NATIONAL HEALTH AND MORBIDITY SURVEY (NHMS) 2017:
Key Findings from the Adolescent Health and Nutrition Surveys

Infographic Booklet
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In 2018, there are about **5.5M** adolescents in Malaysia.

More than half of them are in schools. Adolescents are valuable assets to the country as they will become future leaders who will continue to drive and sustain the development of the nation. They are perceived as the healthiest population group however they do have their own set of unique problems and healthcare needs.

Nationwide school-based surveys were conducted among adolescents in Malaysia were in 1996, 2012, and most recently in 2017 - the findings of which are presented in this booklet.

There were three major scopes in this survey:
- Adolescent Health Survey (AHS)
- Adolescent Mental Health (DASS-21)
- Adolescent Nutrition Survey (ANS)

The objectives of this study were to identify health risk behaviors and protective factors among secondary school students, and to determine nutrition-related components among adolescents in Malaysia.

Methodology

- National school sampling frame
- Multistage stratified cluster sampling design
- Cross-sectional study design
- Data collection from 26 March to 3 May 2017
- 36 teams for data collection; 4 teams each for Sabah and Sarawak; 2 teams per state in Peninsular Malaysia and the Federal Territories
- Individual and parental consents obtained before conducting the surveys
- Registered with NMRR-16-698-30042
- Validated questionnaires used
### AHS & DASS

- **Target population**: 13-17 years
- **Instruments**: Anonymous self-administrated questionnaire with scannable answer sheet
- **Study sample**: 212 secondary schools were randomly selected (30,496 students)
- **Response rate**: 89.2%

### ANS

- **Target population**: 10-17 years
- **Instruments**: 1. Face-to-face interview for habitual food intake, dietary intake and nutritional status
  2. Anonymous self-administrated questionnaire with scannable answer sheet
- **Study sample**: 212 secondary schools and 99 primary schools were randomly selected (40,087 students)
- **Response rate**: 89.5%

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Distribution of Schools for Adolescent Health and Nutrition Survey, 2017

www.iku.gov.my
### Key Findings

**Internet use and addiction among Malaysian adolescents**

- **6 in 7** secondary school adolescents were active internet users in Malaysia.
- **2 in 7** secondary school adolescents were addicted to the internet in Malaysia.

**Why should we worry about adolescents engaging excessively in online activities?**

- Excessive online gaming, gambling, shopping, chatting.
- Viewing pornographic websites.
- Strangers online, data insecurity.
- Cyber-bullying environments.

**Internet addiction**

- Among adolescents of Chinese ethnicity.
- Measured using Malay Version Internet addiction Test.

**Devices used by internet addicts:**

- **94%** Smartphones.
- **62%** Computers, laptops, or notebooks.
- **31%** Tablet devices.

**Prevalence of internet addiction by form:**

- The prevalence of internet addiction seemed to increase with age, rising up to **38%** among Form 5 students.

**Prevalence of internet addiction by state:**

- WP Kuala Lumpur and WP Putrajaya had the highest rates of internet addiction among all states.
Teenagers and illicit drugs in Malaysia

**Definition of Drug use:**
Taking of heroin, morphine, glue, amphetamine or methamphetamines (ecstasy, syabu, ice), marijuana/ganja (except prescribed medicine).

**1 in 25**
3.4% secondary school students in Malaysia claimed to have ever used drugs.

**17%**
Initiated drug use at age 7 years or younger

**2.4%**
Ever used amphetamines or methamphetamines

**2.8%**
Ever used marijuana

**3.4%**
Are current drug users

**Trends in Illicit Drug Use**
- 2012: 1.5% Ever used drugs
- 2014: 4.3% Ever used drugs
- 2012: 1.7% Currently using drugs
- 2014: 3.4% Currently using drugs

**Source of getting drugs (%)**

- **Bought them from someone:** 25.9
- **Gave someone else money to buy it for me:** 13.3
- **Stole:** 14.0
- **Friend:** 11.4
- **Family:** 4.4
- **Some other way:** 6.1
- **Some other way:** 6.1

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
Bullying victimisation among adolescents in Malaysia

