



In country report



Departamento di Enseñansa Aruba

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Acronyms

AIDS	: Acquired Immunodeficiency Syndrome
AZV	: Algemene Ziektekosten verzekering
BMI	: Body Mass Index
CBS	: Central Bureau of Statistics
CDC	: Centre for Disease Control
DPH	: Department Of Public Health
EGSE	: Encuesta Global de la Salud Escolar
EPB	: Educacion Profesional Basico
EPI	: Educacion Profesional Intermedio
GSHS	: Global School Health Survey
HAVO	: Hoger Algemeen Voortgezet Onderwijs
HIV	: Human Immunodeficiency Virus
MAVO	: Middelbaar Algemeen Voortgezet Onderwijs
NSVRC	: National Sexual Violence Resource Centre
OCT's	: Overseas Caribbean Territories
PANCAP	: Pan Caribbean Partnership for HIV and AIDS
PHCO	: Pan American HIV Caribbean Office
STI	: Sexual Transmitted Infection
YBRSS	: Youth Behavior Risk Factors Survey
USA	: United States of America
WHO	: World Health Organization

Introduction



1 Introduction

As acknowledged by the World Health Organization (WHO) adolescents (between 10 and 19 years) are often thought of as a healthy group. However, many adolescents do die prematurely due to accidents, suicide, violence, pregnancy related complications and other illnesses that are either preventable or treatable. Numerous more suffer of chronic ill-health and disability. Additionally, many serious diseases in adulthood have their roots in adolescence. Moreover, tobacco use, sexually transmitted infections including HIV, poor eating and limited exercise habits, lead to illness or premature death later in life (WHO, 2013).

In 2012 the HIV prevalence in Aruba among children and adolescents 0 to 24 years old were 4.9 cases per 10,000. It was also observed that the vertical transmission of HIV in Aruba was present, however in a small number of cases. In 2005, a condom survey was conducted among secondary school going youth (12 -21 years) this survey showed that 42% of the youth reported to have had sexual intercourse and their average age of sexual debut was 14.2 years. Furthermore, a quarter reported to have had multiple sexual partners; however 47% of the sexually active adolescents never used a condom. From this survey it was also observed that the adolescents had a low risk perception and a limited knowledge about HIV.

In Aruba, the prevalence of risk factors among adolescents influencing their health is unknown; this due to the fact that indicators about the adolescent's personal, perceived and social environment are scattered over the different stakeholders who work closely with them. With this survey a description of the prevalence of the different risk and protective factors together with the adolescent's own perception of their environment shall be presented.

Background

In January 2009 the implementation of the project funded by the European Commission “Strengthening the integration of the British and Dutch OCTs in the Regional Response to HIV/AIDS through the Pan Caribbean Partnership against HIV/AIDS” was started. In this project each Overseas Caribbean Territories (OCT’s) including Aruba were directly addressed by the EU commission for the response to HIV on both national as regional levels. The Pan-American Health Organization/ World Health Organization through its HIV Caribbean Office (PHCO) based in Trinidad & Tobago was designated as the implementing agency for this project.

The goal of this project is to stop the progress of and reverse the spread of HIV/AIDS in the Caribbean region. In addition, this project aims to minimize its impact on the health, social and economic sectors, in the context of poverty reduction strategies. The project strategy identifies five priority areas consistent with the priority areas of the first Caribbean Regional Strategic Framework (CRSF) of the Pan Caribbean Partnership for HIV and AIDS (PANCAP). This survey complies with the first step to enhance prevention efforts and prioritizations for the reduction of HIV/AIDS in the OCT’s.

Information gathered through this survey will give Aruba a baseline of indicators on the adolescent population of Aruba attending secondary schools. To date, no indicators pertaining to the knowledge, attitude and behavior about the sexual reproductive health of the adolescents is known. In addition to sexual reproductive health, indicators for the personal environment, perceived environment system and social environment which have its influences on the behavior system of the adolescents was also investigated. As described in the PHCO protocol, this study has adopted the theoretical framework based on the *Problem Behavior Theory of Jessor & Jessor, 1977* , the Social Cognitive Theory by Bandura, 1977 and the Ecological Systems Theory by Bronfenbrenner, 1979 (PHCO, n.d.)

The received PHCO study protocol describes the methodology to be applied in the participating countries. However, since the countries vary in sizes, specific details of sampling and implementation need to occur. Therefore each country had to make adjustments to each country context. Aruba made the necessary modifications to the study in terms of sample size, instrument and implementation, nevertheless with the approval of the PHCO.

Objectives

Goal

Regional:

To strengthen HIV/STI prevention and comprehensive health programs and services for young persons in the Dutch and British OCT's.

National:

To contribute to the strengthening of national health policies, prevention programs and services aimed at the Aruban adolescents and also to the expansion of the services provided by the Youth Healthcare unit at the Department of Public Health Aruba.

General objective:

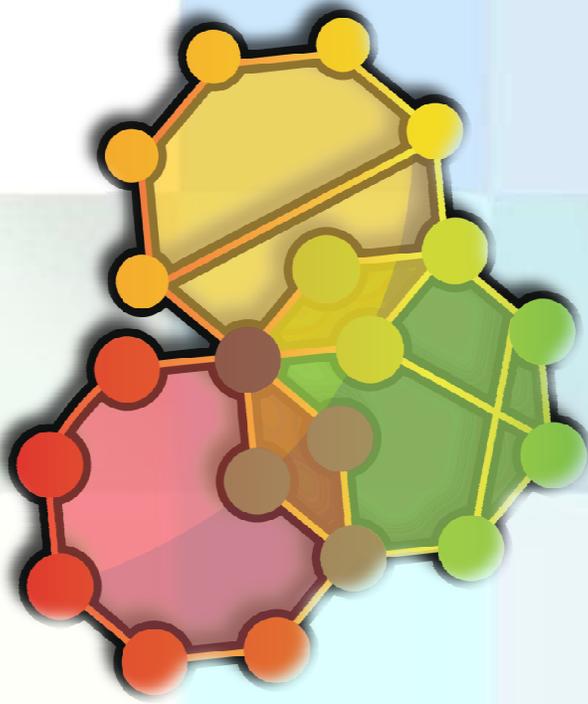
To enhance understanding of the factors that influence the health and wellness of young persons, with the emphasis on HIV and sexual and reproductive health in Aruba and the OCT's, as a basis for the development, adaptation, and monitoring of targeted health programs and services for young persons.

Specific objectives:

To assess protective and risk factors related to the health and wellness of young persons.

To assess the knowledge, attitudes, perceptions and behaviors of young people related to HIV, sexuality, and other sexual and reproductive health issues.

Methodology



2 Methodology

2.1 Study design

The Youth Health Survey Aruba 2012 is a quantitative study using a survey among secondary in-school-going youth in Aruba. Quantitative methods allows for a collection of more objective data on a large number of variables based on a fixed response option among a large number of respondents. (PHCO, 2010)

In this study Aruba applied and followed the “Protocol for implementation of a study on youth health and sexuality” of the Pan-American Health Organization Caribbean Office (PHCO). This protocol included a quantitative and qualitative instrument. To be able to standardize the data collection within the participating countries, the proposed instrument had to be used by all participating countries.

A representative random sample was drawn from classes of secondary schools in Aruba with the exception of the private schools and other non-public schools.

The school based survey was administered in the classrooms by trained field staff. Each student had to complete their own survey individually and deposit the survey in a sealed envelope.

Anonymity was kept by giving each selected student a serial number, complying with the guidelines of Good Epidemiological Practice by the International Epidemiology Association (IEA, 2010).

Informed consent was used because a large portion of the secondary school going youth was younger than 18 years. Therefore permissions had to be granted by parents or guardians of the participating youth. The informed consents were kept safe and separate from the surveys.

2.2 Instrument design

The quantitative instrument consisted of core questions and expanded questions. The core questions were required by the PHCO to be used by all participating countries. Expanded questions were optional to be used by each country.

Aruba chose to do the core questions and the expanded questions and added two extra modules to the survey. These were the Dental condition and Physical measurements modules.

The majority of the questions were closed questions. Some questions were left open. Each module was divided by headers, see table 1.

	Modules	Core & expanded items	Aruba items
A	About you	Demographics and family structure	Country of birth & Nationality, Region
B	Peer relationships	Friends and perceived behaviour	
C	Family Relationships	Parental involvement, risk behaviour parents, presence of caring parents, parent child communication, physical and/or sexual abuse by family members	Suicidal behavior of parents
D	Sexual & Reproductive Health	Sexual behavior incl. e.g. sexual active, age of first sex, number of sex partners, use of protection during intercourse, type of contraceptive used, pregnancies & abortions, substance use before intercourse, sexual abuse by partner(s)	
E	Knowledge & Attitudes	Knowledge about HIV transmission, attitudes towards contraception, fertility, gender roles, susceptibility to HIV	
F	Health Services	Availability health services, trust in health service personel, knowledge of how to obtain health services	
G	Social & Mental Health	Selfesteem, psychological distress, religiosity	
H	Tobacco, Alcohol and other substances	Regular use of alcohol and other substances e.g. marihuana. Hard drugs. Reasons substances	
I	School environment	Expectation of academic achievement, expectation of future achievement, connectedness to school, teacher student support, sexual education at school, engagement with organized social groups, work engagement/performance	
J	Hygiene	Personal hygiene	
K	Nutrition	Consumption of fruits and vegetables	
L	Physical Health	Knowledge about own weight and height. Own perception weight, satisfaction with own weight	
M	Dental condition		Consumption of dentist/orthodontist services. In possession of "saneringsbewijs" (no carries), having braces, reason going to dentist.
N	Physical Measurements		Measurement of weight, height, bloodpressure, heart rate, waist circumference.

Table 1 Modules of the questionnaire, with core and expanded questions and Aruba items.

The instrument was developed based on reviews of methodologies and lessons learned from similar studies in the Caribbean and other parts of the world. The instrument included questions originating from The Global School-based Student Health Survey (GSHS), Adolescent Health Survey in the Caribbean (2000) and Behavioral Surveillance Survey.

The module physical measurements and the variables are presented in table 2. The measurements were collected using a separate form. After these measurements the respondents received a card with the collected data for their personal use.

Variables	Unit
Blood pressure	mm Hg
Heart rate	bpm
Height	cm
Weight	Kg
Pregnant	yes/no

Table 2 Variables collected in module Anthropometrical measurements

To receive a more accurate result in the measurements of the blood pressure measurements, it was measured two times together with the heart rate. It is known that the heart beat and blood pressure are directly influenced by excitement. Therefore the first measurement was blood pressure and heart rate, followed by the other readings and at the end of the readings the blood pressure and heart rate was again.

The personnel used for the collection of these measurements were nurses or Youth health Physicians of the Department of Public Health. The teams consisted of either 1 nurse with 1 doctor, or 2 nurses or 1 nurse with 1 administrative worker.

Equipment used for these measurements were; OMRON M4-1 digital blood pressure monitor for blood pressure and heart rate, a scale in kilograms for the weight and for the height a portable measuring board was used for measuring the height.

2.3 Pilot of the instrument

A year before the execution of the survey, the PHCO piloted the first version of the instrument in the English language on Aruba. The following table (3) illustrates the general observation of the pilot.

General Observations and comments:

The following were verbalized by students following a discussion:

- Some of the questions were referred to as very personal.
 - Most of the youths felt that some of the questions were uncomfortable, but they did not have any difficulty responding to the questions.
 - Some of the participants felt that they had to think before responding to the questions.
 - The young people were generally laughing before settling down into responding to the questions.
 - Some felt that the questionnaire was too long.
 - In general the questionnaire was completed within 45 minutes to an hour.
 - For some young people they appeared bored after some time.
 - Except for Aruba, there were no problems with understanding the questions.
 - In two territories, the time of the day (Friday evening) may have affected the outcome of the pilot.
 - Reaching the out of school youth would have required additional time, and hence the tool was not piloted with this group.
-

Table 3 General observations and comments PHCO on piloted instrument.

The pilot showed that the Aruban students had some difficulties understanding some of the questions, this because of the type of words used in the questions.

Four (4) languages are spoken in Aruba, Dutch and Papiamentu being the official languages and Papiamentu as the native language also. English and Spanish are also widely spoken. Therefore the instrument had to be translated into these 4 languages. Official local interpreters in these languages were in charge of these translations.

The instrument in these 4 languages was again piloted before the execution of the survey.

No major differences from the PHCO pilot were detected; however students with a higher educational level needed less time to complete the survey as compared to students with a lower educational level. Therefore it was proposed and decided to reserve a maximum of 1 hour and 30 minutes for the survey to take place in schools.

2.4 Sampling

The sample for the Youth Health Survey Aruba 2012 was drawn by Central Bureau of Statistics (CBS) of Aruba, using the population data and of the population attending secondary schools. The latter was obtained from the Department of Education of Aruba. A random sample (95% CI) of all the classes of all 14 secondary schools on Aruba was drawn.

In 2011, the total Aruban population between the ages 12 and 19 years was 12,119. However as of September 2011 as provisional data of the CBS, only 9058 adolescents were attending secondary schools in Aruba, including students who were in in-service training.

Until now there is no quantitative data about risk behavior of adolescents in terms of their health, therefore a sample of 80% of the total adolescent population attending secondary schools were drawn. For the total number of students and classes in the sample see table 4.

Sample	Sum	Classes
EPB	1505	102
EPI	1374	70
School HAVO	1303	51
MAVO	2681	111
VWO	381	16
Total	7244	350

Table 4 80% sample of all secondary school in Aruba, CBS 2011

From this sample a sub sample was drawn for the collection of biometrical measurements for the calculation of e.g. BMI. The participation to these measurements was not obligatory.

Since there is no data available with reference to anthropometric data regarding adolescents, a subsample of about 1000 adolescents was calculated to give representative data.

Subsample	Sum	Classes
EPB	213	14
EPI	166	10
School HAVO	183	7
MAVO	374	15
VWO	57	2
Total	993	48

Table 5 Subsample student's anthropometric measurement including in service- training students

An oversampling of 1011 students was selected for the anthropometric measurements from 48 different classes from the participating schools on Aruba.

2.5 Response

Of the 7244 secondary school attending adolescents selected in the random sample, 4765 (65.8%) participated with the survey. And from the 1011 students selected for anthropometric measurements, 699 (69.1%) students participated.

The main reason for not participating with the survey was absence of the students (65%). About 3.9% did not receive parental consent to participate and 1.8% did not have a consent form to participate. Some classes were dropped from the survey because, either they had a free hour on the school roster or they were graduate classes whereby the whole class was absent during the survey hours.

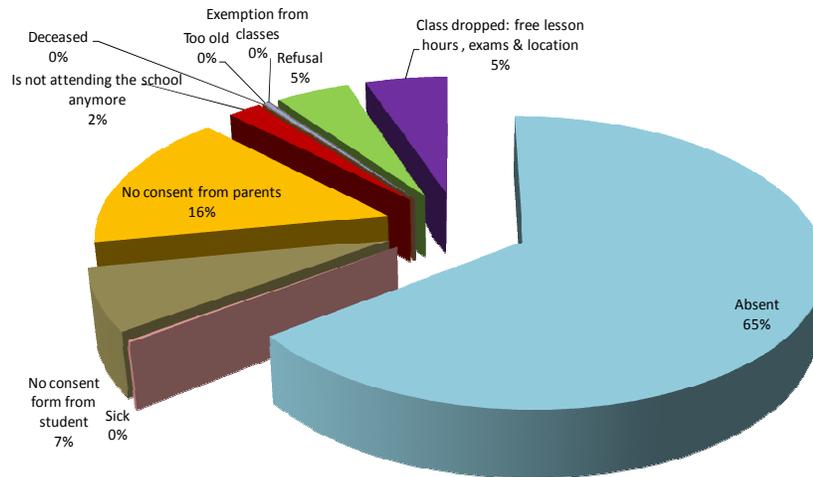


Figure 1 Reasons for not participating to the YHS Aruba 2012

2.6 Data collection processing and analysis

Students filled out the surveys by hand and delivered the survey to the field personnel present in the classroom, the surveys were sealed in an envelope. The questionnaire did not include any name of the participant. The field personnel handed in these sealed envelopes to the field worker coordinators at the Epidemiology Unit of the Department of Public Health.

Each questionnaire was entered into the computer program SPSS. A code book was used by the data entry personnel to code the answers and enter them in a structured manner in SPSS. In the SPSS file variables were created similar to the questionnaire. A Pearson's chi-square was used at a statistical significant level e.g. $p < 0.05$ for associations between categorical variables in this random sample.

Since the sample represents the adolescents aged 12 to 19 years, analysis for single age adolescent population was done for some risk or protective factors.

Analysis for the prevalence of either risk or protective factors at the different educational levels was also calculated by using the adolescent population at each level of education as the denominator.

Ethical considerations

Following the protocol for implementation of this Youth Health Survey and sexuality study designed by the PHCO, the necessary precautions were taken in the classrooms to protect the participants. As described in the protocol, the specific measures were taken in the classrooms by the field workers. The classroom furniture was arranged with sufficient space between the desks to avoid easy viewing of the desk of others. Field staff and teachers were not allowed to wander through the room. The questionnaires were deposited in an envelope and were immediately sealed by the field worker.

Field workers were instructed to give the necessary information about the survey to the participants and their options. Whenever the participants felt uneasy to answer a question, he or she could stop with the survey and leave the classroom.

No personal information was allowed on the questionnaire and the field worker was not allowed to browse through the questionnaire when submitted by the participant.

Even though the protocol of the PHCO stated that schoolteachers were not allowed in the classroom during the administration of the survey, this could not be followed on Aruba. The reason for this is because the field staff was not allowed by the Aruban law to stand alone in the classroom with students without a teacher being present.

Data management and analysis

Data was managed by the staff of the Epidemiology and Research Unit of the Department of Public Health.

Country Profile



3 Country profile

3.1 Demographics Aruban population

At the end of 2011 the population of Aruba consisted of 103,504 inhabitants, of which 49,075 (47.4%) were males and 54, 429 (52.6%) were females. Aruba is densely populated with an average of 575 persons per km² and the majority of the population lives on the northern side of the island (Department of Public Health Aruba, 2013). Aruba is divided 7 districts and its capital Oranjestad.

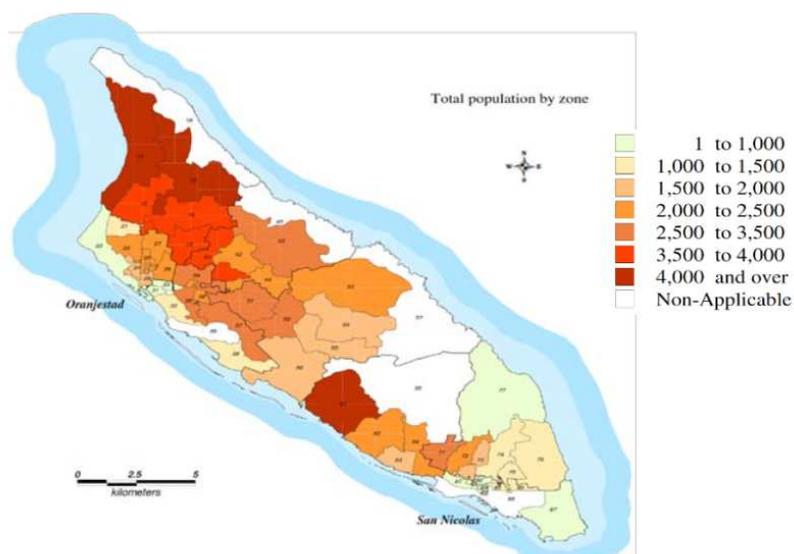


Figure 2 Population density Aruba, 2011

3.2 Demographics adolescent participants

In total 4765 students attending secondary schools on Aruba, between the ages of 12 and 19 participated in the Youth Health Survey Aruba 2012.

Of these 4765 students, 2464 (51.7%) were females and 2301 (48.3%) were males. The age distribution by age category is presented in the next table.

Age distribution (yrs)	n	%
12	277	5.8
13	678	14.2
14	899	18.9
15	880	18.5
16	799	16.8
17	627	13.2
18	403	8.5
19	202	4.2

Table 6 Age distribution of the sample population

The Aruban population has a diversity of different nationalities and countries of origin. This is also reflected in the adolescent sample. However the majority (79.8%) of the population were Aruban born, 20.2% were born in other countries in the region and in European and in Asian countries. See the table below.

Other country of birth		
	n	%
Caribbean island	222	4.7
Latin American country	438	9.3
European country	209	4.4
Asian country	17	0.4
South Pacific country	24	0.5
North American countries	29	0.6
Area not specified	13	0.3
Total	952	20.1

Table 7 Other country of birth

The majority of the participant's have a Dutch nationality, 87.0%. The remaining 13% of the participants had a variety of 30 different nationalities.

3.3 Religion of studied population

Since the discovery of Aruba by the Spaniards and the Dutch colonization, Christianity has been the most common religion on the island. The Christian religion is also in majority under the participants, about 98.1% have a Christian religion and the remaining 1.5% has a non- Christian religion. Less than 1 % of the participants stated not to remember or was not sure which religion they had.

3.4 Educational levels of studied population

In total 14 secondary schools of different education levels participated with this Youth Health Survey.

Also these 14 secondary schools have different levels of education. In table 8 the different schools are presented and the number of students which participated with the survey and its percentages of the total. These schools are geographically spread out over the island.

What is the name of your school?			
		n	%
Lower level vocational and technical education	EPB Hato	601	12.6
	EPB St. Cruz	83	1.7
	EPB San Nicolas	344	7.2
Academically oriented 5 yrs and 6yrs preparatory course to higher professional education or university	Colegio Arubano O'stad	1020	21.4
	Colegio Arubano San Nicolas	100	2.1
Academically oriented 4 yrs preparatory course to middle level professional education.	Juliana School	267	5.6
	Mon Plaisir College	161	3.4
	Maria College	398	8.4
	Colegio San Antonio	345	
	La Salle College	370	7.2
	Filomena College	185	7.8
	Colegio San Augustin	165	3.9
	John Wesley College	147	3.5
C.G. Abraham de Veerschool	139	3.1	
Middle Level vocational and technical education	EPI	440	9.2
		4765	100

Table 8 Population distribution of participating students by schools

Health Behavior Risks



4 Health Behavior Risks

4.1 Usual source of medical care

In 2001, the General Health Insurance (Algemene Ziektekosten Verzekering (AZV)) was established to provide universal access to health care for all Aruban citizens as well as persons who legally work on the island. Health care providers, including all primary care physicians, specialists, most dentists, physical therapists, and midwives, are contracted by the AZV. This insurance system provides accessibility of medical care to all Aruban residents reducing the health inequity in medical care. Improvement of equity to medical care therefore is essential to maintain health or health outcomes of a population. It also complies with fairness and human rights norms (WHO, Health Systems, 2013). Adolescents worldwide face many barriers in obtaining health services and commodities they need. The focus of WHO is on making existing health facilities - which are intended to provide health services to all segments of the population – more adolescent 'friendly' (WHO, Adolescent health, 2013).

When the Aruban school going adolescents were asked where they usually go for medical care, 60.8% responded that they go to their doctor (general practitioner) whereas 22.2% do not go anywhere for medical care, 5.3% stated to go to a public clinic, 9.8% go to the hospital and 0.2% go to a traditional healer. It is observed that more males (64.6%) go to doctor for medical care as compared to the females (56.8%). Also a slightly higher percentage of the females (23.0%) compared to the males (21.5%) stated to go nowhere for medical care.

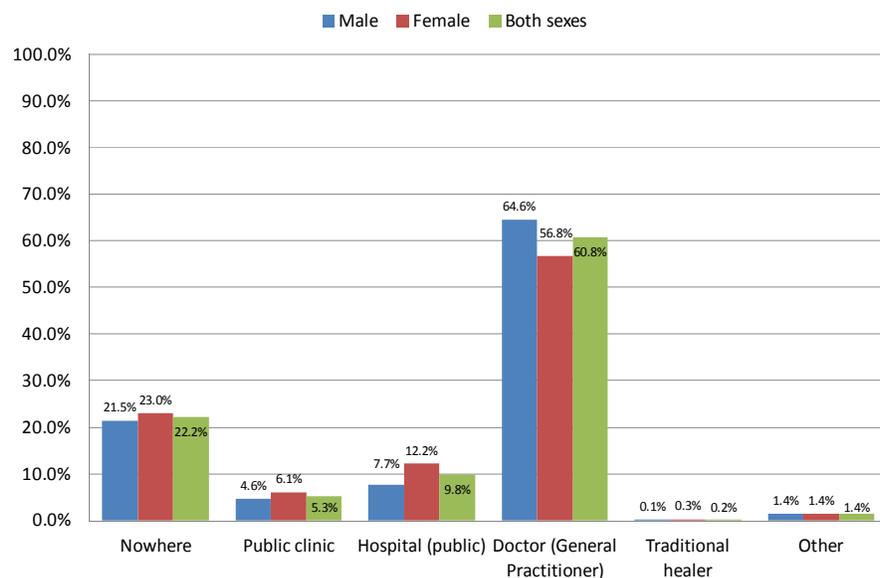


Figure 3 Use of health care facilities by the secondary school youth in Aruba, 2012

For the EPB students, one third (32.6%) do not go anywhere for medical care. For the MAVO students this is one out of 5 (22.7%), for the HAVO/VWO students this percentage was 13.3%.

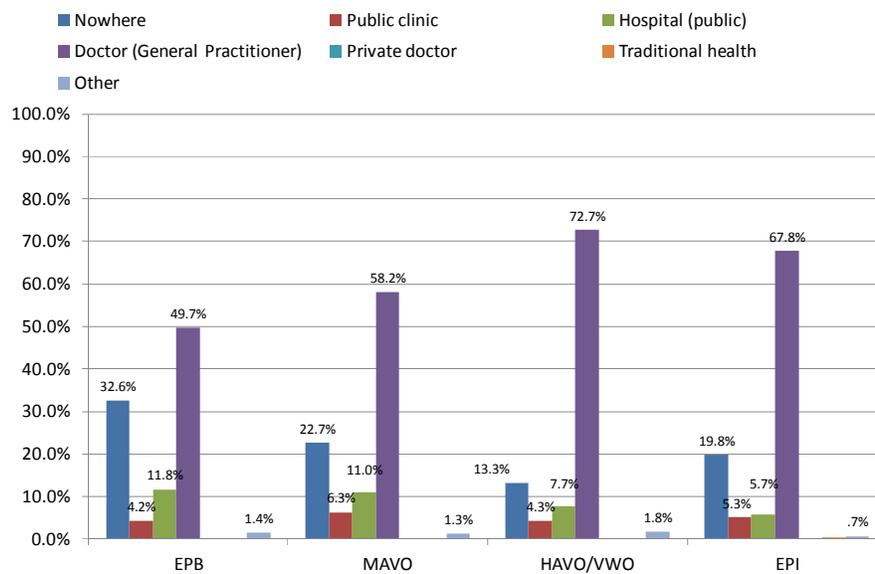


Figure 4 Use of health care facilities by the secondary school going youth by educational level

When different statements (see table 9) were asked about health care services and health care providers, 62.7% of the students stated that they found that health care providers do listen carefully to the youths. Furthermore, the students said that health care providers are friendly and do care for the needs of the youths (56.8%) and that they treat all youth clients with equal care and respect (55.3%). On the other hand, almost half of the adolescents stated that they are not sure if the health care providers can keep the adolescents' personal issues to themselves (49.3%), they are not sure if their parents or others in the clinic will know their personal issues. Fifty five percent (54.6 %) of the adolescents were not sure whether the opening hours of the health care facilities are somewhat inconvenient for them.

Also more than half of the adolescents (56.3%) stated that they are not sure if the youths are being asked to be involved in or asked about how to provide services to them.

However, after analyzing the answers to these statements up close, it was we observed that overall more than one third of the adolescents were not sure about the services provided to them.

Statements	Yes	No	Not sure
If I tell a health care provider, such as a nurse or doctor, something personal, my parents or others in the clinic or community will know	22.9	27.8	49.3
Health care providers listen carefully to youth	62.7	7.0	30.3
Health care providers are friendly and care about youth needs	56.8	8.0	35.2
Youth feel satisfied with the services they receive when they visit a health care facility, like a clinic or hospital.	36.7	18.1	45.2
Getting to a health care facility is easy for youth	23.5	35.0	41.5
The hours health care facility are open are convenient for youth	26.9	18.5	54.6
Youth know all about the health services that are available to them and how to obtain them	19.3	35.9	44.9
Youth are involved in or are asked about how to provide services to youth	22.1	21.7	56.3
Youth feel comfortable discussing reproductive health concerns, such as sex, HIV and birth control, with health care providers	26.1	33.8	40.1
Health care providers treat all youth client with equal care and respect	55.3	7.2	37.4

Table 9 Statements about health care services and personnel

4.1.1 Visits to the dentist and procedures

More than one third (37.9%) of the secondary school going adolescents have visited the dentist once or twice during the past year prior to the survey. While one out of ten (11.4%) has visited the dentist only 1 time during the past year and more than one out of five (22.7%) has never visited a dentist during the past year.

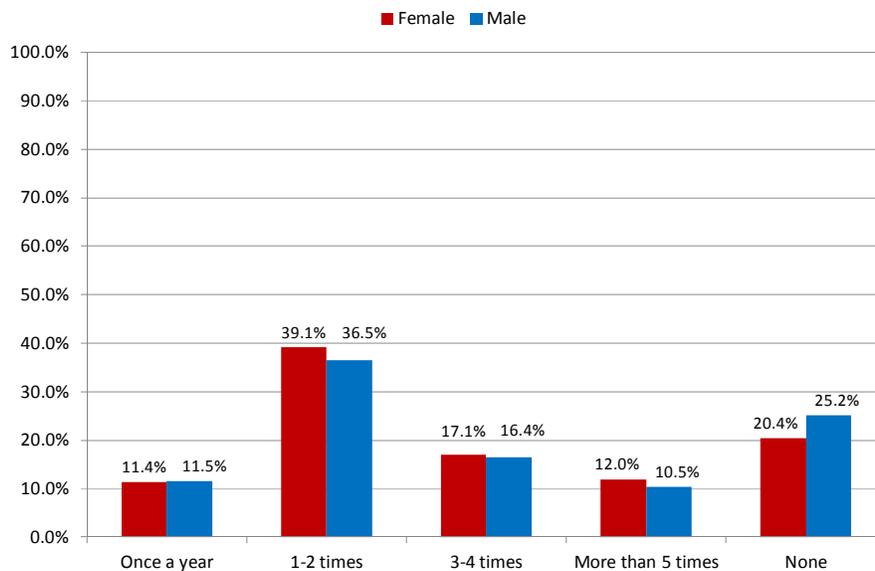


Figure 5 Visits to the dentist during the past year by gender

Overall there are no big differences between females and males regarding visits to the dentist during the last year. From the adolescents who did not go to the dentist last year, more than a quarter thinks it is not necessary (27.8%) while 1 out of 5 (21.4%) think it is too expensive. However, 14.4% have stated that they are afraid of the dentist. The last time the adolescents visited a dentist prior to

the survey was also measured, 9.7% visited the dentist 1-4 weeks prior to the survey and 0.5% visited the dentist more than 5 weeks prior to the survey.

What is the main reason for NOT going to the dentist the last year?		
	n	%
I'm afraid of the dentist	134	14.4
I don't think it is important	116	12.4
I don't think it is necessary	259	27.8
The dentist is too expensive	200	21.4
Other	224	24.0
Total	933	100.0

Table 10 Reasons for not going to the dentist

The main reason why the secondary school going adolescents have visited a dentist was for a regular checkup (34.6%) and 28.8% for a cleaning (fluoride treatment/tartar removal). The remaining 27.9% was because of pain and/or extraction of a tooth or molar and/or filling of a tooth or molar.

These procedures are regular procedures; however there are more complicated procedures like surgical procedures which are being done by dentists. Among the secondary school going youths, 19.4% has stated to have ever had a dental surgical procedure. From the ones who had surgical procedures, almost 60% (57.8%) had a complicated tooth extraction. One out of five (20.6%) had an impacted or complicated removal of third molars and 18% had other type of surgical procedures which were not defined. Yet, 3.5% did not know what type of surgical procedures was carried out.

4.1.2 Dental health record ('saneringsbewijs')

A dental health record card ('saneringsbewijs') is a card that is evidence that the denture of the person is remediated and is healthy from the age of 4 up to 18 years. This card is given by dentists only, and it is valid for 1 year. The dental health record card enables the AZV to cover other preventive treatments.

Findings about this topic among secondary school going youths were, that a quarter of the school going youths did have a dental health record card (26%), while more than one third (38,3%) did not have this card.

Yet, 25.1% did not know if they have such a card and 10% never visited the dentist. From the ones who had a dental health record card, a slightly higher percentage was females (55.1%) whereas 44.9% were males.

4.2 Life style of adolescents

Adolescents establish patterns of behavior and make lifestyle choices such as lack of physically activity and choosing improper nutrition which in turn may affect their health during their transition from childhood to adulthood (WHO, 2010).

4.2.1 Nutrition

Nutrition is a critical part of an individual's health and development. A healthy eating pattern during childhood and adolescence is important for proper growth and development. This can prevent the development of health problems and chronic non-communicable diseases such as diabetes and even cancer (WHO, 2010).

Fruits and vegetables

Consumption of fruits was measured by the number of times fruits have been eaten per day during a period of 7 days prior to the survey. Almost three quarters (72.3%) of the secondary school going adolescents consumed fruits such as apple, orange, watermelon or banana one or more times per day during the past 7 days. From all female adolescents between 12 and 19 years, 70.8% ate fruits one or more times per day during the past 7 days. For the males this was 74.0%, a slightly higher percentage as compared to the females, see figure 6A.

Fruit consumption by single age shows that adolescents 14 years old have the highest percentage of fruit consumption during the past 7 days, figure 6B shows the percentage of fruit consumption by single age. It has to be noted that fruit consumption tends to decrease with increasing age.

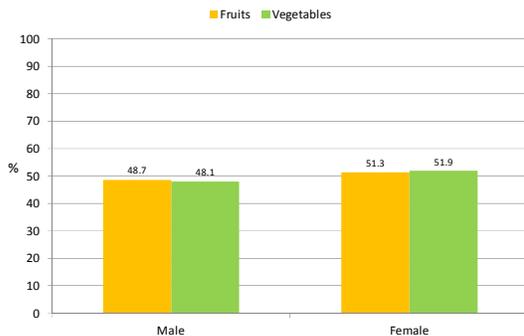


Figure 6A Fruits & vegetables consumption by gender

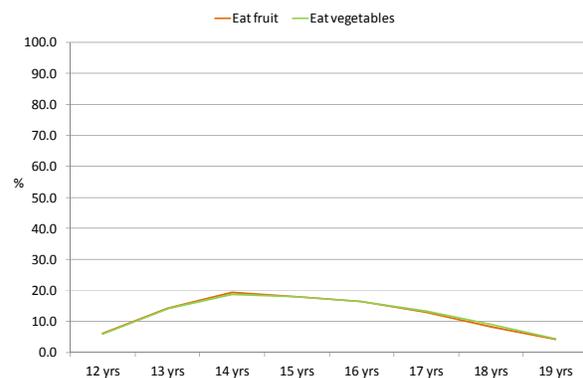


Figure 6B Fruits & vegetables consumption by single age

Vegetables were consumed by a higher percentage of adolescents as compared to fruits, 82.1% of the adolescents have stated to consume vegetables one to more times a day during the past 7 days. More than 80% (81.2%) of the female adolescents have consumed vegetables one or more times a

day during the past 7 days; however the males have a slightly higher percentage as compared to the females, 83.1%.

