 days.


## Consumption of water and soft drinks

- $78 \%$ of all students reported to drink one or more glasses or small bottles of water per day.
- $55 \%$ of all students reported to drink one or more glasses or small bottles of carbonated soft drink per day.


## Education about healthy eating behaviours

- $53 \%$ of students recalled to have been taught in any of their classes on the benefits of healthy eating.


## Overweight and Dietary Behaviours (continued)

## Comparison of overweight and obesity prevalence between countries

Only few data about excess weight were available in the African region. In order to compare obesity and overweight prevalence of Seychelles with other countries, we used all national data available on the GSHS website on September $2^{\text {nd }}, 2008$ (29). These prevalence have been measured with the same methodology as in Seychelles.

Figure 1-3. Prevalence of overweight and obesity among students aged 13-15 years in Seychelles and in other countries that participated to GSHS


- Overweight and obesity were defined along the International Obesity Task Force definition (14).
- Seychelles was in the higher range compared to other countries.
- The prevalence of overweight and obesity in Seychelles was closer to the prevalence in the Eastern Mediterranean region than to the African region.


## Conclusion

These findings suggest the need to:

- Further shape a favourable environment that facilitates the consumption of healthy foods,
- Build social norms that promote the consumption of fruits and vegetables,
- Strengthen health education programs and policies on healthy nutrition in schools and other settings,
- Further develop the school canteens and supply healthy meals to more children.


## 2. Physical Activity

## Background

Adequate physical activity throughout life span and maintaining a normal weight are highly effective means of promoting health and preventing a broad range of chronic diseases. Early adoption of an active physical activity pattern increases the chance of maintaining physical activity during adulthood $(12,13,18,19)$.

## Physical activity

Figure 2-1. Prevalence of students who spent 30 minutes or more walking or riding a bicycle to and from school per weekday during the past 7 days


- Only $15 \%$ of all students spent 30 minutes or more walking or bicycling to and from school per weekday.


## Sitting activities

Sitting activities were defined as "sitting or watching television, playing computer games, talking with friends, or doing other sitting activities such as watching DVD videos."

Figure 2-2. Prevalence of students who were doing sitting activities for at least 3 hours per day


- Overall, $54 \%$ of students spent at least 3 hours per day doing sitting activities.
- The frequency of sitting activities increased with age.


## Physical education classes

Figure 2-3. Prevalence of students who reported to have participated in physical education classes at least 2 days per week during this school year


- Only $39 \%$ of all students reported to have participated in physical education classes on 2 or more days per week during this school year.


## Education

- Overall, $60 \%$ of all students were taught in any of their classes during this school year on the benefits of physical activity.


## Conclusion

These findings suggest the need to:

- Further develop facilities and programs for physical exercise and activities during and outside school hours,
- Ensure that regular classes of physical activity are actually given to all students,
- Further develop structures and conditions that promote walking, cycling or any other form of physical activity (e.g. cycling lanes, sidewalks, etc).


## 3. Cigarette Smoking

## Background

Smoking is the first preventable cause of morbidity and mortality worldwide and 5 million deaths are currently related to tobacco use each year. Smoking markedly increases the risk of multiple cancers (particularly lung cancer), cardiovascular disease (particularly heart attack and stroke), pulmonary disease and many other fatal and non-fatal diseases. Most smokers start smoking during childhood and adolescence. This underlies the critical importance of measures to prevent smoking uptake in children and adolescents (20,21).

## Prevalence of cigarette smoking

Figure 3-1. Prevalence of cigarette smoking during the past 30 days, by frequencies


- Current smoking in children is often defined as smoking cigarettes on at least one day during the past 30 days.
- $17 \%$ of all students (i.e. $11 \%+4 \%+2 \%$, first column in Figure 3-1) reported to have smoked cigarettes on one or more day during the past 30 days.
- The prevalence of cigarette smoking was larger in boys than in girls ( $23 \%$ vs. $11 \%$, respectively).


## Age of smoking initiation among smokers

- Among current smokers, $45 \%$ had tried a cigarette at the age of 11 years or younger.


## Exposure to environmental tobacco smoke

- $63 \%$ of all students reported that people smoked in their presence during the past 7 days.


## Correlation between smoking and other characteristics, age 13-15 (see Appendix III)

- Cigarettes smoking was associated with environmental smoke, alcohol drinking (both frequency and volume), cannabis use (Figure 3-2), elevated number of sexual partners, missing school, bullying, and poor knowledge by parents of what their child was doing with his/her free time.

Figure 3-2. Prevalence of cannabis use during the past 30 days, among current cigarette smokers and non-smokers


## Conclusion

These findings emphasize the need to:

- Tighten relevant regulations and legislation related to tobacco use, e.g. legislation to ban smoking in enclosed public places, including bars and discotheques,
- Strengthen school-based education programs to further raise awareness on tobacco use and to build resistance skills among children,
- Provide smoking cessation programs to young smokers who want to quit.


## 4. Alcohol and Other Drugs Use

## Background

Compared to non-drinkers, young people who drink alcohol are more likely to engage in other risk behaviours, such as smoking, use of other drugs, and risky sexual behaviours. Alcohol drinking can also impair psychological development and negatively influence a child's performance at both school time and leisure time (22-28).

## Prevalence of alcohol use

Figure 4-1. Prevalence of alcohol drinking during the past 30 days, by frequencies


- $59 \%$ of all students (i.e. $36 \%+15 \%+8 \%$, first column in Figure 4-1) had at least one drink on at least one day during the past 30 days.
- The overall prevalence was similar in boys and girls (overall $59 \%$ boys and $58 \%$ girls).
- Drinking frequency increased with age.


## Binge drinking

Binge drinking was defined as the consumption of 5 or more dinks for boys ( 4 or more for girls) on at least one day during the past 30 days.

Figure 4-2. Prevalence of binge drinking during the past 30 days


- $10 \%$ of all students reported a pattern of binge drinking during the past 30 days.
- The prevalence of binge drinking did not differ between boys and girls ( $10 \%$ vs. $11 \%$, respectively).
- The frequency of binge drinking increased with age among boys and girls.


## Education

- $48 \%$ of all students reported to have been taught in any of their classes during this school year about the dangers of alcohol use.


## Age of drinking initiation among drinkers

- Among students who ever drank alcohol more than a few sips, $83 \%$ had their first drink before the age of 14 .


## Comparison of alcohol drinking between countries

Figure 4-3. Prevalence of alcohol drinking among students aged 13-15 years in Seychelles and in selected African countries (GSHS data, 29)


- Drinking frequency was higher in Seychelles than in several other African countries.


## Alcohol and Other Drugs Use (continued)

Correlation between drinking and other characteristics, age 13-15 (see Appendix III)

- Drinking frequency and volume were strongly associated.
- Drinking was associated with cigarette smoking, environmental smoke, cannabis use, number of sexual partners, missing school, bullying, and poor knowledge by parents of what their child was really doing during his/her free time.


## Cannabis use

Cannabis was defined as "marijuana, cannabis, hashish, 'lapay', 'tyalas', steam, stuff, or joint".

Figure 4-4. Prevalence of cannabis use in lifetime, by frequencies

$15 \%$ of all students (i.e. $8 \%+3 \%+4 \%$, first column in Figure 4-4) used cannabis at least once in their life.

Figure 4-5. Prevalence of cannabis use during the past 30 days, by cannabis use frequency


- $12 \%$ of all students $(6 \%+3 \%+3 \%$, first column in Figure 4-5) used cannabis during the past 30 days.
- The prevalence of cannabis use was markedly higher in boys than in girls.
- This prevalence was already high in the youngest category (11-12 years old).
- No significant difference was observed between the prevalence of students who had ever tried cannabis and the prevalence of students who had tried cannabis during the past 30 days. This may suggest that experimenters tend to sustain their habit or that the questions were not well understood.


