



Vol. 13 No.2 December 2017

NIH

BULLETIN

NATIONAL INSTITUTES OF HEALTH, MINISTRY OF HEALTH MALAYSIA



adolescent HEALTH

INSIDE THIS ISSUE

4

TECMA 2016

6

ADOLESCENT
HEALTH SURVEY

10

DOKTOR MUDA

14

11th NCCR in conjunction with
REACTA FORUM 2017



Editorial Board

ADVISOR

Datuk Dr Shahnaz Murad
Deputy Director General of Health
(Research & Technical Support)
Ministry of Health Malaysia

CHIEF EDITOR

Tee Guat Hiong

EDITORS

Delarina Frimawati binti Othman Andu
Juanita Halili
Komathi Perialathan
Kong Yuke Lin
Minson Majimbun
Mohd Idris Omar
Mohd Zakwan bin Zainal Abidin
Nor Haryati Ahmad Sanusi
Sumitra Sithamparam
Sharifah Zawani Syed Ahmad Yunus
Tania Gayle Robert
Theyveeka Selvy a/p Rajoo
Vinomarlini Gunasagaran

From The Desk of.....

Chief Editor

Adolescence is a significant phase in human growth as it is the transition point from childhood to adulthood with specific health and developmental needs. This age group of 10 to 19 years old, comprising of one fifth of the Malaysian population are a valuable asset and will be the future leaders of this country. Therefore, it is no surprise that the government especially Ministry of Health spearheaded various studies that emphasised on adolescents' health.

The most significant study is the National Health and Morbidity Survey (NHMS), which focuses on adolescent health in 2017. Dedicated researchers and support staff under the Institute for Public Health (IPH) carried out the survey. The study focuses on health risk behaviour, mental health problems, nutrition as well as protective factors that may deter adolescents from indulging in risky behaviours and detrimental environments.

This issue also highlights the Tobacco and E-cigarette Survey among Malaysian Adolescents (TECMA), which was carried out in 2016 to determine the pattern of tobacco dependence and the increasing prominence of e-cigarettes / vape use among adolescents. This survey is paramount in devising the effective policy to reduce the prevalence of tobacco addiction, therefore ensuring the continuous health of the adolescents. Apart from the two abovementioned nationwide surveys, the Effectiveness of Doktor Muda as Peer Educator: Health Knowledge, Attitude and Practices of Primary School Children in Malaysia is another major initiative carried out by the National Institutes of Health (NIH), specifically the Institute for Behavioural Health Research (IHBR). The main objective of the study was to promote positive health awareness and behaviours among schoolchildren. In addition, other NIH institutions carried out biomedical and clinical research related to adolescent health.

This issue also highlights the recently concluded joint conferences of the National Conference on Clinical Research (NCCR) and the Regional Asian Clinical Trial Association (REACTA). These events saw various research works related to precision medicine were given due recognition and the establishment of interregional collaboration on clinical research activities.

Researchers from NIH had published 17 articles on adolescent health in international and national journals. In addition, researchers had presented findings on adolescent health in various conferences either through oral or poster presentations. Abstracts of journal articles and presentations together with snapshots of posters are featured in this bulletin.

I would like to express my heartfelt thanks to all the editors for their contribution to the development of this bulletin. I sincerely hope that this issue of NIH Bulletin will enhance the understanding of the public on the importance of adolescent health and the role of Ministry of Health in ensuring a positive development of the country's adolescents. Enjoy reading.



Tee Guat Hiong

Head
Office of Communication and
Public Liaison,
National Institutes of Health,
Ministry of Health, Malaysia

Table of Content

Introduction of Adolescent Health	3
Tobacco and E-cigarette Survey among Malaysian Adolescents (TECMA) 2016	4
Adolescent Health Survey (AHS) 2017	6
Adolescent Nutrition Survey (ANS) 2017	8
The Effectiveness of <i>Doktor Muda</i> as Peer Educator : Health Knowledge, Attitude and Practices of Primary School Children in Malaysia	10
Abstracts of Oral Presentations	12
11 th NCCR in Conjunction with REACTA FORUM 2017	14
Posters and Abstracts	16
Journal Abstracts	22

Adolescent HEALTH



Adolescence typically refers to the period of life between ages 10 to 19. It can be considered the transitional age of growth and development from childhood to adulthood. During these years, adolescents may establish behaviours and make lifestyle choices that affect both their current and future health.

Health-risk behaviours developed during adolescence often continue into adulthood and may result in social problems, disability or even death. These behaviours, which are mostly preventable, include tobacco use, unhealthy eating, alcohol and other drug use, inadequate physical activity, behaviours that contribute to unintentional injury and violence and sexual behaviours that can result in

Human Immunodeficiency Virus (HIV) infection, other sexually transmitted diseases and unintended pregnancy.