1 in 6 adolescents was a recent victim of bullying*

Boys were bullied more than girls, most frequently among those of Indian ethnicity

19% vs 14%

Prevalence of bullying by state

Prevalence of bullying by form

Bullying was experienced most among those in Form 1, and decreased with age. The most common form of bullying was 'being made fun of because of how body or face looks' (16%)

---

* defined as being on the receiving end of "bad and unpleasant" actions, such as "teasing a lot in an unpleasant way", or being "left out of things on purpose"
Pattern of current cigarette use among Form 1 to Form 5 students in Malaysia

1 in 10 smokes

Prevalence of current cigarette smoking by form:
- Form 1: 12.8%
- Form 2: 12.6%
- Form 3: 14.3%
- Form 4: 15.3%
- Form 5: 14.1%

Prevalence of current cigarette smoking by ethnicity:
- Bumiputera Sarawak: 22.2%
- Bumiputera Sabah: 19.8%
- Other: 17.9%
- Indian: 15.0%
- Malay: 14.1%
- Chinese: 7.0%

Prevalence of current cigarette smoking by state:
- WP Labuan recorded the highest prevalence in current cigarette smoking (19.2%)
- WP Putrajaya recorded the lowest prevalence in current cigarette smoking (7.8%)

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
Alcohol use among adolescents

About 1 in 10 students are current drinkers

6% reported drunkenness

76% had their first alcoholic beverage before the age of 14 years

About 1 in 5 students ever consumed alcohol

DEFINITIONS

Ever drinkers:
Those who had a history of alcohol consumption in their life time.

Current drinkers:
Those who had at least a “drink” of alcohol in the past 30 days.

Drunkenness:
When someone demonstrates signs such as staggering when walking, not being able to speak right and throwing up after consuming alcohol in a lifetime.

Sources of obtaining alcohol

- Family: 38%
- Store: 27%
- Friends: 17%
- I gave someone else money to buy for me: 9%
- Some other way: 8%
- Stole: 2%

Q: How did you obtain the alcohol?
### Sex & teens: What is going on in Malaysia?

The prevalence of ever having had sex was highest in Pahang, and lowest in WP Kuala Lumpur.

<table>
<thead>
<tr>
<th>Class/Form</th>
<th>Prevalence of ever having had sex by form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove Class/Form 1</td>
<td>9.3%</td>
</tr>
<tr>
<td>Form 2</td>
<td>6.9%</td>
</tr>
<tr>
<td>Form 3</td>
<td>6.1%</td>
</tr>
<tr>
<td>Form 4</td>
<td>7.3%</td>
</tr>
<tr>
<td>Form 5</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

- **35%** Ever had sex before age 14 years old
- **21%** Were having multiple sexual partners
- **6%** Are currently still having sex

Source: Adolescent Health Survey, NHMS 2017

www.iku.gov.my
Safe sex: What was used?

Among those surveyed who had ever had sex, **only 12%** said they used condoms.

- **21%** of the students who used condoms were Indian.
- **17%** of Form 1 students used condoms.
- **16%** of the rural students used condom.

Prevalence of using (a) condoms and (b) other forms of birth control by state

- Kelantan recorded the highest prevalence for condom use among Malaysian students (22.2%).
- Putrajaya recorded the lowest prevalence for condom use among Malaysian students (3.2%).

- Johor recorded the lowest prevalence for usage of birth control tools other than condom among Malaysian students (8.1%).
- Kelantan recorded the highest prevalence for usage of birth control tools other than condom among Malaysian students (14.9%).

Among those surveyed who had ever had sex, **only 10%** said they used other forms of birth control.

- **9 in 100** boys used condoms when they had sex.
- **16 in 100** girls used condoms when they had sex.
- **12 in 100** boys used other forms of birth control.
- **7 in 100** girls used other forms of birth control.

Source: Adolescent Health Survey, NHMS 2017

www.iku.gov.my
Adolescent suicidal behaviour: A mounting crisis?

Suicidal behaviour encompasses suicidal ideation, plan and/or attempt.

Suicidal behaviour was highest among Form 1 students.