## Cocaine, heroine or ecstasy use

- $10 \%$ of all students aged $11-17$ reported to have ever tried cocaine, heroine, or ecstasy ( $12 \%$ boys, $7 \%$ girls).


## Correlation between cannabis use and other characteristics, age 13-15 (see Appendix III)

- Cannabis use was strongly associated with an elevated number of sexual partners, cigarette smoking, drinking, and missing school.
- Among boys, cannabis use was also associated with a lower number of close friends and poor knowledge by the parents of what their child was really doing with his/her free time.


## Conclusion

These findings suggest the need to:

- Conduct further studies, e.g. focus group and other types of qualitative research to examine the significance of these risk behaviours among adolescents,
- Sustain school-based education programs by providing students with quality information on drinking and substance use issues,
- Further develop and implement appropriate prevention programs in children and adolescents to raise resilience to substance use.


## 5. Sexual Behaviours that Contribute to HIV Infection, Other Sexually Transmitted Infections and Unintended Pregnancy

## Background

Approximately 33 million people have HIV/AIDS worldwide. Young people aged 15-24 are particularly at risk of contracting sexually transmitted infections (STI). Adolescents who begin sexual activity early are more likely to have sex with multiple partners and are less likely to use condoms, which increases their risk of being infected with STIs (30-33).

## Sexual intercourse

Figure 5-1. Prevalence of students who ever had sexual intercourse


- $26 \%$ of all students ever had sexual intercourse.
- More boys ( $33 \%$ ) than girls ( $21 \%$ ) reported that they ever had sexual intercourse.
- At the age of $13-15,29 \%$ of boys and $16 \%$ of girls reported that they ever had sexual intercourse.


## Sexual partners

Figure 5-2. Prevalence of students who had one or more sexual partners during their life time


- $19 \%$ of all students reported sexual intercourse with two or more partners during their lifetime.
- The (slight) discrepancy between the prevalence of sexual intercourse based on questions on intercourse during time (Figure 5-1) and number of sexual partners (Figure 5-2) could suggest differences in understanding of the questions despite the fact that the questions provided an explicit definition of sexual intercourse.
- Bragging and sexual abuse may also be issues to be considered when interpreting the data.

Correlation between number of sexual partners and other characteristics, age 13-15 (see Appendix III)

- The number of sexual partners was associated with cigarette smoking, drinking, cannabis use, and missing school.


## Age of initiation of sexual intercourse among sexually active students

- Among all students who had sexual intercourse, $56 \%$ said they had sex for the first time before the age of 14 .


## Condom use

- Among the students who had sexual intercourse during the past 12 months, $57 \%$ reported to have used a condom the last time they had sexual intercourse.


## Education

- $60 \%$ of students recalled to have been taught in any of their classes during this school year on how to avoid HIV or AIDS.


## Conclusion

These findings suggest the need to:

- Strengthen and sustain school-based education programs on safe sex and STI,
- Conduct such education programs at an early age, including primary school.


## 6. Bullying

## Background

Children who are victims of bullying have increased stress and a reduced ability to concentrate at school. They also are at increased risk for substance abuse, aggressive behaviours, and suicide attempts (34-37).

## Prevalence of bullying

Bullying was defined as "when a student or group of students say or do bad and unpleasant things to another student, when a student is teased a lot in an unpleasant way or when a student is left out of things on purpose. It is not bullying when two students of about the same strength or power argue or fight or when teasing is done in a friendly and fun way."

Figure 6-1. Prevalence of students who were bullied during the past 30 days, by bullying frequency


- $47 \%$ of all students (i.e. $31 \%+8 \%+8 \%$, first column in Figure 6-1) reported to have been bullied at least once during the past 30 days.
- Younger students reported bullying more frequently than older students.


## Correlation between bullying and other characteristics, age 13-15 (see Appendix 2)

- Among boys, bullying was associated with cigarette smoking, alcohol drinking, cannabis use, younger age and low number of close friends.
- Among girls, bullying was associated with an elevated number of sexual partners.


## Comparison of bullying between countries

Figure 6-2. Prevalence of bullying during the past 30 days among adolescents aged 13-15 in Seychelles and in selected African countries (GSHS data, 29)


- The prevalence of bullying was rather low in Seychelles compared to the other considered African countries.


## Conclusion

The findings suggest the following:

- Further studies should examine the scope and extent of bullying in school children in view of the apparent substantial prevalence of this behaviour,
- School-based education programs addressing specifically bullying should be considered,
- Peer counsellors could have an important role in the prevention of bullying among their peer fellows and relevant training programs should be considered.


## 7. Mental Health

## Background

Anxiety disorders, depression and other mood disorders, as well as behavioural and cognitive disorders, are among the most common mental health problems found among adolescents. Worldwide, approximately $20 \%$ of children and adolescents suffer from these disabling conditions. Half of all lifetime cases of mental disorders start by the age of 14 . In particular, suicide is a leading cause of death among adolescents (38-41).

## Depression

Figure 7-1. Prevalence of students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing their usual activities, during the past 12 months


- $32 \%$ of all students reported to have had sustained episodes of sadness or hopelessness.
- Sadness or hopelessness was slightly more frequent in girls than in boys.


## Suicidal behaviour

Figure 7-2. Prevalence of students who seriously considered attempting suicide during the past 12 months


- $17 \%$ of all students seriously considered attempting suicide during the past 12 months.


## Comparison of suicidal behaviour between countries

Figure 7-3. Prevalence of students aged 13-15 who seriously considered attempting suicide during the past 12 months in Seychelles and in selected African countries (29)


- The prevalence of suicidal behaviour was lower in Seychelles than in several other African countries.


## Close friends

- 6\% of all students aged 11-17 years declared having no close friends.


## Conclusion

These findings suggest the need to:

- Strengthen school-based counselling programs,
- Provide more quality information to students on these issues and motivate them to come forward to talk about their problems.


## 8. Protective Factors

## Background

For most adolescents, school is the most important setting outside of the family. School attendance is related to several health risk behaviours including violence and sexual risk behaviours. Good parental bonding and connection is associated with lower levels of depression and suicidal ideation, alcohol use, sexual risk behaviours, and violence (42-46).

## Missing classes

Figure 8-1. Prevalence of missing school or class without permission during the past 30 days


- $33 \%$ of all students missed school or class without permission on one or more days during the past 30 days.
- Missing school or class without permission was more frequent in boys ( $40 \%$ ) than in girls (26\%).


## Parents or guardians knowing the content of students' free time (as reported by students)

Figure 8-2. Prevalence of students whose parents or guardians never or rarely really knew what they were doing with their free time during the past 30 days


- $34 \%$ of all students (i.e. $19 \%+15 \%$, first column in Figure 8-2) reported that their parents or guardians never or rarely really knew what they were doing with their free during the past 30 days.
- Boys (38\%) reported this characteristic more frequently than girls (30\%).

Correlation between knowledge by parents of what their child was really doing with his or her free time and other characteristics, age 13-15 (see Appendix III)

- Poor knowledge by parents of what their child was doing with his or her free time was associated with drinking and elevated number of sexual partners.
- Among boys, poor knowledge by parents of what their child was doing during his or her free time was associated with cigarette smoking, cannabis use, and school missing.


## Conclusion

These findings suggest the need to:

- Provide more information to students on the importance of regular school attendance,
- Provide more information to parents on the need to develop bonding and connection in order to promote healthy behaviours amongst their children.


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## Appendix I - 2007 Seychelles Fact Sheet, age 13-15

## Global School-based Student Health Survey

Seychelles


The 2007 Seychelles GSHS measured alcohol and other drug use; sexual behaviors that contribute to HIV infection, other STI, and unintended pregnancy; unintentional injuries and violence; dietary behaviors and overweight; physical activity; tobacco use; mental health; and protective factors.