In view of the importance of the health issues among adolescents, institutions under National Institutes of Health (NIH) had carried out several surveys as follows:

1. The **Tobacco & E-cigarette Survey among Malaysian Adolescents (TECMA)** was conducted by the Institute for Public Health in 2016. The aim of the survey was to determine the prevalence of current cigarette smoking, e-cigarette / vape use and shisha smoking among school-going adolescents.
2. The **National Health & Morbidity Survey (NHMS) 2017 - Adolescent Health Survey (AHS)** was conducted among students in selected primary and secondary schools throughout Malaysia from March until May 2017. The main scopes of the survey were adolescent health and nutrition.
3. The **Effectiveness of Doktor Muda as Peer Educator: Health Knowledge, Attitude and Practices of Primary School Children in Malaysia** led by Institute for Health Behavioural Research was a nationwide comparative cross-sectional study between SDM (School with Doktor Muda) and SBDM (School without Doktor Muda). It was carried out from March 2016 to March 2017 with the intention to identify the effectiveness of Doktor Muda as peer educator in promoting positive health awareness and behaviours to their peers.

The details of the above studies can be found in the following pages of this Bulletin

Tobacco And E-Cigarette Survey Among Malaysian Adolescents

TECMA

2016

Author :
Tania Gayle Robert
Institute for Public Health, Ministry of Health Malaysia



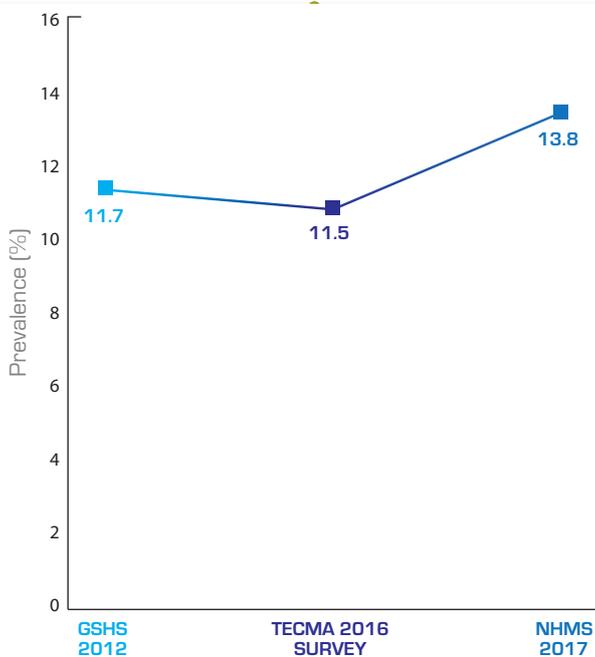
Principal receiving a token of appreciation for participation from the Field Supervisor



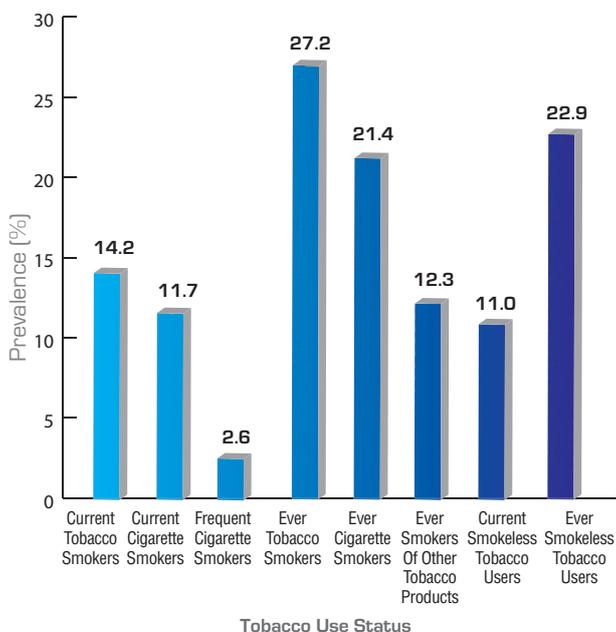
Students answering TECMA questionnaires



Data Collection Training Workshop for Southern zone team members



Prevalence Of Current Cigarette Smokers



Prevalence Of Tobacco Use

The Tobacco and E-cigarette Survey among Malaysian Adolescents (TECMA) 2016 was a cross-sectional survey designed to represent the school-going adolescents aged 10-19 years old at public and private schools in Malaysia. A total of 136 schools with 13,162 students took part in this survey. The overall response rate for the survey was 86.6%. This survey utilised a structured questionnaire, which was divided into three modules namely: Tobacco Use, E-cigarette/Vape Use and Shisha Use for data collection. This questionnaire was developed with inputs from researchers and experts in tobacco and smoking from the Ministry of Health. Field data collection was conducted in April 2016. Findings from TECMA 2016 were presented to the Director General of Health and Minister of Health and a report was published.

The prevalence of current cigarette smokers among adolescents aged 10 – 19 years was 11.7%; which was comparable to the Global School Health Survey (GSHS) done in 2012 at 11.5%. However, the prevalence of current cigarette smokers increased to 13.8% in Adolescent Health Survey (AHS) 2017. In 2016, 78.7% of ever smokers tried their first cigarette before the age of 14 whereas the GSHS 2012 reported a lower prevalence (70.8%). Almost 4 in 10 students were exposed to second hand smoke (SHS) at home and 5 in 10 in public places. However, 76.7% of current smokers wanted to stop smoking with nearly nine in ten (87.3%) students had seen anti-tobacco messages.