Suicidal ideation:
- **Girls**: 10.8%
- **Boys**: 9.1%

Suicidal plan:
- **Girls**: 7.8%
- **Boys**: 6.8%

Suicidal attempt:
- **Girls**: 6.9%
- **Boys**: 7.0%

Suicidal ideation 2012 & 2017:
- **Girls**: 7.9% (2012) vs 10.0% (2017)
- **Boys**: 6.8% (2012) vs 7.3% (2017)

Indian: 19.3%, Chinese: 17%, Others: 17.9%
Bumiputera Sarawak: 13.7%, Bumiputera Sabah: 10.1%, Malay: 6.9%

Suicidal ideation
- Rural: 11.2%
- Urban: 10.9%

Suicidal plan
- Rural: 9.0%
- Urban: 7.9%

Suicidal attempt
- Rural: 10.1%
- Urban: 6.7%

Suicidal ideation highest in WP Kuala Lumpur: 13.2%
Suicidal plan highest in Selangor: 9.5%
Suicidal attempt highest in Perak: 9.3%

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
Care for adolescents: Peer and family support

Less than half of adolescents perceived that their parents knew what they were doing in their free time.

Only 1 in 7 adolescents perceived that their parents check their homework.

Only 1 in 3 adolescents perceived that their parents understood their problems.

Less than half of adolescents had peer support at school.

Prevalence (%) of protective factors among adolescents (2012 and 2017)

- Parents knew what they were doing in their free time
- Parents understood their problems
- Parents checked their homework
- Had peer support at school

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
### Truancy among Malaysian adolescents

**Definition of Truancy:**
Missed class or school without permission for at least one day in the past 30 days.

#### Prevalence of Truancy by State

<table>
<thead>
<tr>
<th>State</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terengganu</td>
<td>35.9%</td>
</tr>
<tr>
<td>National</td>
<td>29.4%</td>
</tr>
</tbody>
</table>

#### Prevalence of Truancy in Secondary Schools

<table>
<thead>
<tr>
<th>Grade</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORM 1</td>
<td>26.6%</td>
</tr>
<tr>
<td>FORM 2</td>
<td>27.8%</td>
</tr>
<tr>
<td>FORM 3</td>
<td>27.5%</td>
</tr>
<tr>
<td>FORM 4</td>
<td>34.5%</td>
</tr>
<tr>
<td>FORM 5</td>
<td>30.8%</td>
</tr>
</tbody>
</table>

#### Ethnicity Prevalence of Truancy

- Malay: 29%
- Indian: 33%
- Chinese: 28%
- Bumiputera: 37%
- Bumiputera Sarawak: 23%
- Others: 37%

Truancy rates were highest among students of ‘Other’* ethnicities, followed by Bumiputera Sabah and Indian.

*other ethnic groups in Malaysia apart from the major ethnicities

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Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
National Health and Morbidity Survey 2017

Key Findings

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Physical attacks and fights

Had been physically attacked:

- Urban: 25.2% (31.4% for urban, 29.3% for rural)
- Rural: 25.5% (24.1% for urban, 27.7% for rural)

- National prevalence: 25.3%

Had been involved in a physical fight:

- Urban: 24.2% (23.6% for urban, 25.0% for rural)
- Rural: 25.7% (23.4% for urban, 27.3% for rural)

- National prevalence: 24.9%

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
Physical and verbal abuse at home among teenagers

1 in 10 teenagers are physically abused

4 in 10 teenagers are verbally abused

Boys suffer more physical abuse
Girls suffer more verbal abuse

Abuse among teenagers by form (%)

<table>
<thead>
<tr>
<th>Form</th>
<th>Physical Abuse</th>
<th>Verbal Abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 1</td>
<td>18.1</td>
<td>42.8</td>
</tr>
<tr>
<td>Form 2</td>
<td>14.3</td>
<td>42.0</td>
</tr>
<tr>
<td>Form 3</td>
<td>10.3</td>
<td>43.6</td>
</tr>
<tr>
<td>Form 4</td>
<td>9.1</td>
<td>45.1</td>
</tr>
<tr>
<td>Form 5</td>
<td>6.8</td>
<td>42.7</td>
</tr>
</tbody>
</table>

The incidence of physical abuse is low and reduces as teenagers grow but verbal abuse is high and remains constant with age.