The 2007 Seychelles GSHS was a school-based survey of students in Grades S1, S2, S3, S4, and S5. A two-stage cluster sample design was used to produce data representative of all students in Grades S1, S2, S3, S4, and S5 in Seychelles. At the first stage, schools were selected with probability proportional to enrollment size. At the second stage, classes were randomly selected and all students in selected classes were eligible to participate. The school response rate was $100 \%$, the student response rate was $82 \%$, and the overall response rate was $82 \%$. A total of 1,432 students participated in the Seychelles GSHS. Students self-reported their responses to each question on a computer scannable answer sheet. For comparison purposes, only students aged 13-15 years are included in the analyses for this fact sheet.

| Results for students aged 13-15 years | Total | Boys | Girls |
| :---: | :---: | :---: | :---: |
| Alcohol and Other Drug Use |  |  |  |
| Percentage of students who had at least one drink containing alcohol on one or more days during the past 30 days | $61.6 \pm 1.0$ | $62.1 \pm 1.5$ | $61.2 \pm 2.2$ |
| Percentage of students who drank so much alcohol that they were really drunk one or more times during their life | $53.1 \pm 1.1$ | $56.2 \pm 1.2$ | $50.0 \pm 1.7$ |
| Percentage of students who had a hang-over, felt sick, got into trouble with family or friends, missed school, or got into fights, as a result of drinking alcohol one or more times during their life | $21.0 \pm 1.1$ | $27.4 \pm 1.0$ | $14.7 \pm 1.7$ |
| Percentage of students who used drugs one or more times during their life | $13.0 \pm 1.5$ | $19.6 \pm 1.5$ | $6.8 \pm 2.0$ |
| Sexual Behaviours that contribute to HIV Infection, Other STI, and Unintended Pregnancy |  |  |  |
| Percentage of students who have ever had sexual intercourse | $21.5 \pm 1.1$ | $28.6 \pm 1.5$ | $15.5 \pm 1.1$ |
| Percentage of students who have had sexual intercourse with two or more people during their life time | $16.6 \pm 0.8$ | $24.6 \pm 1.3$ | $9.3 \pm 0.6$ |
| Among students who had sexual intercourse during the past 12 months, the percentage who used a condom the last time they had sexual intercourse | $59.7 \pm 2.6$ | * | * |
| Unintentional Injuries and Violence |  |  |  |
| Percentage of students who were bullied on one or more days during the past 30 days | $50.5 \pm 0.7$ | $52.6 \pm 1.1$ | $48.6 \pm 1.3$ |
| Dietary Behaviours and Overweight |  |  |  |
| Percentage of students who went hungry most of the time or always during the past 30 days because there was not enough food in their home | $15.7 \pm 0.6$ | $16.2 \pm 1.2$ | $14.9 \pm 1.0$ |
| Percentage of students who are overweight** | $7.5 \pm 0.6$ | $7.3 \pm 0.7$ | $7.6 \pm 0.9$ |
| Percentage of students who are at risk for becoming overweight*** | $14.6 \pm 0.6$ | $12.9 \pm 0.8$ | $16.1 \pm 0.8$ |
| Physical Activity |  |  |  |
| Percentage of students who were physically active for a total of at least 60 minutes per day on all 7 days during the past 7 days | $18.8 \pm 0.8$ | $24.1 \pm 1.2$ | $13.9 \pm 0.7$ |
| Percentage of students who spent three or more hours per day during a typical or usual day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities | $54.7 \pm 0.8$ | $52.7 \pm 1.5$ | $56.2 \pm 1.3$ |

Global School-based Student Health Survey
Seychelles
2007 Fact Sheet


| Tobacco Use |  |  |  |
| :---: | :---: | :---: | :---: |
| Percentage of students who smoked ciqarettes on one or more days during the past 30 days | $17.2 \pm 0.9$ | $24.1 \pm 1.2$ | $10.8 \pm 2.5$ |
| Percentage of students who used any other form of tobacco on one or more days during the past 30 days | $9.2 \pm 0.4$ | $14.4 \pm 0.8$ | $3.9 \pm 0.4$ |
| Percentage of students who reported people smoking in their presence on one or more days during the past 7 days | $64.7 \pm 1.0$ | $66.5 \pm 1.7$ | $62.9 \pm 1.0$ |
| Mental Health |  |  |  |
| Percentage of students who felt lonely most of the time or always during the past 12 months | $14.7 \pm 0.7$ | $12.4 \pm 0.6$ | $16.8 \pm 1.3$ |
| Percentage of students who seriously considered attempting suicide during the past 12 months | $17.5 \pm 0.7$ | $15.6 \pm 1.0$ | $19.4 \pm 2.0$ |
| Percentage of students who have no close friends | $5.2 \pm 0.3$ | $6.4 \pm 0.5$ | $4.1 \pm 0.4$ |
| Protective Factors |  |  |  |
| Percentage of students who missed classes or school without permission on one or more days during the past 30 days | $32.0 \pm 1.2$ | $40.7 \pm 1.7$ | $23.9 \pm 1.3$ |
| Percentage of students who reported that most of the students in their school were never or rarely kind and helpful during the past 30 days | $41.2 \pm 0.8$ | $44.9 \pm 1.2$ | $37.8 \pm 1.1$ |
| Percentage of students whose parents or quardians never or rarely really knew what they were doing with their free time during the past 30 days | $35.3 \pm 1.3$ | $39.5 \pm 1.2$ | $31.4 \pm 1.8$ |

* indicates less than 100 students.
**Students who were at or above the 95th percentile for body mass index by age and sex based on reference data from Cole, Bellizzi, Flegal, and Dietz, British Medical Journal, May, 2000.
***Students who were at or above the 85 th percentile but below the 95 th percentile for body mass index by age and sex based on reference data from Cole, Bellizzi, Flegal, and Dietz, British Medical Journal, May, 2000.

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## Appendix II - Tables of Prevalence of Risk Behaviours, age 11-17

Table 2. Body mass index (BMI) and dietary behaviours, by sex, age 11-17, Seychelles, 2007

| Question | Total \% (95\%CI) | Sex |  |
| :---: | :---: | :---: | :---: |
|  |  | Boys \% $(95 \% C I)$ | Girls \% (95\%CI) |
| Overweight* | $\begin{gathered} 14.2 \\ (12.1-16.4) \end{gathered}$ | $\begin{gathered} 12.7 \\ (9.7-15.7) \end{gathered}$ | $\begin{gathered} 15.6 \\ (12.6-18.7) \end{gathered}$ |
| Obesity* | $\begin{gathered} 7.3 \\ (5.6-8.9) \end{gathered}$ | $\begin{gathered} 6.3 \\ (4.1-8.6) \end{gathered}$ | $\begin{gathered} 8.1 \\ (5.8-10.5) \end{gathered}$ |
| Ate fruits and vegetables on five or more times per day during the past 30 days | $\begin{gathered} 44.5 \\ (41.8-47.2) \\ \hline \end{gathered}$ | $\begin{gathered} 44.9 \\ (41.1-48.7) \\ \hline \end{gathered}$ | $\begin{gathered} 44.1 \\ (40.4-47.8) \\ \hline \end{gathered}$ |
| On average, drunk one or more glass or small bottle of water, every day | $\begin{gathered} 77.7 \\ (75.4-79.9) \end{gathered}$ | $\begin{gathered} 78.6 \\ (75.4-81.7) \\ \hline \end{gathered}$ | $\begin{gathered} 77.1 \\ (73.9-80.2) \end{gathered}$ |
| On average, drunk one or more small bottle or glass of carbonated soft drink, such as Coke, Fanta, Sprite, Bitter Lemon, Yacenthe lemonade, every day | $\begin{gathered} 55.5 \\ (52.8-58.1) \\ \hline \end{gathered}$ | $\begin{gathered} 56.8 \\ (53-60.7) \\ \hline \end{gathered}$ | $\begin{gathered} 53.9 \\ (50.1-57.6) \\ \hline \end{gathered}$ |
| During this school year, were taught in any of their classes of the benefits of healthy eating | $\begin{gathered} 52.5 \\ (49.8-55.2) \end{gathered}$ | $\begin{gathered} 52.1 \\ (48.2-56.0) \end{gathered}$ | $\begin{gathered} 52.8 \\ (49-56.5) \\ \hline \end{gathered}$ |

*Overweight and obesity were assessed along standard definition (14).