The prevalence of current e-cigarette/vape users among adolescents was 9.1%; comparable to the AHS 2017 at 9.8%. Almost half (46.5%) of ever e-cigarette/vape users tried their first e-cigarette/vape before the age of 14 years old. Only a mere 37.5% of current e-cigarette/vape users knew that their e-cigarette/vape contained nicotine. However, 67.5% of current e-cigarette/vape users wanted to quit immediately and 71.6% tried to quit in the past 12 months. The prevalence of current dual users (those using e-cigarettes/vape and cigarettes) was 5.2%. Almost half (46.1%) of them started with cigarette smoking while 10.0% with e-cigarette/vape. Forty one percent of all students felt that e-cigarette/vape was equally harmful as cigarette smoking.

The prevalence of current shisha smoking among adolescents was 3.5%; while the prevalence of ever shisha smoking was 10.6%. More than half (51.2%) of ever shisha smokers tried their first shisha smoking before the age of 14 years old.

From TECMA 2016, smoking still appeals to some Malaysian adolescents. Therefore, smoke free advocacy towards Malaysian youth should be continued and strengthened. Programmes at school, community and national levels must reinforce the message that smoking is harmful and adolescents should stay away from cigarette or passive smoking. Smoke-free advocacy could be implemented during physical education, art lessons, science lessons and civic or religious lessons.

School counsellors could play an important role in helping young smokers to quit smoking and they should be equipped with proper guidelines and training on how to help adolescents who are smokers to quit. Essential intervention programmes such as KOTAK (Kesihatan Oral Tanpa Asap Rokok) by the dental services must be supported by all quarters. Parents must also play a role in discouraging their children from smoking.

Since the introduction of electronic cigarettes, adolescents seem to be influenced and attracted to this new device. It may also attract non-cigarette smokers towards this culture and thus normalize the smoking habit. Proper guidelines should be drawn to contain its accessibility especially to the young ones as the dangers of e-cigarettes are not known yet.

Adolescent Health Survey

AHS 17

Authors

S. Maria Awaluddin¹, Nik Rubiah Nik Abd Rashid², Amal Shamsudin²

¹ Institute for Public Health, Ministry of Health Malaysia

² Family Health Development Division, Ministry of Health Malaysia

Adolescent is group of population in which our future leaders are born. In order to prepare them to be competent leaders, they should have psychosocial balance, physical fitness and supportive environment to grow. Priority was given to adolescent health since 20 years ago. A nationwide survey was conducted in 1996 to assess the health risk behaviours such as smoking, drinking alcohol, drug use and practice in sexual activity. Subsequently, the Global Youth Tobacco Surveys and The Youth Behaviour Risk Factor Surveillance were conducted.

The latest Adolescent Health Survey (AHS) 2017 and the Malaysia Global School-based Student Health Survey (GSHS) 2012 shared similar methodology and target population to ensure results were comparable. Both surveys focused on secondary school students aged 13 to 17 years to represent the Malaysian adolescents. These surveys used the adapted WHO anonymous self-administered questionnaires assessing 10 main scopes on the adolescent health. Both surveys obtained good response from participants. The main scopes covered in the surveys were substance use (tobacco, alcohol and drugs), sexual behaviours, violence and injury, mental health problems, hygiene practices, physical activities, dietary behaviours and protective factors.

Generally, the findings from these surveys reflected the current on-going problems among school-going adolescents. An increasing trend of substance use especially drug use was observed and the problem was more profound in the younger age groups. The prevalence of ever used drugs in their lifetime was 4.3%, this was 2.5 times higher compared to Malaysia GSHS 2012 and similar trends were seen for current drug use and ever used marijuana. In regards to tobacco use, the prevalence of current cigarette smoking in the Malaysia GSHS 2012 was 11.5% and a slight increase was reported in AHS 2017 (13.8%).



The prevalence of current cigarette smoking among female adolescents has doubled in AHS 2017 compared to the Malaysia GSHS 2012. The prevalence of current drinkers among school-going adolescents was 10.2%, an increase from 8.9% as reported by the Malaysia GSHS 2012.

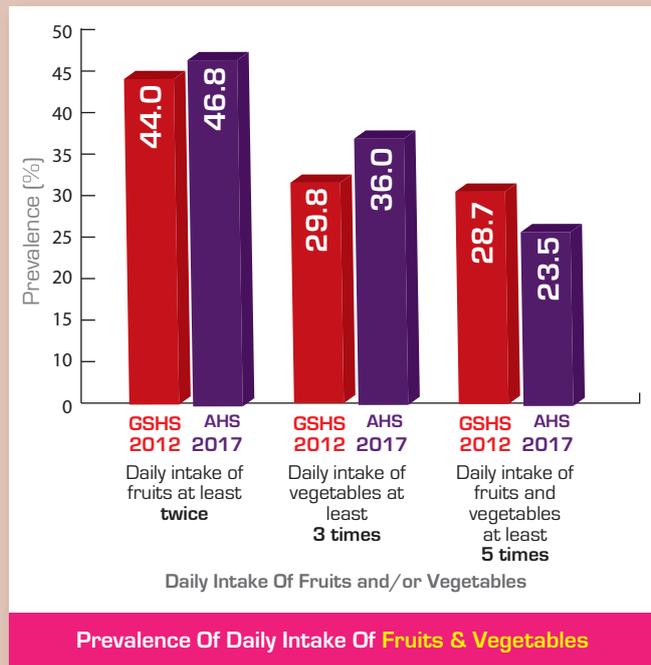
The prevalence for ever had sex among school-going adolescents was found to be similar to the findings in 2012. However, there was a downtrends for safe sexual practices among those who ever had sex (used condom and other birth control method during last sexual activity). The safe sexual practices among those who ever had sex was found to be unsatisfactory.