Analyzing vegetables consumption by age we see the same trend with fruit consumption; the consumption of fruits and vegetables seems to increase up to age 14 and then decrease with increasing age.

Overall, there was no big difference between sex or age, for the consumption of fruits and vegetables. Yet, there is still a large amount of students who did not consume any fruits or vegetables during the last 7 days (fruits: 14.8 %; vegetables: 10.0 %). According to the “General Guidelines Nutrition and Movement for Aruba”, adolescents should have 4 portions of fruits and vegetables every day (DPH et al., 2012). It has to be mentioned that since the survey has measured only the frequency of the consumption of fruits and vegetables and not number of portions, no comparisons can be made with the national guidelines of Aruba.

Soda (sugar- sweetened beverage)

More than three quarters (77.7%) of the adolescents have stated to drink one or more cans, bottles or glasses of soda per day during the past 7 days. Females have a higher percentage of soda consumption as compared to the males, 52.5% and 47.5% respectively. Still there are 7.8% of the adolescents who have not consumed soda during the past 7 days. According to the Dietary Guidelines for Americans 2010, drinking sugar-sweetened beverages can result in weight gain, overweight, and obesity (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2010). It has to be noted that one out of five adolescents (21.3%) drink four to more than 5 sodas per day during the past 7 days. Taking into account that one can of soda can contain 39 grams of sugar, these adolescents have consumed more than 156 grams of sugar during a period of 7 days. This amount of sugar is comparable to 39 sugar cubes.

Fast food consumption

In this survey adolescents were asked whether they ate fast food (outside of home) during the period of 7 days prior to the survey. Examples of fast foods were Burger King, Mc Donald’s, Wendy’s or Taco Bell. As mentioned in the Dietary Guidelines for Americans 2010, individuals who eat fast food once or more times per week are at increased risk for gaining weight, becoming overweight and finally becoming obese (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2010). During the past 7 days almost three quarter (73.2%) of the adolescents has stated to have eaten fast food less than 1 time per day to 5 times or more per day. On the contrary, a little more than a quarter, 26.7%, of the adolescents have stated to not have eaten fast food during the past 7 days.

During the past 7 days, on how many times per day did you eat fast food (out of home)?		
	n	%
Less than 1 time per day	1157	25.1
1 time per day	1276	27.7
2 times per day	492	10.7
3 times per day	225	4.9
4 times per day	80	1.7
5 times or more per day	146	3.2
Didn't eat fast food during past 7 days	1232	26.7
Total	4608	100.0

Table 11 Frequency of fast food consumption (out of home) during the past 7 days prior to the survey

Still, 1 out of 5 (20.5%) of the adolescents have stated that they have eaten fast food during the past 7 days 2 times to more than 5 times per day, see table 11.

One third of the female adolescents have stated to eat fast food 1 time per day during the past 7 days, for the males this is 25.7%. While a higher percentage of the males (27.7%) as compared to females (25.8%) have stated to not have eaten fast food during the past 7 days.

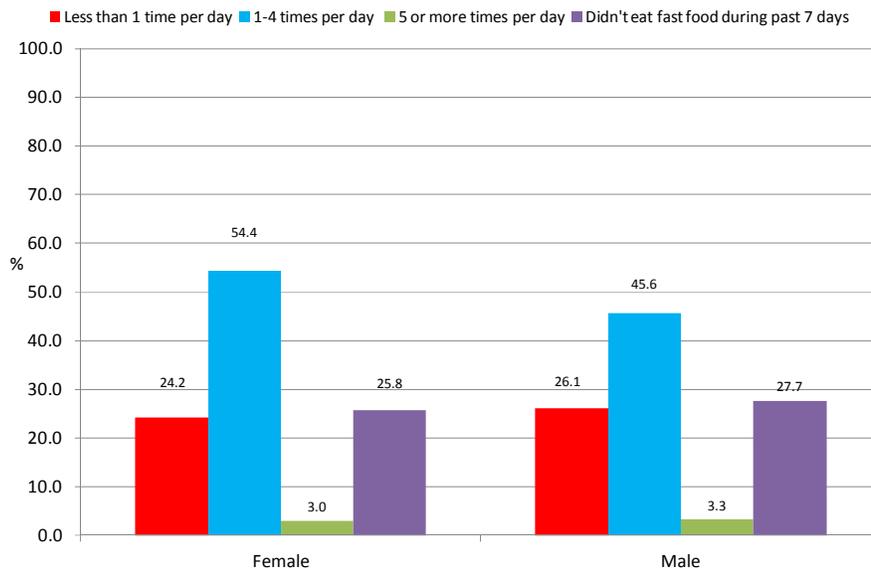


Figure 7 Fast food consumption per day during the past 7 days by gender

As figure 7 shows, a higher percentage of females consume fast food in a higher frequency as compared to the males, 54.4% of the females eat 1-4 times per day fast food, while 45.6% of the males eat fast 1-4 times per day fast food. Males consume less than 1 time per day fast food fast food as compared to the females, 26.1% and 24.2% respectively.

As figure 8 shows, the percentage of adolescents consuming fast food during the past 7 days by single age population from 12 years to 19 years, is between 5% and 18 %.

Fast food consumption has a tendency to increase after 12 years until 15 years, after 15 years of age it shows a decrease till 19 years.

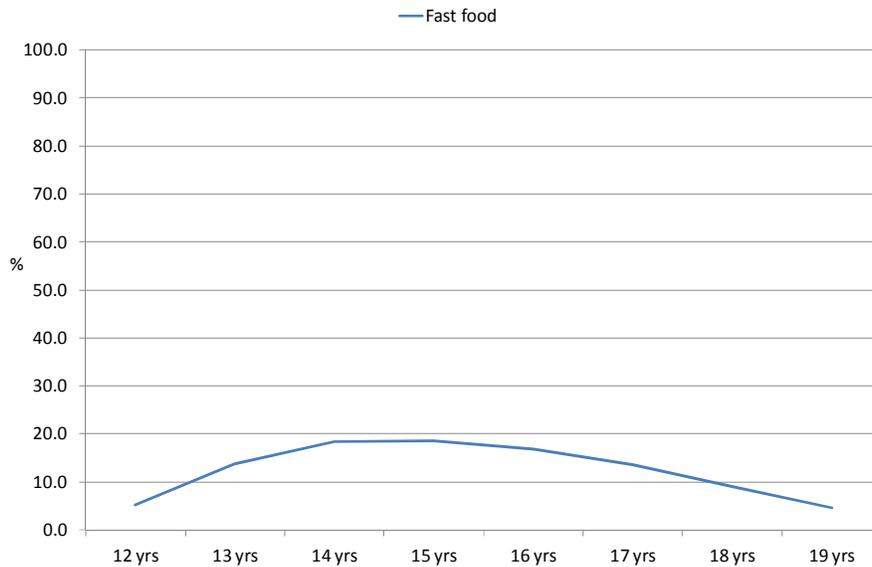


Figure 8 Percentage of fast food consumption days during the past 7 days by single age

4.2.2 Physical activity

WHO defines physical activity as any movement with the body produced by skeletal muscles which requires the use of energy. This includes sports, exercise, doing house hold chores, walking and dancing (WHO, 2013). By doing any physical activity at least 60 minutes daily, it can reduce the chance of developing any kind of non communicable disease such as cardiovascular diseases, even cancer. It can also help keeping you healthy and maintaining the right weight (WHO, 2004). The “Nutrition and Exercise Guidelines for Aruba” recommends 60 minutes of physical activity daily for the adolescents between 12 and 18 years of age, whereas for adults (18+ years) a minimum of 30 minutes daily (DPH et al., 2012).

Among the school going adolescents, 78.5% have participated in any kind of physical activity of at least 60 minutes a day, with a frequency between 1 to 7 days during the past 7 days prior to the survey. Yet 1 out of 5 adolescent (21.5%) have not been physically active during 7 days prior to the survey.

During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?		
	n	%
Zero days	981	21.5
1 day	838	18.4
2 days	678	14.8
3 days	639	14.0
4 days	411	9.0
5 days	375	8.2
6 days	165	3.6
7 days	479	10.5
Total	4566	100.0

Table 12 Number of days being physically active for at least 60 minutes per day during the past 7 days

A high percentage of adolescents (60%) have stated to be physically active 1 to 3 days 7 days prior to the survey, 26.5% was active during 4 to 6 days and 13.4% was physically active for 7 days for at least 60 minutes per day. Analyzing the physical activity by sex, it is observed that male have a higher percentage of being physically active for 4-6 days and also for being physically active for 7 days, 60.9% and 15.9% respectively. Females on the other hand have the highest percentage for being physically active for 1 to 3 days during the past 7 days as compared to the males, 57.9% against 42.1%. It is noticed that males are physically active for more days during a week as compared

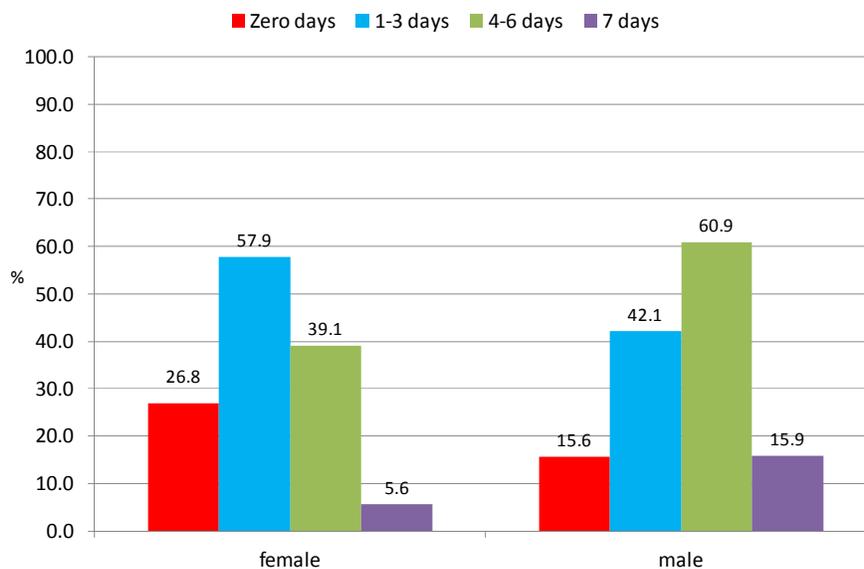


Figure 9 Physical activities of adolescents during past 7 days by gender

to the females. Also a quarter (26.8%) of the females, are physically inactive, while for the males 15.6% are physically inactive. It can be stated that a quarter of the female adolescents have a sedentary lifestyle.

As recommended by the Nutrition and Exercise Guidelines for Aruba, an adolescent needs 60 minutes of daily physical activity. Only 10.5% of the school going adolescents complies with this recommendation. The hours spend on sedentary activities such as watching TV, playing video games or using the computer was measured by number of hours per day, the following figure illustrates the findings. The “Nutrition and Exercise Guidelines for Aruba” recommends for adolescents between 12 and 19 years a maximum of 1 hour for per day only for sedentary activities (DPH et al., 2012).

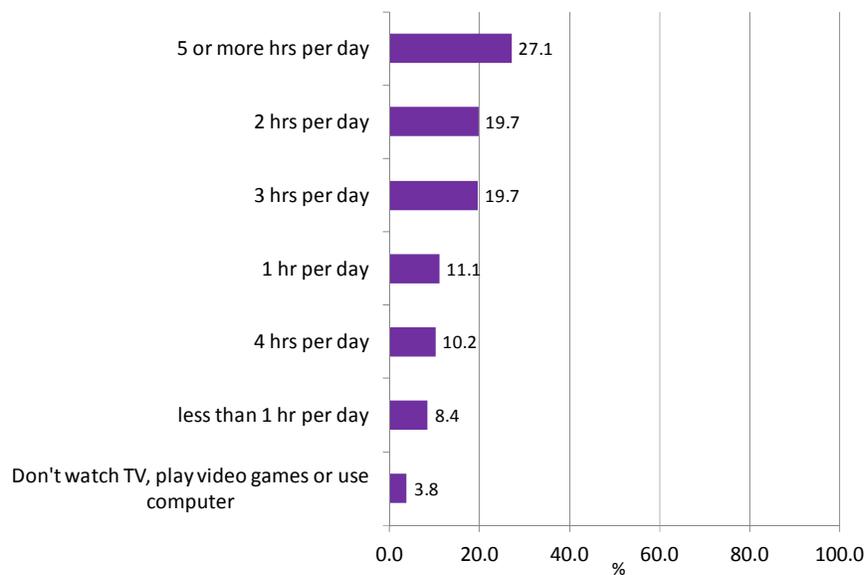


Figure 10 Hours spend watching TV, play video games or use computers

As it is observed in figure 10 more than one quarter of the adolescents spend more than 5 hours per day on sedentary activities. A small 3.8% have stated to not participate with these sedentary activities. It has to be noted that the female adolescents have a higher percentage of sedentary activities as compared to the males, 52.7% against 47.4%. The association between sex and hours spend on sedentary activities is statistical significant ($\chi^2= 38.667$; $p<0.05$).

Of all adolescents 8.7% comply with the Nutrition and Exercise Guidelines for Aruba for sedentary activities.

Overall 78.5% of the adolescents have stated to be physically active, however only 1 out of 10 adolescents do comply with the guidelines for a healthy active lifestyle. One out of five adolescents has a sedentary lifestyle. Male adolescents are more active during more days per week as compared to the females. This finding is seen among the female adolescents having a higher percentage of sedentary lifestyle as compared to the males.

When comparing the physical activity of the Aruban adolescents with the US adolescents it is noticed that the US adolescents are more physically active.

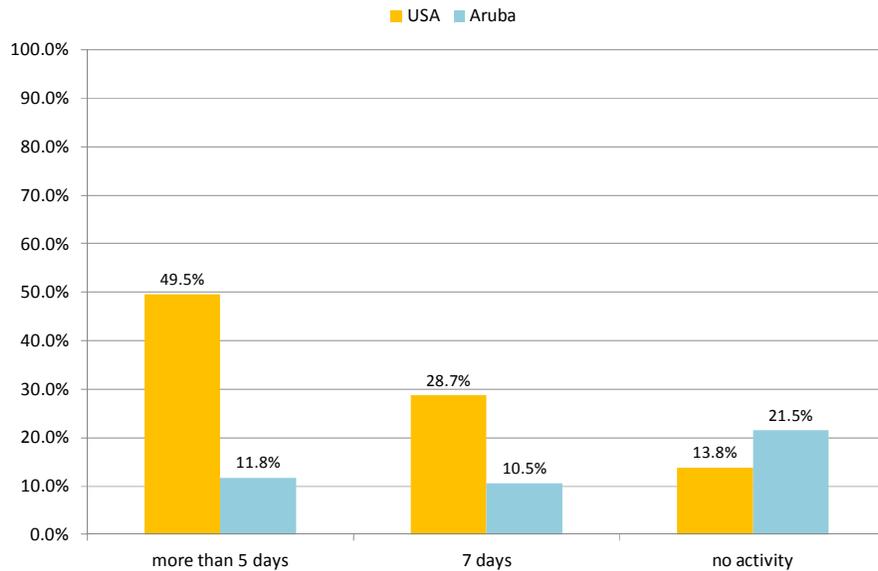


Figure 11 Comparison physical activities per day past 7 days, USA & Aruba

4.2.3 Hygiene

According to the WHO, hygiene refers to conditions and practices in order to keep oneself health and prevent the spread of certain infectious diseases. Hand washing with soap after using the bathroom (latrine) prevents the spread of bacteria/or viruses that could cause infections and or illnesses. (WHO, 2013)

Hand washing before eating

Almost all adolescents (96.8%) wash their hands before eating, however in different frequencies, see table 13.

How often do you wash your hands before eating?		
	n	%
Never	148	3.2
A little of time	484	10.4
Sometimes	1007	21.7
Most of time	1292	27.9
Always	1702	36.7
Total	4633	100.0

Table 13 Frequency of hand washing before eating

Still there are 3.2% of the adolescents who stated to never wash their hands before eating. There are no large differences between males and females regarding hand washing. This applies to all frequencies for hand washing.

Hand washing with soap after use of bathroom

More than half of the adolescents (62.8%) have stated to always wash their hands with soap after using the bathroom. On the contrary, 1.8% has stated to never wash their hands with soap after using the bathroom. Taking a closer look at the frequency of hand washing with soap by gender, it is observed that the females have a higher percentage of always washing their hands with soap (64.3%), compared to the males (61.5%). As for all other frequencies of hand washing with soap after using the bathroom, the frequency is higher for the males as compared to the females.

4.2.4 Oral health

As stated by the WHO, oral health is important to the general health and quality of life of the world population. It is a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay and tooth loss and other diseases and disorders that could limit an individual's capacity in biting, chewing, smiling, speaking and their psychosocial wellbeing. Risk factors contributing to oral diseases include an unhealthy diet, tobacco use, harmful alcohol use, poor oral hygiene and social determinants (WHO, 2012).

Oral hygiene (brushing teeth behavior)

Of the total school going adolescents 44.1% brush their teeth twice a day and 37.3% brush their teeth three times a day. Overall, 91.4% brush their teeth more than 2 times per day. Yet there are 7.2% of the adolescents who stated to usually brush their teeth 1 time per day and 1.4% less than 1 time per day.

How many times per day do you usually clean or brush your teeth?		
	n	%
Less than 1 time per day	67	1.4
1 time per day	334	7.2
2 times per day	2040	44.1
3 times per day	1723	37.3
4 times or more per day	461	10.0
Total	4625	100.0

Table 14 Frequency of tooth brushing per day

Analyzing this information by sex it is observed that overall there are no large differences between the sexes with respect to brushing. Still when analyzing the frequency of brushing teeth by single age we see that the frequency of brushing teeth 2 times per day tends to increase with age.

When this association is tested for significance the chi-square was 38.657 with a p value of 0.08, meaning there is no statistical significance.

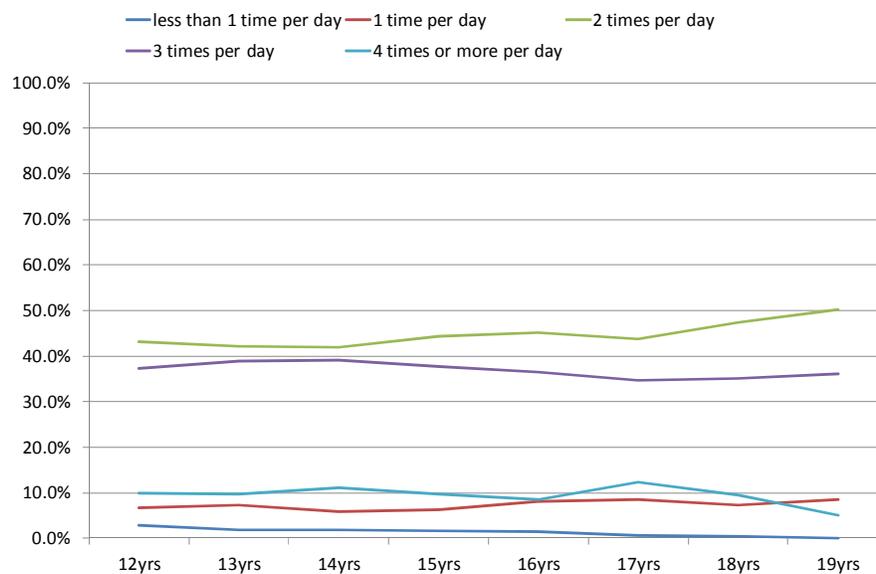


Figure 12 Number of times tooth brushing by single age

Braces

Braces are worn by 14.7% of all secondary school youth, overall 15.6% of the adolescents who wear braces are females and 13.6% of all adolescent males wear braces. About 9% (8.5%) have worn braces in the past while the majority of the adolescents have never worn braces (76.8%).

The percentage of each single age is analyzed for current brace use. It is observed that around 15 % of ages 12 to 16 years currently wear braces.

The use of braces decreases with age which can be due to the fact that the General Health Insurance covers braces only for adolescents younger than 18 years of age. The use of braces by educational level shows that 1 out of 5 students who attend HAVO/VWO are currently wearing braces.

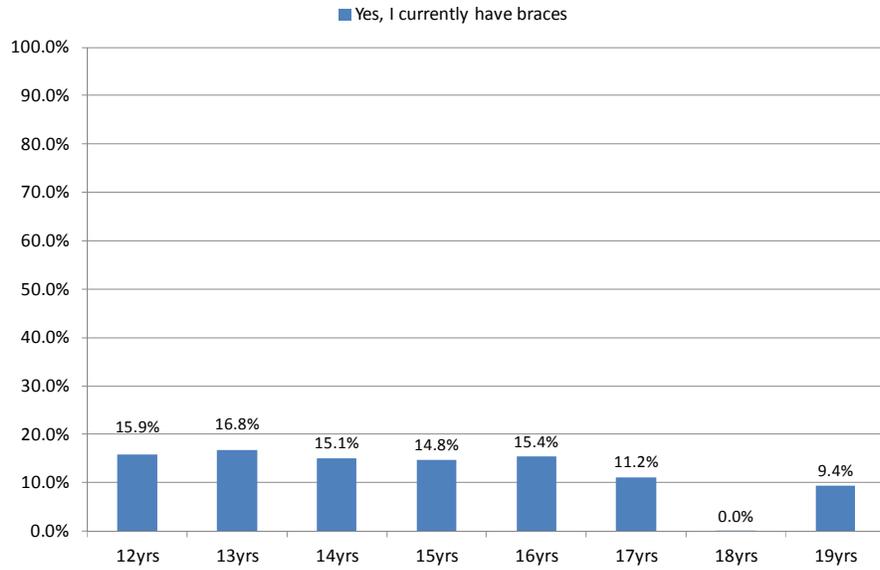


Figure 13 Current wear of braces by single age

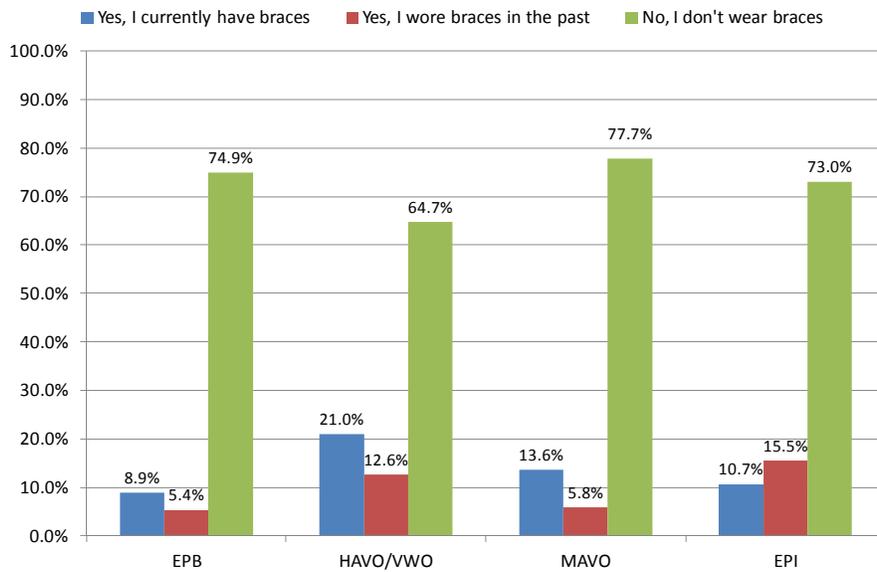


Figure 14 Use of braces by educational level

4.2.5 Smoking

Tobacco use is one of the main risk factors for increasing the risks for a number of chronic diseases, such as cancer, lung diseases, and cardiovascular diseases (WHO, 2013).

In this survey smoking was measured among the adolescents when they first tried cigarettes and the age by which this happened. To be able to measure current users, the question was narrowed down to a time span of 30 days prior to the survey.

Of all secondary school going youth between 12 and 19 years old, 38.7% have ever tried a cigarette. One out of five of the adolescents (20.9%) have ever tried a cigarette as young as less than 10 years old. Females tend to try cigarettes at a younger age as compared to the males, however the difference between the percentages are small. It is important to note, that there is no significant association between sex and the age at which they first tried a cigarette.

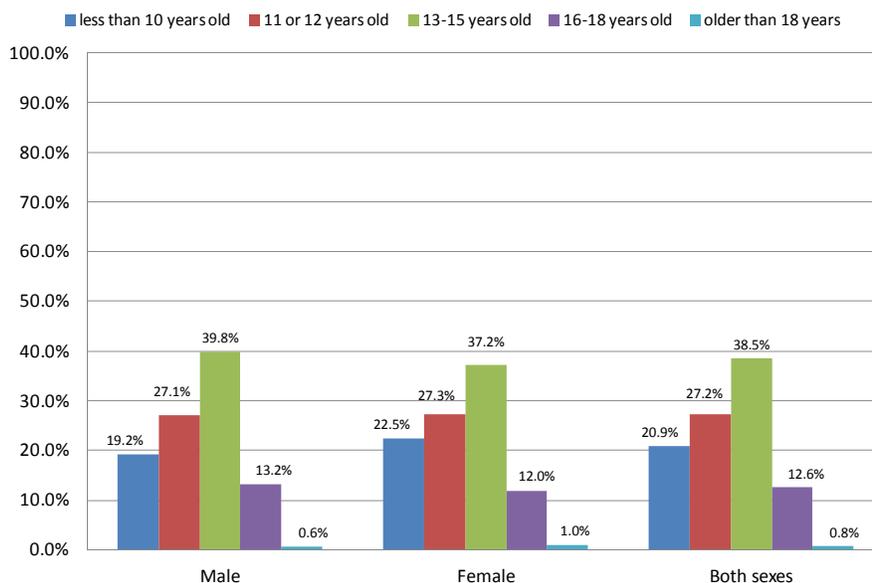


Figure 15 Age at first cigarette by gender

As for current cigarette use among the students a remarkable 94% of the adolescents have not smoked during the past 30 days. During the past 30 days, 6% of the secondary school going adolescents smoked on average one cigarette to more than 20 cigarettes per day. In other words six percent of the adolescents are current smokers.

One packet of cigarettes contains 20 cigarettes. A small percentage (0.2 %) of the adolescents has stated to have smoked more than 1 pack of cigarettes per day during the past 30 days.

When we compare our data on smoking with other countries we observe that for the U.S.A. 44% of the adolescents have ever tried a cigarette and 18.1% are current adolescent smokers (YRBS USA, 2011). In the Netherlands 18% of the adolescents between 10 to 20 years, are current smokers

(Jeugd Monitor, 2012). This is a similar percentage as compared to the USA, however the age range between these two studies vary. Aruba, however, has a lower percentage compared to both countries as for smoking behavior.

4.2.6 Alcohol

As the WHO have stated harmful use of alcohol results in 2.5 million deaths each year. Worldwide for years, alcohol-related deaths are present in 9% of all deaths involving adolescents between 15 to 29 years. Alcohol is the world’s third largest risk factor for disease burden. Furthermore alcohol is associated with many serious social and developmental issues. These issues include violence, child neglect and abuse, and absenteeism at the workplace (WHO, 2013).

In Aruba, 70.2 percent of the school going youth between 12- 19 years has stated to have ever tried alcohol. From this 70.2%, 51.6% were females and 48.4% males.

In this survey the age when alcohol was first tried was also considered and as table 15 shows, a third of the adolescents who ever tried alcohol, tried it when they were in the age category of 13 to 15 years. In addition, it is striking that 1 out of 10 of the adolescents tried alcohol when they were less than 10 years old.

How old were you when you had your first drink of alcohol?		
	n	%
less than 10 years old	513	11.0
11 or 12 years old	844	18.1
13-15 years old	1443	30.9
16-18 years old	457	9.8
older than 18 years	21	.4
never drink alcohol	1394	29.8
Total	4672	100.0

Table 15 Age first tried alcohol

Further analysis of alcohol use during the past 30 days showed that around two third of the adolescents, 61.3%, did not use alcohol during the past 30 days.

Yet, 38.7%, representing more than a third of the adolescents have stated to have had at least one drink per day during the past 30 days.

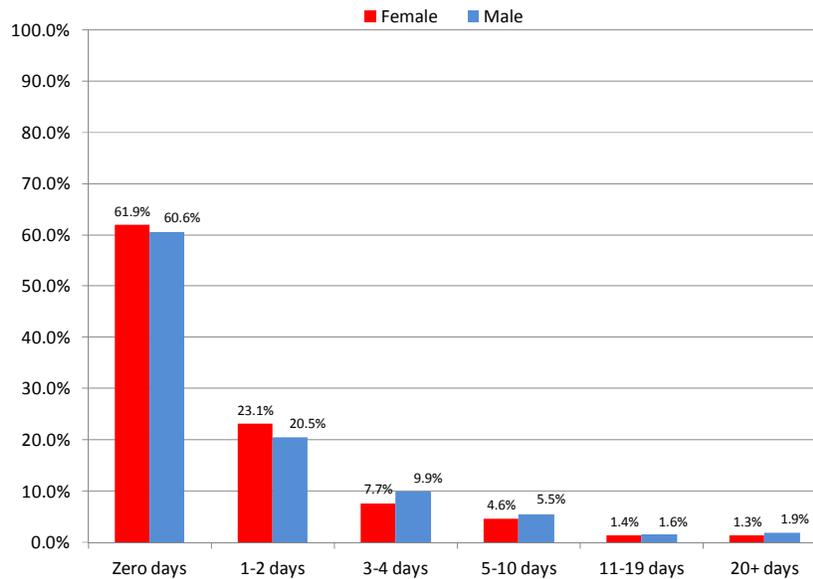


Figure 16 Alcohol use during past 30 days by gender

When this data is plotted by sex in figure 16 it is observed that alcohol use between the male and female adolescent have no major differences. However, when this data is further analyzed, the females have a higher percentage as compared to the males in having at least one drink for 1 to 2 days. When the number of days increase this percentage decreases for the females. The association between sex and the number of days alcohol was used is statistical significant, $\chi^2 = 15.330$ and $p < 0.05$. Males show a similar trend, nevertheless, in higher percentages overall compared to the females.

The frequency of being drunk was also measured by asking how many times during the adolescents' life they were drunk. The definition of drunk in this question was drinking alcohol to an extent that someone will stagger when walking, not be able to speak and throw up. Of all secondary school going adolescents, 71.1% had never consumed alcohol that much as to become drunk. Yet, almost one third (28.9%) has stated the contrary. The number of times they were drunk varied between 1-2 times up to more than 20 times during their life; 17.7% stated of being drunk 1-2 times, 7.5% stated 3-9 times, 1.5% stated 10 -19 times and 1.6% stated 20 or more times during their life.

Analyzing this behavior by sex of the adolescents, it is observed that females have a higher percentage of being drunk 1 to 2 times during their life as compared to males. However, males have the highest percent of being drunk for more than 3 times in their life. The association between sex and the number of times during the adolescent life being drunk is statistically significant ($\chi^2 = 30.070$; $p < 0.05$).

As previously mentioned, alcohol is associated with many serious social and developmental issues. Getting into trouble with friends and or family, missing school or getting into fights because of alcohol can be considered as serious social issues which can have their effect on the development of the adolescent. More than 90% of all the school going youth (91.4%) has never gotten into these types of problems because of alcohol use. Still there is a small percentage (8.6%) who stated to have indeed experienced these issues because of alcohol use. Around 6% got in trouble 1 to 2 times, the remaining 2.6% got into trouble 3 times or more. Less than 1% (0.8%) of the adolescents stated to have gotten more than 20 times in trouble because of alcohol use.

For all levels of education except EPI, more than half of the students have not used alcohol during the past 30 days. However, the most common frequency of alcohol consumption among the adolescents at all educational levels were, at least one alcoholic drink for 1-2 days during the past 30 days.

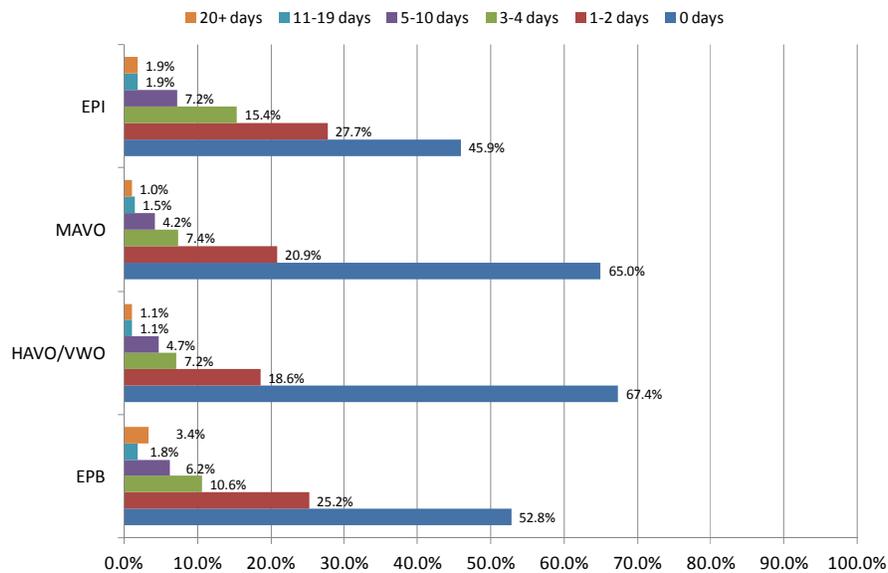


Figure 17 Days of consumption of at least one drink of alcohol during the past 30 days by educational level

4.2.7 Drug use

According to the United Nations, cannabis use has increased worldwide since 2009. Cannabis is the world's most illicit drug used, with a total of almost 181 million cannabis users worldwide. This number is similar to 3.6% of the total world population between 15-64 years old. The United Nations also states that the estimate number of illicit drug users has increased, while the numbers of drug users with dependence or drug use disorders has remained stable (UNODC, 2013).

In this survey the exposure and use of soft drugs, marijuana, was observed among the secondary school going adolescents. Almost 16 % (n=724) of the school going adolescents in the age category of 12-19 years has ever tried marijuana during their life. Of all school going adolescents, 13.8% of female and 17.3% of the male adolescent have ever tried marijuana during their life.

Analyzing the 16% of adolescents who ever tried marijuana, 46.5% were females and 53.5% males; there is no big difference between the sexes. There is also no significant association between sex and ever tried marijuana. It is important to mention the age when these adolescents were first exposed to smoking marijuana. The ages are presented in the following table 16.