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
Unintentional injury among Malaysian adolescents

30% had been seriously injured in the past 12 months

Unintentional injury:
A serious injury in the past 12 months which makes the student miss at least one full day of usual activity (such as school, sports or a job) OR requires treatment by a doctor or medical personnel

Prevalence of recent serious injury by state

Penang recorded the lowest prevalence rate for serious head injury among secondary school students (25.2%)

Perlis recorded the highest prevalence rate for serious head injury among secondary school students (34.1%)

Prevalence of recent serious injury by form

Serious injuries occurred most frequently in Form 1, reducing slightly with age

Falls (35%) were the most common cause of unintentional injuries sustained among adolescents

Source: Adolescent Health Survey, NHMS 2017
www.iku.gov.my
Meal skipping behaviour among Malaysian adolescents

Trend of main meal intake (%) among Malaysian Adolescents

<table>
<thead>
<tr>
<th>Meal</th>
<th>Deficiency</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>7 in 10</td>
<td>28%</td>
</tr>
<tr>
<td>Lunch</td>
<td>5 in 10</td>
<td>48%</td>
</tr>
<tr>
<td>Dinner</td>
<td>5 in 10</td>
<td>30%</td>
</tr>
<tr>
<td>Total</td>
<td>3 in 10</td>
<td>53%</td>
</tr>
</tbody>
</table>

DEFINITIONS

Breakfast:
First food consumed after waking from sleep (6am-8am)

Lunch:
Foods consumed between 11am to 3pm

Dinner:
Foods consumed between 6pm to 10pm

In 2017, approximately:

- 7 in 10 adolescents skipped breakfast regularly
- 5 in 10 adolescents skipped lunch regularly
- 74% of obese adolescents skipped breakfast
- 32% adolescents skipped breakfast because they “had no time”
- 44% adolescents skipped breakfast because they had “no appetite”
- 9% adolescents skipped breakfast because “no food was available”
Dietary supplement consumption among adolescents in Malaysia

1. Every 2 in 5 and 1 in 3 of adolescents consumed vitamin/mineral and food supplements respectively.

2. School children aged 10-12 years old were the top consumers of dietary supplements.

3. WP Putrajaya showed the highest prevalence of dietary supplement users.

4. Thin adolescents consumed higher dietary supplements compared to other BMI status.

5. The most consumed dietary supplements were vitamin C and honey.

6. The main reason for taking dietary supplements was due to parents’ advice.

Source: Adolescent Nutrition Survey, NHMS 2017
www.iku.gov.my
Alarming facts on carbonated soft drinks consumption among Malaysian adolescents

Adolescents living in rural areas consumed carbonated soft drinks more frequently than their urban counterparts.

Male adolescents consumed carbonated soft drinks more frequently than girls.

Intake of carbonated soft drinks by ethnicity:
- Bumi Sarawak: 63.6%
- Others: 48.2%
- Bumi Sabah: 47.4%
- Indian: 43.6%

Prevalence of carbonated soft drinks intake by state:
- Rural: 41%
- Urban: 34%
- 1 in 3 of Malaysian students had carbonated soft drinks at least once daily.
- Boys: 40%
- Girls: 32%
- Upper secondary school level: 32%
- Lower secondary school level: 40%

Lower secondary school students consumed carbonated soft drinks more frequently.
Accuracy of body weight perception among adolescents in Malaysia

**DEFINITION**

Body weight perception refers to the personal evaluation of one’s weight as “underweight” or “normal weight” or “overweight”, irrespective of actual body mass index (BMI).

**50%** of adolescents with **NORMAL** body weight, correctly perceived their weight to be normal.

**70%** of adolescents with **THIN** body weight, correctly perceived their weight to be thin.

**44%** of adolescents with **OVERWEIGHT** body weight, correctly perceived their weight to be overweight.

**14%** of adolescents with **OBESE** body weight, correctly perceived their weight to be obese.

Source: Adolescent Nutrition Survey, NHMS 2017
www.iku.gov.my
Do adolescents in Malaysia read food labels?