The prevalence of violence and injury among school-going adolescents were almost similar in both surveys; more actions are required in handling these problems. Indian ethnicity was noted to be the highest among those who ever involved in violence acts such as physical attack, physical fight, had ever been bullied at school and had ever been physically abused at home.

The overall prevalence of internet use among school-going adolescents was 85.6% and the overall prevalence of internet addiction was 29.0%. Smartphones were the most common device used by the students.

There was not much difference in the prevalence of poor personal hygiene practices among school-going adolescents in 2012 and 2017.

This survey showed a decrease in the prevalence of school-going adolescents gone hungry due to not having enough food at home, from 4.9% in 2012 to 3.9% in 2017. The prevalence of adolescents who consumed fruits at least twice daily was 46.8% and 36.0% consumed vegetables at least three times daily; an increase compared to the findings in the Malaysia GSHS 2012. However, only 23.5% of the school-going adolescents consumed fruits and vegetables five times daily; which was lower than the findings in 2012 (28.7%). Regarding unhealthy food intake, increasing trends of carbonated drink and fast food intakes were reported.



There was not much difference in the prevalence of peer support, having parental or guardian supervision, parental or guardian connectedness and parental or guardian bonding between the two surveys. These were the protective factors for the adolescents, whereby attention was to be given in the school environment and at home.

Overall, the prevalence of health-related behaviours among school-going adolescents remain a public health concern. In view of the above findings, there is an urgent need to strengthen the awareness, knowledge and practice of positive health-related behaviours at home, school and community settings. In addition, we need to enhance resilience and coping skills among students through school and community programs and activities such as Doktor Muda, Minda Sihat, cadet and volunteerism. Dissemination of health education materials on health risk behaviours at large and strengthening the protective factors against risky behaviours through intersectoral collaboration with more emphasis on spiritual values and parenting skills should be prioritized. Last but not least, the effectiveness of adolescent health programmes provided by various agencies are to be evaluated at regular intervals.

Adolescent Nutrition Survey

ANS

17

Author

Ruhaya Salleh

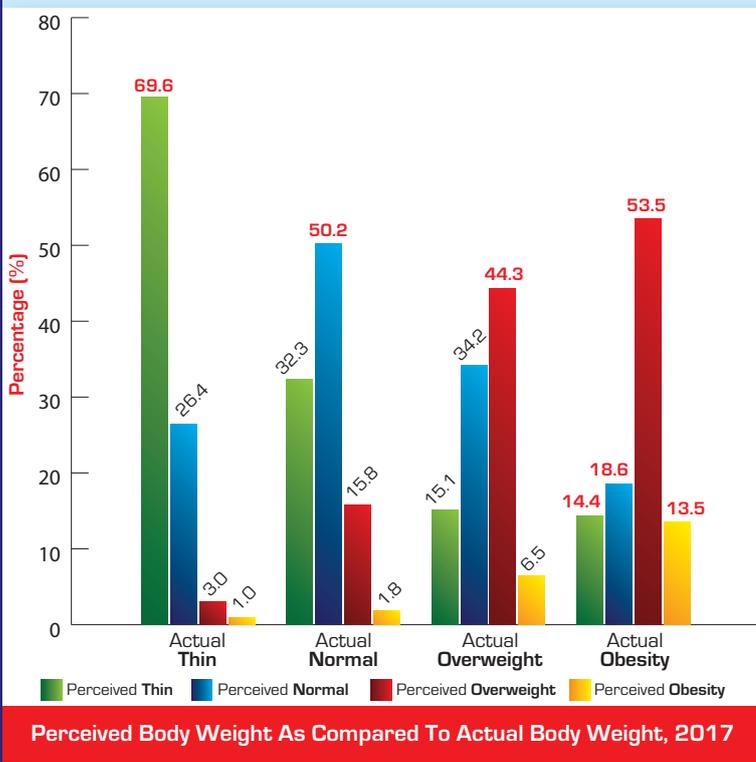
Institute for Public Health, Ministry of Health Malaysia

Adolescent Nutrition Survey (ANS) is the second nationwide study on nutrition among adolescents after the Malaysia School-based Nutrition Survey (MSNS) 2012. There were three main scopes in this survey; which were Adolescent Nutrition Survey (ANS), Habitual Food Intake and Dietary Intake. ANS consisted of eight topics, namely nutritional status, body weight perception, meal pattern, physical activity, vitamin/mineral, food supplement intakes as well as food and nutrition labelling. This survey was conducted at 311 randomly selected schools in all states including three federal territories in Malaysia. This school-based survey was a cross-sectional study involving school-going adolescents aged 10 to 17 years in Malaysia. A multi-stage stratified cluster sampling design was used to recruit national representative samples from students in Standard 4 to 6 (10-12 years of age) and Form 1 to 5 (13-17 years of age). The survey was conducted using self-administered questionnaires and face-to-face-interviews.