There were 5.4% of the adolescents who have tried marijuana the first time being younger than 10 years old. One out of ten of the adolescents tried it when they were 11 to 12 years old. About 80% of the adolescents tried marijuana for the first time when they were older than 13 years old.

How old were you when you first tried marijuana?		
	n	%
less than 10 years old	39	5.4
11 or 12 years old	79	10.9
13-15 years old	372	51.4
16-18 years old	222	30.7
older than 18 years	12	1.7
Total	724	100.0

Table 16 Age first tried marijuana

In addition, there were no big differences between the sex of the adolescents and the age they first tried marijuana, overall most adolescents, both females and males, have tried marijuana at the age between 13 and 15 years. There is a slight difference between males and females in the younger age at first tried marijuana; it is observed that a slightly higher percentage of males have tried marijuana younger than 12 years old.

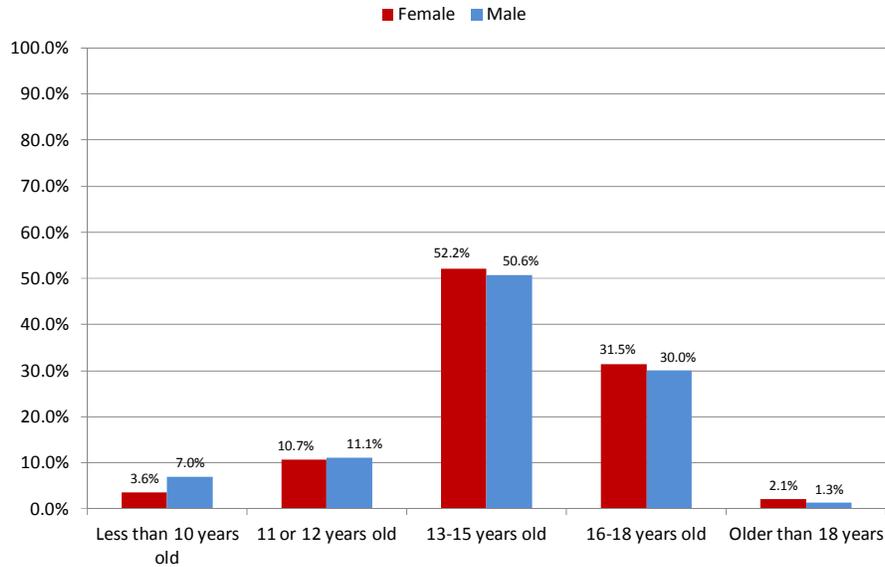


Figure 18 Age first tried marijuana by gender

The frequency of marijuana used during the lifetime of the adolescents was also measured. About 16% of the school going adolescents has stated to have used marijuana more than 1 time during their life. From this 15% about 3.5% stated to have used marijuana more than 20 times during their life.

The percentage of students who ever tried marijuana by level of education varies but there are no large differences. Each percentage for the use of marijuana by the level of education is calculated by using the single population by level of education. It is observed that EPB and EPI students have a similar percentage of those who ever tried marijuana, 20.4% and 21.5% respectively. Moreover, the HAVO/VWO and MAVO education levels also have similar percentages, 12.2% and 12.9% respectively.

Comparing those who ever tried marijuana among the Aruban adolescents with the US adolescents, Aruba has a lower prevalence of ever tried marijuana as compared to the US, 16% and 39.9% respectively (YRBS USA, 2011).

Hard Drug use

In addition to soft drugs, the use of hard drugs was also asked to the adolescents. The use of hard drugs was measured during their lifetime.

The prevalence is low, 2.5% of the secondary school going adolescents has stated to have ever used drugs other than marijuana during their lifetime.

Availability of drugs during the past 30 days to the adolescents was also asked and 8.4% of all school going adolescents has gotten drugs from different sources. The most common source stated was

from friends (4.3%), followed by buying it from someone (1.9%) and the remaining 2.2% stated to have gotten the drugs from family, others stated to have gotten it from some other way and even some have stated to have even stolen it.

From the Argentinean Global School Health Survey, the use of drugs was measured including soft drugs and hard drugs together. The prevalence of drug use for the Argentinean adolescents is 11.7%, were 15.2% are males and 8.6% are females. (GSHS Argentina, 2009). The drug use for the Manitoban (Canada) adolescents of illicit drugs, including soft and hard drugs was 20% (YHSR Manitoba, 2009).

Reasons to start drug use

The main reasons for starting the use of alcohol or drugs are stated in table 17. As shown in this table, for both sexes the main reason stated was curiosity (42.1%), followed by the reason that they wanted to have fun (24.8%) and also that they wanted to feel better (14.4%).

One out of ten adolescents stated that friends were an influence to use drugs. Also a small percentage also stated that the reason they used drugs was because of medical reasons.

Main reason why started using alcohol or drugs	Female	Male	Both sexes
	%	%	%
For medical reasons/ my health	60.5	39.5	4.2
My friends told me to do it	50.2	49.8	10.9
I wanted to feel better	47.3	52.7	14.4
I wanted to have fun	51.3	48.7	24.8
Curiosity	47.6	52.4	42.1

Table 17 Main reason for starting the use of alcohol or drugs

Sexual and Reproductive Health



5 Sexual and Reproductive Health

The module sexual and reproductive health of the adolescent consisted of 9 sub modules describing the sexual behavior and experience of the adolescents. The sexual behavior described could be a first time experience or experiences in the past or during the past 12 months. In addition the experiences of the sexual act, the modules also asked about the specific behavior around the sexual activities such as the use of drugs or alcohol before the sexual act and also if there was any violence experienced. The use of birth control such as condoms was asked. In addition, questions about pregnancy and abortion were also asked. The knowledge about HIV, the confidence for not contracting HIV and self testing for HIV were investigated.

Another important variable asked in this module which can have its influence not only on the HIV knowledge but also on the sexual risk behavior of the adolescent, were the gender norms.

5.1 Sexual health adolescents

Sexual activity has been measured by asking whether the adolescent ever had sexual intercourse during their lifetime and also whether they were sexually active during the past 12 months, prior to the survey. In order for the students to have the same understanding of the definition of sexual intercourse, this definition was explained in the questionnaire.

More than one third of the Aruban secondary school going adolescents (38.1%) had ever had sexual intercourse during their lifetime. From the total Aruban school going adolescents, 34.3% were females and 42.2% were males, indicating that a higher percentage of males are not virgins anymore. Moreover it is important to mention that the adolescents in the age category of 18+ have the highest percentage of not being virgin anymore.

In contrast, more than half of the adolescents have not had sexual intercourse. The reasons for not having intercourse are presented in the table 18 below.

If you never had sexual intercourse, what is the main reason?		
	n	%
Wait until older	1091	41.1
Wait until married	541	20.4
Don't want to risk pregnancy	188	7.1
Don't want to risk STI	194	7.3
Have not had a chance to have sex or met someone	302	11.4
My religious values	70	2.6
Some other reason	269	10.1
Total	2655	100.0

Table 18 Main reason for not having sexual intercourse

More than forty percent (41.1%) of the adolescents stated that they want to wait until they are older to have sex. One out of five wanted to wait until they are married, while one out of ten stated that they did not have the chance or has not met someone to have sex with.

Other reasons that were mentioned were that they did not want to get pregnant or did not want to risk a sexually transmitted infection. Also almost 3% stated that because of their religious values they did not have sex.

5.2 Adolescents who ever had sexual intercourse

Analyzing the population of adolescents who have ever had sexual contact during their lifetime more in depth (n=1801), it was observed that more males had ever had sexual intercourse as compared to the females, 53.5% and 46.5% respectively. The association between ever had sexual intercourse and sex of the adolescents was observed and a χ^2 of 31.2 at a $p < 0.05$ was found, meaning that there is a significant association between ever had sexual intercourse and sex. The percentages of the adolescents who ever had sexual contact by single age was calculated, figure 19 shows the findings. The percentage of adolescents who ever had sexual intercourse increases with age. This association had a large Chi-square ($\chi^2 = 1193.967$ and a p -value of < 0.05), meaning there is a strong association between age and ever had sexual intercourse.

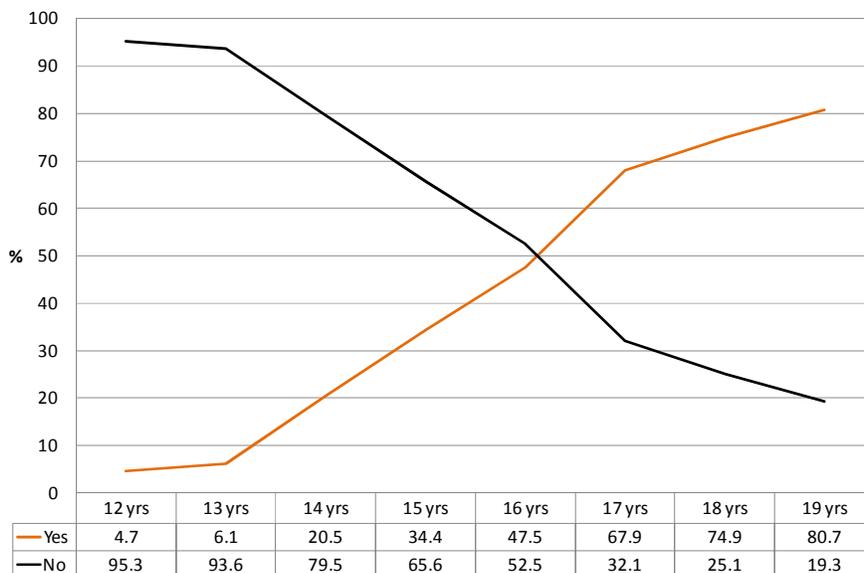


Figure 19 Percentage of population "Ever had sexual contact" by single age

In the population of adolescents visiting EPB, more than half have ever stated to ever had sexual contact (54.6%), however, EPI have the highest percent of students who have ever had sexual contact. This high percentage is a reflection of the association mentioned above of sexual contact and age, since EPI students are the oldest population in this survey.

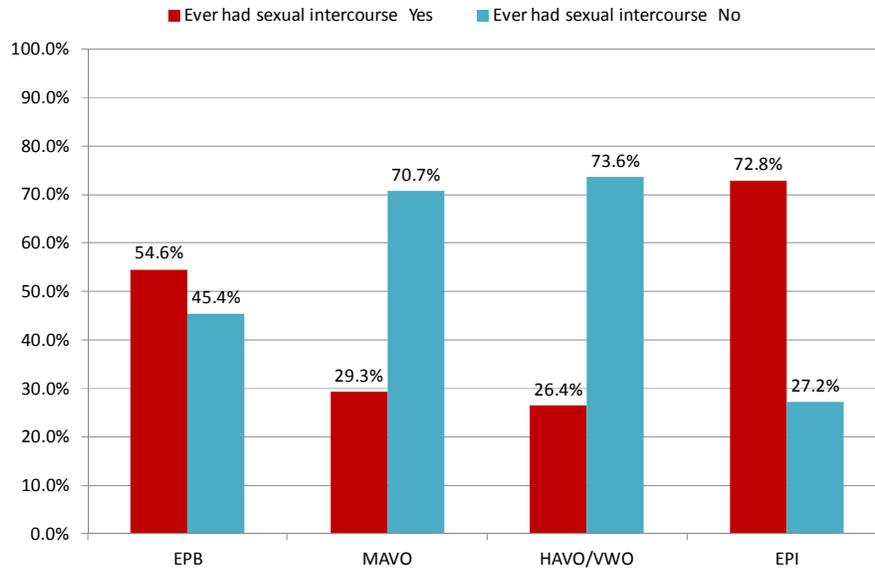


Figure 20 Percentage of population 'Ever had sexual contact' by level of education

5.3 First debut

For the Aruban adolescent the average age of first sexual intercourse was at 14.4 years with a minimum age at 4 years and a maximum age at 19 years. Females have an average age of sex debut at 14.7 years and the average age for males at 14.09 years. Comparing the average age of sex debut of the Aruban adolescents with the world average age of sex debut, which is 17.3 years, it is observed that Aruba has a younger average age (Durex, 2005). The distribution of first sexual intercourse by age categories is illustrated in table 19.

As illustrated in table 19, 70.7% of the adolescents were in the age category 14 to 17 years when they first had sex and more than three quarters are females, (76.7%). It has to be noted that ages younger than 5 years have been stated as age at first sex. However further analysis would have to show whether sex at this young age was voluntary.

If we analyze the age at first intercourse by sex, we see that girls have had their first intercourse at an older age compared to the males.

How old were you when you had sexual intercourse for the first time?				
		Female	Male	Both sexes
<5 yrs	n	2	1	3
	%	0.2%	0.1%	0.2%
6-9 yrs	n	15	33	48
	%	1.8%	3.6%	2.8%
10-13 yrs	n	134	261	395
	%	16.5%	28.2%	22.7%
14-17 yrs	n	622	606	1228
	%	76.7%	65.4%	70.7%
18+ yrs	n	38	25	63
	%	4.7%	2.7%	3.6%
Total	n	811	926	1737
	%	46.6%	53.4%	100.0%

Table 19 Age at first sexual intercourse

Males have a higher percentage of first time having intercourse at the age of 6-9 years. This trend remains up to 14 to 17 years; thereafter the females take over by having the highest percentage of first time having intercourse at the age of 18+.

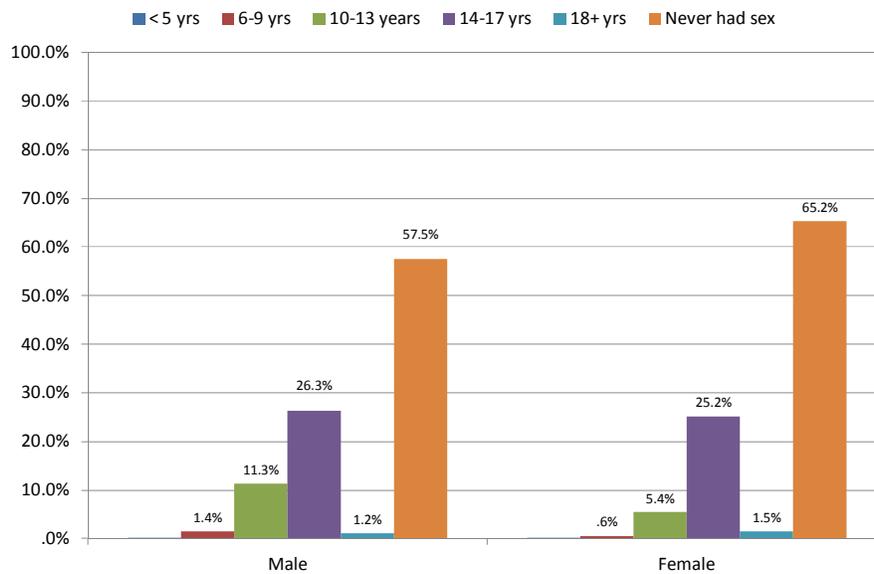


Figure 21 Age at first sex by gender

Males start at an earlier age with sex as compared to the females. This association between sex and age at first intercourse is strong and statistically significant ($\chi^2 = 72.484$ en $p < 0.05$).

It is important to mention that sexual intercourse is associated with both sex and age.

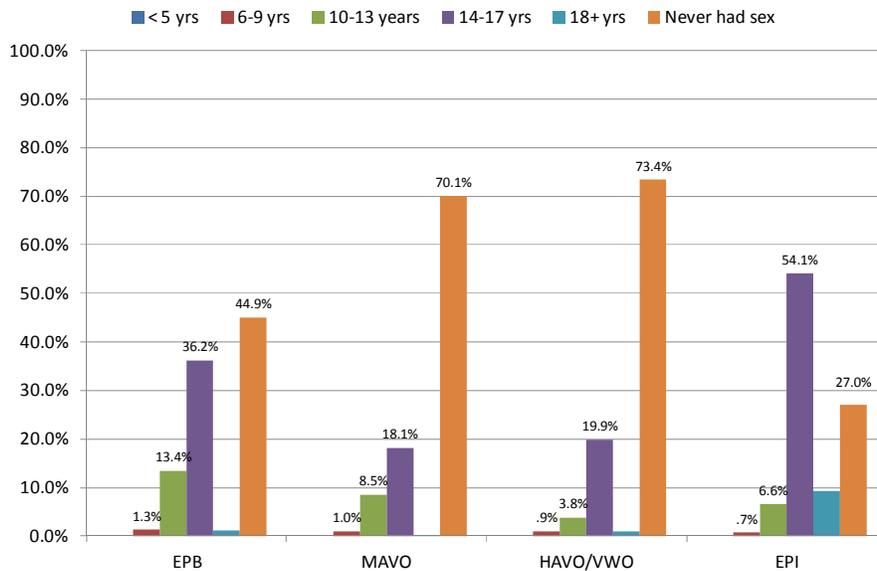


Figure 22 Age at first sex by level of education

It has been found that the adolescents at the HAVO/VWO level of education have the highest percentage of never having sex (73.4%). EPI students have the highest percentage of adolescents who were between 14 to 17 years the first time they had sex (54.1%). Conversely, the students at EPB showed the highest percentage of students who were between 10 to 13 years old when they first had sexual intercourse (13.4%).

5.4 Contraceptive use

Contraceptive use, being a protective factor, for a healthy sexual reproductive life was also measured. Among the Aruban adolescents between 12 and 19 years who has ever had sex (n=1801), more than three quarters (77.9%) have used contraceptive during their first sexual intercourse. Still there is one out of five adolescents who did not use a contraceptive during their first sexual encounter. There was no large difference in the percentages between the males and females who did use a contraceptive, 77.2% for the females and 78.4% for the males. Analyzing this by age categories, the age categories 15-17 years and 18 + years have similar percentages, almost 4 out of 5 adolescents in these age categories used a contraceptive during their first sexual contact.

The most common type of contraceptive used at the sexual debut was the condom, 67.4% stated to have used this contraceptive during the first time having intercourse. Only 5.2% have stated to have used birth control pills and other methods such as withdrawal (3.5%), Depo Provera (0.4%) and still 4.2% were not sure whether a contraceptive was used. The use of condom is more common in males than females, 69.8% and 64.7% respectively.

Withdrawal, being the oldest contraceptive method for preventing pregnancy, is still being used by adolescents; of the 3.5% of adolescents using this method more than half are females. The majority of adolescents practicing withdrawal are in the age category of 15-17 years.

5.5 Partner at sexual debut

The person with whom adolescents experienced their first sexual intercourse was for almost three quarters (73.3%) of the adolescents their boyfriend, girlfriend, husband or wife. There was no difference between males and females. However more females than males stated to have had their first sexual contact with a boyfriend, girlfriend, husband or wife, 77.9% and 69.3% respectively. It has also been observed that 16.5% of the female adolescents have had their first sexual experience with a friend, while for the males 13% had their first experience with a friend or with someone they have just met.

Of the remaining 26.7%, 14.6% have stated to have had their first experience with a friend, 8.1% stated with someone they just met and 2.2% stated with a family member and 1.8% stated with someone they didn't know as being defined as a stranger or rapist. The latter could explain the young age of less than 9 years of first time having sexual intercourse.

It is also interesting to notice that almost half of the adolescents (49.7%) had their first sexual intercourse with a partner of the same age. However more than one third (35.6%) have stated that their first sexual partner was 1-5 years older than themselves and 6.7% stated that their first sexual partner was 6 to more than 10 years older than themselves.

Analyzing the age of the first sexual partner by sex of the respondent we see that two thirds of the males had their first sexual encounter with a partner around their same age, while for half of the females their first sexual encounter was with a partner who was 1 to 5 years older. Moreover, for 5% of the females their first sexual encounter was with a partner who was even 6 to 10 years older than themselves.

Data analysis also showed that almost 3% of both females and males had their first sexual encounter with a partner who was more than 10 years older than themselves. Of the total adolescent population surveyed this was the case for 2.4% of the female and 3.4% of the male adolescents.

It is relevant to have an insight on how the adolescents have experienced their sexual debut. This could have implications for the further development of their sexual reproductive life.

The first time you had sexual intercourse, the person was				
		Female	Male	Both sexes
Younger than you	n	25	89	114
	%	3.0%	9.3%	6.4%
Around same age as you	n	311	577	888
	%	37.4%	60.5%	49.7%
1-5 years older than you	n	427	208	635
	%	51.3%	21.8%	35.6%
6-10 years older than you	n	41	27	68
	%	4.9%	2.8%	3.8%
More than 10 years older than you	n	20	32	52
	%	2.4%	3.4%	2.9%
Don't know	n	8	21	29
	%	1.0%	2.2%	1.6%
Total	n	832	954	1786
	%	46.6%	53.4%	100.0%

Table 20 Age difference of sex partner at first time sex

Most of the adolescents (84.3%) described their first sexual experience as wanting to have sex, 92.0% were males and 75.6% were females. However, 11.9% described the first time not wanting to have sex and 2.8% felt they were forced to have sex. From those who felt forced to have sex (n= 48; 2.8%), most were females (n= 38; 4.7%). Furthermore 1.0% (n=17) of those who had been threatened the first time they had sexual intercourse, showed no difference between males and females.

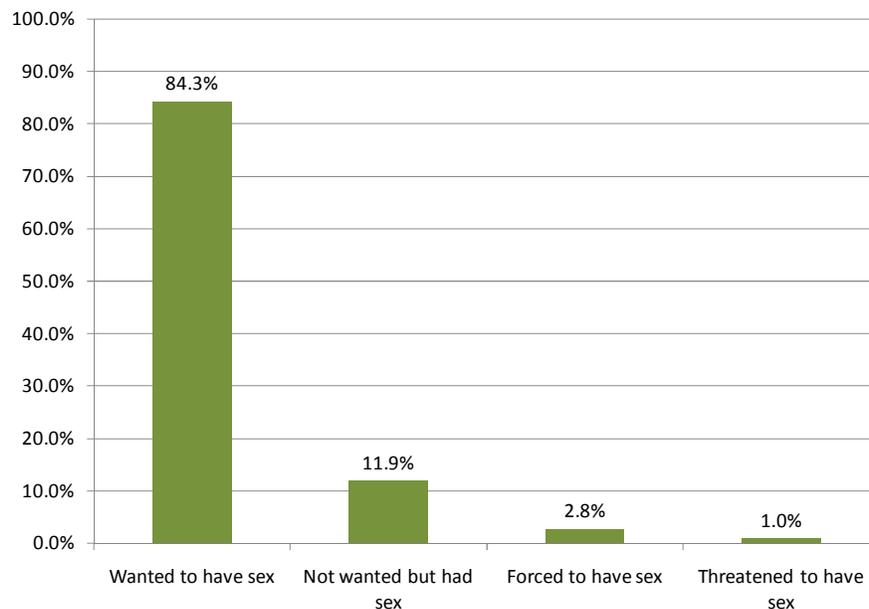


Figure 23 Experience of first sexual intercourse

Since the questionnaire did not have the possibility of skipping questions, the respondents answered the follow up questions not realizing they had to skip this question. Therefore it is interesting to see that the percentage of adolescents stating to have been threatened have increased in this question in comparison to the answers of the previous question. So it is important to make clear that at the previous question about being threatened the first time at sexual intercourse, only 1.0% stated to

have felt threatened. Analyzing the follow up question about the type of threat used, this 1.0% (n=17) increased to 6.1% (n=107). It is noteworthy that threat was experienced by females as well as males. Two thirds were females (69.2%) and one third (30.8%) were males.

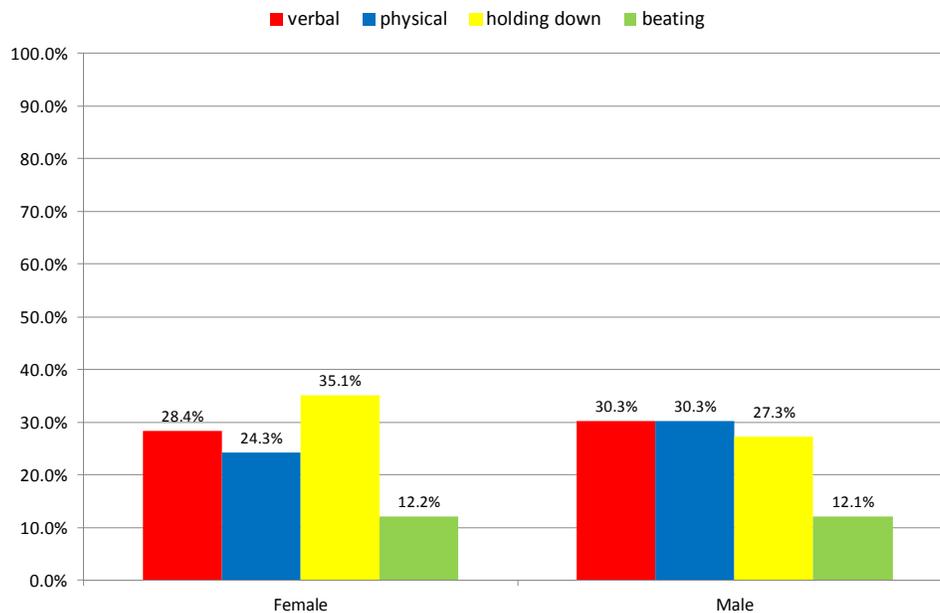


Figure 24 Type of threat used during first sexual intercourse by gender

Figure 24 shows the type of threat used by gender from the population who stated that they were threatened to have sex. The most common threat used was holding down (32.7%), followed by verbal threat (29%), physical threat (26.2%) and even beating (12.7%). More females compared to males have experienced these threats, holding down was the most common type of threat experienced by the female adolescents, see figure 24. Analyzing the population who experienced a threat during their first sexual intercourse by single age, adolescents of 16 years of age have the highest percentage in experiencing a threat during the first sexual act. One must not exclude the observation that also 5.1% of the adolescents between the ages 12 and 13 years old have also experienced a threat during their first sexual act.

5.6 Sexually active adolescent

Sexual activity was measured using the number of sexual partners during their life and the frequency of the sex act during the past 12 months prior to this survey.

Almost 60% (59.7%) of the adolescents have stated to have had 2 or more than 5 sex partners during their lifetime. As figure 25 illustrates the percentage for females decreases as the number of different sex partners increases. It is alarming to see that one out of five males had more than five sex partners during their lifetime.

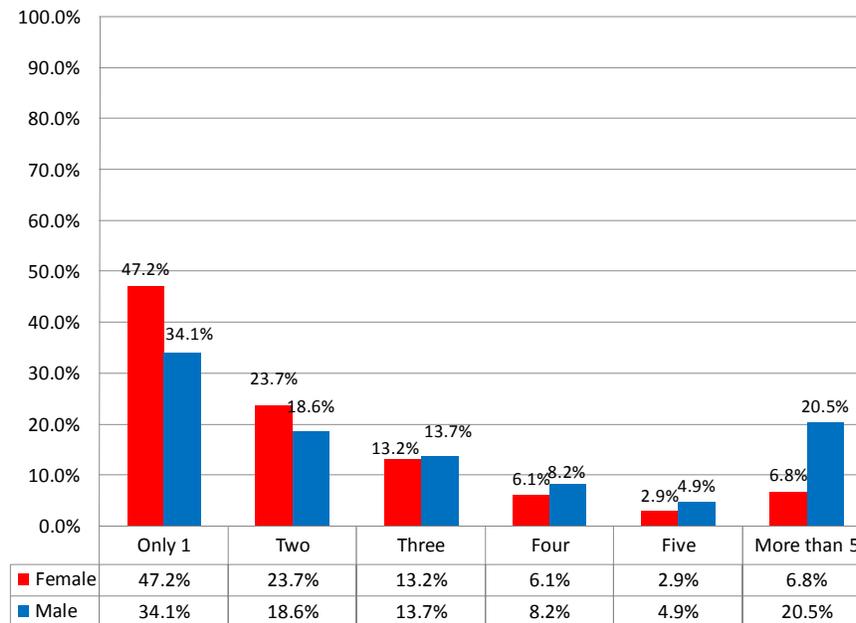


Figure 25 Number of different sex partners during life by gender

Moreover, it is observed that males have had more sexual partners during their life as compared to the females, this association is statistically significant with a $\chi^2 = 90.53$ and $p < 0.05$.

The number of sex partners by single age is plotted in figure 26 and shows that having only 1 partner during a lifetime decreases with increasing age. The percentage of adolescents who had two and more than five partners increases also with increasing age.

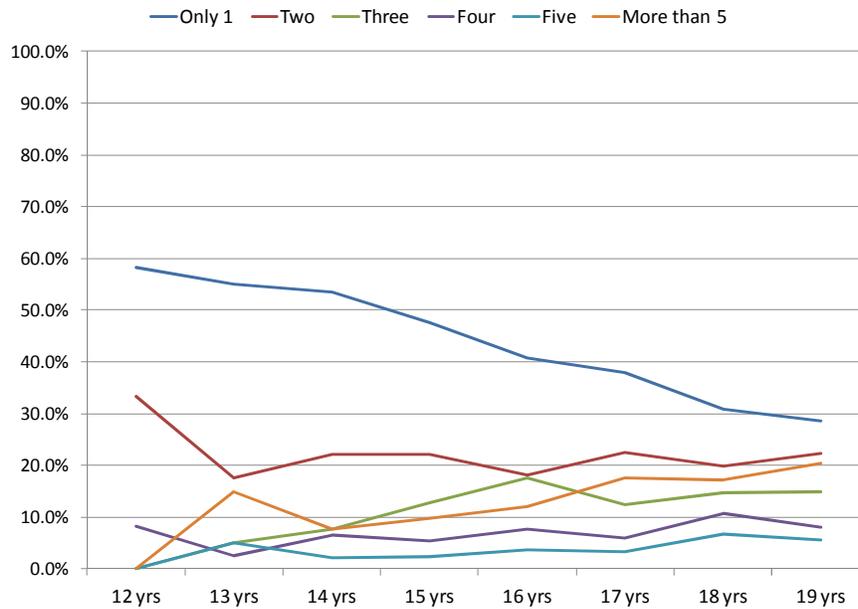


Figure 26 Number of partners by single age

5.6.1 Sexual intercourse during the past 12 months prior to the survey

To have an indication on how sexually active the adolescents are, sexual activities during the past 12 months were measured.

How many people have you had sexual intercourse with in the past 12 months?		
	n	%
Zero	242	13.6
Only one	1017	57.2
Two	274	15.4
Three	100	5.6
Four	47	2.6
Five	31	1.7
More than 5	68	3.8
Total	1779	100.0

Table 21 Number of sexual partners during the past 12 months

The majority of the adolescents (57.2%; n=1779) had only 1 sex partner during the past 12 months, 15.4 % had 2 sexual partners and 13.7% had more than 3 sexual partners.

A higher percentage of the females as compared to the males have had only one sex partner during the past 12 months, 68.8% and 46.9% respectively.

However as the number of sex partners increase the percentages for both males and females having multiple sex partners decrease (see figure 27).

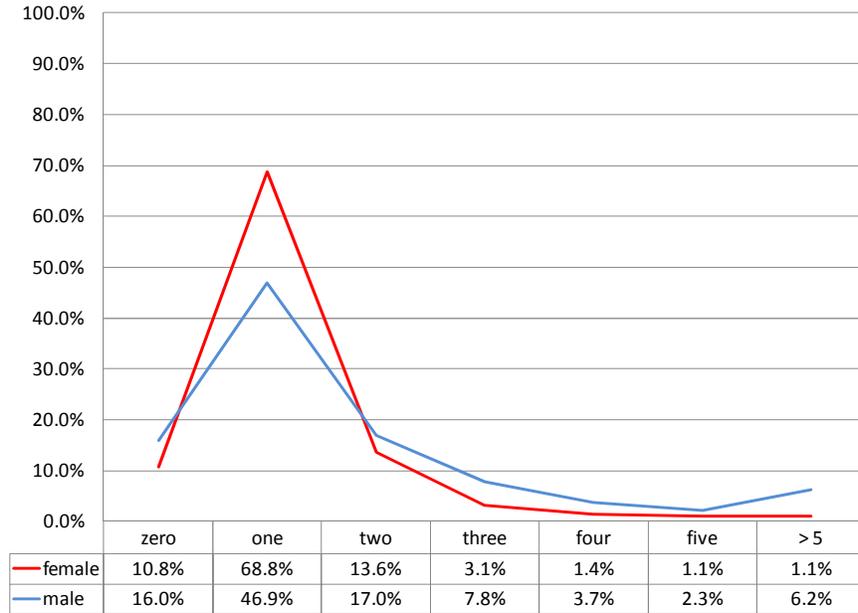


Figure 27 Number of sex partners during the past 12 months by gender

Moreover the percentage of males having multiple sex partners is slightly higher as compared to the females. The frequency of sexual activity in adolescents was also measured by asking how many times the adolescent had sex during the past 12 months.

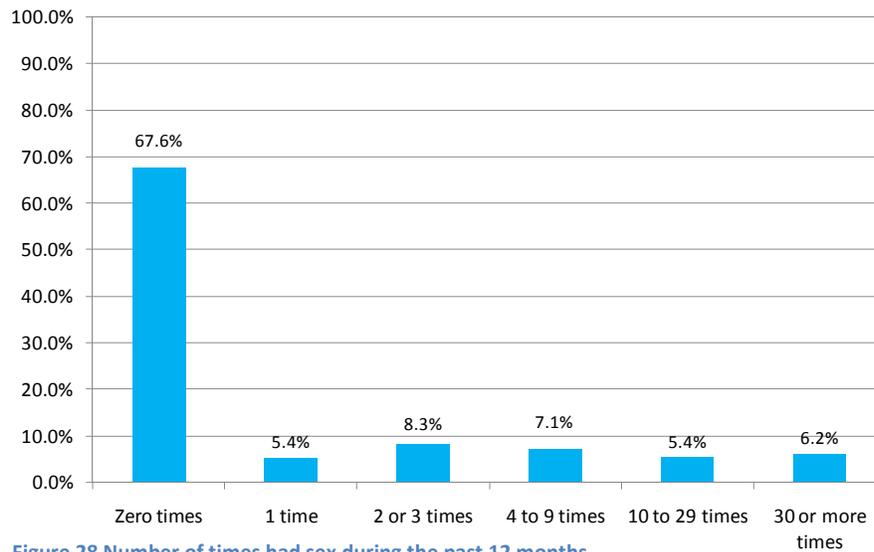


Figure 28 Number of times had sex during the past 12 months

More than two thirds of the adolescents did not have sex during this period; only one third was sexually active. From this one third, 5.4% had sex once and 27% had sex more than 2 times. If these frequencies are further analyzed by sex, we see that half of the females were sexually active (during the past 12 months), females were more sexually active as compared to the males. These sexually

active females, however, had only one partner as compared to the males who had multiple partners ($\chi^2=109.443$; $p < 0.05$).

Moreover, the number of times being sexually active by single age during the past 12 months shows an increase in the number of times adolescents had sex by single age, see figure 29.