Table 3. Physical activity among students, by sex, age 11-17, Seychelles, 2007

| Question | Sex |  |  |
| :--- | :---: | :---: | :---: |
|  |  | Boys \% <br> $(95 \% C I)$ | Girls \% <br> $(95 \% C I)$ |
| Spent 30 minutes or more total walking and <br> bicycle to and from school during the past 7 days | $(12.6-16.6)$ | 14.5 | 14.6 |
| Doing sitting activities for more than 3 hours per <br> day | 53.6 | $(11-6-17.4)$ | $(11.8-17.3)$ |
| Participated in physical education classes on 2 or <br> more days per week | $(50.8-56.3)$ | $(47.5-55.5)$ | $(51.6-59.1)$ |
| During this school year, were taught on any of <br> their classes the benefits of physical activity | $(36.0-41.4)$ | $(36.4-44.3)$ | $(33.3-40.7)$ |

Table 4. Tobacco use among students, by sex, age 11-17, Seychelles, 2007

| Question | Sex |  |  |
| :--- | :---: | :---: | :---: |
|  |  | Boys \% <br> $(95 \% C I)$ | Girls \% <br> $(95 \% C I)$ |
| Smoked cigarettes on one or more days during <br> the past 30 days | 17.0 <br> $(14.9-19.1)$ | 23.0 <br> $(19.5-26.5)$ | $(8.5-13.2)$ |
| Among students who smoked cigarettes during <br> the past 30 days, those who tried their first <br> cigarette at age 11 or younger | 44.8 | 48.7 | 39.0 |
| People smoked in their presence on one or more <br> days during the past seven days | (40.5-49.0) | $(43-54.4)$ | $(32.6-45.4)$ |

Table 5. Alcohol use and other drugs use among students, age 11-17, by sex, Seychelles, 2007

| Questions | Total \% (95\%CI) | Sex |  |
| :---: | :---: | :---: | :---: |
|  |  | Boys \% (95\%CI) | Girls \% (95\%CI) |
| Had at least one drink containing alcohol on one or more days during the past 30 days | $\begin{gathered} 58.4 \\ (55.5-61.3) \\ \hline \end{gathered}$ | $\begin{gathered} 60.1 \\ (55.8-64.4) \end{gathered}$ | $\begin{gathered} 56.9 \\ (52.9-60.9) \end{gathered}$ |
| Among students who had a drink of alcohol other than a few sips, have had their first drink of alcohol before age 14 years | $\begin{gathered} 82.9 \\ (80.5-85.4) \end{gathered}$ | $\begin{gathered} 830 \\ (79.4-86.5) \end{gathered}$ | $\begin{gathered} 83.4 \\ (80.0-86.7) \\ \hline \end{gathered}$ |
| Had five or more drinks for males, respectively four or more drinks for females, on the days they drank alcohol during the past 30 days | $\begin{gathered} 10.1 \\ (8.3-12.0) \\ \hline \end{gathered}$ | $\begin{gathered} 9.6 \\ (6.9-12.2) \\ \hline \end{gathered}$ | $\begin{gathered} 10.7 \\ (8.0-13.3) \\ \hline \end{gathered}$ |
| During this school year, were taught on any of their classes of the dangers of alcohol use | $\begin{gathered} 48.3 \\ (45.6-51) \end{gathered}$ | $\begin{gathered} 46.2 \\ (42.2-50.2) \end{gathered}$ | $\begin{gathered} 50.2 \\ (46.4-54) \end{gathered}$ |
| Used cannabis on one or more days during the past 30 days | $\begin{gathered} 12.1 \\ (10.3-13.9) \end{gathered}$ | $\begin{gathered} 20.3 \\ (17.1-23.6) \\ \hline \end{gathered}$ | $\begin{gathered} 3.9 \\ (2.4-5.4) \\ \hline \end{gathered}$ |
| Had ever tried cocaine, heroine or ecstasy | $\begin{gathered} 9.7 \\ (8.0-11.3) \end{gathered}$ | $\begin{gathered} 11.9 \\ (9.2-14.6) \end{gathered}$ | $\begin{gathered} 7.4 \\ (5.4-9.3) \end{gathered}$ |

Table 6. Sexual behaviours that contribute to HIV infection, other sexually transmitted infections, and unintended pregnancy among students, by sex, age 11-17, Seychelles, 2007

| Question | Total \% (95\%CI) | Sex |  |
| :---: | :---: | :---: | :---: |
|  |  | Boys \% (95\%CI) | Girls \% (95\%CI) |
| Had ever had sexual intercourse | $\begin{gathered} 26.1 \\ (23.5-28.8) \\ \hline \end{gathered}$ | $\begin{gathered} 32.6 \\ (28.5-36.7) \\ \hline \end{gathered}$ | $\begin{gathered} 20.6 \\ (17.3-23.9) \end{gathered}$ |
| Had sexual intercourse with two or more partners during their life time | $\begin{gathered} 19.3 \\ (17.0-21.6) \end{gathered}$ | $\begin{gathered} 27.5 \\ (23.8-31.2) \\ \hline \end{gathered}$ | $\begin{gathered} 11.7 \\ (9.1-14.3) \\ \hline \end{gathered}$ |
| Among sexually active students, initiated sexual intercourse before age 14 years | $\begin{gathered} 55.5 \\ (50.4-60.7) \end{gathered}$ | $\begin{gathered} 64.1 \\ (57.8-70.5) \end{gathered}$ | $\begin{gathered} 41.8 \\ (33.7-49.8) \end{gathered}$ |
| Among students who had sexual intercourse during the past 12 months, those who used a condom at last sexual intercourse | $\begin{gathered} 57.2 \\ (50.4-64) \\ \hline \end{gathered}$ | $\begin{gathered} 63.4 \\ (54.8-72.1) \\ \hline \end{gathered}$ | $\begin{gathered} 48.5 \\ (38-59.1) \\ \hline \end{gathered}$ |
| During this school year, were taught how to avoid HIV or AIDS during this school year | $\begin{gathered} 59.8 \\ (57.1-62.5) \\ \hline \end{gathered}$ | $\begin{gathered} 54.3 \\ (50.3-58.4) \\ \hline \end{gathered}$ | $\begin{gathered} 65.2 \\ (61.6-68.8) \end{gathered}$ |

Table 7. Violence and unintentional injury among students, age 11-17, by sex, Seychelles, 2007

| Question | Sex |  |  |
| :--- | :---: | :---: | :---: |
|  |  |  |  |
|  | $(95 \% C I)$ | Boys $\%$ <br> $(95 \% C I)$ | Girls $\%$ <br> $(95 \% C I)$ |
| Were bullied one or more days during the past 30 <br> days | 46.8 <br> $(43.8-49.8)$ | $(43.3-52)$ | $(41.7-49.8)$ |

Table 8. Mental health issues among students, by sex, age 11-17, Seychelles, 2007

| Question |  | Sex |  |
| :--- | :---: | :---: | :---: |
|  |  | Total $\%$ <br> $(95 \% C I)$ | $(95 \% \mathrm{CI})$ |