Total response rates for self administered questionnaire was 89.5% for ANS, 96.4% for habitual food intake and 96.6% for dietary intake assessment. Based on the indicator height for age (HAZ), the prevalence of normal height ($HAZ \geq 2SD$) was 91.8% and stunting 8.2%. The prevalence of stunting was higher in rural areas (10.2%) as compared to urban areas (6.8%). In terms of BMI for age (BAZ), the prevalence of thinness was 6.6%, overweight 15.6% and obesity 14.8%. As for body weight perception, only 15.6% correctly perceived that they were thin whereas 69.1% were actually within normal weight, 8.0% overweight, and 7.2% were obese. Among those school-going adolescents who had normal weight, 50.2% correctly perceived their weight to be normal. However, among those who were actually overweight and obese, 44.3% and 13.5% correctly perceived themselves to be overweight and obese respectively. Health was the main reason among those who wanted to lose and gain weight; with 56.3% preferred exercise as an option to lose weight; 52.4% wanted to increase quantity of food to gain weight.

Almost all adolescents consumed either rice, noodles, bread, cereals or tubers daily, but only 53.2% of them met the daily recommended intake of 4 to 8 servings (MDG 2010). More than half of adolescents (61.6%) met the recommended intake of poultry, meat, and eggs (0.5 - 2 servings). Less than one quarter of adolescents consumed adequate healthy foods such as vegetables (7.9%), legumes (23.2%), milk and dairy products (23.3%) but a slightly higher consumption of fruits (31.5%). Only 2.2% met the recommended daily intake of fish.





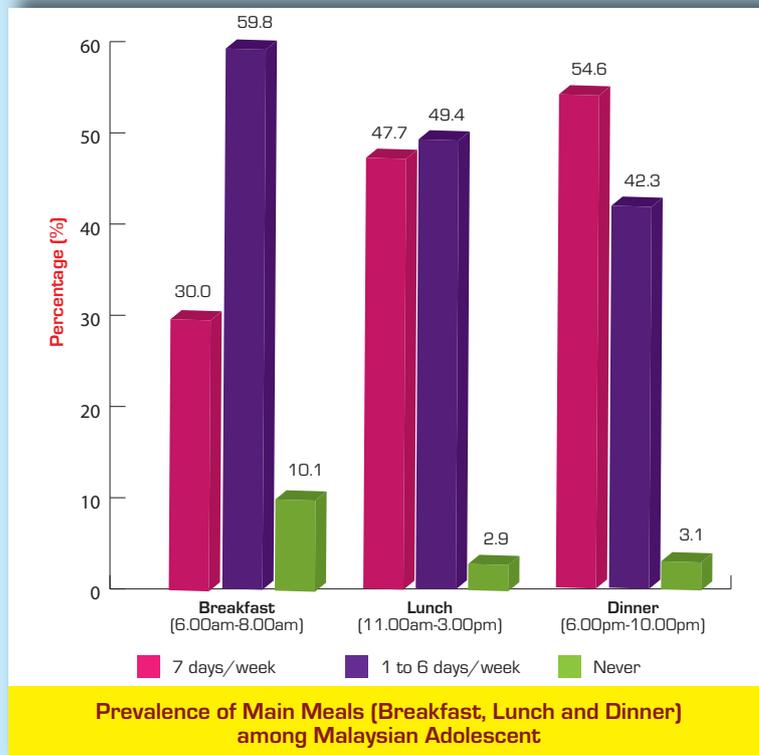
As for meal pattern, the prevalence of breakfast intake for seven days per week among adolescents was 30.0%. The majority of them had breakfast one to six days per week (59.9%) and some of them did not have breakfast in a week (10.1%). Among those who had breakfast, 67.2% obtained from home. Adolescents from urban areas (31.0%) reported having breakfast daily (seven days per week), higher than rural areas (28.6%). The two main reasons for skipping breakfast were no appetite (43.6%) and no time (31.8%). The prevalence of having lunch seven days per week among school-going adolescents was 47.7%; 49.4% had lunch up to six days per week and 2.9% did not have lunch in a week. No appetite (48.2%) and no time (17.9%) were the two main reasons for skipping lunch. As for dinner, 54.6% of school-going adolescents had dinner seven days per week, 42.3% 1-6 days per week and 3.1% did not have dinner in a week. Only 6.4% took heavy meals after dinner.

There were 2.5% who had fast food daily and 13.1% did not have fast food. Social media such as YouTube, Facebook, Instagram (37.9%) and television (36.7%) were reported as the main sources which affected dietary pattern. A percentage of 28.7% reported that their dietary patterns were not affected by any media sources.

For dietary intake, the median energy intake of adolescents was 1848 kcal, which was 90.2% of the Recommended Nutrient Intake (RNI) for energy. Boys reported higher median energy intake with 2068 kcal compared to girls (1670 kcal). Half of the total daily energy intake consisted of carbohydrate (51.6%), protein (15.0%) and fat (33.4%). The total daily energy intake was derived from three main meals: breakfast (20.8%), lunch (26.0%) and dinner (25.7%).