Furthermore, the need for abstinence decreases with increasing age. When analyzing a possible association with the Pearson's Chi- square, it has to be noted to have a strong association with a $\chi^2 = 1210.644$ and $p \text{ value} < 0.05$.

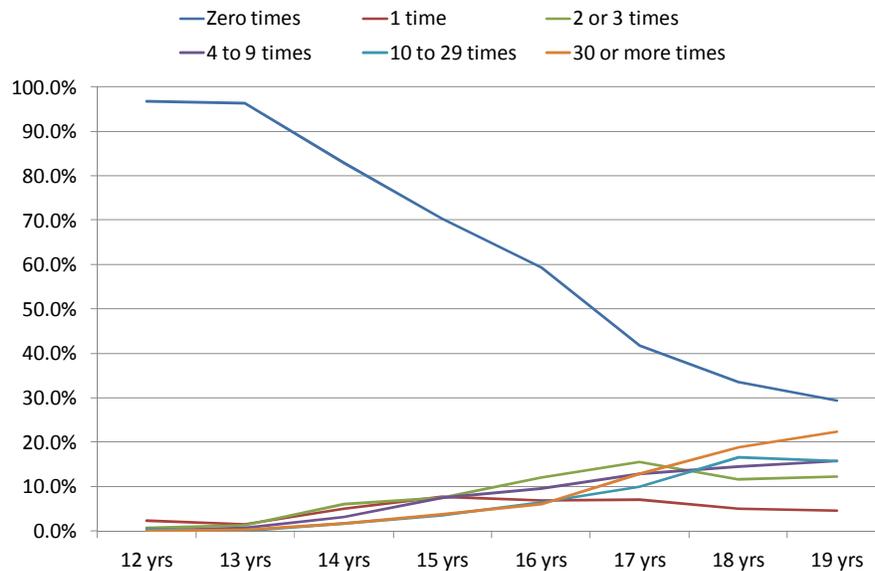


Figure 29 Number of times had sex by single age

5.6.2 Contraceptive use past 12 months prior to the survey

Only 38.8% of the sexually active adolescents always used a condom, with the males being the majority, 60% to 40% among the females. In addition, 17.2% never used a condom from which one out of five is a female and one out of eight is a male. The remaining 44% did use a condom ranging from 'regularly', 'sometimes', 'about half of the time' to 'almost every time'.

The majority of the sexually active adolescents did not use a condom during the last 12 months because another type of contraceptive was used (25.4%). More females as compared to males have stated to have used another type of contraceptive, 67.3% and 32.7% respectively.

Other reasons stated by both males and females for not using condoms were e.g.:

- Sex was unexpected (14%)
- The partner did not want to use a condom (5.6%)
- Others thought it was not necessary (7.0%)
- Others thought it was too expensive to use (1.9%)

Even 3.3% stated they wanted to have a baby that is why a condom was not used.

For the ones who stated not to have used a condom during the last time they had sex during the past 12 months is not due to lack of knowledge about condoms or lack of accessibility and/or availability of condoms. When asked to the total population adolescent (n=4399) about their knowledge of availability of condoms only 20.3% did not know where to get condoms. The remaining 79.7% knew where, when and how to get or buy a condom one way or another. See the table 22 below for details.

If you wanted to get a condom, how would you most likely get it?		
	n	%
Vending Machine	112	2.5
Store or shop or street vendor	921	20.9
Pharmacy, DBZ or Famia Planea	1890	43.0
parent (my mother or father)	247	5.6
Give someone money to buy	150	3.4
Some other way	186	4.2
Don't know	893	20.3
Total	4399	100.0

Table 22 Knowledge of condom availability

5.6.3 Current use of contraceptive to avoid pregnancy

Currently one out of five adolescents who are sexually active does use contraceptives which are not condoms. These current contraceptive users are for one third females and only 11.3% are males. Adolescents 18 + have the highest percentage for the current use of contraceptive (26.3%).

It is observed that the current use of contraceptives increases with age, this association is statistical significant with a $\chi^2 = 27.396$ with a p-value < 0.05, see figure 30.

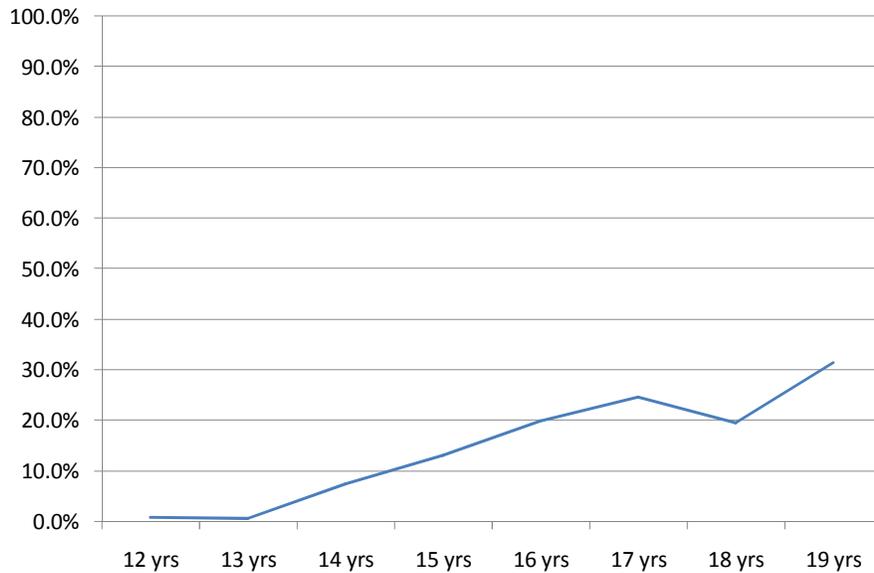


Figure 30 Current use of contraceptives excluding condoms by single age

5.7 Use of alcohol and drugs before sex

In a European study the association between alcohol and/or drugs use and sexually transmitted diseases was determined. Different types of substances are used for different sexual proposals. This study showed that when alcohol and/or drugs were used, the young adolescents were more likely to have more sexual partners, not using a condom and regretted sex after being drunk or having used drugs (Bellis, M. et al., 2008).

The use of alcohol and/or drugs by adolescents before having sex is considered a risk behavior associated with unsafe sex and increased risk for contracting sexually transmitted diseases such as HIV. In this survey this behavior has been investigated during two periods of time; 'during the 12 months' period prior to this survey and 'the last time' prior to this survey the adolescent had sex.

It has been observed that almost 70% of the adolescents never used alcohol or drugs before having sex. Nevertheless one third (30.6%) of the adolescents used alcohol or drugs before having sex. The frequency in which these were used during the past 12 months period were, '*sometimes*', '*half of the times*', '*almost every time*' and '*always*'.

There were no large differences between the males and females who used alcohol or drugs before sex, 32.2% for the males and 28.9% for the females. This is almost a third for both males and females. The use of alcohol and drugs before sex increases together with the age of the adolescent. However, it has to be noted that almost one third (29.8%) of the adolescents 14 years of age and one out of ten (11.1%) of adolescents 12 years old used alcohol or drugs before having sex. Aruban adolescents are exposed to risky behaviors at a very young age (see figure 31).

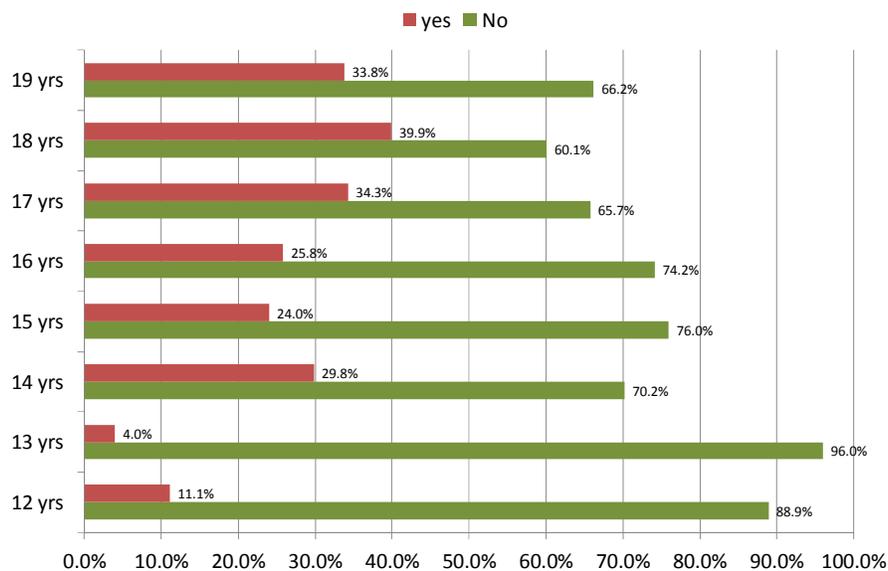


Figure 31 Use of alcohol or drugs before sex

The use of alcohol and drugs before sex has also been investigated among the sex partners of the adolescents. A similar percentage of their partners used alcohol or drugs before sex in different frequencies (29.6%). More than one third (36.0%) of the females have stated that their sex partner used drugs or alcohol before sex.

The use of alcohol or drugs before sex by the adolescent's partner increased also with age. Again the 12 and 14 years old adolescents had the highest percentages of partners who used alcohol or drugs before sex. For the time period, *the last time* they had sex, 10.5% of the adolescent have stated to have used alcohol or drugs before having sex. A slightly higher percentage of females (11.0%) compared to the males (10.1%) have used alcohol and drugs before having sex.

5.8 Sexual violence

Sexual violence was also experienced during the period of past 12 months prior to the survey. More than 5% (5.6%) of the adolescents who were *sexually active* have been forced or threatened to have sex. Furthermore, 3.4% have brought forward to have experienced some *sort of* force or threat to have sex.

Analyzing the information by sex, we observed that around 10% of the female adolescents have experienced sexual violence during the past 12 months, while 8.1% of the male adolescents also experienced sexual violence. Besides, it is the adolescents 12 to 14 years who more frequently experienced sexual violence during the past 12 months period compared with the remaining ages. This association between age of adolescents and sexual violence during the past 12 months period is statistically significant ($\chi^2=16.903$, $p < 0.05$). Overall, holding down (41%) and verbal threats (34.3%) were the most common types of violence experienced by all ages. For the females holding down was

the most common type of threat used while for the males, it is verbal threat which was the most common type used.

Exchanging goods for sex was also measured among the adolescents and 5.3% have indeed ever received money or goods in exchange for sex. On the contrary to sexual violence where females were the most stricken, males are the most who exchanged goods for sex, 7.2% against 3.2%. Adolescents 19 years old had the highest percentage of exchanging goods or receiving money for sex, 9.3% of all 19 years old adolescents. The 14 years old adolescents had the second highest percentage, 8.3%, the remaining ages had percentages varying between 7.3% and 4.7%.

5.9 Same sex attraction

The question about sexual attraction of the adolescent was not understood by 30% (28.8%), the majority were adolescents in the age category of 12 to 14 years (37.7%). However two thirds of the Aruban adolescents, 60.7%, have stated that their sexual attraction is towards the opposite sex, thus heterosexual. There were no large differences between the sexes with reference to their sexual attraction (see figure 32).

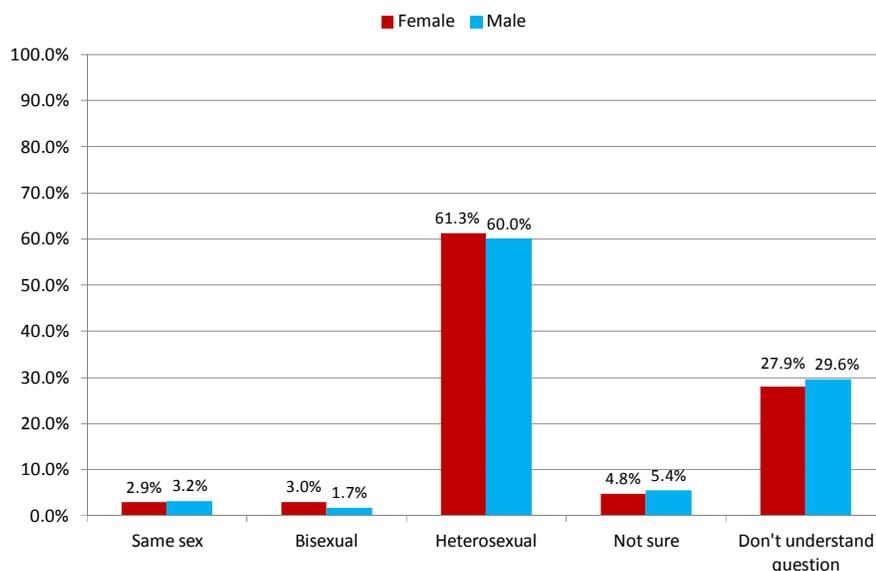


Figure 32 Sex attraction adolescents by gender

5.9.1 Pregnancy

Of the total population of secondary school going youth, 3.1% have been pregnant one time or have gotten someone pregnant and 0.7% have been pregnant or have gotten someone pregnant multiple times.

5.9.2 Abortion

Questions about abortion were asked to all the females and 2.6% (n=63) did have an abortion. These females were in the age categories of 15 years and older. About 2% have had an abortion once and 0.4% had an abortion multiple times. Of those who had an abortion one time, 2.8% were in the age category of 15 to 17 years old and 7.1% were 18+ years.

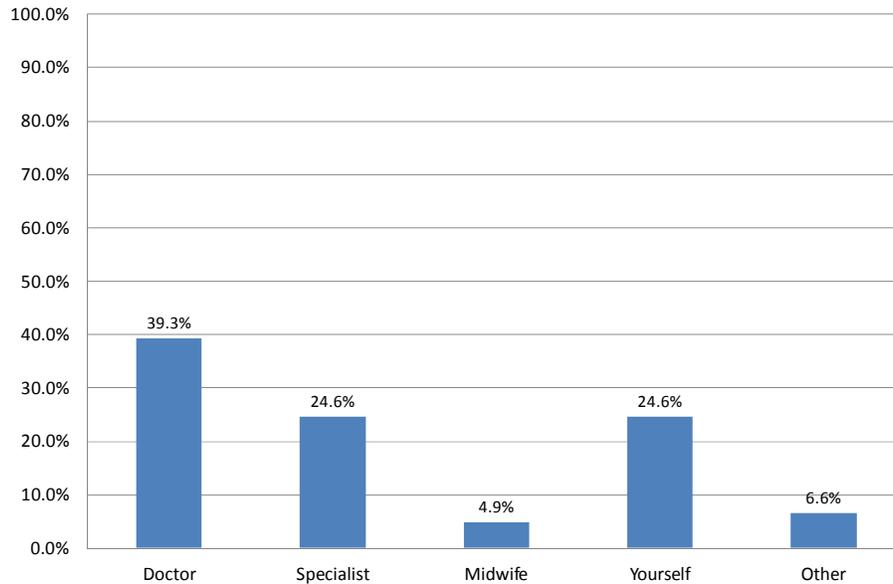


Figure 33 Person who performed the abortion

Among the adolescents who had an abortion, 50% had taken this decision themselves, while one third (30.0%) were told by their parent or guardian to have an abortion. The remaining 15% were told by their partner or someone else. The abortion were mostly performed by a doctor (39.3%) followed by a specialist (24.6%). It is important to mention that almost one quarter of the abortions performed were done by the adolescent herself. In addition, 50% of the abortions were treated at a doctor’s office and remarkably 20.7% of the abortions were treated at home.

5.10 HIV knowledge adolescent

The knowledge about HIV transmission among adolescents will give an insight on the omissions in HIV transmission. Questions about this topic were presented in the survey to the adolescent.

Only 8% of the adolescents had a comprehensive knowledge of HIV (all the questions were answered correctly) two thirds were females (60.8%) and one third (39.2%) males.

Analyzing this small population by age category, it is observed that more than half are in the age category of 15-17 years, followed by the age category 12 to 14 years and the 18+ adolescents are the ones with the lowest percentage of knowledge about HIV.

HIV Knowledge		Yes	No	Don't know
Can a pregnant woman with HIV infection or AIDS infect her unborn child?	%	74.6	4.1	21.4
Can a woman with HIV or AIDS infect her newborn child through breastfeeding?	%	45.8	12.3	41.9
Can a person get HIV infection or AIDS by sharing a meal (food) with someone who is infected?	%	14.4	53	32.6
Can a healthy-looking person be infected with HIV?	%	70.6	7.9	21.6
Can a person protect herself or himself from HIV infection or AIDS by using a condom correctly every time they have sexual intercourse?	%	72.5	10.8	16.7
Can a person protect herself or himself from HIV infection or AIDS by having one uninfected faithful partner (one uninfected partner who has no other partner)?	%	58.8	16	25.2
Can a person protects herself or himself from HIV infection or AIDS by not having sexual intercourse?	%	63.4	21	15.6

Table 23 HIV Knowledge

The statement with the highest percentage of the correct answers was *“if a pregnant woman can infect its unborn child with HIV”*. Almost three quarters (74.6%) of the adolescents answered this statement correctly. The statement with the lowest percentage of correct answer was *“if a person can get infected with HIV when sharing a meal (food) with someone who is infected”*. Only half (53%) of the adolescents had answered this statement correctly. It is important to mention that this statement also had one of the highest percentages of adolescents who did not know the answer. Overall the statement *“if a woman infected with HIV can infect her newborn child through breastfeeding”* had the highest percentage of adolescents who did not know the answer to this question.

5.10.1 Level of education and HIV knowledge

When comparing the level of education of the adolescents with their HIV knowledge, less than 40% (36.5%) of the adolescents attending HAVO/VWO, which is the highest educational level in this survey, had answered all the questions correctly. Also less than 40% of the adolescents attending MAVO had the correct knowledge about HIV. Only 16.5% of EPI students and 10.1% of the adolescents attending EPB answered all the questions correctly. In other words 1 out of 10 students at EPB had the correct knowledge about HIV (see figure 34).

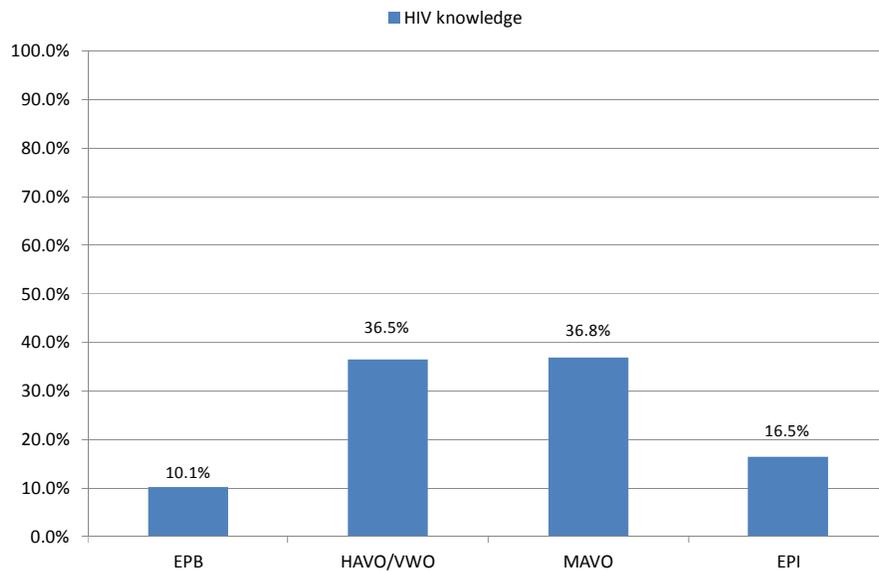


Figure 34 Correct Knowledge by level of education

In addition, the adolescents were also asked how likely they were exposed to HIV. One third (30.5%) did not know if they were exposed, while 9.3% have stated to have very likely been exposed to the HIV virus (see figure 35). In both cases more females did not know if they were exposed to HIV and also more females have stated to have been more likely exposed to HIV.

It notable that one out of ten adolescents 13 years of age have stated that they were very likely to be exposed to the virus of HIV (11.4%). Adolescents 12 years of age have the highest percentage of not knowing whether they were exposed to the HIV virus (49.6%).

The percentage of adolescents not knowing whether they were exposed to the HIV virus seems to decrease with increasing age. Additionally, the percentage of adolescents not being exposed at all to the HIV virus tends to increase with age.

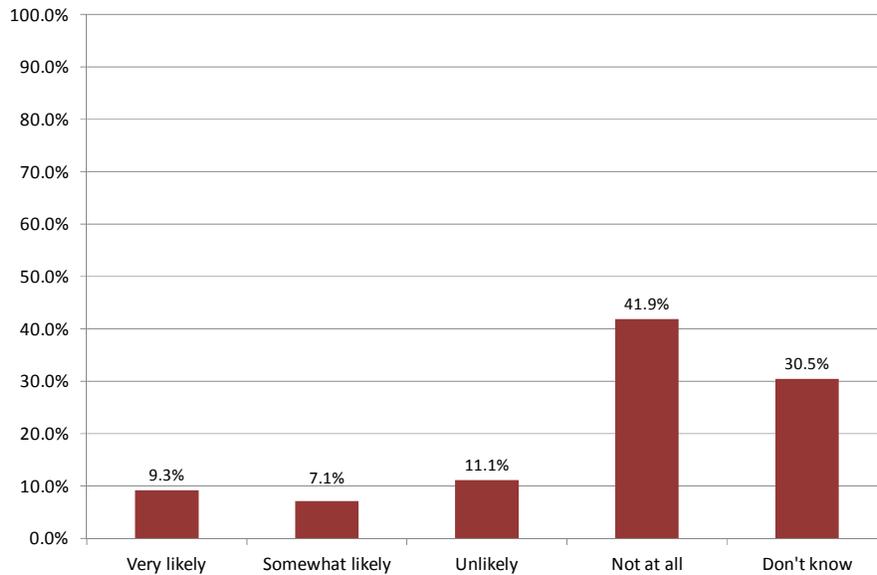


Figure 35 Likelihood of HIV exposure

The confidence of the adolescents towards an HIV infection during intercourse was also measured. The statements are presented in figure 36. Overall, the adolescents are very confident when present in a situation where they have to express themselves to their sex partner. Still 1 out of 10 ten and 1 out of 5 of the adolescents possess very little confidence to no confidence at all in such situations.

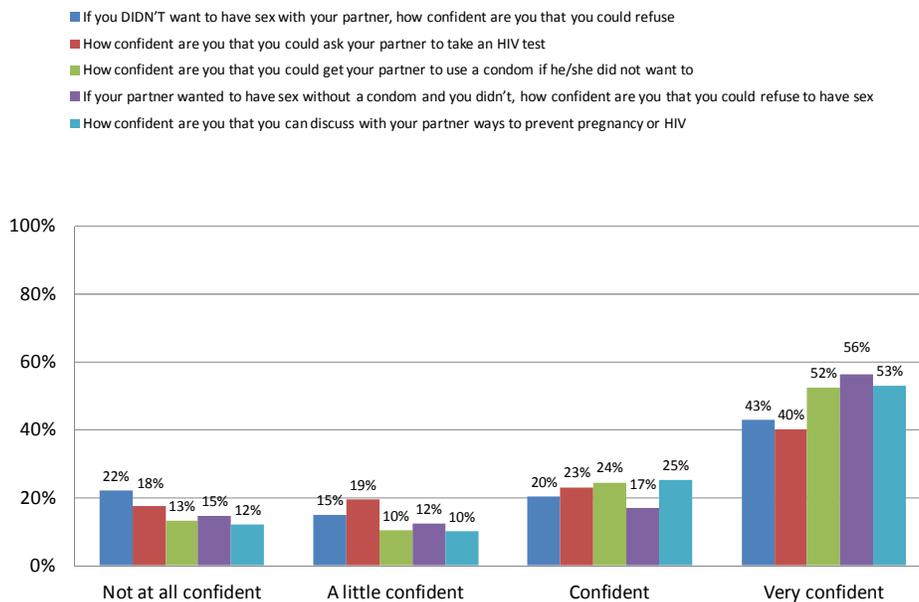


Figure 36 Confidence of adolescent towards their sex partner

The adolescents showed the most confidence in refusing their sex partner to have sex without a condom (56.4%). In addition, a little more than half of both males and female adolescents are very

confident to convince their sex partner to use a condom (52.3%). More than 40% of all adolescents are very confident to refuse sex with their partner if they do not want to have sex as opposed to 22 % who are not at all confident to do so. Analyzing confidence about these behaviors by gender, we observe that the females overall are more confident as compared to the males.

5.11 Gender norms

Gender norms are a set of ‘rules’ or ideas about how each gender should behave. They are not based on biology, but instead determined by culture and/or society. It is important to remember that gender norms can differ from one culture to another. What may be acceptable behavior for a male in one culture may be unacceptable in another culture. Gender norms have a strong influence on sexual behavior and relationships (NSVRC, 2012).

Ideas and thoughts about differences between gender, prevention, gender roles, contraceptive use, sexual abuse and violence were measured in this survey for the adolescents.

5.11.1 Macho culture

In the Caribbean it is known that a ‘macho’ culture prevails. To get an idea of how this manifests itself among the Aruban adolescents, questions were asked about the difference between male and female having more than one sex partner. The details are presented in the following figure 37.

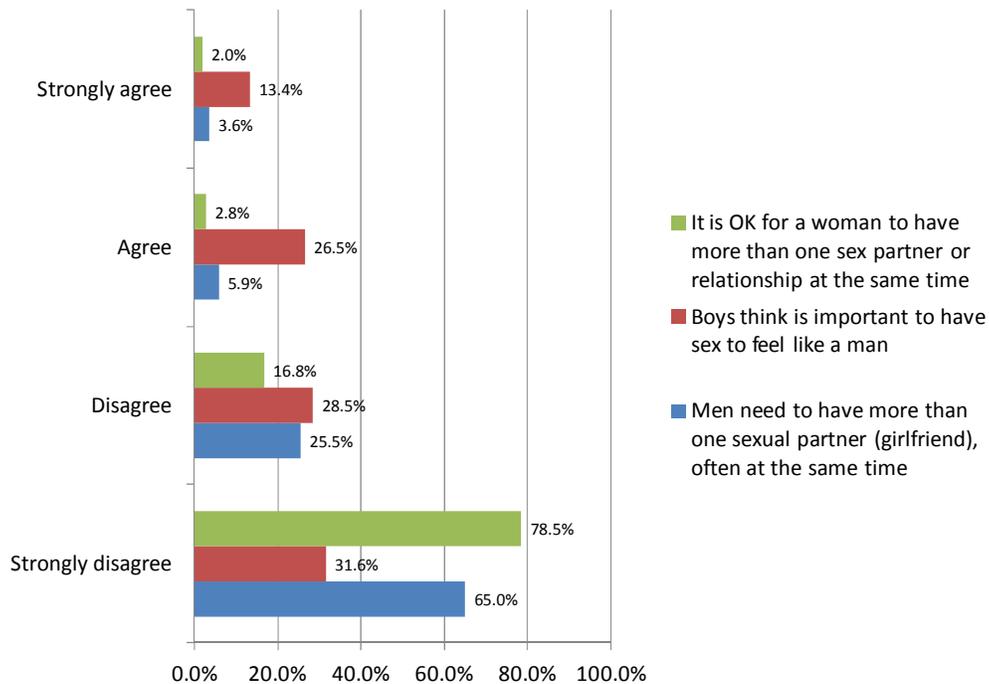


Figure 37 Macho culture among adolescents

The statement with the highest percentage of strongly disagreement was that it is not OK for women to have one or more sex partners or relationships at the same time, 78.5% strongly disagreed.

However when this same statement was asked about the males and multiple partners, 65% strongly disagreed. This could indicate that it is slightly more acceptable for males to have multiple partners as compared to females.

About the statement that boys think it is important to have sex to feel like a man, one third strongly disagreed. Nevertheless 13.4% strongly agrees with this statement.

Analyzing these statements by gender, it was observed that both females and males strongly disagreed with the statement of a women having more than one sexual partner at the same time; the males a little less than the females.

As for the statement that men need to have more than one sex partner at the same time it can be seen that less than half of the males strongly disagreed compared to 80 % of the females. On the other hand we can see that more than 70 % of the males strongly disagreed that it is ok for a woman to have more than one sexual partner or relationship at the same time (see figure 38).

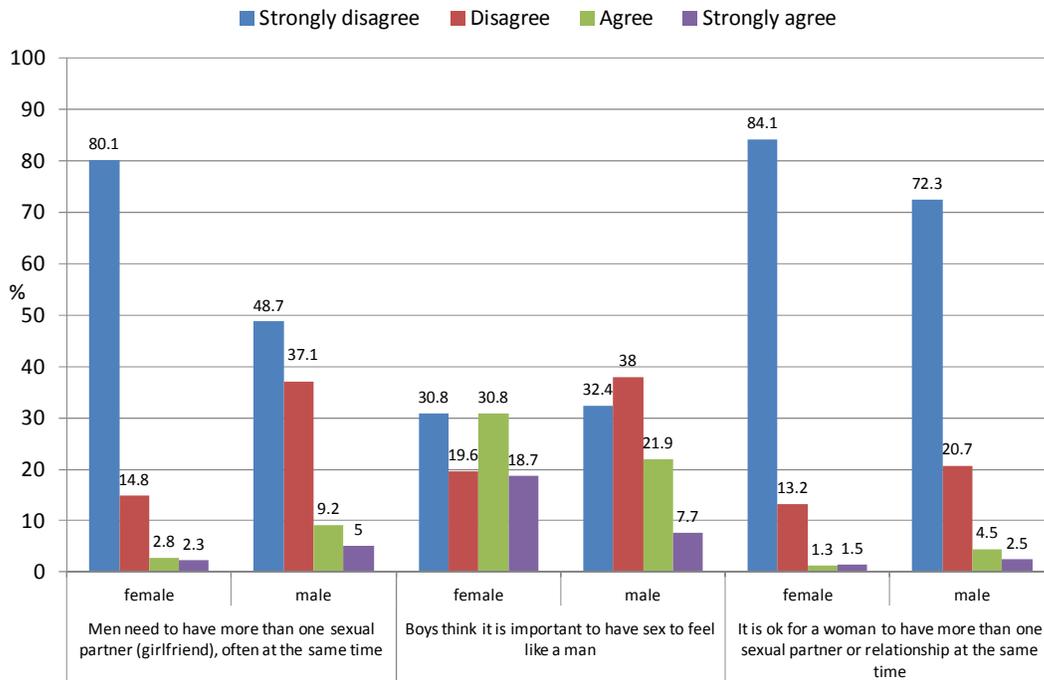


Figure 38 Macho culture among adolescent by gender

Taking the above into consideration this strongly suggests a double standard for the males when it comes to multiple partners and relationships.

5.11.2 Women and men roles

The roles for women and men were also measured by asking the adolescents about the responsibilities at home, responsibilities towards pregnancies, sex and self esteem. More than half of the adolescents disagreed or strongly disagreed with the statement that housework and caring for children are the woman’s work.

Also about 70% disagreed or strongly disagreed with the statement that it is the woman’s only responsibility to use something to prevent pregnancy. However, one third agreed or strongly agreed with this statement.

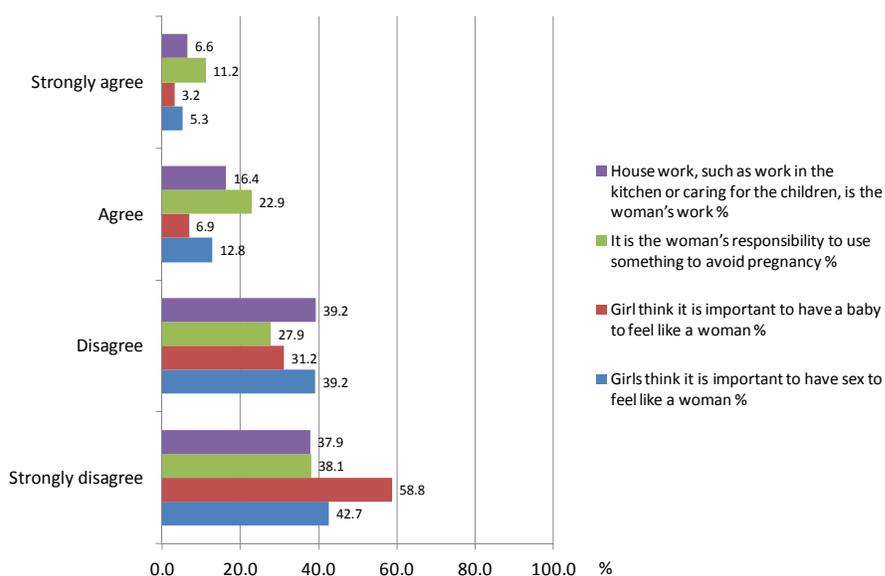


Figure 39 Perception women's role

The statement that adolescents have mostly disagreed with was about girls thinking it is important to have a baby to be able to feel like a women, see figure 39. About 90% of the adolescents disagreed or strongly disagreed with this statement, yet one out of ten adolescents did agree or strongly agreed with this statement.

If the statements about the women’s role are analyzed by gender, we observed that females are the ones who mostly disagreed about all the statements presented except for the statement about responsibility towards housework and children (see figure 40).

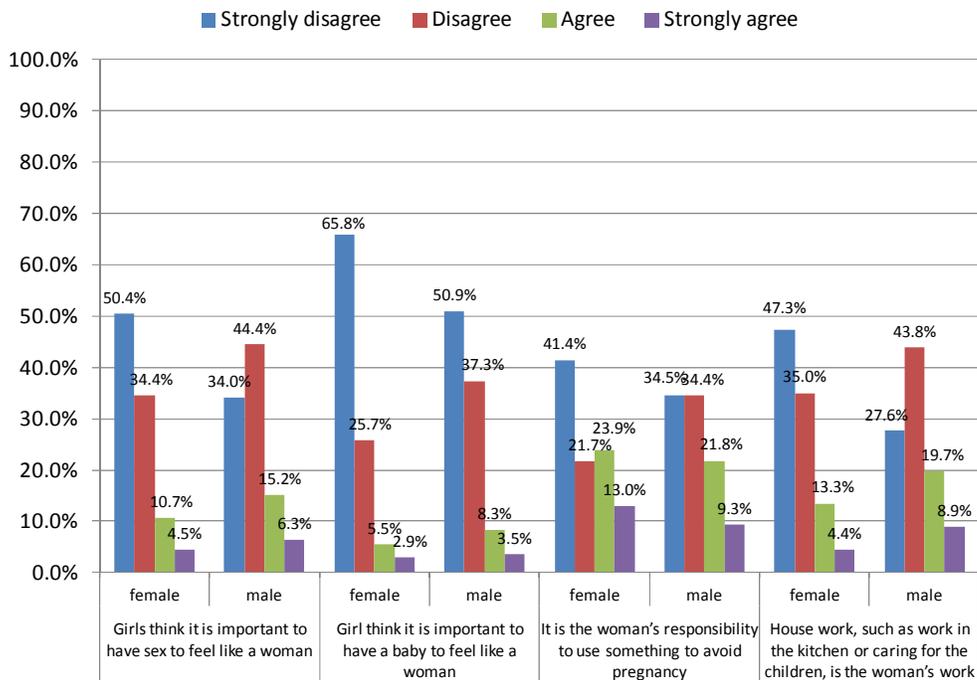


Figure 40 Perception women's role by gender

Here males also strongly disagreed with this statement. More males as compared to females agreed and strongly agreed with the statement that it is the woman's responsibility to use something to avoid pregnancy.