Table 9. Protective factors among students, by sex, age 11-17, Seychelles, 2007

| Question | Total \% (95\%CI) | Sex |  |
| :---: | :---: | :---: | :---: |
|  |  | Boys \% $(95 \% C I)$ | Girls \% (95\%CI) |
| Missed class or school without permission on one or more days during the past 30 days | $\begin{gathered} 33.3 \\ (30.7-36.0) \\ \hline \end{gathered}$ | $\begin{gathered} 40.3 \\ (36.3-44.3) \\ \hline \end{gathered}$ | $\begin{gathered} 26.6 \\ (23.1-30.0) \\ \hline \end{gathered}$ |
| Parents or guardians never or rarely really knew what the students were doing with their free time during the past 30 days | $\begin{gathered} 33.8 \\ (31.2-36.4) \\ \hline \end{gathered}$ | $\begin{gathered} 38.2 \\ (34.2-42.1) \end{gathered}$ | $\begin{gathered} 29.9 \\ (26.4-33.5) \\ \hline \end{gathered}$ |

## Appendix III - Correlations Between Selected Risk Behaviours, age 13-15

We calculated the Spearman's correlation coefficients between the following variables among boys and girls aged 13-15 years.
Table 10. Description of the variables

| Name of the variable | Definition | Categories |
| :---: | :---: | :---: |
| Age | Age of the student | 13; 14; 15 |
| Weight status | Weight status of the student after IOTF definition (14) | Normal weight; overweight; obese |
| Fruits and vegetables | Number times the student ate fruits or vegetables per day during the past 30 days | 0; 1; 2; 3; 4; 5 or more |
| Water | Number of glasses or small bottles or water the student drank on average | Do not drink; 1-2/week; several/week; 1/day; 2/day; 3/day; 4/day; 5 or more /day |
| Soft drinks | Number of glasses or small bottles or carbonated soft drinks the student drank on average | Do not drink; 1-2/week; several/week; 1/day; 2/day; 3/day; 4/day; 5 or more /day |
| Walk/bike to/from school | Number of days the student walk or ride a bicycle during the past 7 days | 0; 1; 2; 3; 4; 5; 6;7 |
| Sitting activities | Hours per day the student spent doing sitting activities during a typical or usual day | Less than 1; 1 to 2; 3 to 4; 5 to 6; 7 to 8; more than 8 |
| Cigarette smoking | Number of days the student smoked cigarettes during the past 30 days | 0; 1-2; 3-5; 6-9; 10-19; 20-29; 30 |
| Smoking initiation age | Among students who have tried cigarette, age of first try | 7 or younger; 8-9; 10-11;12-13;14-15 |
| Environmental smoke | Number of days people smoked in presence of the student during the past 7 days | 0; 1-2; 3-4; 5-6; 7 |
| Alcohol: frequency | Number of days the student drank alcohol during the past 30 days | 0; 1-2; 3-5; 6-9; 10-19; 20-29; 30 |
| Alcohol: volume | Number of drinks, on the days the student drank alcohol during the past 30 days | Did not drink; 1; 2; 3; 4; 5 or more |
| Alcohol initiation | Among students who have drunk alcohol other than a few sips, age of first try | 7 or younger; 8-9; 10-11; 12-13; 14-15 |
| Cannabis | Number of times the student used cannabis during the past 30 days | 0; 1-2; 3-9; 10 or more |
| Sexual initiation | Among students who have ever had sex, age of first sexual intercourse | 11 or younger; 12; 13; 14; 15 |
| Bullying | Number of days the student has been bullied during the past 30 days | 0; 1-2; 3-5; 6-9; 10-19; 20-29; 30 |
| Close friends | Number of close friends the student has | 0; 1; 2; 3 or more |
| Missing school | Number of days the student missed classes or school without permission during the past 30 days | 0; 1-2; 3-5; 10 or more |
| Parents/guardians | Frequency of knowing by the parents or guardians' student what he or she was really doing during his or her free time | Never: rarely; sometimes; most of the time; always |

## Spearman's correlation coefficients ( $r$ ) among boys aged 13-15 years ( $N=430$ )

Red: large positive correlation ( $r>0.5$ ); Orange: medium positive correlation ( $r$ between 0.3 and 0.5 ); Yellow: small positive correlation ( $r$ between 0.1 and 0.3 ); Light blue: small negative correlation ( $r$ between -0.3 and -0.1 ). $R=1$ means perfect correlation; $R=0$ means no correlation at all.

|  | $\stackrel{\otimes}{\mathbb{<}}$ | $\begin{aligned} & n \\ & \frac{n}{0} \\ & \vdots \\ & \vdots \\ & \pm \\ & \hline .0 \\ & .0 \\ & 3 \end{aligned}$ |  | $\begin{aligned} & \frac{5}{む} \\ & \frac{ \pm}{0} \end{aligned}$ |  |  |  |  | $\begin{aligned} & \stackrel{N}{ \pm} \\ & \stackrel{ \pm}{U} \\ & \stackrel{0}{0} \end{aligned}$ |  |  |  |  |  | n 0 0 든 |  |  | $\frac{\stackrel{9}{\lambda}}{\overline{\bar{\lambda}}}$ |  |  | $\begin{aligned} & \text { n } \\ & 0.0 \\ & 0.0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0.0 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Weight status | -0.05 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fruits and vegetables | -0.09 | 0.06 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water | 0.06 | 0.21 | 0.17 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Soft drinks | 0.01 | -0.05 | 0.12 | 0.00 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Walk or ride a bicycle | 0.02 | -0.07 | 0.00 | -0.08 | 0.00 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sitting activities | 0.02 | -0.01 | 0.06 | 0.04 | 0.17 | 0.11 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Physical education | 0.03 | -0.06 | -0.03 | 0.04 | 0.05 | 0.20 | 0.10 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cigarette | 0.03 | -0.06 | 0.01 | -0.04 | 0.07 | 0.08 | 0.19 | 0.12 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |
| Smoking initiation age | 0.23 | 0.04 | -0.14 | 0.03 | -0.13 | -0.01 | 0.01 | 0.10 | 0.18 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| Environmental smoke | 0.06 | -0.03 | 0.13 | -0.05 | 0.12 | 0.07 | 0.14 | 0.04 | 0.32 | 0.05 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| Alcohol: frequency | -0.04 | 0.03 | 0.06 | -0.01 | 0.18 | 0.14 | 0.13 | 0.04 | 0.42 | 0.01 | 0.29 | 1.00 |  |  |  |  |  |  |  |  |  |
| Alcohol: volume | 0.00 | 0.03 | 0.11 | 0.07 | 0.19 | 0.10 | 0.15 | 0.07 | 0.37 | 0.05 | 0.27 | 0.83 | 1.00 |  |  |  |  |  |  |  |  |
| Acohol initiation age | 0.22 | 0.04 | -0.03 | 0.08 | 0.03 | -0.04 | -0.13 | 0.05 | -0.07 | 0.34 | -0.09 | -0.28 | -0.23 | 1.00 |  |  |  |  |  |  |  |
| Cannabis | 0.00 | -0.07 | 0.05 | -0.08 | -0.01 | 0.07 | 0.06 | 0.07 | 0.55 | 0.04 | 0.24 | 0.32 | 0.21 | -0.09 | 1.00 |  |  |  |  |  |  |
| Sexual partners | 0.09 | -0.04 | 0.07 | 0.00 | 0.12 | 0.15 | 0.25 | 0.10 | 0.35 | -0.09 | 0.24 | 0.37 | 0.27 | -0.17 | 0.43 | 1.00 |  |  |  |  |  |
| Sexual initiation age | 0.34 | 0.11 | 0.01 | 0.16 | -0.07 | 0.13 | 0.16 | 0.11 | 0.05 | 0.20 | 0.11 | 0.13 | 0.17 | 0.05 | 0.00 | 0.19 | 1.00 |  |  |  |  |
| Bullying | -0.16 | 0.02 | 0.04 | 0.07 | 0.06 | -0.02 | 0.05 | -0.04 | 0.22 | -0.05 | 0.13 | 0.22 | 0.16 | -0.06 | 0.16 | 0.01 | 0.09 | 1.00 |  |  |  |
| Close friends | -0.10 | 0.11 | -0.02 | 0.07 | -0.07 | 0.03 | -0.03 | 0.05 | -0.08 | 0.18 | 0.00 | -0.03 | -0.05 | 0.09 | -0.18 | -0.06 | 0.16 | -0.13 | 1.00 |  |  |
| Missing school | -0.02 | -0.11 | 0.01 | -0.09 | 0.10 | 0.06 | 0.12 | 0.05 | 0.28 | -0.01 | 0.18 | 0.24 | 0.19 | -0.02 | 0.33 | 0.26 | 0.00 | 0.10 | -0.09 | 1.00 |  |
| Parents/guardians | -0.05 | 0.14 | 0.03 | 0.04 | -0.02 | 0.02 | -0.07 | 0.07 | -0.17 | 0.04 | -0.04 | -0.17 | -0.11 | 0.09 | -0.15 | -0.19 | 0.24 | -0.03 | 0.10 | -0.14 | 1.00 |