The national prevalence of physical activity among school-going adolescents was 44.6%. Boys and younger adolescents were more active than girls and older adolescents. The most favourite activities during spare time were walking for exercise, jogging / running, badminton, tagging and cycling. Boys and younger school-going adolescents were more active than girls and older adolescents. More adolescents watched television, played computer or video games over the weekend compared to schooling days.

The prevalence of vitamins / minerals and food supplements intake among adolescents was 44.7% and 30.6% respectively; higher among the youngest adolescents and boys. The most commonly consumed were Vitamin C (17.8%) and bee products (16.2%). The main reason for taking vitamin / minerals (42.9%) and food supplements (41.3%) was due to parents' advise.



Food and nutrition labeling use was assessed among secondary school-going adolescents; 84.5% read food and nutrition labeling. They were more concerned about fat and total energy compared to other nutrients. More than 50% of adolescents answered correctly on nutrition facts and list of ingredients used.

The Effectiveness of

DOKTOR MUDA

as Peer Educator :

HEALTH KNOWLEDGE, ATTITUDE and PRACTICES of Primary School Children in Malaysia

Authors

Suraiya Syed Mohamed, Siti Nur Farhana Harun, Kamarulzaman Salleh, Komathi Perialathan, Nor Hayati Ahmad Sanusi

Institute for Health Behavioural Research, Ministry of Health Malaysia



Doktor Muda (DM) is a school-based health programme started in 1989 and has been implemented nationally since year 2000 by Health Education Division, Ministry of Health in aspiration to achieve better health status among school children. DM is a group of trained school children that met certain criteria as peer educators in order to empower their peers to adopt healthy practices. A nationwide comparative cross-sectional study between SDM (School with *Doktor Muda*) and SBDM (School without *Doktor Muda*) was carried out from March 2016 to March 2017 to assess the effectiveness of *Doktor Muda* as peer educator. This study was registered with the National Medical Research Registry (NMRR-16-642-30447) and ethical approval was obtained from the Ministry of Health and Ministry of Education.



A two-stage cluster sampling design was applied in this study; first stage was the selection of schools and second stage, the selection of school children (matched group). A total of 2588 (1294 SDM: 1294 SBDM) year 5 school children from 87 primary schools participated in this study. Data was obtained using a guided self-administered questionnaire assessing the knowledge, attitude and practices on healthy eating, hand hygiene, dental health, *Tak Nak Merokok* and active lifestyle.

Key Findings :

- Primary school children had the least knowledge regarding ideal body weight.
- The most unfavourable attitude was active lifestyle and the most non-compliant practice was healthy eating.
- Knowledge of school children on *Tak Nak Merokok* was better in SDM compared to SBDM. There was a significant difference ($p < 0.05$) between *Tak Nak Merokok* knowledge score with the type of school; mean difference of 0.08 lower among SBDM (95% CI: 0.009, 0.145).
- *Tak Nak Merokok* practice was found to be higher in SDM compared to SBDM. There was a significant difference ($p < 0.05$) between *Tak Nak Merokok* practice scores with the type of school; mean difference of 0.08 lower among SBDM (95% CI: 0.006, 0.162).
- Positive attitude on active lifestyle was higher among SBDM respondents compared to SDM. The results showed there was a significant difference ($p < 0.001$) between active lifestyle attitude score with the type of school; mean difference of -0.38 lower among SDM (95% CI: -0.133, 0.052).
- Female respondents' attitude towards overall health practices was found higher than male. The results showed there was a significant differences ($p < 0.001$) in the attitude score between gender towards health practices. The mean difference was -2.80 lower among male respondents (95% CI: -3.528, 2.086).
- A chi-square test was performed and there was a significant relationship between :
 - Source of health information with knowledge related to eating vegetables, $\chi^2 = 3.97$, $P < 0.05$ ($n = 2588$).
 - Source of health information with knowledge related to eating fruits, $\chi^2 = 4.51$, $P < 0.05$ ($n = 2588$).

- Source of health information with drinking plain water practice, $\chi^2 = 3.97$, $P < 0.05$ ($n = 2588$)
- Source of health information with *Tak Nak Merokok* practice, $\chi^2 = 4.14$, $P < 0.05$ ($n = 2588$)

Overall, *Doktor Muda* plays an important role in increasing the health knowledge, attitude and practices on their peers. DM's role as peer educator was seen to be more effective for *Tak Nak Merokok* component compared to other components. A better method and mechanism of message delivery by DM need to be identified for other components as well for it to be visible and impactful for their peers.