5.11.3 Men's role

The role of men in financial responsibility, presence in raising kids and responsibilities for using contraception were measured. More than half of the adolescents agreed that men are very important in raising children as opposed to one in ten adolescents who strongly disagreed that men are very important in raising children.

About the responsibility of men to avoid pregnancy, the thoughts were divided whereby 51.5% agreed that it is the man's responsibility as opposed to more than 40% of the adolescents who disagreed or strongly disagreed with this statement, see figure 41.

After analyzing these statements by gender, it can be concluded that both male and female adolescents agreed with most of the statements. It has to be noted that slightly more males strongly agreed that men are very important in raising children. From figure 42 one can observe that the thoughts are mutual for both males and females about the male's role.

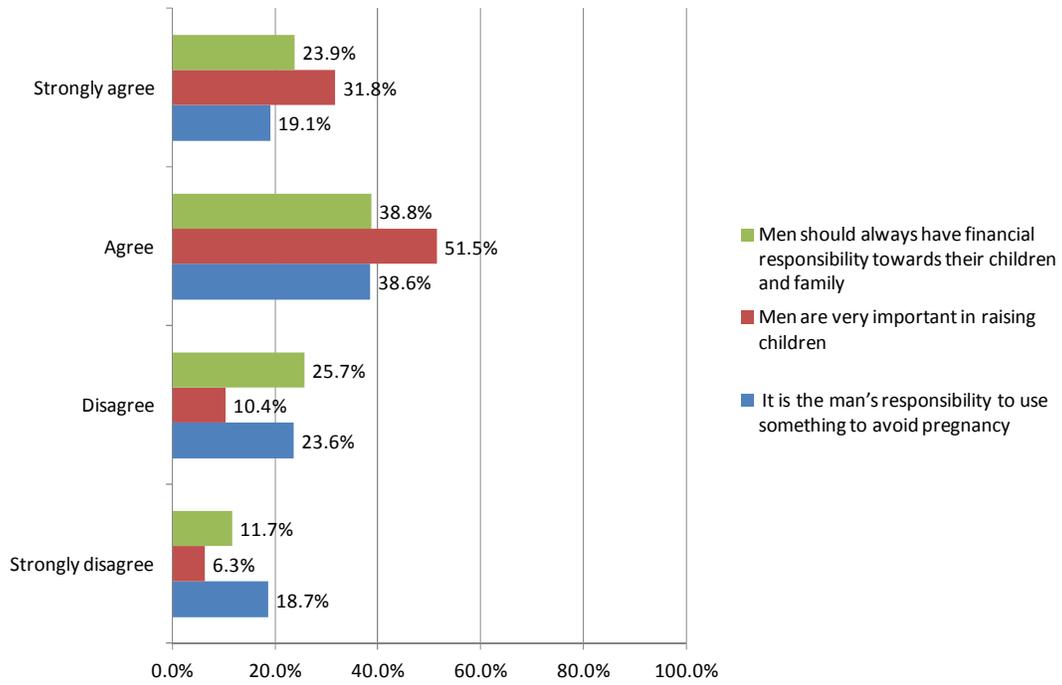


Figure 41 Men's role

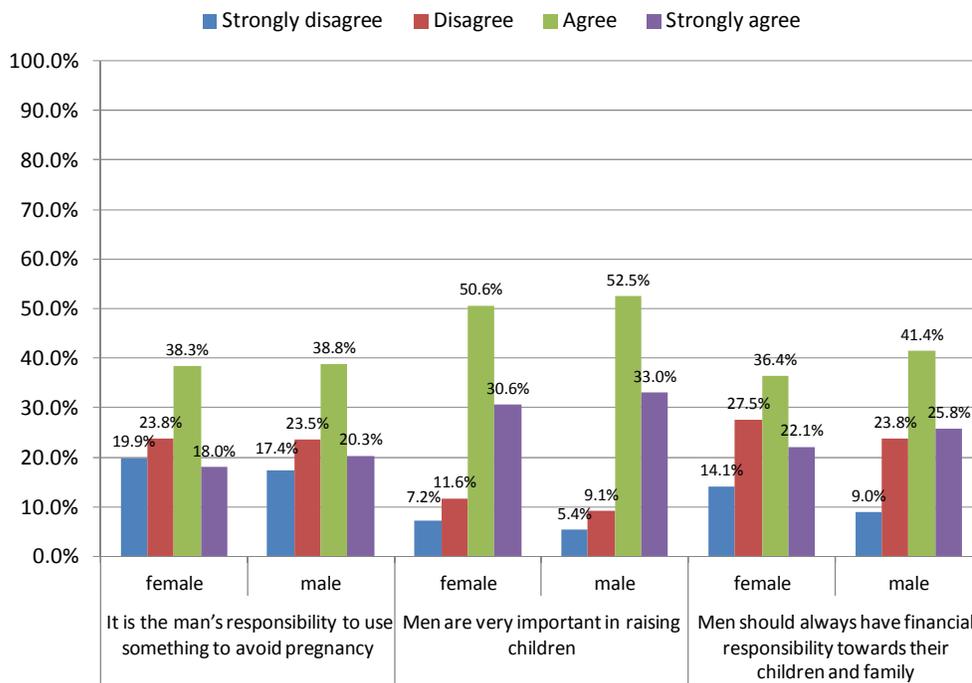


Figure 42 Perception men's role by gender

5.11.4 Peer pressure from friends

In order to be accepted by friends, pressure can be put on friends from friends to have sex. This was measured by asking how adolescents feel about this. More than 70% felt that even though their friends have sex, they do not have to have sex. Still more than one quarter (27.9%) felt the contrary, that pressure from friends would influence their sex behavior, see figure 43.

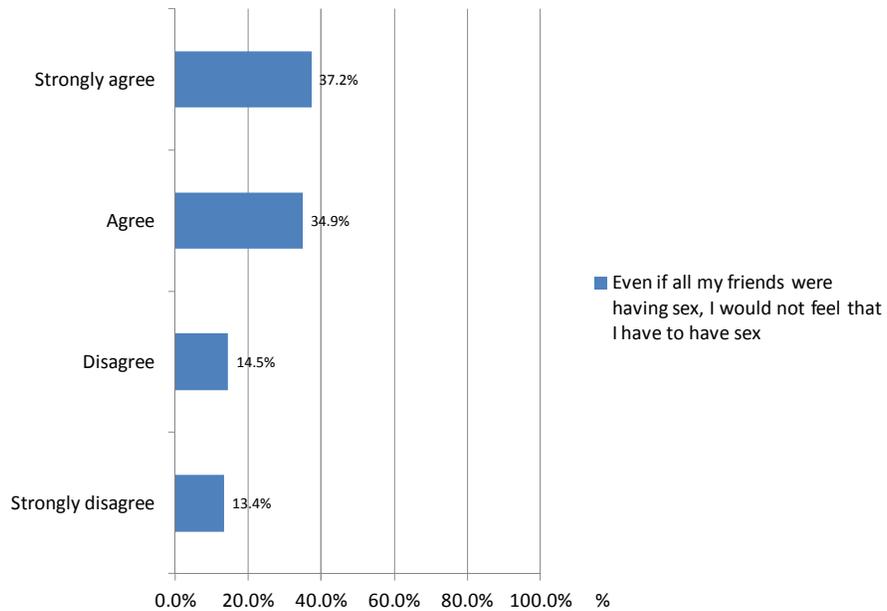


Figure 43 Peer pressure from friends

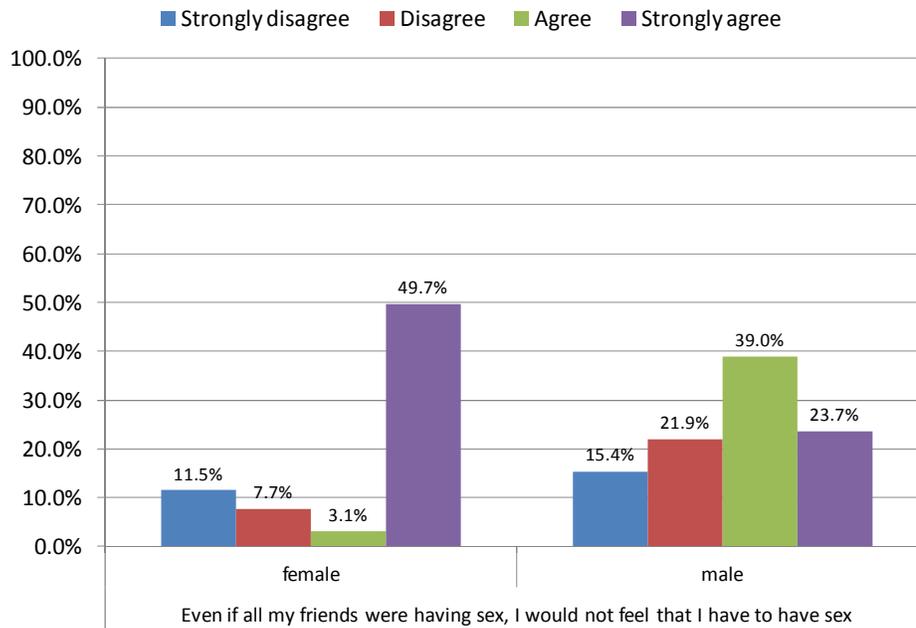


Figure 44 Peer pressure from friends by gender

The highest percentages of adolescents who strongly agreed with the statement that friends do not have pressure on them which can influence their sex behavior were females, see figure 44.

On the contrary males have the highest percentage of adolescents who *disagreed* and *strongly disagreed* with this statement. In other words males experience this pressure more than females.

5.11.5 Sexual abuse and sexual violence

The way one behaves is also taught and defined by the culture and mostly by the gender norms set by a community. Often males are taught to be aggressive while females are taught to set limits when it comes to sex. This can be a contributing factor for sexual violence or abuse (Gallagher & Parrot, 2011).

Statements about using threat, force or violence in a relationship were presented to the adolescents in this survey. Overall most of the adolescents strongly disagreed with the presented statements. For example when asked if it is OK for a boy or a man to sometimes hit his girlfriend or wife, 86.5% of the adolescents strongly disagreed and 10.8% disagreed.

However 2.7% agreed or strongly agreed with this statement. Although it is a small percentage, it is important to mention that some adolescents think that this behavior is OK.

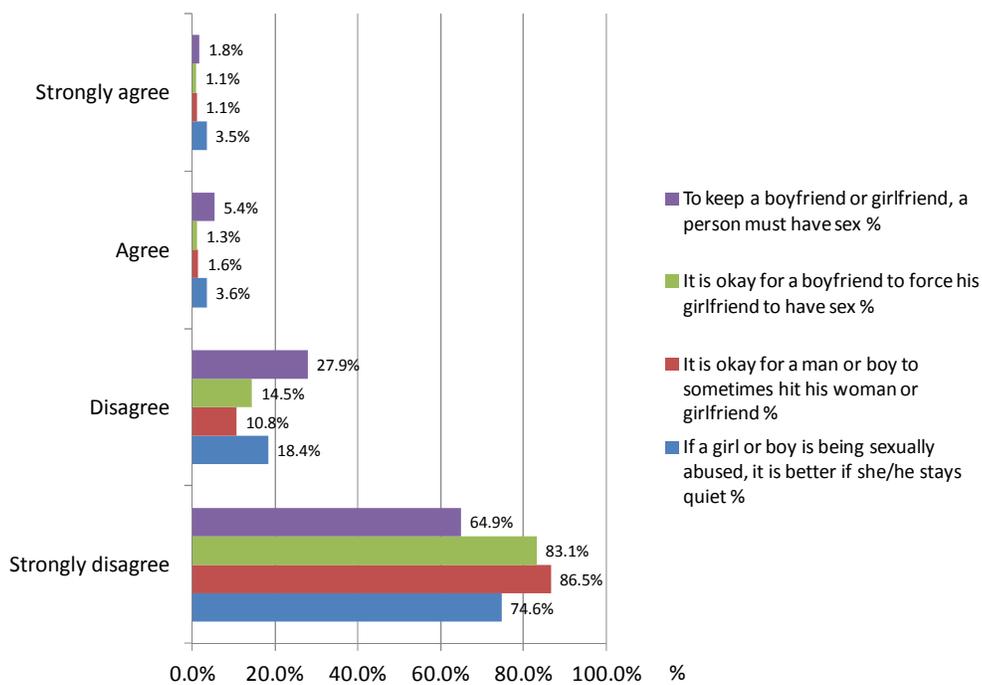


Figure 45 Perceptions about sexual abuse and sexual violence

Sexual abuse was also brought forward to the adolescents and 83.1% strongly disagreed with the statement that it is OK for a boy to force his girlfriend to have sex, 14.5% also disagreed with this statement. Still it is important to mention that 2.4% agreed and strongly agreed with this statement. When asked if it is better to stay quiet when someone is being sexually abused, 74.6% strongly disagreed and 18.4% disagreed. Yet, almost one out of ten adolescents (7.1%) thinks it is better to indeed stay quiet about this (see figure 45). After analyzing these statements by gender it can be concluded that females as well as males strongly disagreed with these statements; however it is noteworthy that females show a slightly higher percentage for strongly disagreeing with all the statements regarding sexual abuse and violence (see figure 46).

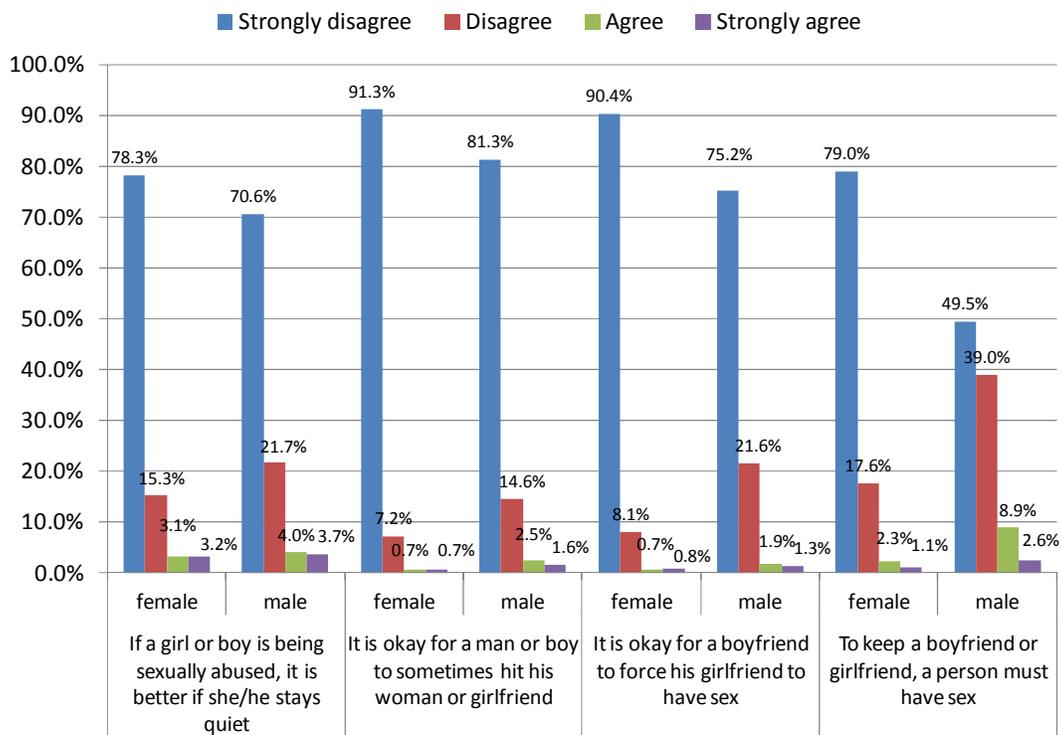


Figure 46 Perception about sexual abuse and sexual violence by gender

Males have the highest overall percentage when it comes to disagreeing with the statement that it is a must to have sex in order to keep a girlfriend or boyfriend.

5.11.6 Prevention and condom use

Gender norms also have their influence on thoughts about preventive measures such as avoiding pregnancies and sexually transmitted diseases.

When asked if abstinence is the best way to protect oneself from getting pregnant, less than half of the adolescents strongly agreed and 32.1% agreed. One out of five adolescents disagreed with this statement and 8.1% strongly disagreed, see figure 47.

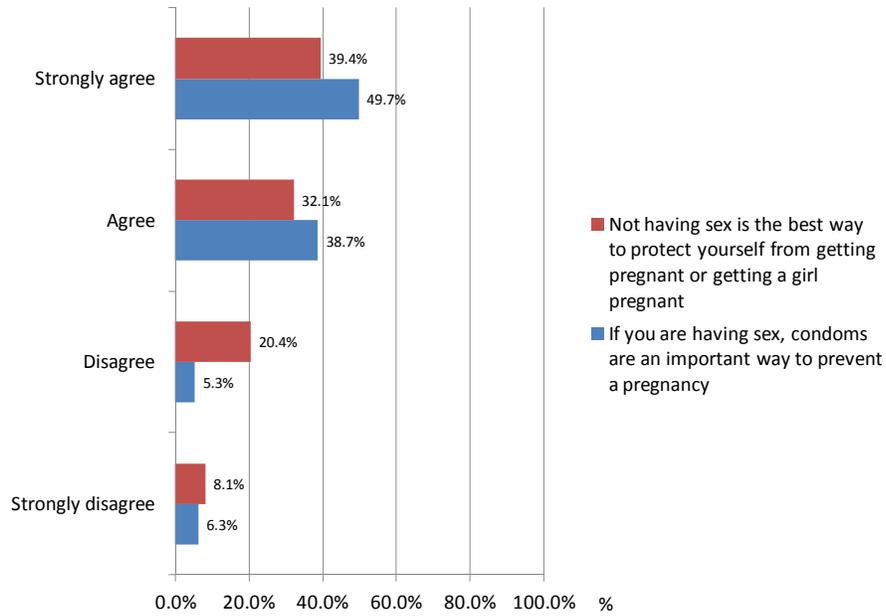


Figure 47 Perception about prevention for getting pregnant

More females as compared to males strongly agreed with both statements about abstinence for avoiding pregnancy. A majority of males on the contrary think the use of condom is the best way to prevent pregnancy (figure 48).

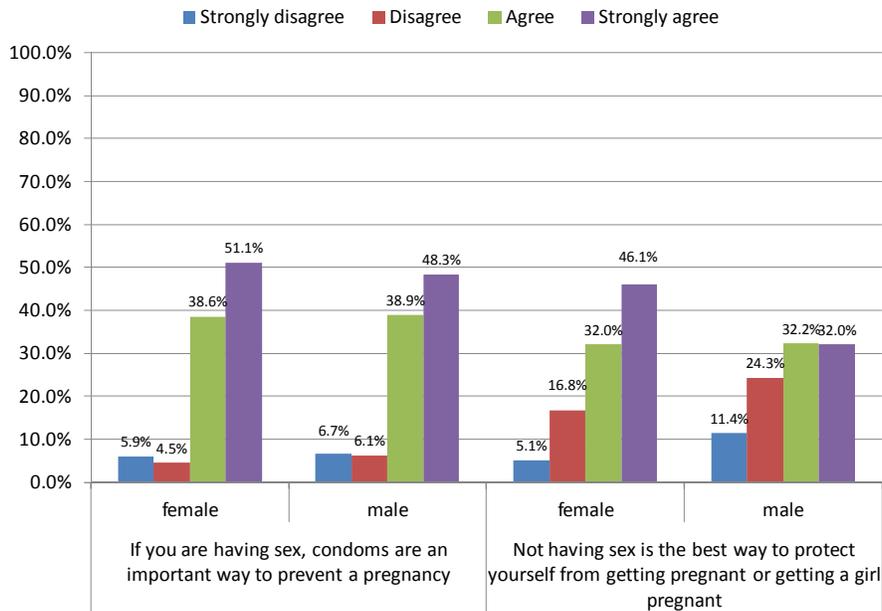


Figure 48 Perception about prevention for getting pregnant by gender

Perceptions about condom use however are varied (see figure 49), for example almost 80% of the adolescents disagreed or strongly disagreed with the thought that it is unnecessary to use condom when they are in a serious relationship.

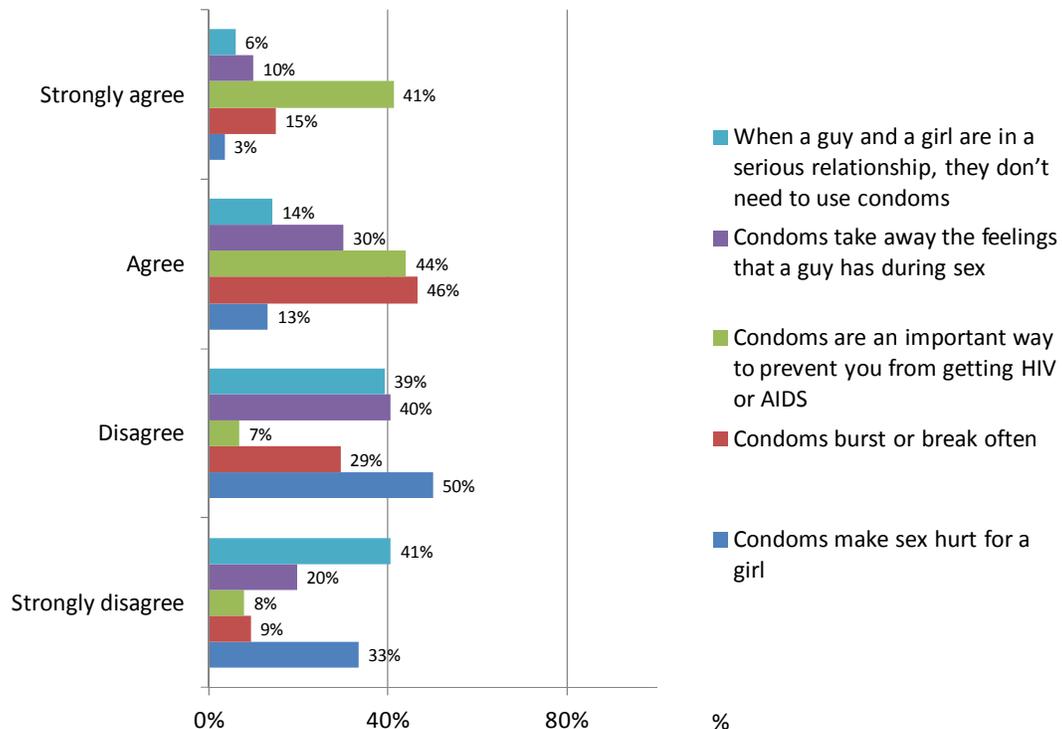


Figure 49 Perception about condom use

On the other hand 20.1% agreed with this thought, in other words, two out of ten of the adolescents find it unnecessary to use condom with their girl/boyfriend being in a serious relationship. At the same time 85.3% think that condoms are an important way to protect against HIV and AIDS, yet 14.7% disagreed or strongly disagreed with this statement.

Figure 49 shows the perceptions about the thought that condoms take away the feeling a guy has during sex, 40% agreed or strongly agreed with this thought.

Yet, 83.4% disagreed or strongly disagreed that condom hurt girls during sexual intercourse.

Remarkably 14.9% of the adolescents strongly agreed and almost half (46.5%) agreed with the statement that condoms burst or break often.

It is alarming to notice that almost half of the adolescents have this experience with condoms considering the fact that condoms are known to be very strong; and when they break it is most of the time due to using them incorrectly.

About half of the males as well as females disagreed with the statement that condom hurt girls during sexual intercourse. In addition, more females as compared to males agreed that condoms often burst or break. More males compared to females agreed that condoms do take away the feeling during sexual intercourse, see Annex I.

Community Environment



6 Community Environment

6.1 Family environment

6.1.1 Family composition

Family plays an important role in the development of the adolescent. Data received from the survey indicated that 51.3% (53.3% males and 49.5% females) of the secondary school going adolescents currently live with both their biological parents; followed by 40.1% (43.0% females and 37.0% males) living with only one biological parent (either mother or father) and 8.6 % (9.7% males and 7.6% females) do not live with either of their biological parent (see figure 50). After analyzing this same population by level of education we saw that 63.7% of HAVO students live with both parents. A little less than half of EPB students (45%) live with only 1 biological parent and 15.4% live with neither one of their biological parent.

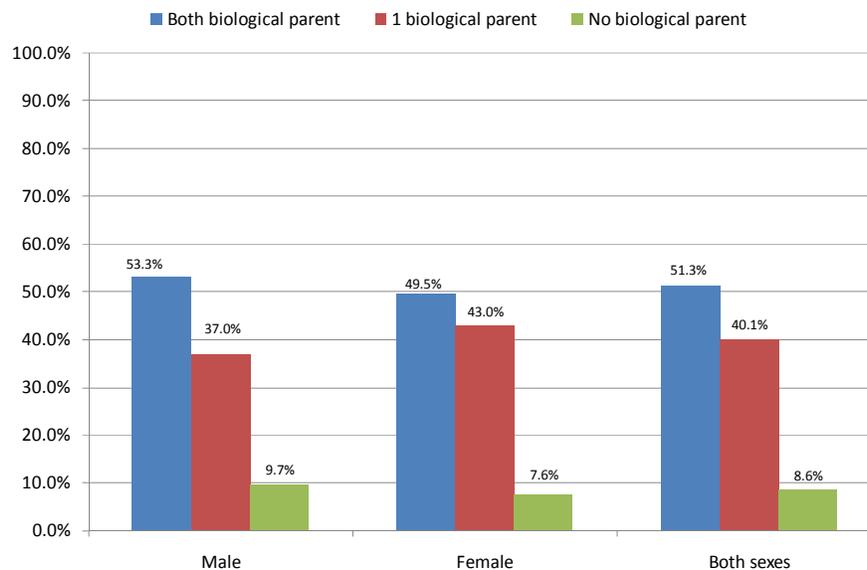


Figure 50 Family composition by gender

When we study those students who were not living with any biological parent, which were a total of 8.6% of the secondary school attending youths (n=401), we see that 54.1% were males and 45.9% females. The majority of these groups, who live without biological parents, were attending MAVO schools (43.9%).

Analyzing the family composition of those who do not live with any biological parent, we observe that one in every 5 adolescent (21.2%) currently live with their stepmother; more males (23.0%) as compared to females (19%).

HAVO/VWO and MAVO school going adolescents were the ones with the highest percentage in living with their stepmother (27.0% and 25.0% respectively). More than one third of this same population (n=401) who do not live with their biological parents have stated that they live with their grandparents, namely 36.2%. There is no large difference between the percentages of the males and females who live with their grandparents (36.4% versus 35.9%). One in every 5 adolescent (21.9%) currently live with their aunt and 40.6 % have stated that they live with their siblings (see annex II).

6.1.2 Communication

Communication is the key for a good relationship between parents and their children. Different topics can be discussed with one or both parents or other adults. Asking the youth which topics were being discussed with the family, the figure listed below (figure 51) shows the results of this question.

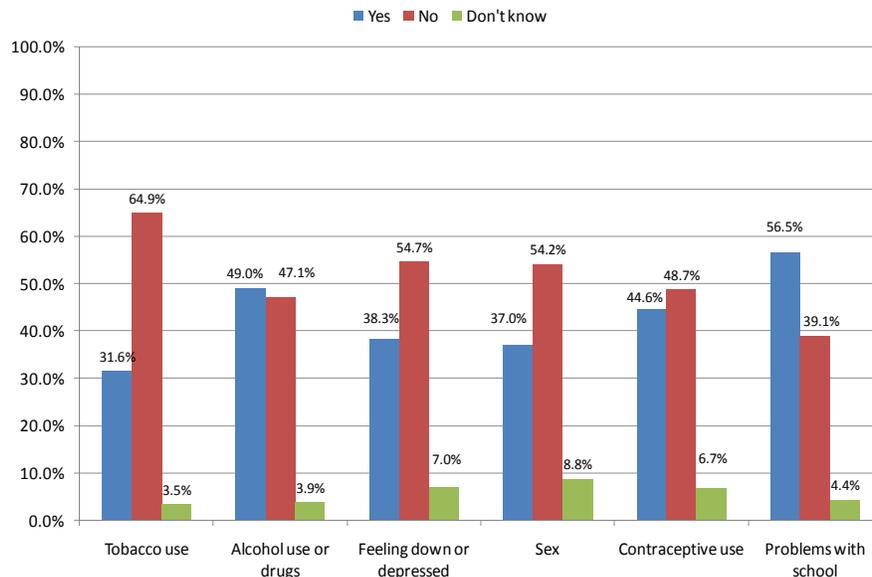


Figure 51 Topics discussed with parents or adults in home

What is most noticeable in figure 51 is that more than half of the students indicated that topics such as tobacco use, feeling down or depressed and sex were not discussed with parents. Tobacco use has the highest percentage of not being discussed (64.9%). The main topic that was mostly discussed was *problems at school* as stated by more than half (56.5%) of the secondary school going youth. The percentage of adolescents who discuss alcohol or drugs use with a parent or adult and the percentage of adolescents who do not discuss these problems with a parent of adult was almost the same (49.0% stated yes and 47.1% stated no).

Further analysis shows that female students (as shown in figure 52) have a higher percentage for discussing the topics as compared to males. The biggest difference in percentage between males and females is that of discussing feelings, where almost half of the female students (48.8%) did discuss their feelings as compared to almost a third of the male students (32.6%).

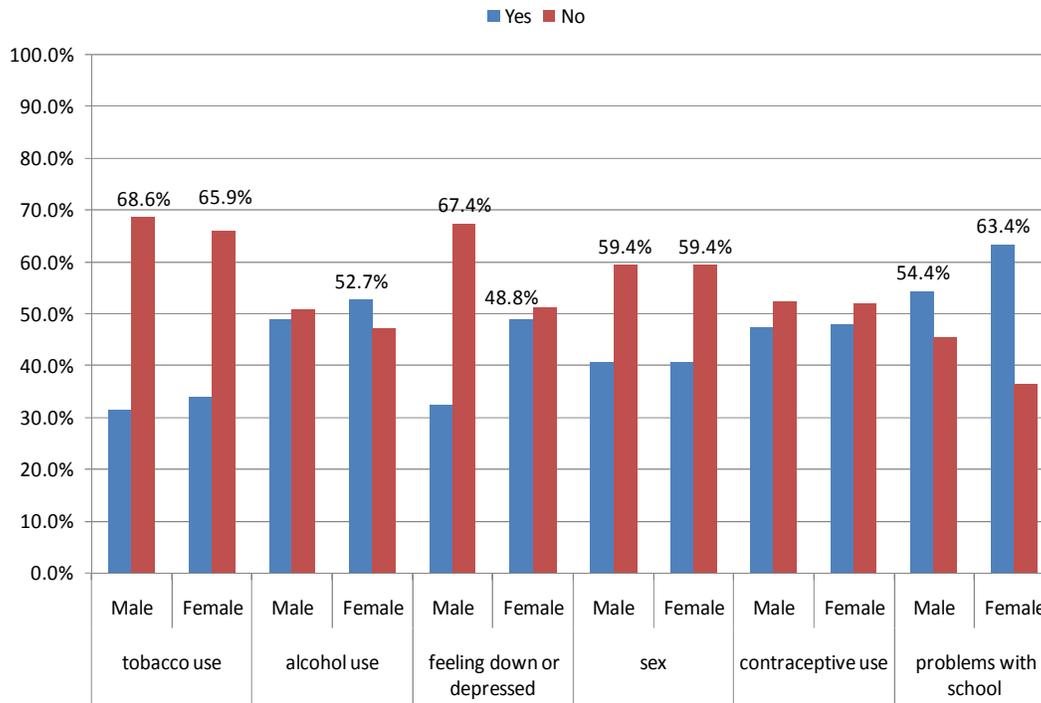


Figure 52 Topics discussed with parents or adults in home by gender

Analysis by level of education shows that for HAVO/VWO students and MAVO students, topics such as problems at school had the highest percentage of being discussed, 76.0% and 57.7% respectively.

EPI students discussed alcohol use more than the other topics (65.4%) and EPB students mostly discussed contraceptive use with a parent or adult, as compared to the other topics (42.8%). In contrast to the topics discussed, EPB, MAVO and EPI students shows the highest percentage of not discussing tobacco use, 79.0%, 72.9% and 59.4% respectively. More than half of HAVO/VWO students (53.7%) did not discuss feelings such as feeling down or depressed.

6.1.3 Family suicide attempt

Relatives of a family member who committed suicide have a higher risk of attempting or committing suicide (Kim, C.D. 2005). Almost half (49.6%) of the respondents stated that none of their family member ever tried to commit suicide and 29.9% don't know if any family member ever tried to kill themselves.

On the other hand, 15.2% stated that a family member tried to commit suicide. Furthermore, for 5.3% of the respondents it was fatal for their family member (see table 24). More in depth analysis shows that of the 5.3% of the respondents, whose family member died due to suicide, 60.5% were females and 39.5% males. There is a significant association between sex and family suicide attempt ($\chi^2=83.064$; $p < 0.05$).

As far as you know, have any of your family members ever tried to kill themselves?		
	n	%
No	2313	49.6
Yes and they lived	710	15.2
Yes and they died	248	5.3
Don't know	1392	29.9
Total	4663	100.0

Table 24 Suicide attempt and outcome in the adolescent's family member

6.1.4 Family problems

The school attending youth was asked whether any of their family member or adults they were living with, had any kind of problems such as drinking, mental health problems, drug use or violence in the 5 years prior to this survey. A total of 29.1% (n= 1358) of the secondary school attending youth responded yes to this question.

Results show (see figure 53) that drinking problems of a parent or adult occurs with 51.0% of the students, followed by mental health problems with 18.8% of the respondents. Problems with violence is present in 16.9% of the respondents' parents or adults and drug use in 13.3% of family member of the school attending youth. For violence there was a significant association for the sex of the respondent and violence ($\chi^2= 8.156$; $p < 0.05$). More females experience the above mentioned problems with a parent or adult in their home as compared to the males.