## Spearman's correlation coefficients ( $r$ ) among girls aged 13-15 years ( $N=492$ )

Red: large positive correlation ( $r>0.5$ ); Orange: medium positive correlation ( $r$ between 0.3 and 0.5 ); Yellow: small positive correlation ( $r$ between 0.1 and 0.3 ); Light blue: Small negative correlation ( $r$ between -0.3 and -0.1); Dark blue: medium negative correlation ( $r$ between -0.5 and -0.3 ).

|  | $\stackrel{\otimes}{8}$ | $\begin{aligned} & n \\ & \frac{n}{0} \\ & \vdots \\ & \vdots \\ & \frac{1}{0} \\ & .0 \\ & 30 \end{aligned}$ |  | $\begin{aligned} & \frac{5}{む} \\ & \frac{ \pm}{0} \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \frac{9}{\lambda} \\ & \overline{\bar{\lambda}} \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Weight status | 0.01 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fruits and vegetables | -0.08 | -0.01 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water | -0.03 | 0.05 | 0.20 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Soft drinks | 0.00 | -0.08 | 0.03 | -0.01 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Walk or ride a bicycle | 0.11 | -0.09 | 0.00 | -0.07 | -0.05 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sitting activities | 0.03 | -0.08 | 0.02 | 0.00 | 0.11 | 0.07 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Physical education | 0.00 | 0.01 | 0.05 | 0.05 | 0.05 | 0.09 | 0.02 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cigarette | 0.04 | -0.01 | 0.04 | -0.04 | 0.12 | 0.05 | 0.00 | -0.04 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |
| Smoking initiation age | 0.43 | -0.10 | -0.19 | -0.11 | 0.07 | 0.08 | 0.00 | -0.03 | 0.17 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| Environmental smoke | 0.07 | -0.03 | 0.05 | 0.00 | 0.10 | 0.13 | 0.05 | 0.09 | 0.20 | 0.07 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| Alcohol: frequency | 0.17 | -0.06 | 0.03 | -0.11 | 0.17 | 0.04 | 0.10 | -0.05 | 0.25 | 0.20 | 0.21 | 1.00 |  |  |  |  |  |  |  |  |  |
| Alcohol: volume | 0.19 | -0.05 | 0.07 | -0.06 | 0.20 | 0.09 | 0.10 | -0.02 | 0.28 | 0.22 | 0.24 | 0.88 | 1.00 |  |  |  |  |  |  |  |  |
| Acohol initiation age | 0.21 | 0.05 | 0.02 | 0.02 | -0.07 | 0.04 | -0.14 | -0.10 | 0.05 | 0.34 | -0.04 | -0.07 | -0.04 | 1.00 |  |  |  |  |  |  |  |
| Cannabis | -0.06 | 0.02 | 0.04 | -0.02 | 0.11 | 0.04 | 0.13 | 0.00 | 0.29 | -0.04 | 0.08 | 0.16 | 0.12 | 0.01 | 1.00 |  |  |  |  |  |  |
| Sexual partners | 0.09 | 0.03 | -0.09 | -0.08 | 0.14 | -0.02 | 0.00 | -0.05 | 0.27 | 0.03 | 0.10 | 0.29 | 0.21 | -0.10 | 0.30 | 1.00 |  |  |  |  |  |
| Sexual initiation age | 0.45 | -0.11 | 0.07 | -0.15 | 0.07 | 0.12 | 0.08 | 0.13 | 0.04 | 0.46 | 0.01 | -0.09 | -0.10 | 0.46 | -0.04 | 0.00 | 1.00 |  |  |  |  |
| Bullying | -0.09 | 0.01 | 0.06 | -0.06 | 0.09 | 0.03 | -0.07 | 0.04 | 0.04 | -0.19 | 0.20 | 0.06 | 0.03 | -0.09 | 0.05 | 0.13 | -0.14 | 1.00 |  |  |  |
| Close friends | 0.01 | 0.06 | 0.01 | 0.05 | -0.02 | 0.04 | 0.02 | 0.05 | 0.03 | -0.11 | -0.06 | -0.05 | -0.08 | 0.02 | 0.03 | -0.08 | -0.31 | -0.10 | 1.00 |  |  |
| Missing school | 0.05 | -0.06 | 0.08 | -0.14 | 0.15 | 0.06 | 0.04 | -0.04 | 0.25 | 0.04 | 0.16 | 0.22 | 0.24 | 0.02 | 0.20 | 0.26 | 0.08 | 0.08 | -0.05 | 1.00 |  |
| Parents/guardians | -0.09 | -0.10 | 0.10 | 0.09 | -0.08 | 0.00 | 0.03 | 0.05 | -0.08 | -0.06 | -0.08 | -0.16 | -0.15 | 0.11 | -0.05 | -0.11 | -0.03 | -0.06 | 0.09 | -0.05 | 1.00 |

## Appendix IV - 2007 Seychelles GSHS Questionnaire

The questionnaire is displayed here with a smaller font and reformatted, as compared to the questionnaire actually given to students, in order to be shown on less pages.

## 2007 SEYCHELLES GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY

This survey is about your health and the things you do that may affect your health. Students like you all over your country are doing this survey. Students in many other countries around the world also are doing this survey. The information you give will be used to develop better health programs for young people like yourself.

DO NOT write your name on this survey or the answer sheet. The answers you give will be kept private. No one will know how you answer. Answer the questions based on what you really know or do. There are no right or wrong answers.

Completing the survey is voluntary. Your grade or mark in this class will not be affected whether or not you answer the questions. If you do not want to answer a question, just leave it blank.

Make sure to read every question. Fill in the circles on your answer sheet that match your answer. Use only the pencil you are given. When you are done, do what the person who is giving you the survey says to do.

Here is an example of how to fill in the circles:
Fill in the circles like this
Not like this


Survey

1. Do fish live in water?
A. Yes
B. No

Answer sheet


Thank you very much for your help.

1. How old are you?
A. 11 years old or younger
B. 12 years old
C. 13 years old
D. 14 years old
E. 15 years old
F. 16 years old
G. 17 years old
H. 18 years old or older
2. What is your sex?
A. Male
B. Female
3. In what grade are you?
A. S1
B. S2
C. S 3
D. S 4
E. S5

The next 6 questions ask about your height, weight, going hungry, and where you get your lunch.
4. How tall are you without your shoes on? ON THE ANSWER SHEET, WRITE YOUR HEIGHT IN THE SHADED BOXES AT THE TOP OF THE GRID. THEN FILL IN THE OVAL BELOW EACH NUMBER.
5. How much do you weigh without your shoes on? ON THE ANSWER SHEET, WRITE YOUR WEIGHT IN THE SHADED BOXES AT THE TOP OF THE GRID. THEN FILL IN THE OVAL BELOW EACH NUMBER.
6. How do you describe your weight?
A. Very underweight
B. Slightly underweight
C. About the right weight
D. Slightly overweight
E. Very overweight
7. Which of the following are you trying to do about your weight?
A. I am not trying to do anything about my weight
B. Lose weight
C. Gain weight
D. Stay the same weight
8. During the past 30 days, how often did you go hungry because there was not enough food in your home?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
9. Where do you get your lunch most often during school time?
A. I generally do not take lunch
B. School meal
C. Take away bought inside school
D. Take away bought outside school
E. Home made food
F. Snacks from tuck shop such as samosa, kato piman, etc.
G. Other manner
10. Chose the figure that best reflects how you think you look?