DEFINITIONS

Always:
Reads food labels every time when buying or receiving food/drinks

Sometimes:
Occasionally or once in a while reads food labels when buying or receiving food/drink

Never:
Does not read food labels at all

Type of information read from food labels (%):

- Expiry date: 78.6%
- Nutrition claims: 17.3%
- Nutrition facts: 24.8%
- Food ingredients: 28.7%
- Storage instructions: 18.2%

Reasons for not reading food labels:

- Not interesting: 38%
- Do not understand: 19.2%
- Time constraint: 17.7%
- Did not know the importance: 14.4%
- Small font: 12.4%
- Already aware: 11.8%

Type of macronutrient noted from labels (%):

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total energy</td>
<td>42</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Total carbohydrate</td>
<td>33</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Total fat</td>
<td>33</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Total protein</td>
<td>25</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>
Malaysian adolescents: How active are they?

About 45% of Malaysian students are physically active.

- Primary school students are more active than secondary school students:
  - Primary school: 57.0%
  - Secondary school: 37.3%

- Prevalence of physical activity among urban and rural school children was similar:
  - Rural: 46.4%
  - Urban: 43.2%

- Boys are more active than girls:
  - Boys: 54.1%
  - Girls: 35.2%

Prevalence of physically active adolescents according to body weight status:

- Thinness: 43.4%
- Normal: 44.9%
- Overweight: 43.5%
- Obese: 44.7%

Screen time more than 2 hours over weekends and on schooling days:

- Schooling days:
  - Active students: 57.0%
  - Inactive students: 43.0%

- Weekends:
  - Active students: 54.4%
  - Inactive students: 45.6%

*Screen time refers to the time spent on watching television, playing video games and using the computer or surfing the internet.*
Dietary patterns and heavy meals after dinner among adolescents in Malaysia

1 in 3 adolescents ate inadequate cereals/ grains/ tubers/ related products daily

4 in 5 adolescents ate inadequate fish daily

2 in 3 adolescents ate inadequate fruits daily

3 in 4 adolescents ate inadequate milk & dairy product

23 in 25 adolescents ate inadequate vegetables daily

National prevalence of adolescents having heavy meals after dinner

- 6.4% Daily (7 days)
- 70.4% 1-6 days
- 23.2% Did not take

*Meals taken after 10pm, consisting of ‘heavy food’ or high calorie food such as nasi lemak, roti canai, fried noodles, burger, fried chicken and etc. It does not include light snacks for example 2 biscuits and/or one glass of milk.

Demographic breakdown of respondents who eat heavy meals after dinner on a daily basis

- Primary: 6.9%
- Secondary: 6.1%
- Rural: 6.5%
- Urban: 6.3%
- Girls: 5.1%
- Boys: 7.6%

Source: Adolescent Nutrition Survey, NHMS 2017
www.iku.gov.my
Dietary intake among adolescents

Median energy intake per day of adolescents in Malaysia: 1848 kcal

Adolescents are getting the recommended composition\(^\ast\) of nutrients from their diet:
- 52% Carbohydrate
- 33% Fat
- 15% Protein

Median energy by ethnicity:
- Malay: 1855 kcal
- Chinese: 1806 kcal
- Indian: 1583 kcal
- Bumiputera Sabah: 1934 kcal
- Bumiputera Sarawak: 1899 kcal
- Others: 2102 kcal

Sugar intake in adolescents increased 1.4x from 2012 to 2017:
- 2012: 29.5g
- 2017: 40.7g

Dietary intake:
Daily eating patterns of an individual including the quantities and the calories consumed as well as the intake of macronutrients (nutrients that is required in large amounts) and micronutrients (nutrients that is required in small amounts).

*Recommended Nutrient Intake (RNI) 2017:
- Carbohydrate: 50-65%
- Protein: 10-20%
- Fat: 25-35%

Source: Adolescent Nutrition Survey, NHMS 2017
www.iku.gov.my
State of Adolescents’ Mental Health in Malaysia

(Based on DASS-21 scoring)

1 in 5 depressed
17.7% 18.9%

2 in 5 anxious
42.3% 37.1%

1 in 10 stressed
10.3% 8.9%

Prevalence of depression, anxiety, and stress by state

Source: Adolescent Mental Health (DASS-21), NHMS 2017
www.iku.gov.my