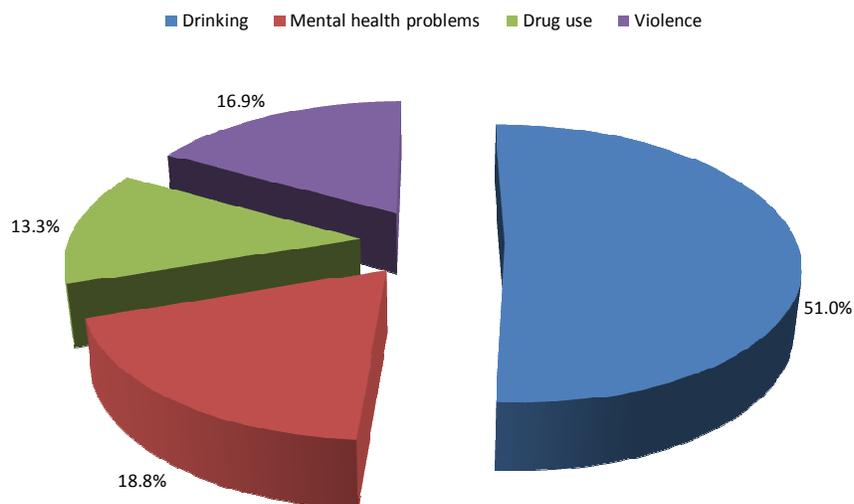


Figure 53 Problem of a parent or adult in home in the past 5 years

6.1.5 Tobacco use by parent or guardian

Parental practice (such as tobacco use) can have direct consequences on the adolescent tobacco use (Poms, L.M. et al., 2012).

Data collected during this survey have shown that 13.4% of the secondary school going youth stated that their father or male guardian would regularly used tobacco, whereas 5.9% said that their mother or female guardian were the ones that regularly used tobacco. Only 3.9% responded that both parents (guardians) were regular tobacco users. More than 70% (73.0%) answered that none of their parents or guardians regularly used tobacco.

6.1.6 Family caring

There is a strong protective effect of family connectedness in relation to adolescents and their decision concerning risky behavior (CDC, 2013).

Connectedness with the family was measured by statements listed in the table below. The connectedness was categorized as low scale (never true), medium scale (from rarely true to often true) and high scale (always true). Table 25 shows the statements and their corresponding percentages, stated by the students.

Categorizing the connectedness (as shown in figure 54) we see that many statements have a medium scale of connectedness. Almost three quarter (74.2%) of the students indicated the presence of an adult who always want them to do their best, from which 52.5% were females and 47.5% were males. MAVO students show the highest percentage in this statement, namely 46.7%.

In your home, there is an adult who					
	Never true	Rarely true	Sometimes true	Often true	Always true
Checks to see if your homework was done?	24.5%	22.3%	24.3%	12.5%	16.4%
Expects you to follow the rules?	5.6%	11.8%	17.7%	23.1%	41.8%
Understands you?	9.9%	15.9%	23.9%	21.1%	29.2%
Pays attention to you?	4.2%	10.4%	17.3%	25.3%	42.7%
Cares about you?	2.4%	5.7%	9.8%	19.5%	62.6%
Believes that you will be a success?	4.1%	6.9%	13.4%	21.5%	54.0%
Is too busy to pay much attention to you?	41.9%	29.0%	17.4%	7.3%	4.4%
Talks with you about your problems?	15.8%	19.1%	22.2%	19.4%	23.4%
Always wants you to do your best?	1.5%	3.0%	5.1%	16.1%	74.2%
Listens you have something to say?	5.8%	11.4%	18.4%	25.2%	39.2%
Always helps you out when you really need it?	4.8%	9.2%	16.5%	22.9%	46.6%
Really knows what you are doing with your free time	12.3%	16.7%	20.5%	23.4%	27.2%

Table 25 Statements by adolescents about family connectedness

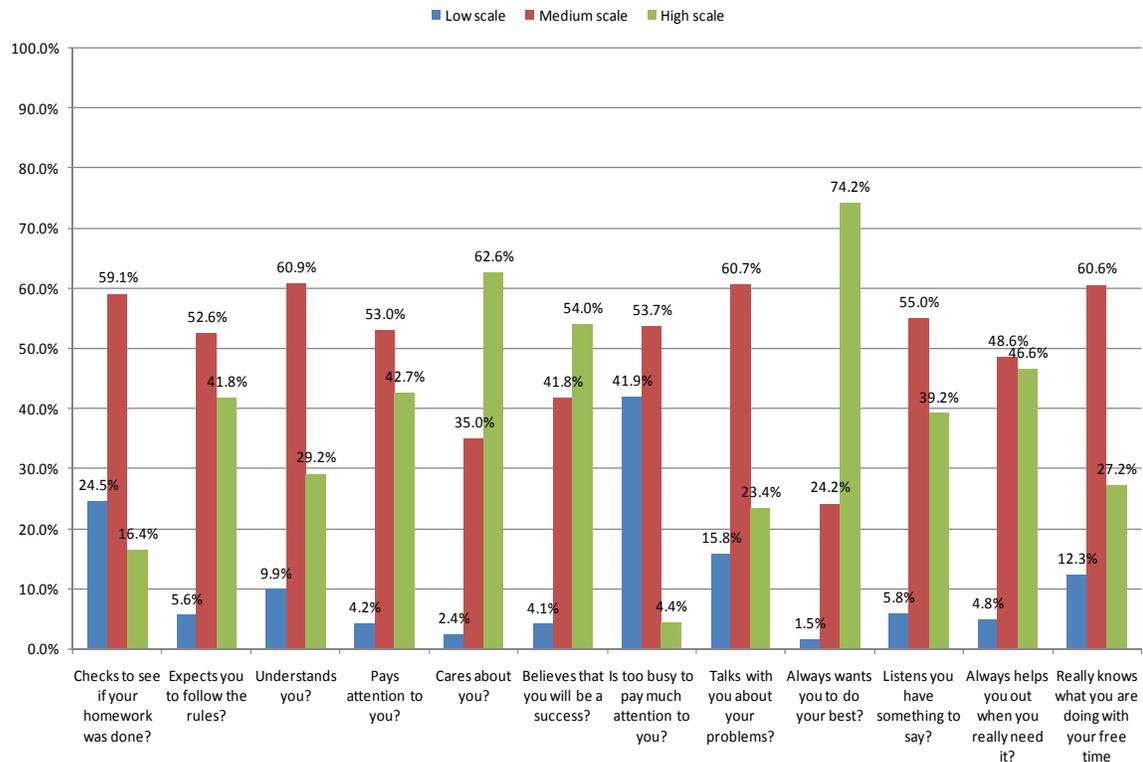


Figure 54 Statement of adolescents about family connectedness by scale of connectedness

Another statement which showed a high connectedness was an adult in their home who really cares about them (62.6%) from which 52.5% females and 47.5% males. On the other hand, there was a low scale of connectedness between the students and the statement concerning “the attention paid to them”. Almost 42% (41.9%; 57.5% females and 42.5% males) stated that they did not get the attention of an adult in their home because he/she was too busy.

6.1.7 Family school support

Students were asked how the connectedness was between school and their family through different statements such as meeting with teacher, helping with school work etc. Table 26 gives you an overview of the statements with their corresponding percentages.

More than half of the students (50.8%) of which 54.1% females and 45.9% males, said that no one in their family had ever met with their teacher during the year the survey was done. Further analysis showed that those who answered never were mostly MAVO students (46.7%).

More than a quarter of the students were not being helped with their school work by someone in the family (29.0%; 52.9% females and 47.1% males).

More than one third (34.4%) of the students stated never receiving too much pressure from family/parents to do well in school, whereas 39.6% (52.9% females and 47.1% males) of the secondary school going youth were being checked all the time to see how they did on tests or examinations.

Someone in your family.....			
	Never	Sometimes	All the time
Has met with your teachers this year?	50.8%	43.8%	5.4%
Has said that it is important to do your best in school?	4.1%	13.7%	82.2%
Helped with your schoolwork?	29.0%	47.3%	23.8%
I receive too much pressure from family/parents to do well in school	34.4%	44.0%	21.6%
Usually checks up on how you did on tests or examinations	17.2%	43.1%	39.6%

Table 26 Statements by adolescents about family school support

6.2 Community caring

The students were asked if they think adults in their community really cared about young people. Again the connectedness is being scaled as low (never true); medium (rarely true to most of the times true) and high scale (always true). Overall, their answers showed that 5.4% (more male students than female students; 53.9% and 46.1% respectively) think there is a low connectedness when it comes to whether there is an adult in the community that cares about them. Seventy-eight percent (78.3%) stated that there was a medium connectedness and only 16.3% think that there is an adult out there who really cares about young people (high scale; more female than male; 52.2% and 47.8% respectively). Figure 55 gives an overview of the frequency of the results by sex.

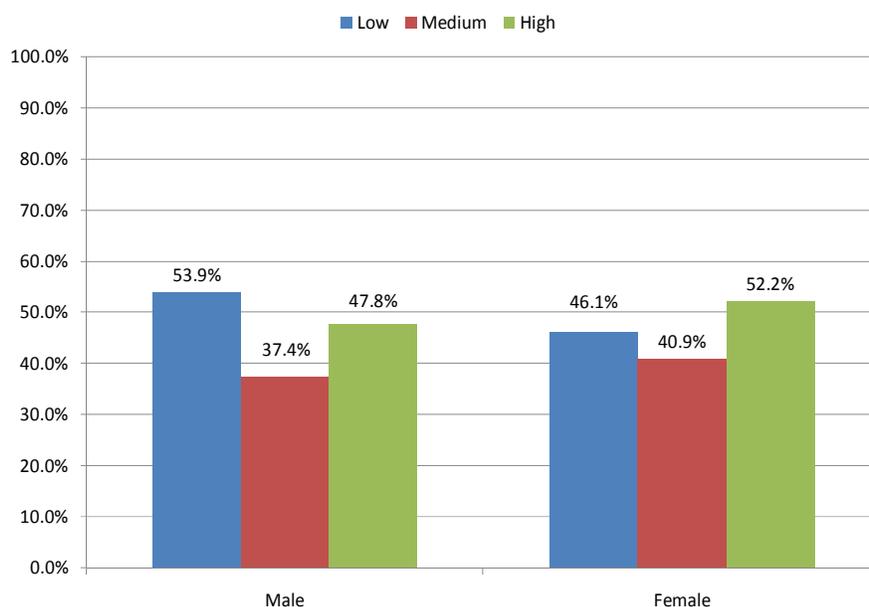


Figure 55 Overview of scale of community care by gender

The connectedness with the community was also measured by statements as shown in table below (table 27) with their corresponding percentages.

The connectedness was scaled as low scale (never true), medium scale (rarely true to often true) and high scale (always true). By putting this percentage of scaling in a graph, as shown in figure 56, we can conclude that, in general, for almost all the statements of the connectedness with the community, there is a medium scale of connectedness.

Outside of your home, there is an adult who					
	Never true	Rarely true	Sometimes true	Often true	Always true
Really cares about you?	10.4%	11.6%	18.4%	22.8%	36.8%
Tells you when you do a good job?	8.1%	8.7%	19.8%	29.8%	33.7%
Notices when you're not there?	22.3%	14.0%	18.6%	20.1%	25.0%
Is mean to you?	60.5%	21.6%	9.6%	4.2%	4.2%
Always wants you to do your best?	5.3%	6.0%	10.7%	22.7%	55.3%
Listens when you have something to say?	7.6%	10.4%	19.6%	24.7%	37.6%
Believes that you will be a success?	6.1%	6.2%	14.1%	25.3%	48.3%
Notices when you're upset about something?	17.1%	14.1%	21.5%	20.6%	26.7%
You trust?	10.6%	9.6%	14.5%	20.2%	45.0%

Table 27 Statements by adolescents about community connectedness

The results show that there were 36.8 % of students stating there was an adult outside their home who really cares about them (high scale connectedness; 57.8% female and 42.2% male).

Opposite to the high scale community connectedness, 10.4 % of the students said that there was nobody out there who really cared about them (low connectedness; 57.1% male and 42.9% female).

More than half (high scale connectedness; 55.3%; 54.7% females and 42.3% males) of the students had an adult outside their home who always wanted them to do their best (see figure 56).

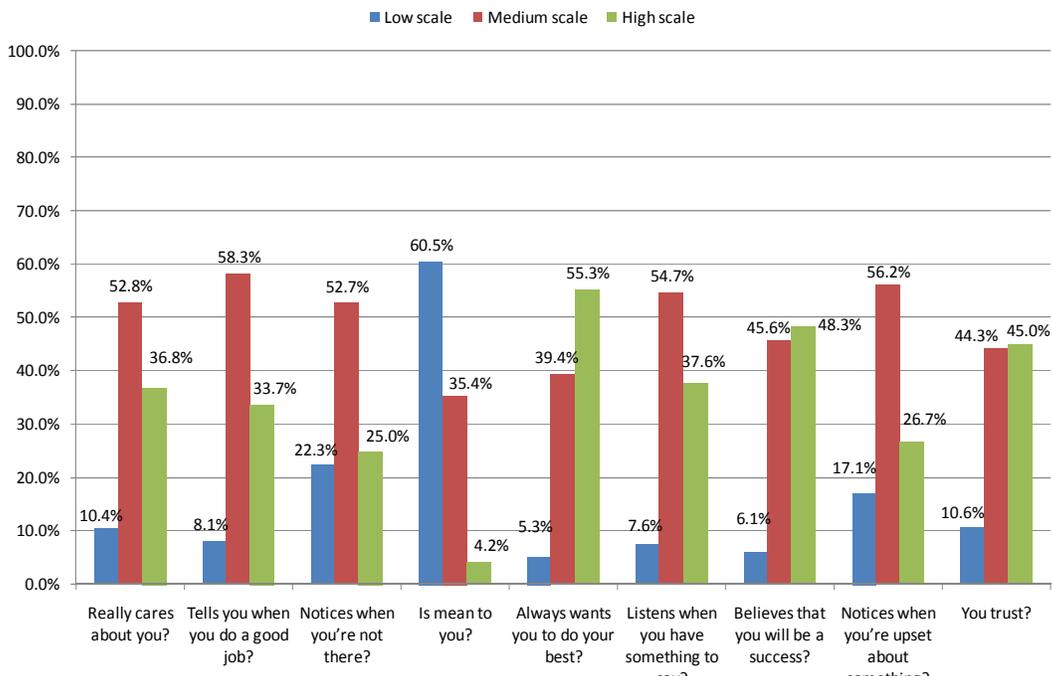


Figure 56 Statements of adolescents about community connectedness by scale of connectedness

6.3 Religion

Religion can be a protective factor in the sexual behavior of an adolescent (Rostosky, S.S. et al., 2004). Data collected during this survey revealed that of the total secondary school going youth between 12-19 years of age, 83.9% consider themselves as religious (ranging from a little religious to very religious).

More females are religious as compared to males (85.6% females and 82.1% males). Considering level of education we see that MAVO students are the ones being more religious as compared to the other levels of education, with a total percentage of 86.5%.

The frequency of attending church in the last month was also measured and the results show that 40.0% of the females attend church once or twice a month, whereas 38.9% of the males did not attend church at all during the last month prior to the survey (see figure 57).

Analyzing by level of education we see that EPB students attend church more than once a week (9.5%) as compared to other levels of education. MAVO students have the highest percentage for attending church weekly or once or twice a month (19.5% and 43.7% respectively) and HAVO/VWO students are the ones who never attend church, with a total of 46.6% of all secondary school going youth.

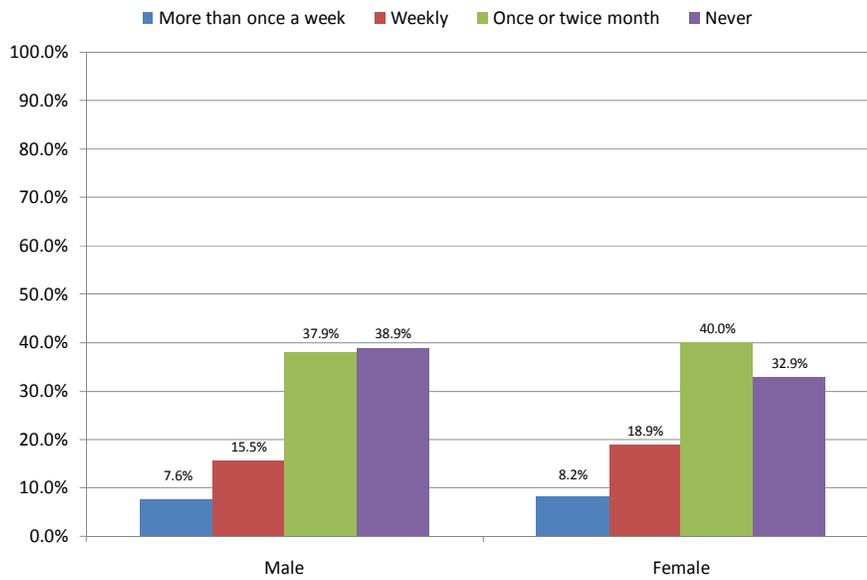


Figure 57 Frequency of church attendance by gender

6.4 Friends

Peer relationship can have many effects on the development of the adolescent, it being positive or negative which can influence their knowledge, behavior and socio-emotional well being (CDC, 2009). Data collected during the survey showed that almost 90% of the students between 12-19 years had 2 friends or more (45.9% females and 43.9% males). Furthermore, 60.6% of these students felt that their friends cared about them a lot (more females than males; 59.8% and 40.2% respectively). Even though 61.6% of the male students would not at all discuss personal problems with their friends, 62.7% of the females will do so (see figure 58).

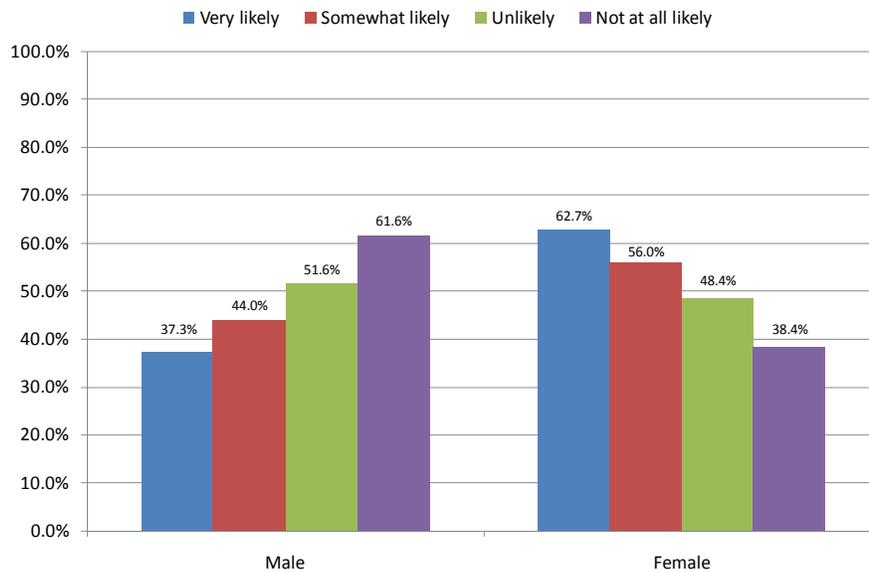


Figure 58 Likelihood of discussing personal problems with a friend by gender

The results of discussing personal problems with a friend, analyzed by level of education, shows that HAVO/VWO students have the highest percentage (22.6%) in discussing personal problems with a friend as compared to EPB students with the lowest percentage (20.8%). There is a strong significant association ($\chi^2= 335.930$; $p < 0.05$) between educational level and discussing personal problems. Students of a high level of education discuss their problems with a friend as compared to students of a low level of education.

Another important measure made during this survey was the perceived peer risk behavior. The youth were asked if they think their friends were having sex, using drugs, drinking alcohol or have been arrested or tried to kill themselves. Table 28 gives an overview of the risky behaviors of the peer which have direct consequences to their health and table 29 shows the risky behavior of the peer with direct consequence on their socio-emotional well being.

As table 28 shows, less than 20% (18.5%) of the youth think that all their friends are using a condom during sexual intercourse and 14.6% stated that all their friends are alcohol consumers. What is notable is that more than 20% (21.8%) of the students were not sure if their friends are using a condom during sexual intercourse. Overall, almost 10% of the students reported they were not sure if their friends were having sex, or using a condom while having sex, using tobacco, using drugs or drinking alcohol or use a condom if their friends were having sex.

How many of your friends do you think.....						
	None	A few	Some	Most	All	Not sure
Are having sex	30.3%	20.9%	15.8%	13.7%	9.9%	9.3%
Use a condom if they are having sex	16.8%	12.8%	12.1%	18.0%	18.5%	21.8%
Use tobacco (e.g. cigarettes)	63.0%	14.6%	8.9%	3.9%	1.6%	7.9%
Drink alcohol (e.g.beer, wine, rum)	27.6%	21.4%	17.4%	14.9%	14.6%	4.1%
Use drugs (e.g. marijuana, cocaine, crack)	60.1%	15.4%	9.5%	4.3%	2.2%	8.5%

Table 28 Perceived peer risky behavior with effects on health

Table 29 shows risk behaviors which can lead to violent engagements, which can have direct effect on the socio-emotional well being of the adolescent. Notable is that 48.3% of the students reported their friends (ranging from a few friends to most friends) have been in a physical fight.

But there were still some students who stated that their friends sell drugs, carry weapons, and have been arrested and tried to kill themselves.

How many of your friends do you think.....						
	None	A few	Some	Most	All	Not sure
Sell drugs	77.3%	8.1%	4.1%	1.0%	0.6%	9.0%
Carry weapons (e.g. gun, knife or cutlass)	73.6%	10.6%	4.6%	1.8%	1.2%	8.2%
Have been in physical fights	41.1%	26.1%	15.8%	6.4%	3.9%	6.7%
Have been arrested	69.9%	13.6%	6.6%	2.0%	1.2%	6.6%
Tried to kill themselves	77.2%	9.3%	3.4%	0.7%	0.6%	8.8%

Table 29 Perceived peer risk behavior with effects on socio-emotional well being

6.5 School

Young people who feel connected to school are more likely to succeed academically and make healthy choices. Doing their best in school will improve their expectation of academic achievement (CDC, 2009).

Data collected during this survey shows that almost a quarter (24.8 %) of the students between 12-19 years of age wants to complete an advanced degree. Of all the females' students who participated in the survey, 31.9 % wanted an advanced degree and 16.9% of all male students wanted an advanced degree (see figure 60). There is a significant association between gender of the respondent and their expectation of academic achievement; females do want to have a higher academic achievement as compared to males ($\chi^2=212.262$; $p < 0.05$).

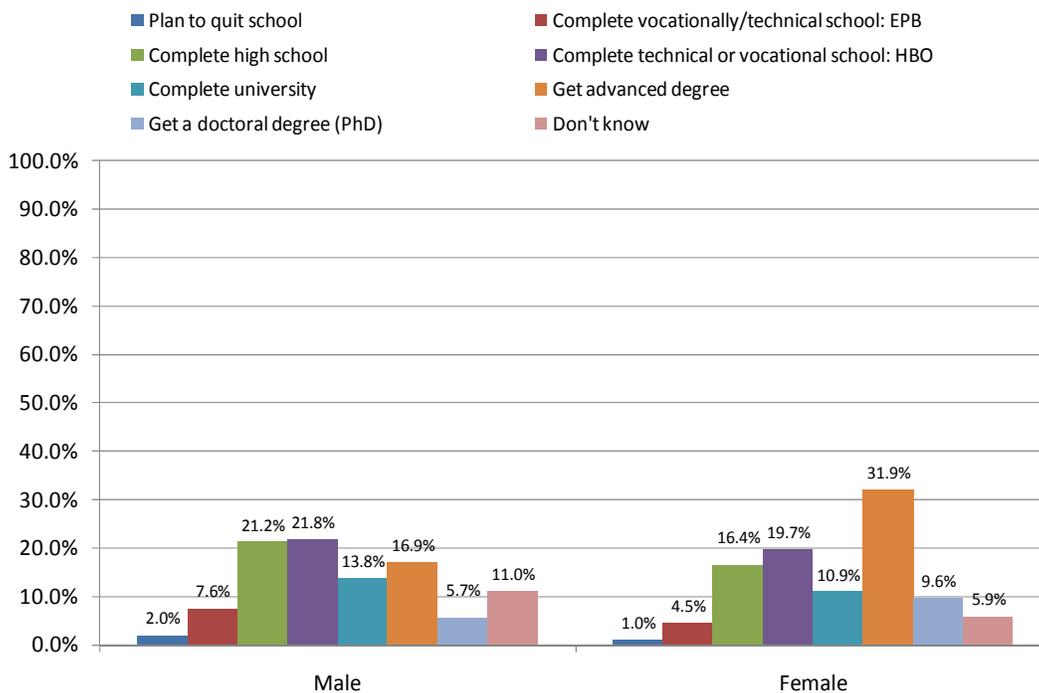


Figure 59 Expectation of academic achievement by gender

Analyzing this data by level of education we see that 39.2% of the EPI students and 27.7% of the EPB students wanted to complete technical/vocational school (HBO level), whereas 27.3% of the MAVO students wanted to complete high school. HAVO/VWO students were the ones with a higher expectation for an academic achievement, with 36.0% of the students wanting to get an advanced degree (see figure 60).

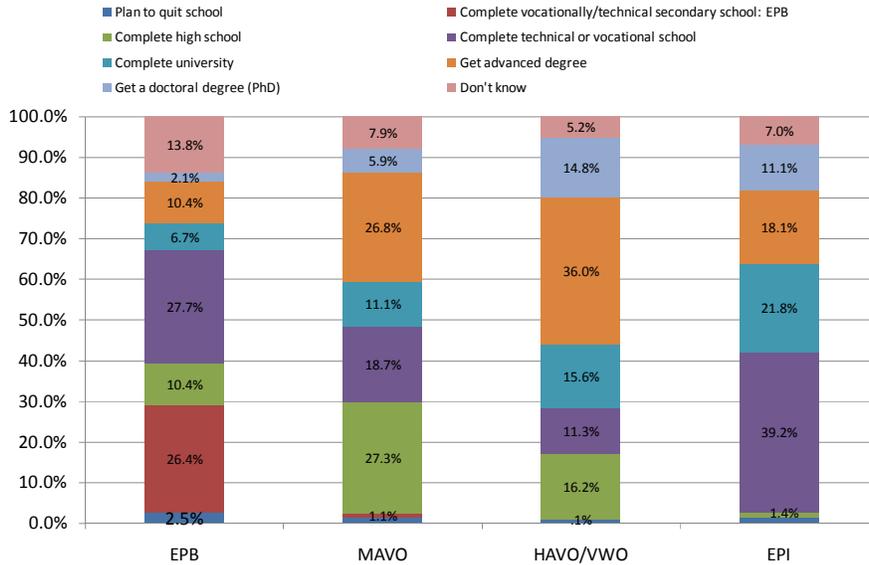


Figure 60 Expectation of academic achievement by level of education

When students were asked whether they liked school or not, 51.5% of all secondary school going youths stated that they sometimes liked school of which 52.8% males and 50.4% females. More than a quarter (26.3%) of the secondary school students stated that they liked school a lot. Of the total female students, 27.9% liked school a lot and this was the case for 24.5% of the males.

According to figure 61, students liking school sometimes increases with age whereas students liking school a lot decreases with age. For those students who don't like school much or for the school haters it remains almost stable from 12 years to 19 years. There is a significant association between liking school and single age of the students ($\chi^2 = 111.022$; $p < 0.05$).

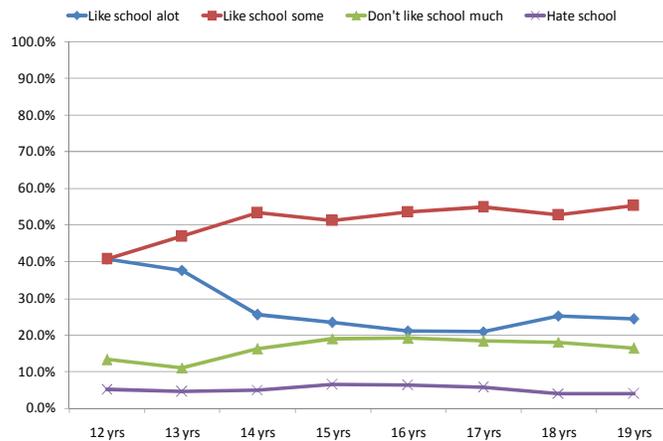


Figure 61 Likelihood of school by single age

Students were asked how many days and the reasons they have missed school since the school year started. As stated in the table 30, 45.3% of the students missed school one to 10 days due to illness (female more than male; 45.7% and 44.9% respectively). Of the respondents, 31.9% missed school because of other reasons, and more than 10% missed school due to skipping school.

How many days of school have you missed since this school year began?					
			Male	Female	Both sexes
Because of illness	1-10 days	n	858	991	1849
		%	44.9%	45.7%	45.3%
Because of family problems	1-10 days	n	99	156	255
		%	5.2%	7.2%	6.3%
Because of skipping school	1-10 days	n	239	233	472
		%	12.5%	10.7%	11.6%
Because of you live far away and could not get to school	1-10 days	n	91	65	156
		%	4.8%	3.0%	3.8%
Because of your family need you to work	1-10 days	n	28	18	46
		%	1.5%	0.8%	1.1%
Because of other reasons	1-10 days	n	597	705	1302
		%	31.2%	32.5%	31.9%
Total	1-10 days	n	1912	2168	4080
		%	46.9%	53.1%	100.0%

Table 30 Reason for missing school

School connectedness is referred to as a student's perception and feelings about the people at school. This was measured by asking the secondary school going youth about how they feel at school, how teachers treat them and about their friendships in school.

The school connectedness was scaled as low scale (none of the time), medium scale (from rarely to most of the times) and high scale (all the times). As displayed in figure 63, the overall connectedness of the students with their school is of medium scale. About 70 % of the students feel safe rarely to most of the time.

Furthermore a little over 60% (61.3%) never feel that they have no friends at school. The statement only parents or guardians care whether they are in school scored the highest indicating that more than half of the students (53.0%) feel this care all of the time. Almost 70% (66.5%) of the students indicate that they are not bullied or feel threatened at school. (See annex III)

Sexual education in school or other places help students make the right choices about sex at a crucial period in their lives (CDC, 2010).

Referring to the last school year, students were asked if topics such as condom use, how to avoid HIV infection, signs and symptoms of HIV and AIDS, were presented or discussed during any of the lessons (see table 31). What is noteworthy is the high percentage of students that did not know or did not remember the topics discussed ranging from 10% to 25%.

Topics such as where to get tested for HIV, the importance of being kind and supportive to people living with HIV/AIDS (PLWH), and where to get treatment for HIV were the least discussed. Topics which were mostly discussed were how to avoid HIV infection or AIDS and how to use a condom (see table 31). Overall, HAVO/VWO students have the highest percentage of topics not being presented or discussed in any lesson and EPB and EPI students have the highest percent for sexual education being presented or discussed in school.

During the last school year, topics discussed or presented in class:			
	Yes	No	Don't know/ can't remember
How to use a condom	62.3%	27.1%	10.5%
How to avoid HIV infection or AIDS	69.1%	20.2%	10.7%
The benefits of not having sex	51.4%	29.3%	19.3%
Where to get tested for HIV	29.6%	51.5%	18.9%
How to tell someone that you do not want to have sex with them	41.6%	42.2%	16.1%
How to tell someone you do not want to have sex with them without a condom	40.6%	41.7%	17.7%
The importance of being kind and supportive to persons with HIV or AIDS	29.4%	45.6%	25.1%
The signs and symptoms of HIV infection and AIDS	49.1%	31.4%	19.4%
Where to get treatment for HIV infection and AIDS	30.5%	44.8%	24.7%
Sexual feelings and behavior	50.6%	28.6%	20.7%

Table 31 Topics discussed in class during the last school year

Adolescents, who have a good relationship with their teachers, are less likely to initiate early sexual engagement, less likely to fall prey to substance use and are less likely to be depressed (Roorda, D. 2011). Of the school going youth, 65.0% (strongly) disagree to discuss sex with their teacher, of which more females than males (52.9% and 47.1% respectively). Most of these students were in HAVO/VWO (27.6%). More than half of the students also (strongly) disagree discussing HIV with their teacher, namely a total of 60.6%, more females (52.7%) as compared to males (47.3%). The majority of students who (strongly) disagree discussing HIV with a teacher are from MAVO with a total of 43.2%.

On the other hand, what stands out as positive teacher connectedness were statements such as teachers expecting the students to graduate from school, followed by teachers expecting them to do their best in school and as last that they could go to their teachers if extra help is needed with their schoolwork.

Of the secondary school going youth between 12-19 years, almost 90% (of which 54.4% females and 45.6% males) stated that their teachers wanted them to finish school. MAVO students have the highest percentage in (strongly) agreeing with this statement, with 46.3%. Another strong statement was that of the teachers expecting the students to do their best in school, whereby 88.8% (54.1% females and 45.9% males) (strongly) agree with this statement.

The other (strong) agreement was that they could get the extra help they needed for their school work. Of the respondents (80.3%) who (strongly) agreed with this statement, 53.9% were females and 46.1% males (see figure 62).

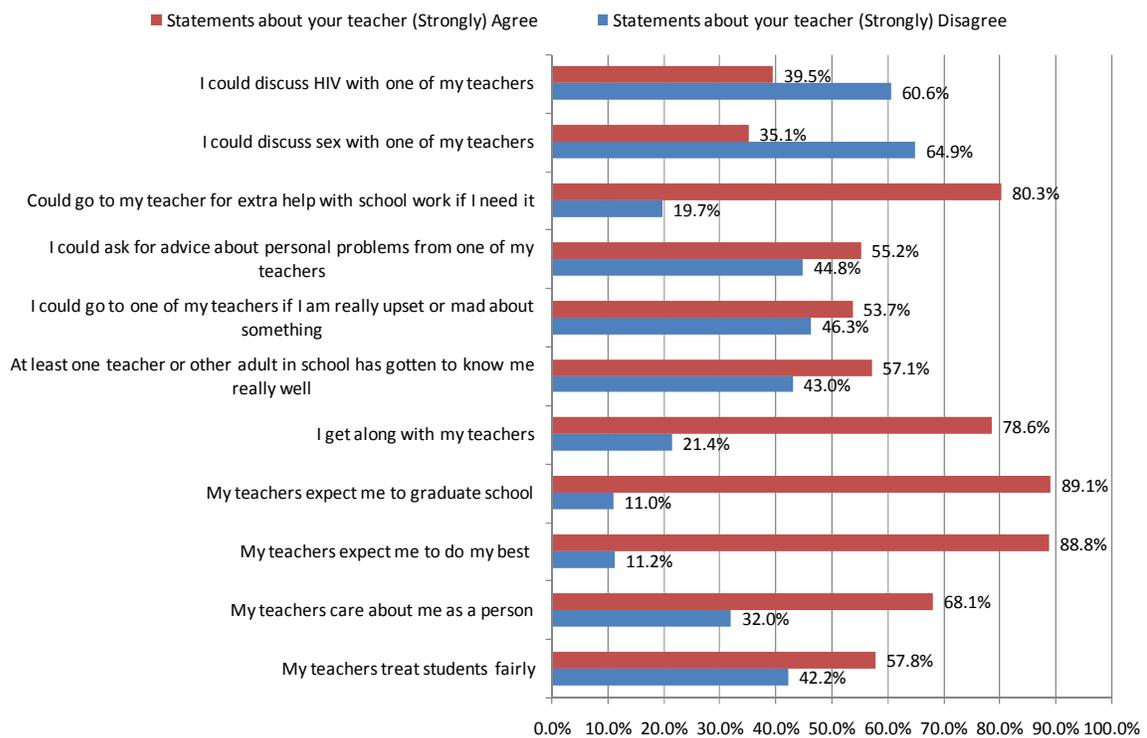


Figure 62 Teacher support scale

6.6 Personal violence

Personal violence can have a negative impact on adolescents, resulting in risky behavior such as substance use (Kilpatrick, D.G. et al., 2000).