A. Drawing A
B. Drawing $B$
C. Drawing C
D. Drawing D
E. Drawing E
F. Drawing F
G. Drawing G
H. Drawing H
11. Choose your ideal figure (how you would like to look)?
A. Drawing A
B. Drawing B
C. Drawing C
D. Drawing D
E. Drawing E
F. Drawing F
G. Drawing G
H. Drawing H

The next 2 questions ask about foods you might eat.
12. During the past 30 days, how many times per day did you usually eat fruit, such as apples, oranges, banana, avocado, mango, papay, zanmalak, frisiter, karanbol, or any other local or imported fruits?
A. I did not eat fruit during the past 30 days
B. Less than one time per day
C. 1 time per day
D. 2 times per day
E. 3 times per day
F. 4 times per day
G. 5 or more times per day
13. During the past 30 days, how many times per day did you usually eat vegetables, such as carrots, lettuce, tomato, cabbage, cucumber, kreson, bred, zariko, or any other local or imported vegetables?
A. I did not eat vegetables during the past 30 days
B. Less than one time per day
C. 1 time per day
D. 2 times per day
E. 3 times per day
F. 4 times per day
G. 5 or more times per day

The next 5 questions ask about drinks or beverages you might consume.
14. On average, how many glasses or small bottles (3 dl) of carbonated soft drinks do you drink, such as Coke, Fanta, Sprite, Bitter Lemon, Cocktail, Pepsi, Mirenda, Yacinthe lemonade, or any similar sweetened drink? (Do not include water, fresh or packet fruit juice, or milk)
A. I do not drink carbonated soft drinks
B. 1-2 small bottles or glasses per week but not every day
C. Several bottles or glasses per week but not every day
D. 1 small bottle or glass per day (on most days of the week)
E. 2 small bottles or glasses per day (on most days of the week)
F. 3 small bottles or glasses per day (on most days of the week)
G. 4 small bottles or glasses per day (on most days of the week)
H. 5 small bottles or glasses per day or more (on most days of the week)
15. When you wish to drink a soft drink, what would you choose usually?
A. Diet Coke
B. Regular Coke
C. I prefer other types of soft drinks (Sprite, Bitter Lemon, lemonade, Yacinthe lemonade, etc.)
D. I rarely drink any soft drink
16. On average, how many glasses or small packets of fruit juice do you drink? (Do not include soft drinks or milk)
A. I do not drink fruit juice
B. 1-2 small packets or glasses of fruit juice per week but not every day
C. Several small packets or glasses of fruit juice per week but not every day
D. 1 small packets or glass of fruit juice per day (on most days of the week)
E. 2 small packets or glasses of fruit juice per day (on most days of the week)
F. 3 small packets or glasses of fruit juice per day (on most days of the week)
G. 4 small packets or glasses of fruit juice per day (on most days of the week)
H. 5 small packets or glasses of fruit juice per day or more (on most days of the week)
17. On average, how many glasses or small bottles of water do you drink? (do not include soft drinks or milk)
A. I do not drink water
B. 1-2 glasses of water per week but not every day
C. Several glasses of water per week but not every day
D. 1 glass of water per day (on most days of the week)
E. 2 small glasses of water per day (on most days of the week)
F. 3 glasses of water per day (on most days of the week)
G. 4 glasses of water per day (on most days of the week)
H. 5 glasses of water per day or more (on most days of the week)
18. On average, how many cups (tas) of tea do you drink? (Do not include water, soft drinks, or milk)
A. I do not drink tea
B. 1-2 cups of tea per week but not every day
C. Several cups of tea per week but not every day
D. 1 cup of tea per day (on most days of the week)
E. 2 cups of tea per day (on most days of the week)
F. 3 cups of tea per day (on most days of the week)
G. 4 cups of tea per day (on most days of the week)
H. 5 cups of tea per day or more (on most days of the week)

The next 2 questions ask about the benefits of healthy eating and benefits of eating more fruits and vegetables.
19. During this school year, were you taught in any of your classes of the benefits of healthy eating?
A. Yes
B. No
C. I do not know
20. During this school year, were you taught in any of your classes of the benefits of eating more fruits and vegetables?
A. Yes
B. No
C. I do not know

The next 3 questions ask about bullying. Bullying occurs when a student or group of students say or do bad and unpleasant things to another student. It is also bullying when a student is teased a lot in an unpleasant way or when a student is left out of things on purpose. It is not bullying when two students of about the same strength or power argue or fight or when teasing is done in a friendly and fun way.
21. During the past 30 days, on how many days were you bullied?
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
22. During the past 30 days, how often were you bullied by students?
A. I was never bullied
B. I was bullied a few times
C. I was bullied several times
D. I was bullied very often
23. During the past 30 days, how were you bullied most often?
A. I was not bullied during the past 30 days
B. I was hit, kicked, pushed, shoved around, or locked indoors
C. I was made fun of because of my race or color
D. I was made fun of because of my religion
E. I was made fun of with sexual jokes, comments, or gestures
F. I was left out of activities on purpose or completely ignored
G. I was made fun of because of how my body or face looks
H. I was bullied in some other way

The next 6 questions ask about your feelings and friendships. The term "suicide" means trying to kill yourself.
24. During the past 12 months, how often have you felt lonely?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
25. During the past 12 months, how often have you been so worried about something that you could not sleep at night?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
26. During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing your usual activities?
A. Yes
B. No
27. During the past 12 months, did you ever seriously consider attempting suicide?
A. Yes
B. No
28. During the past 12 months, did you make a plan about how you would attempt suicide?
A. Yes
B. No
29. How many close friends do you have?
A. 0
B. 1
C. 2
D. 3 or more

The next 6 questions ask about cigarette and other tobacco use.
30. How old were you when you first tried a cigarette?
A. I have never smoked cigarettes
B. 7 years old or younger
C. 8 or 9 years old
D. 10 or 11 years old
E. 12 or 13 years old
F. 14 or 15 years old
G. 16 or 17 years old
H. 18 years old or older
31. 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
32. During the past 30 days, on how many days did you use any other form of tobacco, such as snuff (sike)?
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
33. During the past 12 months, have you ever tried to stop smoking cigarettes?
A. I have never smoked cigarettes
B. I did not smoke cigarettes during the past 12 months
C. Yes
D. No
34. During the past 7 days, on how many days have people smoked in your presence?
A. 0 days
B. 1 or 2 days
C. 3 or 4 days
D. 5 or 6 days
E. All 7 days
35. Which of your parents or guardians use any form of tobacco?
A. Neither
B. My father or male guardian
C. My mother or female guardian
D. Both
E. I do not know