ABSTRACTS of Oral Presentations

TINGKAH LAKU PENGAMBILAN SARAPAN PAGI DALAM KALANGAN REMAJA

(azilahmr@moh.gov.com)

Norashikin Abdul Manan, **Norazilah Mohd Roslan***, Ismarulyusda Ishak
Institut Penyelidikan Tingkahlaku Kesehatan, Kementerian Kesehatan Malaysia
Seminar Penyelidikan Belia Kebangsaan, PWTC, Kuala Lumpur, 6 – 7 Nov 2017

ABSTRAK

Pengambilan sarapan pagi yang berkhasiat merupakan salah satu faktor ke arah pemakanan sihat dalam kalangan remaja. Pengambilan sarapan pagi setiap hari dalam kalangan remaja dapat memberi impak positif kepada kognitif dan kesihatan remaja yang akan menerajui pimpinan negara kelak. Menurut Ma et al. (2003), orang yang tidak mengambil sarapan cenderung untuk makan secara berlebihan. Manakala kajian oleh Velsita et al. 2010, pengambilan sarapan dapat mengurangkan risiko obesiti dalam kalangan kanak-kanak dan remaja. Tujuan kajian ini dijalankan untuk mengenal pasti tingkah laku pengambilan sarapan pagi dalam kalangan remaja. Kajian keratan rentas telah dijalankan pada Julai 2014 hingga November 2014 dalam kalangan remaja berusia 13 hingga 14 tahun di Cheras, Kuala Lumpur. Pengumpulan data menggunakan borang soal selidik berstruktur yang diisi sendiri dengan pemantauan minima oleh penyelidik. Data dianalisa menggunakan perisian SPSS 20. Seramai 82 orang terlibat dalam kajian ini dan majoriti pelajar perempuan sebanyak 51.2%. Hasil menunjukkan sebanyak 76% remaja mengambil sarapan pagi. Daripada jumlah ini hanya 15% sahaja mengambil sarapan setiap hari, manakala sebanyak 24% remaja tidak mengambil sarapan pagi. Dari segi pengetahuan, hanya 39.5% remaja mengetahui pengambilan makanan seimbang mengikut garis panduan piramid Makanan Malaysia. Hasil purata indeks jisim tubuh (IJT) menunjukkan 44% remaja mempunyai IJT kurang berat badan dan 17% mempunyai IJT berat badan berlebihan. Ujian korelasi antara pengetahuan dan amalan menunjukkan hubungan yang lemah dengan nilai ($r = -0.043$, $p = 0.700$). Ujian Anova sehalu, menunjukkan tiada perbezaan signifikan antara IJT dan pengambilan sarapan pagi, ($F = 0.488$, $p = 0.616$). Kesimpulannya, tingkah laku pengambilan sarapan pagi dalam kalangan remaja perlu diberi penekanan dan perhatian supaya dapat meningkatkan status kesihatan remaja amnya dan rakyat Malaysia khususnya. Justeru itu, kerjasama daripada pelbagai pihak dalam memastikan maklumat mengenai pemakanan sihat dapat disampaikan kepada remaja kerana rakyat sihat akan mampu memberi sumbangan kepada pembangunan dan kemakmuran negara.

Kata kunci : sarapan pagi, remaja, kesihatan

INFORMATION-SEEKING BEHAVIOUR ON SEXUAL AND REPRODUCTIVE HEALTH AMONG ADOLESCENTS IN SARAWAK, MALAYSIA (kongsi007@gmail.com)

Albeny Joslyn Panting*, Haslinda Abdullah, Ismi Arif Ismail, Samsilah Roslan, Suraiya Syed Mohamed, Zaikiah Mohd Zain
Institute For Health Behavioural Research, Ministry of Health Malaysia.
Seminar Penyelidikan Belia Kebangsaan, PWTC, Kuala Lumpur, 6 – 7 Nov 2017

ABSTRACT

Adolescent need to have accurate information and awareness on sexual and reproductive health that can help them to make responsible decision-making about their sexual behaviour. The aim of this study was to explore how adolescent access to various sources of media in regards to sexual and reproductive health information-seeking behaviour in Sarawak. A cross-sectional study was carried out in three locations in Sarawak namely Kuching, Sibuan and Miri with an estimated sample size of 1146, and respondents between aged 16 to 19 years. Multi-stage clustered sampling is applied which is based on sampling frame that listed the districts, sub-district, housing estate, and villages under the jurisdiction of each district office. This process utilized at least 6 stages of sampling processes, from division/district selection until selecting potential respondent from each selected household. Data were collected using self-administered structured questionnaire. The data was then analysed using SPSS version 21. Response rate in this study was N=1086 (95%). Results shows respondents reported ever searched for sexual and reproductive health information in the past 3 months was 43% (n=467). The main reason for searching information on sexual and reproductive health was to increase knowledge and awareness while the type of information that most searched was related to personal healthcare. The three main sources of sexual and reproductive health information reported were through the internet (mean 1.12, SD 1.44), peers (mean 1.08, SD 1.40) and electronic media (mean .96, SD 1.29) respectively. In term of the most trusted source of information on sexual and reproductive health, respondent reported health personnel (mean 1.38, SD 1.68), internet (mean 1.21, SD1.49) and school teacher (mean 1.19, SD 1.50) respectively. In conclusion, respondent prefers internet, peers and electronic media as major source of sexual and reproductive health information as compared to other sources. However, internet was among the most trusted source of sexual and reproductive health information, apart from health personnel and school teacher. These findings suggested the needs to look at the strength of these sources of information regarding sexual and reproductive health information in developing effective health education strategies related to sexual and reproductive health among adolescents in Sarawak.