As shown in figure 63, over the last 12 months prior to the survey 50.3% of the secondary school going youth was being bullied (were made fun of, called names and/or were insulted), followed by 27.8% of the students of which something was stolen and 21.1% stated that their properties were damaged on purpose. It does not take away that almost 10% were physically attacked and 7% were sexually harassed.

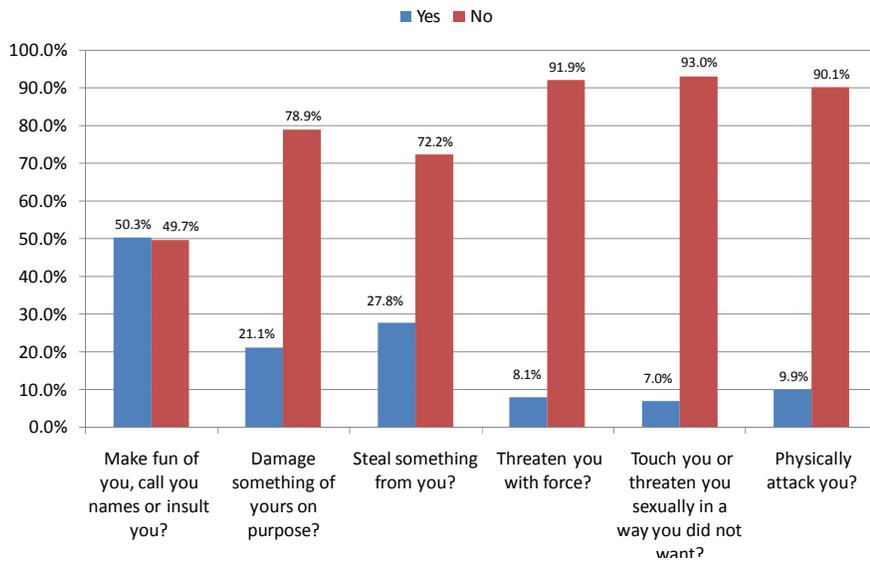


Figure 63 Experience personal violence by gender

Analyzing the group of students who were being bullied, we see that more females cope with this violence than males (52.6% females and 47.4% males). When single age of the students were analyzed, we see a trend in being bullied where there is an increase in percentage of being bullied from 12 years to 14 years and after this age it decreases as age increases (see figure 64).

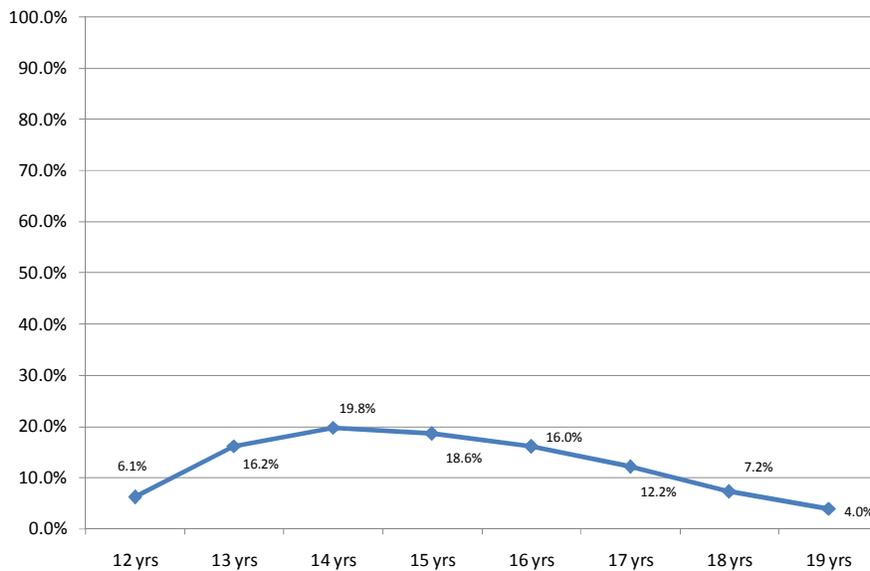


Figure 64 Bullying by single age

6.6.1 Physical abuse and sexual abuse

Physical and/or sexual abuse results in risk behavior e.g. runaways, legal involvement and promiscuous sexual behavior (Cavaiola, A.A. et al., 1988).

Of the total secondary school going youth, 9.2 % (65.1% female and 34.9% male) reported having been physically abused and/or mistreated by a family member or other adult. Of this percentage, the majority of the students who were physically abused or mistreated were 16 years old (21.5%), see figure 65. There were significant associations for sex and ever being physically abused ($\chi^2=34.134$; $p < 0.05$).

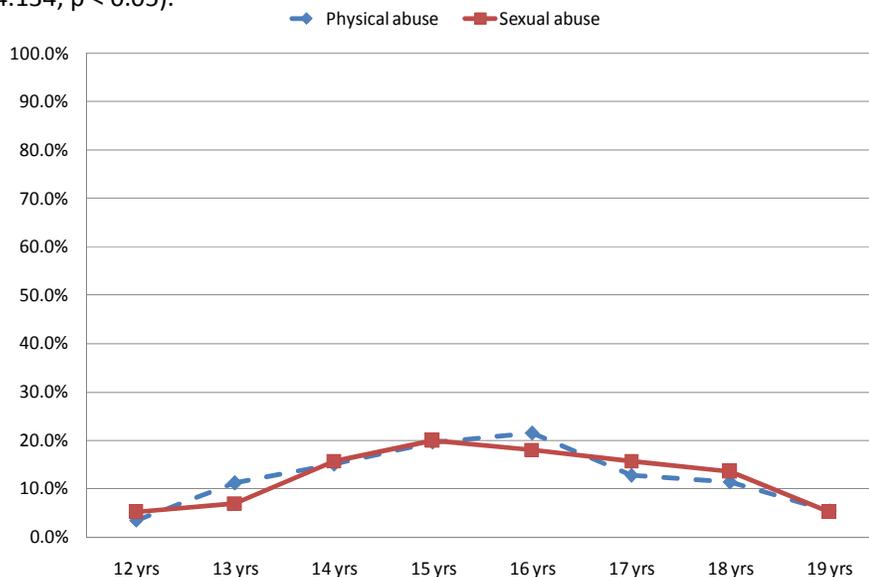


Figure 65 Physical/sexual abuse by single age

Asking the secondary school going youth if they have ever been sexually abused, 4.6% (89.4% females and 10.6% males) responded positive to this question. Of the students who have been sexually abused, one out of 5 (19.9%) adolescents was 15 years old, see figure 65. There were significant associations for sex and ever being sexually abused ($\chi^2=127.829$; $p < 0.05$).

6.6.2 Physical fight

Physical fight can lead to criminal and violent engagements (Pickett, W. et al., 2005).

The students were asked to recall the last 12 months prior to the survey, how many times they were in a physical fight. Of all students 74.8% stated they have not been in a physical fight but 25.2% did fight at least once. Of this 25.2% who were in a physical fight, 62.1% were males and 37.9% were females. There is a significant association between sex and ever being in a physical fight were males do get more engaged in physical fights as compared to females ($\chi^2=127.135$; $p < 0.05$).

Analyzed by single age we see that the majority of students who have been in a fight during the past year prior to the survey were students of 14 years old representing 22.0% of all the students.

When the frequency of fighting was analyzed for all secondary students, who ever were in a physical fight, we see that females have the highest percentage (55.9%) of fighting one time only as compared to males. The percentages of fighting 2 or 3 times were almost equal for both sexes and males fight 4 times or more as compared to females (see figure 66).

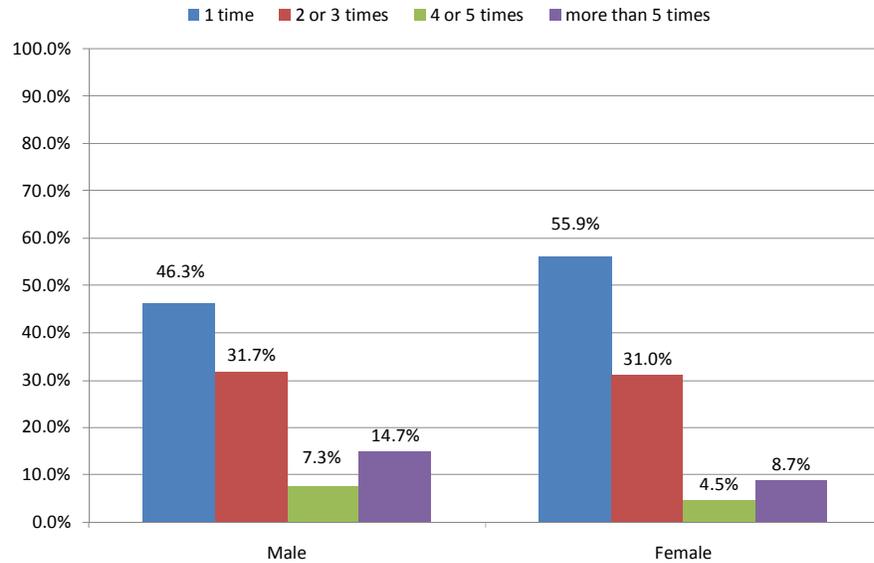


Figure 66 Frequency of being in a physical fight by gender

6.7 Work for pay

There is evidence that work experience can have both positive and negative effects on teenagers. One of the positive effects is that it can promote the healthy development of teenagers. A negative effect could be enhancing their risky behavior by buying substances such as alcohol or drugs. (Mortimer, J.T., 2010).

The results show that 25.1 % of the secondary school students were currently working or have worked in the last 4 weeks prior to this survey. Of this 25.1 %, 62.9% were males and 37.1% were females. Figure 67 gives an overview of the students who were working by single age, as this figure shows, 19.2% of the working students were 16 years old.

If we analyze the type of work these working students were doing during the last 4 weeks (see figure 68) prior to this survey we see that 68.8%, of which 61.3% males and 38.7% females, did or do work for pay.

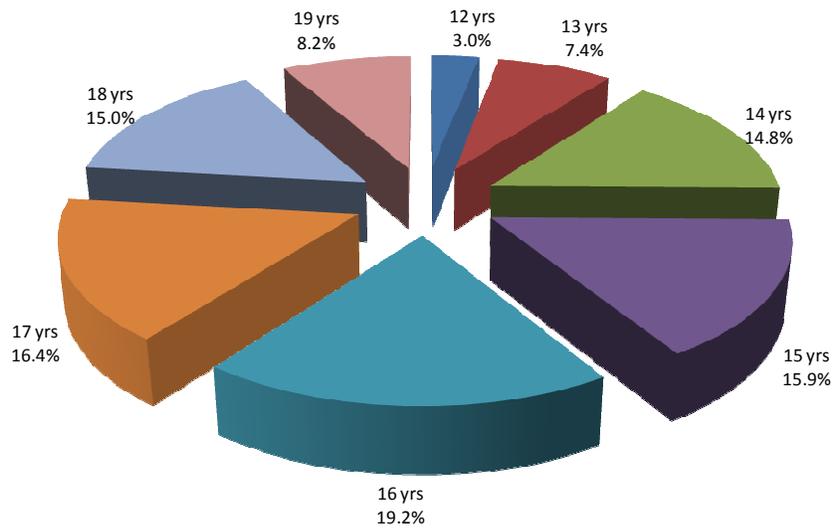


Figure 67 Work for pay by single age

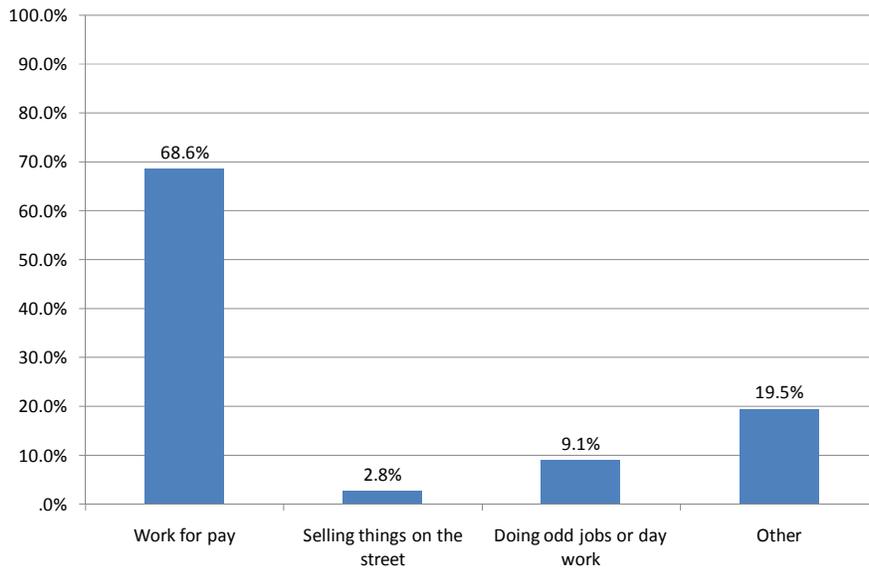


Figure 68 Type of work

6.8 Food insecurity

Lack of access to nutritional and sufficient food is associated with mental disorders, including mood, anxiety and behavioral disorders (McLaughlin, K.A. et al., 2012).

6.8.1 Lack of food

When the youths were asked if they went hungry for the past 30 days prior to the survey, 75.5% of the secondary school going youth did not go hungry to school because of lack of sufficient food.

Of the remaining 24.5% of the students, 14.7% went hungry a little of the time because there was not enough food and 9.8% did go hungry because of not enough food ranging from sometimes to always.

Female students have the highest percentage of going hungry sometimes or most of the times as compared to males (56.4% sometimes and 60.0% most of the time). The percentage of males going hungry sometimes and most of the times are 40.0% and 63.9% respectively, see figure 69.

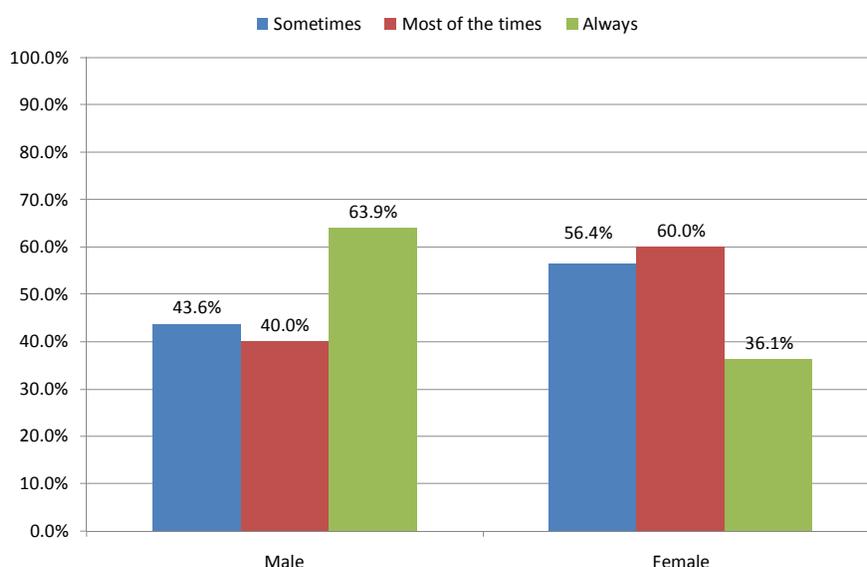


Figure 69 Frequency of going hungry due to lack of food by gender

Males on the contrary, have a higher percentage (63.9%) of always going hungry because of not enough food at home (see figure 70). Analyzed by single age, we see an increase in percentage from 12 years to 14 years and after 14 years the percentages of going hungry drops.

MAVO students (41.7%) are the ones always going hungry as compared to the other educational levels. For detailed percentages for the other level of education, see Annex IV.

6.8.2 Lack of money

These students were also asked if they ate less than they felt they should due to lack of money during a period of 30 days prior to the survey, whereby 77.1% stated that this was not the case in the last 30 days. Of the remaining 22.9% of the secondary school going adolescents, 12.1% felt that they ate less one time in the last 30 days because there was not enough money at home. Followed by 9.0 % of the students who ate less than they should a few times in the last 30 days and only 1.8% stated that they had to eat less than they felt they should because of lack of money many times in the last 30 days.

Analyzing only the students who went hungry due to lack of money for the last 30 days, we see that 39.4% went hungry a few times in the last 30 days prior to this survey, more females as compared to males, 60.7% and 39.3% respectively. Of those students who went hungry many times (7.7%) due to lack of money, 51.9% were males and 48.1% were females.

Students of 14 years and 17 years had the highest percentage of going hungry many times because of lack of money, namely 19.0% for both single ages. As figure 70 shows, EPB students have the highest percentage of going hungry many times due to lack of money, with a total of 44.3%.

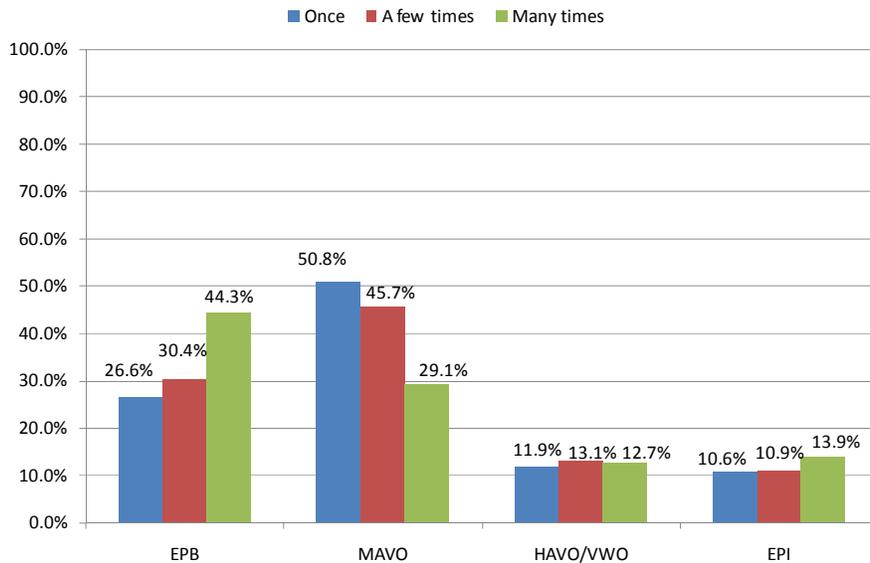


Figure 70 Going hungry because of lack of money by level of education

6.9 Participation in club, teams or other organizational activities

Participation in clubs, teams or other organizational activities reduces risky behaviors, enhances self esteem and also school completion (Massoni, E., 2011).

Data collected showed that only 36.0% of the secondary school going youth do belong to a club, team or organization (see figure 71). Of these 36.0%, 56.3% were males and 43.7% females.

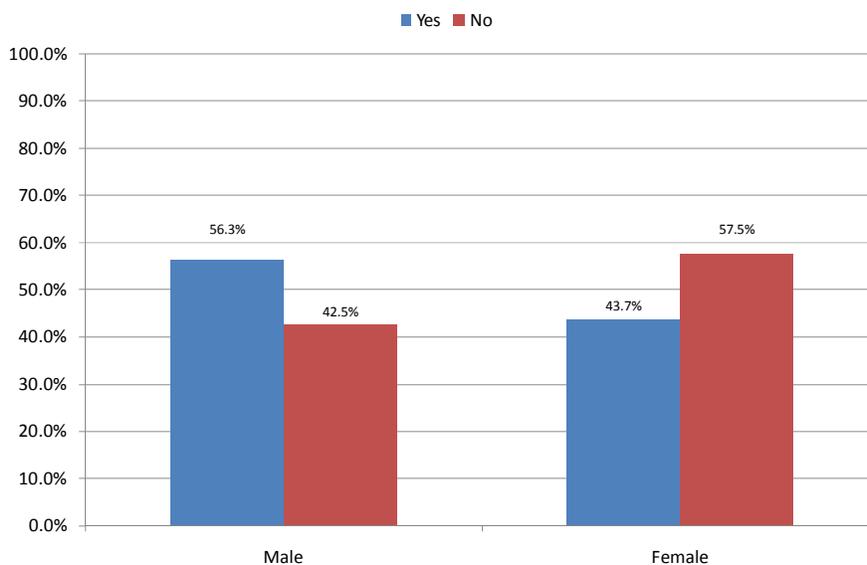


Figure 71 Participation in clubs, teams or organizations by gender

Analyzing the group of students belonging to any club, team or organization, by single age we see that after 14 years the participation percentage begins to drop. Comparing level of education we notice that MAVO students have the highest percentage in participating in any organization, team or club, with 47.3% of all secondary school going students, see figure in Annex IV.

The frequency of participating in clubs, teams and organizations was also measured by asking the students how many days a week they were active in their organizations. Results show that of the secondary school going youth who belong to any club, team or organization, almost one half of the students (49.9%) were active 1-2 days per week in their clubs. Overall, males are more active in their clubs as compared to females (see figure 72). This is also statistical significant ($\chi^2= 126.512$; $p < 0.05$). What stands out when this group is analyzed by single age is that 14 years old students are the most active as compared to students of other ages.

Overall, MAVO students have the highest percentages in being active in a week as compared to students from other educational level.

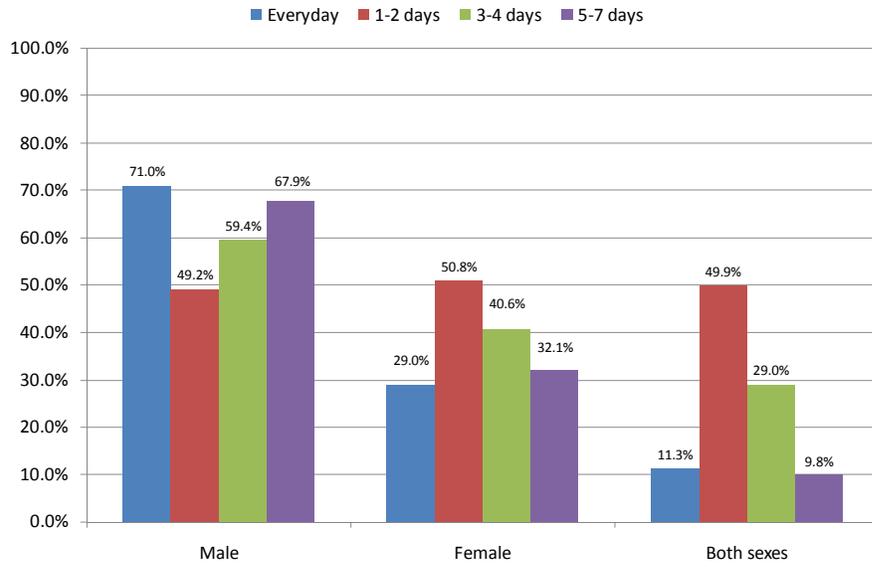


Figure 72 Participation in clubs, teams or organization by gender

Mental Health



7 Mental Health

Most mental health problems appear in late childhood and early adolescence. In particular depression has been identified in many studies as the largest burden of disease among the youth worldwide (WHO, 2013).

The youth health survey has also collected data about some (risk) factors which can sustain the development of mental health problems. Feelings about loneliness, sleeplessness, worthlessness but also behavior suicidal behaviors are the few factors observed during this survey. Factors were measured during the past 12 months, prior to the survey.

7.1 Sad, hopeless and lonely

Feeling sad and hopeless for more than a day during the past year, was the most common feeling among the adolescents, whereas 42.0% felt this way. More than two thirds (66.3%) of the adolescents who felt sad and hopeless were females.

More than a quarter (27.1%) of the adolescents felt lonely sometimes during the past year, while 25.8% never felt lonely during this same period of time. However it has been observed that 1 out of ten adolescent did feel lonely most of the time and 4.3% felt lonely all the time, see table 32.

How often do you feel lonely?		
	n	%
Never	1212	25.8
Rarely	1460	31.1
Sometimes	1273	27.1
Most of the time	555	11.8
Always	200	4.3
Total	4700	100.0

Table 32 Frequency of feeling lonely

Analyzing all students who feel lonely, 40.0% were female students who sometimes felt lonely and 19.4% were female students who felt lonely most of the times. Of the students who always felt lonely, 6.4% were females and 4.8% were males.

However it is important to mention that most of the adolescents who sometimes felt lonely, most of the times and always, were 19 years old (65.9%) and 16 years old (61.5%). Analysis by level of education shows that EPI students show the highest percentage in sometimes feeling lonely (43.4%), followed by MAVO students with the highest percentage in feeling lonely most of the time (18.0%) and EPB students have the highest percentage in always feeling lonely (10.4%), see figure 73. This association is statistical significant with a χ^2 of 76.190 and a $p < 0.05$.

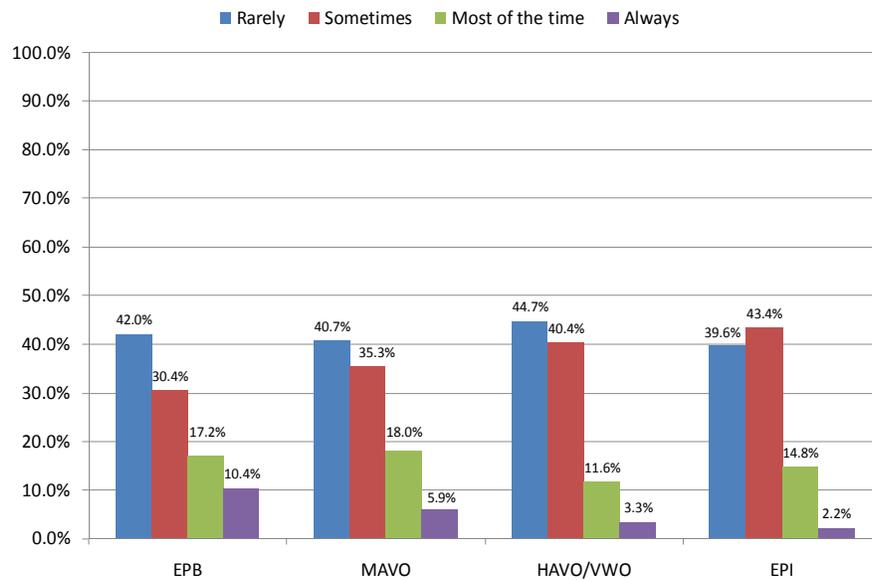


Figure 73 Frequency of feeling lonely by level of education

7.2 Sleeplessness because of worries

Worries sometimes affected sleeping of 22.0 % of the adolescents. One out of ten adolescents had their sleep disturbed by worries *most of the time*. And in 3.1% of the adolescents worries *always* kept them awake, see table 33.

During the past year, how often have you been so worried about something that you could not sleep at night?		
	n	%
Never	1473	31.5
Rarely	1477	31.6
Sometimes	1028	22.0
Most of the time	547	11.7
Always	144	3.1
Total	4669	100.0

Table 33 Frequency of sleeplessness because of worries

Of all the students who were worried (ranging from sometimes to always) about something during the past year prior to the survey that they could not sleep at night, almost 60% were female and 46.0% were males.

Students who are 18 years old have the highest percentage of *sometimes* having sleepless nights (36.3%), and also the highest percentage of always having sleepless nights with 5.9%. More than 20 % of the students (22.1%) of 19 years of age have sleepless nights *most of the times*.

Almost forty percent (38.0%) of HAVO/VWO students *sometimes* have sleepless nights due to worries. Of the EPB students, 20.4% stated having sleepless nights *most of the times* and 7.0% *always* (see figure 74). These associations are also statistically significant with a χ^2 of 44.964 and $p < 0.05$. It could be stated that the feeling of loneliness and sleeplessness have the same trend among the adolescents.

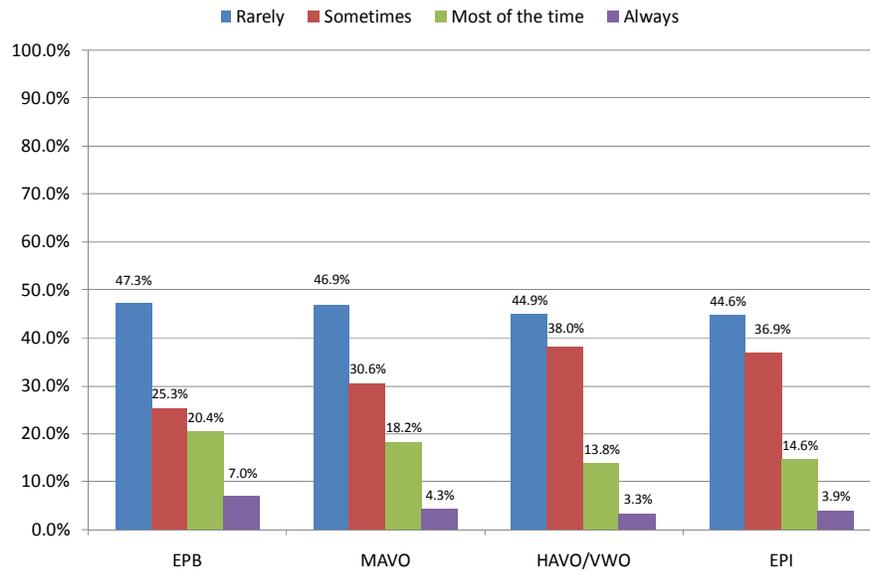


Figure 74 Sleeplessness because of worries by level of education

7.3 Suicide

Suicidal thoughts were also observed among the adolescents in this survey, almost 15% (14.6%; $n=687$) have ever seriously thought about killing themselves 12 months prior to the survey. From this 15%, more than two thirds were females (69.1%) and one third males (30.9%).

It is interesting to know whether the adolescents who ever seriously thought about killing themselves indeed tried out the act. Therefore a data selection was made for the adolescents who answered having the thought of killing themselves and analyzed whether they tried the act. Of the absolute number of 687 adolescent who indeed seriously had the thought, 99.9% ($n=686$) made a plan how they could execute the act, sadly 420 of these adolescents (61.1%) did try to kill themselves. The following table shows the details about the frequency the students tried to commit suicide. On the contrary 36.7% never tried to kill themselves however they seriously thought and planned the act.

During the past year, how many times did you actually try to kill yourself?		
	n	%
1 time	263	62.6%
2 or 3 times	113	26.9%
4 or 5 times	20	4.8%
6 or more times	24	5.7%
Total	420	100%

Table 34 Frequency of adolescent who tried to kill themselves

As shown in table 34, more than 60% tried to kill themselves 1 time and 26.9% tried 2-3 times to kill themselves. There were even 4.8% who tried 4 to 5 times and 5.7% who tried to kill themselves 6 or more times.

Analyzing the students who indeed tried to commit suicide (n=420); we see that in the male population 66.7% tried it once, followed by 19.2% who tried it 2-3 times. Also 5.0% tried it 4-5 times and almost 6% (5.7%) tried to kill themselves 6 times or more. In the female population we only see a high percentage of trying to kill themselves 2-3 times as compared to the male population, namely 30.9%. But comparing the percentages overall, we see that the male students are the ones with the highest percentages of trying to commit suicide (see figure 75).

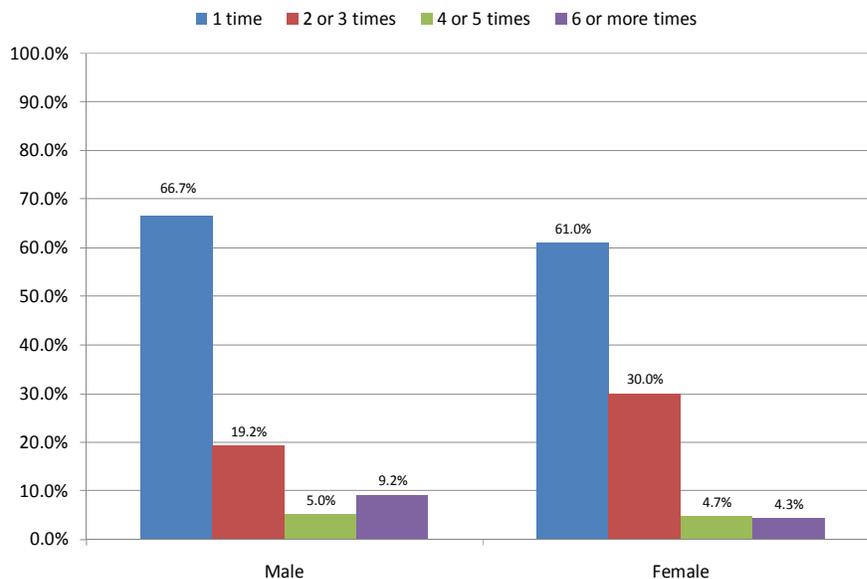


Figure 75 Frequency of suicide attempts by gender

When analysis was being done by age, we observed that the older the students the more they attempted to commit suicide one time (from 61.1% when 12 years to 75.0% when 19 years). On the other hand we see a decrease in percentage as the age increases for those students who tried to commit suicide 4-5 times (from 11.0% when 12 years to 0.0% when 19 years).

Analysis by level of education gives us the following results: 76.7% of EPI students tried to kill themselves once. Of the HAVO/VWO students, 29.0% attempted suicide 2-3 times. And finally EPB students have the highest percentage of trying to kill themselves 4 times or more (5.2% tried 4-5 times and 7.8% tried 6 times or more; see figure 76).

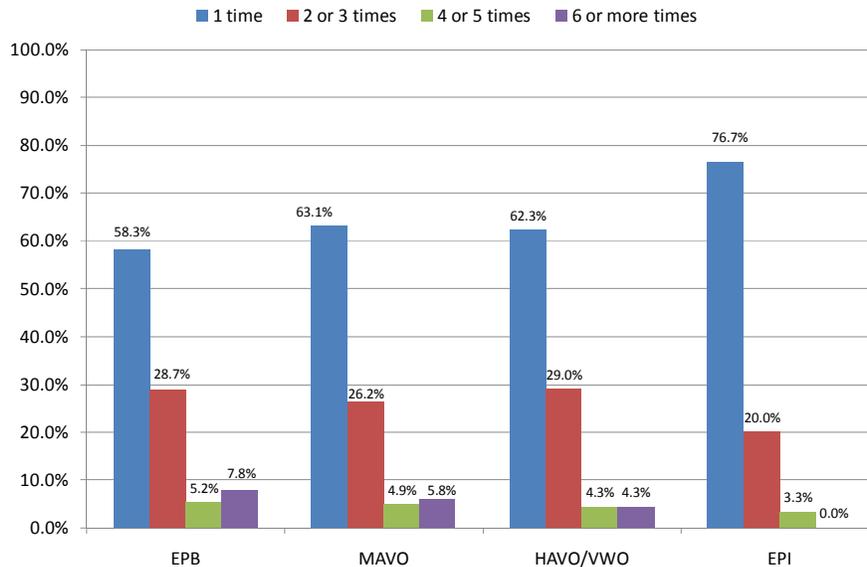


Figure 76 Frequency of suicide attempts by level of education

Comparing these results with the adolescent youth survey in the Caribbean region, 12% of the adolescents in the Caribbean region have attempted suicide (Blum et al., 2003). Compared to the Caribbean, Aruba has a lower percentage of attempted suicide which is 8.8%. In contrast to other Caribbean countries where females reported more attempted suicides, the Aruban male students were more likely to attempt suicide.