The next 8 questions ask about drinking alcohol. This includes drinking beer, Guinness, wine, spirits (whiskey, rum, vodka, takamaka, or tropical), vermouth, porto, martini, liquors, baka, kalu, or lapire. Drinking alcohol does not include drinking a few sips of wine for religious purposes.
36. 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. 7 years old or younger
C. 8 or 9 years old
D. 10 or 11 years old
E. 12 or 13 years old
F. 14 or 15 years old
G. 16 years old or 17 years old
H. 18 years old or older
37. During the past 30 days, on how many days did you have at least one drink containing alcohol?
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
38. During the past 30 days, on the days you drank alcohol, how many drinks did you usually drink per day?
A. I did not drink alcohol during the past 30 days
B. Less than one drink
C. 1 drink
D. 2 drinks
E. 3 drinks
F. 4 drinks
G. 5 or more drinks
39. What type of alcohol do you prefer to drink? (Select only one answer)
A. I do not drink alcohol
B. Beer or Guinness
C. Wine
D. Imported spirits, such as whiskey, rum, vodka, or Old Brown Cherry
E. Locally made spirits such as Tropical, Takamaka, Smironoff, Black ice, or Island Magic
F. Baka, kalu, or lapire
G. Liquor such as brandy, martini, porto, or vermouth, or Irish Cream
H. Other type
40. During the past 30 days, how did you usually get the alcohol you drank? SELECT ONLY ONE RESPONSE.
A. I did not drink alcohol during the past 30 days
B. I bought it in a store, shop, or from a street vendor
C. I gave someone else money to buy it for me
D. I got it from my friends
E. I got it from home
F. I stole it
G. I made it myself
H. I got it some other way
41. During your life, how many times did you drink so much alcohol that you were really drunk?
A. 0 times
B. 1 or 2 times
C. 3 to 9 times
D. 10 or more times
42. During your life, how many times have you ever had a hang-over, felt sick, got into trouble with your family or friends, missed school, or got into fights, as a result of drinking alcohol?
A. 0 times
B. 1 or 2 times
C. 3 to 9 times
D. 10 or more times
43. During this school year, were you taught in any of your classes of the dangers of alcohol use?
A. Yes
B. No
C. I do not know

## The next question asks about drugs.

44. During your life, how many times have you used drugs, such as marijuana, cannabis or hashish, lapay, steam, stuff, joint, or tyalas? (do not include heroine, cocaine, or ecstasy)
A. 0 times
B. 1 or 2 times
C. 3 to 9 times
D. 10 or more times
45. During the past 30 days, how many times have you used drugs, such as marijuana, cannabis or hashish, lapay, steam, stuff, joint, or tyalas? (do not include heroine, cocaine, or ecstasy)
A. 0 times
B. 1 or 2 times
C. 3 to 9 times
D. 10 or more times
46. Have you ever tried cocaine, heroine, lapoud, sache, nof, or ecstasy?
A. Yes
B. No
C. I do not know

The next 5 questions ask about sexual intercourse. This includes vaginal intercourse (when a man puts his penis into a woman's vagina) and anal intercourse (when a man puts his penis into his partner's anus).
47. Have you ever had sexual intercourse?
A. Yes
B. No
48. How old were you when you had sexual intercourse for the first time?
A. I have never had sexual intercourse
B. 11 years old or younger
C. 12 years old
D. 13 years old
E. 14 years old
F. 15 years old
G. 16 years old
H. 17 years old or older
49. During your life, with how many people have you 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
50. During the past 12 months, have you had sexual intercourse?
A. Yes
B. No
51. The last time you had sexual intercourse, did you or your partner use a condom or kapot?
A. I have never had sexual intercourse
B. Yes
C. No

## The next question asks about learning how to avoid HIV infection or AIDS.

52. During this school year, were you taught in any of your classes how to avoid HIV infection or AIDS?
A. Yes
B. No
C. I do not know

The next 2 questions ask about physical activity. Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time. Physical activity can be done in sports, playing with friends, or walking to school. Some examples of physical activity are running, fast walking, biking, dancing, football, basketball and swimming etc...
ADD UP ALL THE TIME YOU SPEND IN PHYSICAL ACTIVITY EACH DAY. DO NOT INCLUDE YOUR PHYSICAL EDUCATION OR GYM CLASS.
53. During the past $\mathbf{7}$ days, on how many days were you physically active for a total of at least 60 minutes per day?
A. 0 days
B. 1 day
C. 2 days
D. 3 days
E. 4 days
F. 5 days
G. 6 days
H. 7 days
54. During a typical or usual week, on how many days are you physically active for a total of at least 60 minutes per day?
A. 0 days
B. 1 day
C. 2 days
D. 3 days
E. 4 days
F. 5 days
G. 6 days
H. 7 days

The next question asks about the time you spend mostly sitting when you are not in school or doing homework.
55. How much time do you spend during a typical or usual day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities, such as watching DVD videos?
A. Less than 1 hour per day
B. 1 to 2 hours per day
C. 3 to 4 hours per day
D. 5 to 6 hours per day
E. 7 to 8 hours per day
F. More than 8 hours per day

The next 3 questions ask about hours per day or week you watch TV or videos, or play computer games.
56. How many hours per DAY do you usually watch TV or videos on week days?
A. Not at all
B. Less than 1 hour per day
C. $1 / 2$ to 1 hour per day
D. 1 to 2 hours per day
E. 2-3 hours per day
F. 4-5 hours per day
G. 6 hours or more per day
57. How many hours per DAY do you usually watch TV or videos on week ends?
A. Not at all
B. Less than 1 hour per day
C. $1 / 2$ to 1 hour per day
D. 1 to 2 hours per day
E. 2-3 hours per day
F. 4-5 hours per day
G. 6 hours or more per day
58. How many hours per WEEK do you usually play computer games? (e.g. on your television, computer, Game Boy, X-box, Nintendo, or Playstation)
A. Not at all
B. Less than 1 hour per week
C. 1 to 3 hours per week
D. 4 to 6 hours per week
E. 7 to 9 hours per week
F. 10 hours or more per week

The next 2 questions ask about going to and coming home from school.
59. During the past 7 days, on how many days did you walk or ride a bicycle to and from school?
A. 0 days
B. 1 day
C. 2 days
D. 3 days
E. 4 days
F. 5 days
G. 6 days
H. 7 days
60. During the past 7 days, how long did it usually take for you to get to and from school each day? ADD UP THE TIME YOU SPEND GOING TO AND COMING HOME FROM SCHOOL.
A. Less than 10 minutes per day
B. 10 to 19 minutes per day
C. 20 to 29 minutes per day
D. 30 to 39 minutes per day
E. 40 to 49 minutes per day
F. 50 to 59 minutes per day
G. 60 or more minutes per day

The next 4 questions ask about physical education, playing on sports teams, benefits of physical activity, and extra curricular activities.
61. During this school year, on how many days did you go to physical education class each week?
A. 0 days
B. 1 day
C. 2 days
D. 3 days
E. 4 days
F. 5 or more days
62. During the past 12 months, on how many sports teams did you play outside of school hours?
A. 0 teams
B. 1 team
C. 2 teams
D. 3 or more teams
63. During this school year, were you taught in any of your classes of the benefits of physical activity?
A. Yes
B. No
C. I do not know
64. Did you take part in any extra curricular activities that was related to physical activity such as basketball, football, hiking, swimming, or dancing?
A. I did not take part in any extra curricular activities
B. I took part in extra curricular activities, but not related to physical activity
C. I took part in extra curricular activities related to physical activity

The next 5 questions ask about your experiences at school and at home.
65. During the past 30 days, on how many days did you miss classes or school without permission?
A. 0 days
B. 1 or 2 days
C. 3 to 5 days
D. 6 to 9 days
E. 10 or more days
66. During the past 30 days, how often were most of the students in your school kind and helpful?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
67. During the past 30 days, how often did your parents or guardians check to see if your homework was done?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
68. During the past 30 days, how often did your parents or guardians understand your problems and worries?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
69. During the past 30 days, how often did your parents or guardians really know what you were doing with your free time?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always

## The next question asks about pocket money.

70. How much pocket money do you get every day on average?
A. I do not receive any pocket money
B. Less that 5 rupees per day
C. 5-9 rupees per day
D. 10-14 rupees per day
E. 15-19 rupees per day
F. $20-25$ rupees per day
G. More than 25 rupees per day