Moreover, comparing these results with the adolescents in South America, specifically Peru, it should be mentioned that Peruvian adolescents have a much higher percentage of attempted suicide cases with 20.0% of the adolescents, especially among the females (EGSE Peru, 2010).

One out of ten adolescents (11.8%) in Aruba felt lonely most of the times. If we compare this with the Peruvian adolescent (10.8), this ratio is almost similar. Comparable to the Aruban situation, the female Peruvian adolescent felt lonely most of the time as compared to the males.

However the Aruban adolescents have more worries that keep them from sleeping as compared to the adolescents in Peru. More than 10% (11.7%) of the Aruban adolescents are kept awake most of the times because of worries, while in Peru this is 8.9%.

Physical Health



8 Physical Health

The Department of Public Health took advantage of the moment to carry out biometrical measurements of the adolescents during the survey. With these measurements valuable information about the physical risk factors can be brought forward. Risk factors such as overweight, and high blood pressure, are precursors to chronic diseases such as diabetes and cardiovascular diseases.

In this survey a subsample of 1011 was drawn from 48 classes of the 14 participating schools. During the field work however, 699 adolescents were present for the measurements, from which 681 (97.4%) took the measurements. The participation to the measurements was not obligatory. There was no difference between males and females in the population who took the measurements.

8.1 Height and weight

The average height of the Aruban adolescent between 12 and 19 years is 1.64 m, with a minimum height of 1.36 m and a maximum height of 1.98 m. The median height was 1.64 m; this means that the most common height among adolescents was 1.64 m.

Using the CDC growth charts as the normative reference for height by single age for as well for females; the height for Aruban adolescents by single age was plotted against the single age. These plots were done using separate growth charts for each sex (CDC, 2000). The percentages of the height of the female and male adolescents have been divided into the average normal height range by single age between the 25th and 75th percentile, height by single age smaller than the 25th percentile and height longer than the 75th percentile. The percentages are presented in the table 35 below.

Height		Females	Males	Both
<25th percentile	n	69	81	150
	%	10.7	12.6	23.4
Normal	n	197	177	374
	%	30.7	27.6	58.3
>75th percentile	n	57	61	118
	%	8.9	9.5	18.4
Total	n	323	319	642
	%	50.3	49.7	100

Table 35 Height and weight female and male adolescent

A slight higher percentage of the females have a height within the normal range as compared to the males, 30.7% against 27.6%. It is important to mention that one out of eight (12.6%) of the male adolescents has a height below the 25th percentile, shorter than the normal range. Also 1 out of 10 of the males is longer than the 75th percentile.

For the females 1 out of 10 are shorter than the normal height range and 8.9% are longer than the 75th percentile. Plotting the heights by single age for the male adolescents we observed the following curves in figure 77.

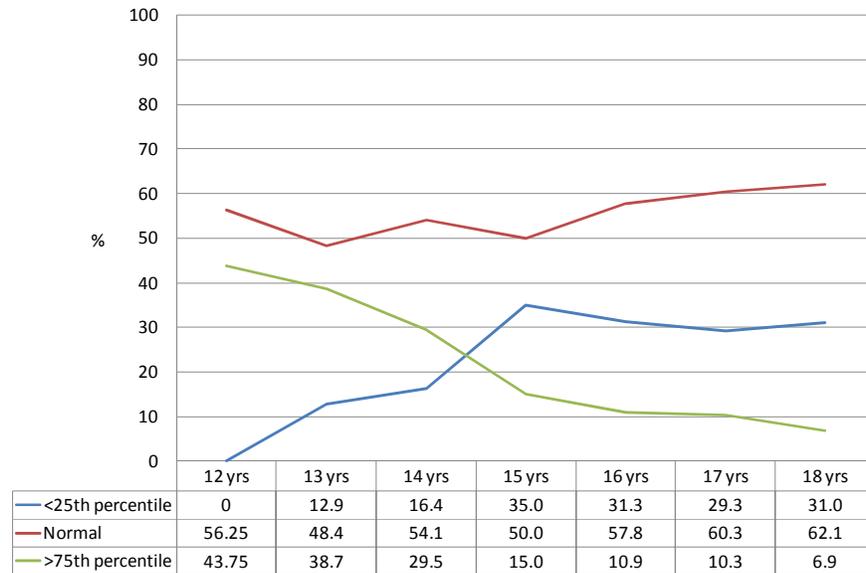


Figure 77 Height of male adolescents by single age

Analyzing trends in height by single age we observed that the heights which are below the 25th percentile increase with age. It is expected that when age increases together with a good environment and socio-economy the height would also increase (CDC, 2000). In the case for the Aruban male adolescent, the growth in height shorter than 25th percentile increases for the 12 to 15 years old and the percentage of adolescents taller than the 75th percentile decreases from 15 years and up. However the trend in the normal ranges shows a slight increase with the age from 15 years up to 18 years.

As mentioned before, females have a higher percentage of heights within the normal range compared to the males. This is also reflected in figure 78.

The percentage of females with a height taller than the 75th percentile decrease with increasing age while the percentage of height within the normal range increases. As it has been observed for the males, the females also have the same trend for the height shorter than the 25th percentile. However this increasing trend is not as smooth as the males.

Overall both males and females have a similar trend in height growth, where height below the 25th percentile increases with age.

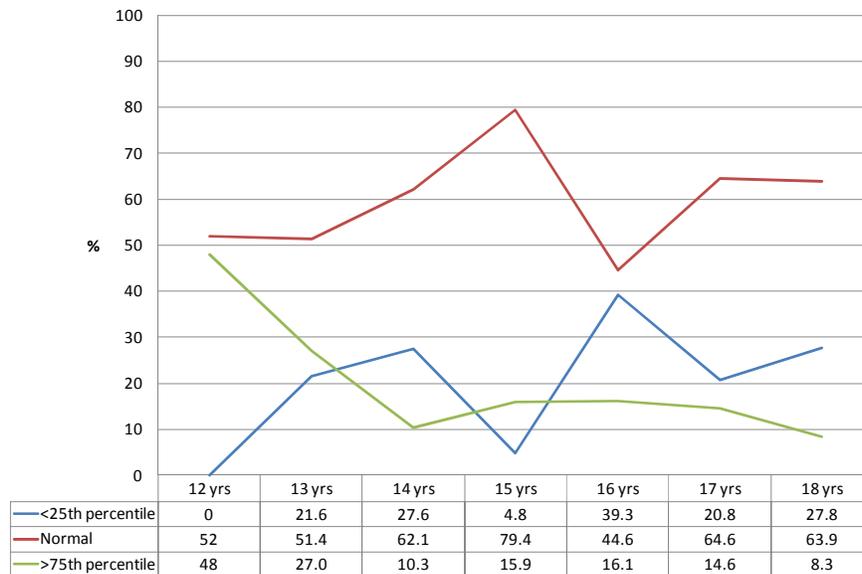


Figure 78 Height of female adolescents by single age

The height has its direct impact on the calculation of the BMI. Both weight and height are used to calculate the body mass index (BMI), using the weight divided by the square of the height. This means that the smaller the height the smaller the denominator, the larger the BMI ratio.

Formula BMI:
$$\frac{\text{weight (kg)}}{(\text{Height (m)})^2}$$

8.2 Weight, BMI male and female adolescent

The mean weight in kilograms of the adolescent was 65 kg, with a minimum weight of 33 kg and a maximum weight of 150 kg. The median weight was 62.0 kg; this means that the most common weight among the adolescents was 62.0 kg.

BMI provides a reliable indicator of body fatness for most people and is used as a screening indicator for weight categories that may lead to health problems (CDC, 2013).

There is however a difference between the categorization of BMI for adults and for the adolescents. In this survey the normative references for BMI for the male and female adolescents was taken from the Centre of Disease Control (CDC, 2000). These growth curves were developed with the intention to be applicable for all types of racial-ethnic populations. Evidence showed that the differences in growth for different racial-ethnic populations are primarily due to environmental and socioeconomic constraints (CDC, 2000). These curves were developed taking into considerations these differences.

As mentioned before the average height of the Aruban adolescents is 1.64 m, the average height of the Dutch adolescent up to 21 years of age was in 2009 1.71 m (Schönbeck, Y. et al., 2012). The Dutch adolescents are on average taller than the Aruban adolescents.

Overweight and obesity remains a public health problem among children and adolescents worldwide. Health related problems to overweight and obesity are many. Sleep apnea, orthopedic and psychosocial repercussions such as poor-self image, stigmatization and depression and an impaired quality of life are among the few. The serious consequences of overweight and obesity can last into adulthood, including metabolic disturbances which increase the risk to cardiovascular diseases and diabetes (Currie et al., 2012).

BMI cut off points for the different weight categories varies for males and females. Using the CDC growth chart for boys and girls by single age and the standard calculation of BMI, it is observed that overall about 40% of the adolescents is overweight or obese. Almost one out of 5 adolescent is overweight or obese, see table 36.

Weight category		Males	Females	Both
Underweight	n	9	45	54
	%	1.4	7.0	8.4
Normal weight	n	182	153	335
	%	28.4	23.9	52.3
Overweight	n	56	70	126
	%	8.7	10.9	19.7
Obese	n	71	55	126
	%	11.1	8.6	19.7
Total	n	318	323	641
	%	49.6	50.4	100

Table 36 Weight categories of adolescents by gender

In figure 79 can be observed that a quarter of the 12 year olds are obese. Another important aspect of the figure is that for the adolescent male, obesity is more prevalent than overweight.

Males at age 16 have the lowest percentage normal (49.2%) weight and one of the highest percentages (25.4 %) of overweight. Moreover in this age overweight (25.4%) and obesity (23.8%) combined, equal the normal weight (49.2%). It has to be noted that throughout the ages 12 to 18 overweight and obesity are very much steady between 10% and 25% for the male population, meaning that the age of the adolescent has no influence on the BMI.

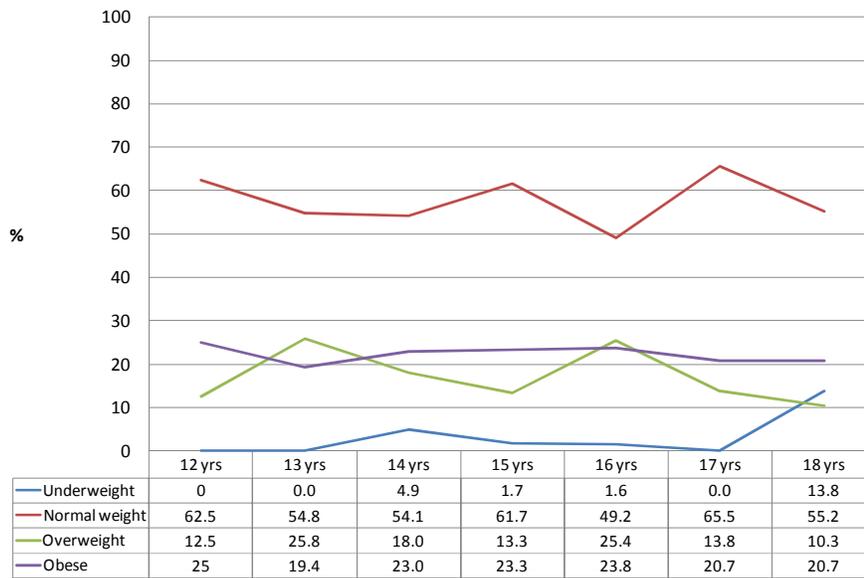


Figure 79 Percentage BMI categories of male adolescents by single age

Besides overweight and obesity, underweight is also present in both sexes, however, in a slightly higher percentage in the female adolescents as compared to the males.

At the young age of 13, 2.7% of the females are underweight. At the age of 15 there is a peak in the percentage of females with an underweight. From the age of 16 there is a steep increase of underweight in the female adolescent, see figure 80.

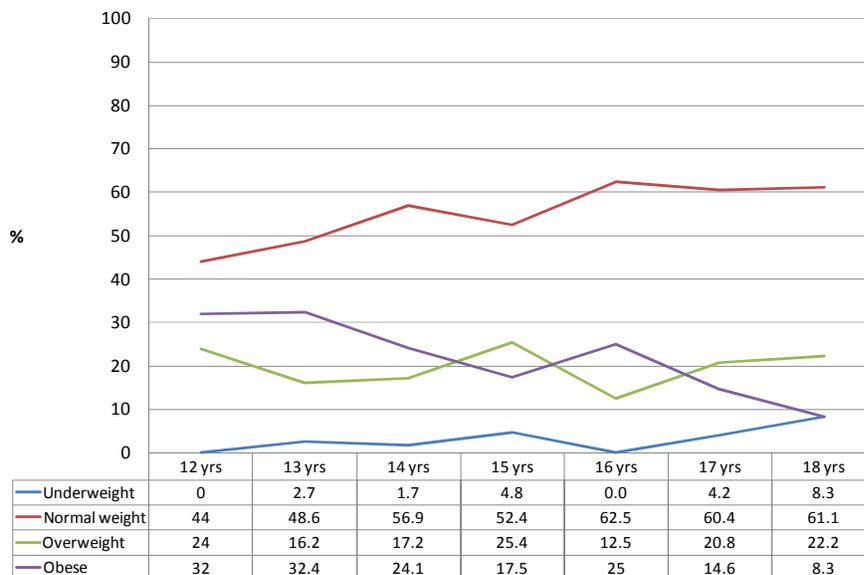


Figure 80 Percentage BMI categories of female adolescents by single age

Conversely to the male adolescent, overweight in the female adolescent has a tendency to increase with age, where overweight and obesity have a tendency to decrease with age.

On the other extreme side of underweight, one third of both the 12 year olds and 13 year olds are obese. At 14 years the percentage of obese female adolescents however drops and overweight tends to increase together with the normal weight up to the age of 16.

Normal weight in the females tend to increase with age from 12 to 16 years, thereafter there is steady curve observed up to the 18 years old.

Overall female adolescents have a higher percentage of overweight and obesity at a very young age, as compared to the males. However as the age of the female adolescent increases, obesity and overweight tend to decrease. This is not the case for the male adolescent, obesity and overweight has a steady trend throughout the ages 12 to 18.

Comparing BMI data of this survey with other countries was a challenge since this was the first time for Aruba conducted such measurements among adolescents. The Aruban educational system is also divided into other grades with different age groups as compared to the grades structure in the region. Therefore the ages of the different populations from the different studies can vary. However if we consider the adolescents as one specific target group for prevention at school or in the age category as a whole, there is no need to be specific about the age differences or the different levels of education of other countries.

Comparing the data of this survey with the Canadian adolescent survey, the adolescent between 14 and 18+ years, 67% for the males and 79% for the males have a healthy (normal) weight (YHSR Canada, 2009). These percentages are higher as compared to the Aruban adolescents.

Also if we compare overweight between these two populations we see that Canadian male adolescents are more overweight as compared to the females, where for Aruba it is the other way around. Aruban female adolescent are more overweight as compared to the males.

However in 2004 in the United States, 17% of the adolescent between 12 and 19 years were overweight. This percentage has tripled since 1980. Still, comparing Aruba with the United States we can state that Aruban adolescents are more overweight than the adolescents in the United States.

Obesity among the adolescents in the U.S.A. increased from 5.0% to 18.4% from 2009 to 2010, 19.6% of this 18.4% were male adolescents and 17.1% were females (Fryar, et al., 2012). Aruban female adolescents have a similar percentage of obesity compared to the U.S.A. whereas sadly the Aruban male adolescents have a higher percentage compared to the U.S.A.

8.3 Own perception of weight

Adolescents have a major task of getting comfortable with their own weight during such a short span of time, because of the rapid changes in their body (Havighurst, R., 1972). This developmental task can have its effect in different ways. Not adapting and dissatisfaction with these body changes are risk factors which can influence the psychopathological development of the adolescent (Cattarin, J. et al., 1994 & Roth, M. et al., 1999).

The adolescent's own perception of weight was also investigated in this survey more than 40% (42.3%) find themselves about the right weight. While one third of the adolescents find themselves slightly overweight and 9.5% very overweight, see figure 81.

However a higher percentage of males (46.4%) find they have about the right weight as compared to the females (38.5%), also the males have higher percentages in finding themselves very underweight or slightly underweight.

On the contrary the females have higher percentages in finding themselves slightly overweight and very overweight compared to the males. Overall males find themselves about the right weight even slightly underweight or very underweight and females find themselves slightly overweight or even very overweight.

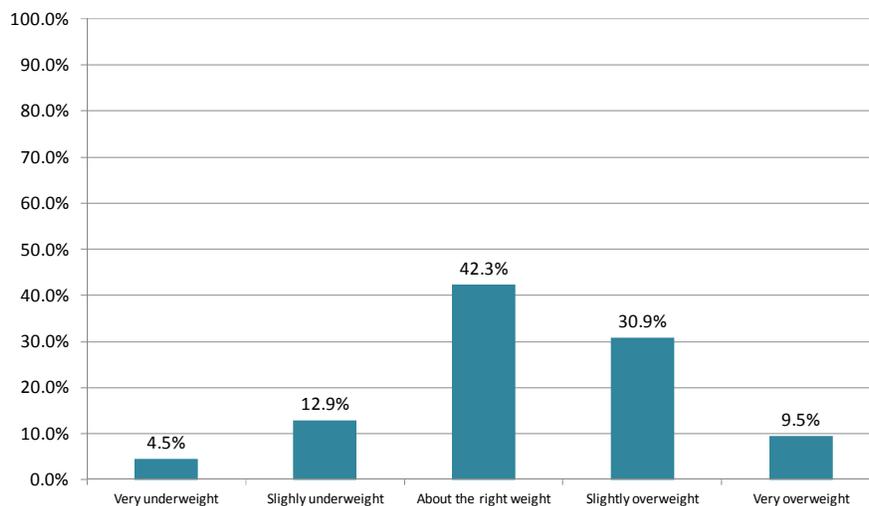


Figure 81 Own perception of weight

Comparing the adolescent's perceptions with the measured BMI in this survey the following findings are observed the in figure 82. The percentage of males finding themselves having a normal weight was high (46.4%) but the measured normal weight (BMI) for the males was even higher (57.2%).

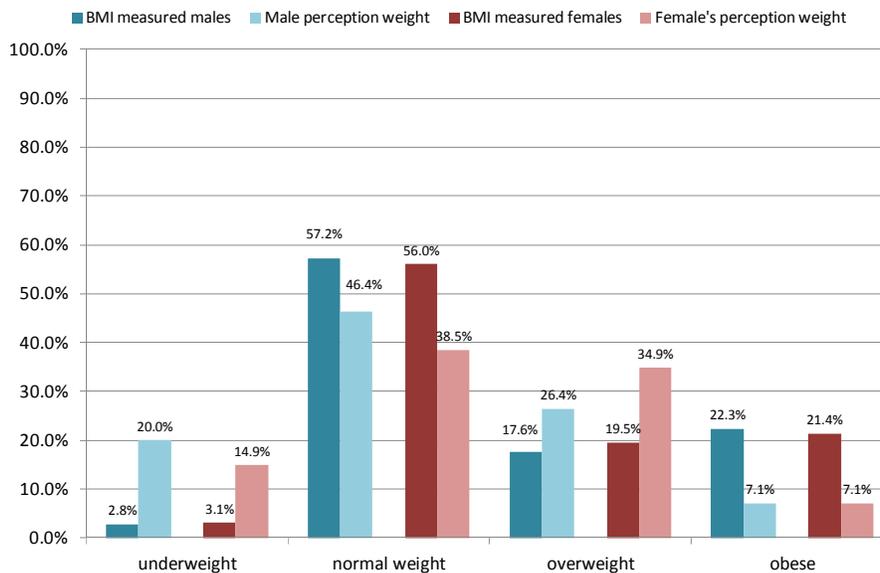


Figure 82 Measured BMI and own perception of weight of adolescents

Additionally the male perception about their overweight (26.4%) was also higher, yet the measured overweight was lower (17.6%). On the contrary their perception about being obese (7.1%) is much lower than the measured BMI for obese (22.3%). Males have a perception of being overweight but their weight measured shows that they are obese. However, they have a rather good perception about their normal weight.

The female adolescents also show a similar trend of perception and measured weight to the males, were their percentage of perception of being overweight is higher as the percentage measured. While for perceptions about feeling obese, the percentage is lower as compared to the measure percentage of female adolescents being obese.

These findings shows that both male and females adolescent do have the perception of being overweight, however this overweight is actually obese.

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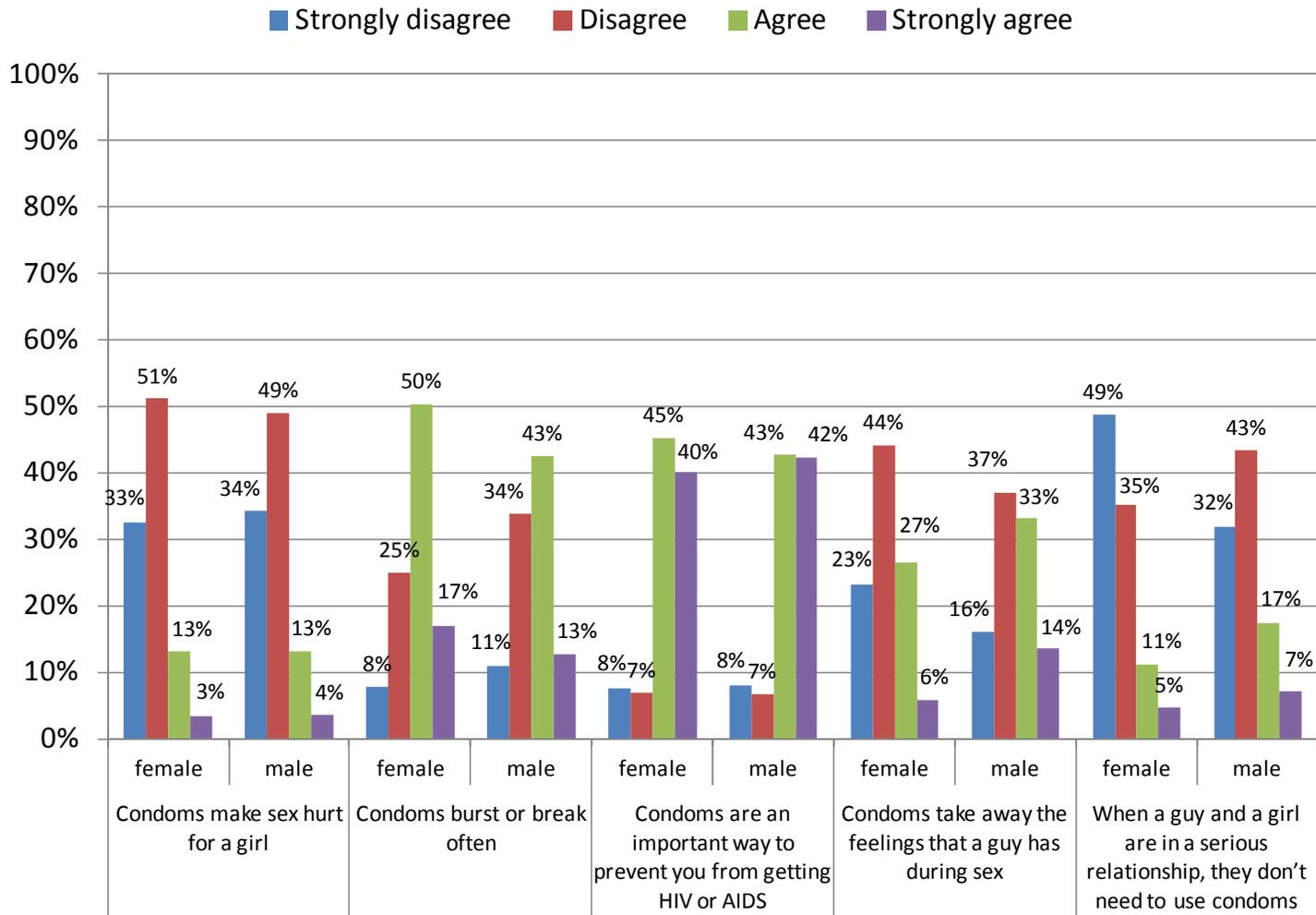
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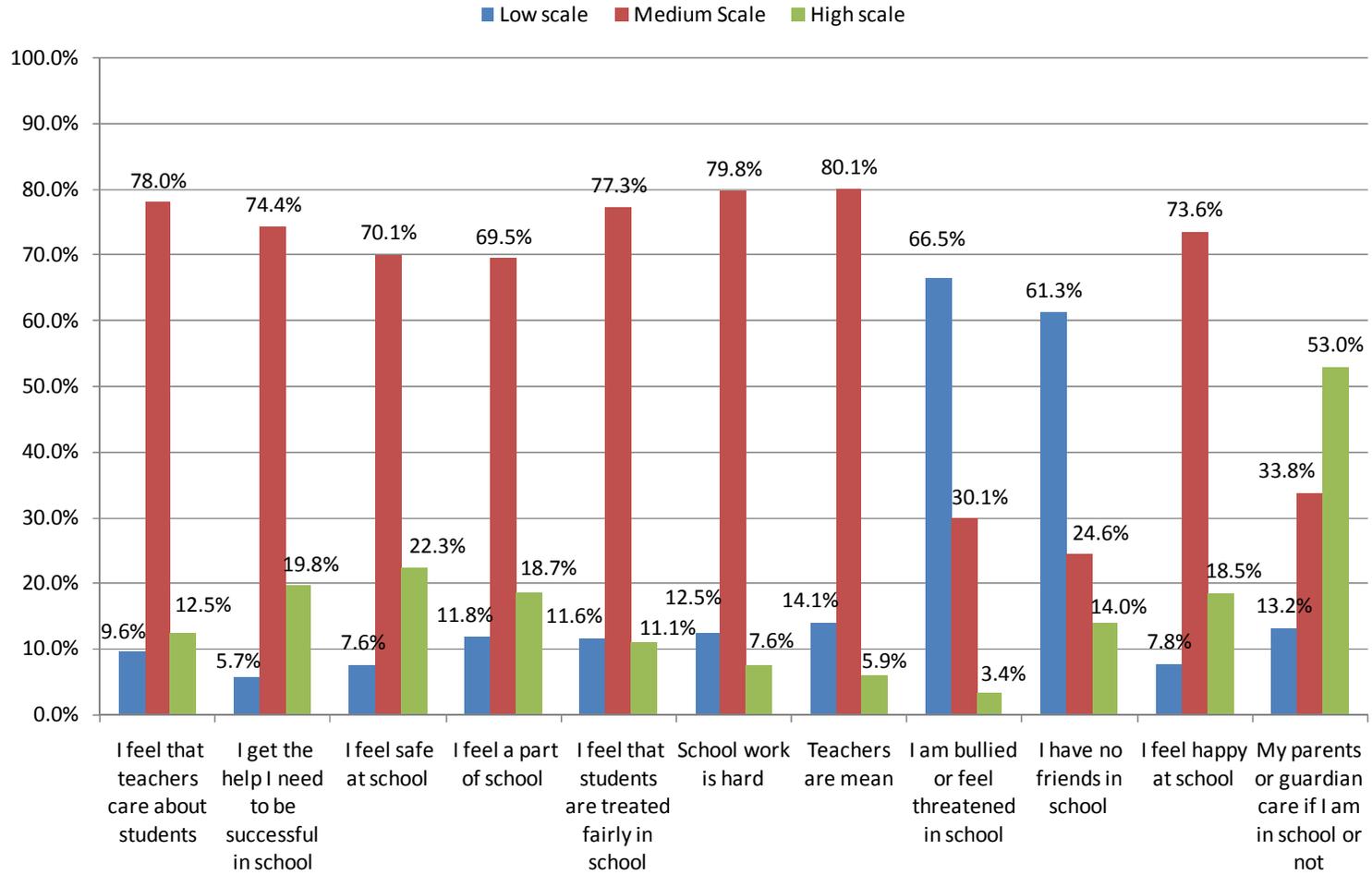
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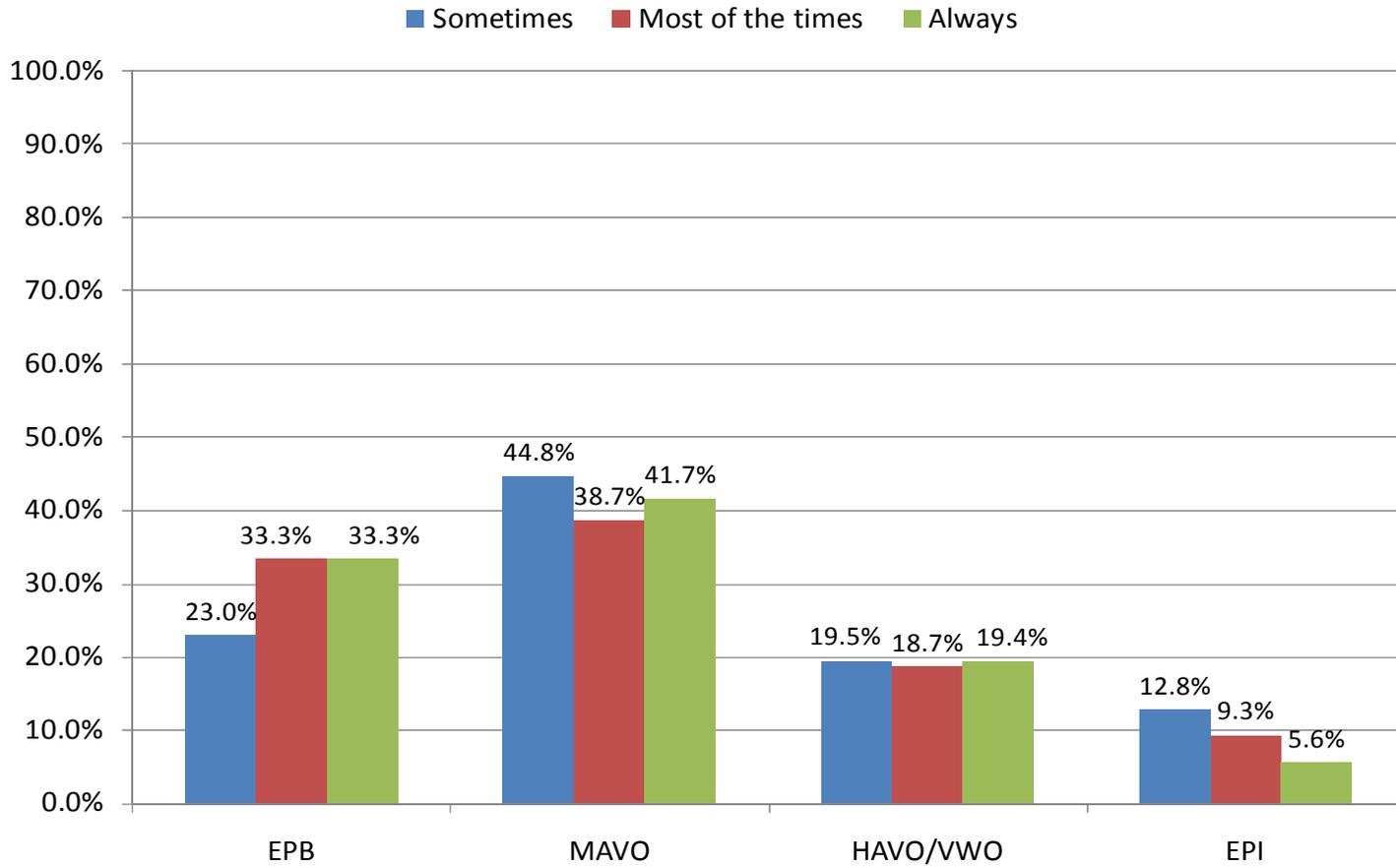
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Annex II Family composition adolescent that does not live with either biological parent.

		Stepfather	Stepmother	Father's girlfriend	Mother's boyfriend	Husband / Wife	My boyfriend/ girlfriend	Grandparents	Aunt	Uncle	Sibling	Other relatives	Other non-relatives	I live alone
Total Population (n= 401)	n	72	85	3	3	4	17	145	88	41	163	52	37	7
	%	18.0	21.2	0.7	0.7	1.0	4.2	36.2	21.9	10.2	40.6	13.0	9.2	1.7
Male	n	46	50	1	3	2	6	78	44	21	91	21	14	6
	%	21.2	23.0	0.5	1.4	0.9	2.8	35.9	20.3	9.7	41.9	9.7	6.5	2.8
Female	n	26	35	2	0	2	11	67	44	20	72	31	23	1
	%	14.1	19.0	1.1	0.0	1.1	6	36.4	23.9	10.9	39.1	16.8	12.5	0.5
12-14 years	n	31	37	2	3	0	1	52	25	17	60	19	10	3
	%	22.0	26.2	1.4	2.1	0.0	0.7	36.9	17.7	12.1	42.6	13.5	7.1	2.1
15-17 years	n	37	42	1	0	2	4	83	53	21	92	23	21	2
	%	17.4	19.7	0.5	0.0	0.9	1.9	39.0	24.9	9.9	43.2	10.8	9.9	0.9
18-19 years	n	4	6	0	0	2	12	10	10	3	11	10	6	2
	%	8.5	12.8	0.0	0.0	4.3	25.5	21.3	21.3	6.4	23.4	21.3	12.8	4.3
EPB	n	27	28	0	1	1	6	50	34	18	60	18	20	0
	%	17.5	18.2	0.0	0.6	0.6	3.9	32.5	22.1	11.7	39.0	11.7	13.0	0.0
MAVO	n	36	44	3	2	1	1	69	39	15	82	23	7	4
	%	20.5	25.0	1.7	1.1	0.6	0.6	39.2	22.2	8.5	46.6	13.1	4.0	2.3
HAVO/VWO	n	7	10	0	0	0	2	18	9	4	16	5	5	0
	%	18.9	27.0	0.0	0.0	0.0	5.4	48.6	24.3	10.8	43.2	13.5	13.5	0.0
Epi	n	2	3	0	0	2	8	8	6	4	5	6	5	3
	%	5.9	8.8	0.0	0.0	5.9	23.5	23.5	17.6	11.8	14.7	17.6	14.7	8.8





Annex V Participation to clubs or organizations by level of education