Keywords : information seeking behaviour, sexual and reproductive health, adolescent

KETAGIHAN TELEFON PINTAR DALAM KALANGAN BELIA UNIVERSITI : SATU FENOMENA BARU DI MALAYSIA? (durrah@moh.gov.my)

Norbaidurah Ithnain*, Shazli Ezzat Ghazali, Norrafizah Jaafar
Institut Penyelidikan Tingkahlaku Kesihatan, Kementerian Kesihatan Malaysia.
Seminar Penyelidikan Belia Kebangsaan, PWTC, Kuala Lumpur, 6 – 7 Nov 2017

ABSTRAK

Ketagihan telefon pintar kini menjadi fenomena global kerana turut menyumbang kepada masalah kesihatan fizikal, mental dan psikosial dikalangan belia universiti. Bagaimanapun, kajian berkaitan fenomena ini masih kurang dijalankan di Malaysia. Objektif kajian keratan rentas ini untuk mengenal pasti trend penggunaan telefon pintar dan menentukan perbezaan ketagihan telefon pintar dengan jantina, pendapatan keluarga dan tempoh penggunaan sehari dalam kalangan belia universiti di salah sebuah universiti awam di Kuala Lumpur. Seramai 369 orang belia tahun pertama terlibat dalam kajian ini. *Smartphone Addiction Scale* (SAS-M) versi Bahasa Melayu telah digunakan untuk mengukur tahap ketagihan telefon pintar; terdiri daripada enam subskala iaitu hubungan berorientasikan ruang siber, gangguan kehidupan seharian, keutamaan, penggunaan yang berlebihan, penglibatan positif dan penarikan. Analisa deskriptif, ujian T Tidak Bersandar dan Anova Sehala digunakan bagi menjawab objektif kajian. Majoriti (78.3%) memiliki telefon pintar lebih daripada setahun dan 70.0% menggunakannya lebih daripada empat jam sehari. Selain itu, 57.2% menggunakannya untuk melayari laman sosial dan 78.9% memperuntukkan kurang daripada RM50 sebulan bagi perbelanjaan telefon. Seramai 47.7% belia berada pada tahap ketagihan telefon pintar teruk. Subskala penggunaan yang berlebihan mencatatkan nilai min tertinggi diikuti gangguan kehidupan seharian dan hubungan berorientasikan ruang siber. Dapatan kajian menunjukkan tiada perbezaan signifikan antara ketagihan telefon pintar dengan jantina ($p>0.05$), tetapi terdapat perbezaan dengan pendapatan keluarga dan tempoh penggunaan sehari ($p<0.05$). Belia yang mempunyai pendapatan keluarga kurang daripada RM1000 dan menggunakan telefon pintar lebih daripada empat jam sehari mencatatkan skor ketagihan yang lebih tinggi. Penemuan ini memberi indikasi bahawa fenomena ketagihan telefon pintar wujud dalam kalangan belia universiti di Malaysia. Walaupun telefon pintar turut memberi manfaat, penggunaan yang berlebihan tanpa kawalan boleh mengakibatkan belia ketagih dan berisiko mengalami kesan negatif terhadap kesihatan. Oleh itu, perhatian dan kerjasama daripada pelbagai pihak amat diperlukan. Program pendidikan kesihatan dan intervensi yang bersesuaian haruslah dilaksanakan bagi menangani ketagihan telefon pintar seterusnya, memperkasakan belia ke arah pengamalan tingkah laku yang lebih sihat.

Kata kunci: ketagihan telefon pintar, belia universiti, kesihatan

DIABETES AMONG YOUTH IN MALAYSIA: SHOULD WE WORRY?

(drnoorani@moh.gov.my)

Noor Ani Ahmad

Institute for Public Health, Ministry of Health Malaysia

13th National Symposium on Adolescent Health, Grand Riverview Hotel, Kota Bharu, Kelantan, 5-7 April 2017

ABSTRACT

Introduction : Population-based registries worldwide show an increasing incidence of diabetes among youth, with several studies reported an increasing proportion of youth with type 2 diabetes mellitus. In Malaysia, there is scarcity of data on this problem. This study aimed to identify youth at-risk for diabetes in Malaysia. **Methods :** Data on youth aged 18 to 25 years from the National Health and Morbidity Survey 2015 was analysed. This survey was conducted as a nation-wide community-based survey using stratified random sampling design. Respondents were considered as having diabetes if they were either previously informed by medical personnel as having diabetes or their fasting blood sugar level was 6.1 mmol/L or more. **Results :** A total of 2733 youth were interviewed during the survey with 2727 youth who responded to the diabetes module; 99.8% response rate. The overall prevalence of diabetes among youth in Malaysia was 5.8% which can be inferred to 220,251 youth. It was noted that 91.4% of those youth were discovered as having diabetes only during the survey. There was no difference in the prevalence by gender, locality, household income or body mass index. Logistic regression analysis revealed that youth at-risk of having diabetes were those of low education level, and those who were also noted as also having hypertension. **Discussion and Conclusion :** Diabetes among youth in Malaysia is an emerging public health problem. As majority of the cases were undiagnosed, primary and secondary prevention strategies should be strengthened. Further studies are vital to differentiate the type of diabetes; either type 1 or type 2 diabetes, as this will affect the management approach.

SUICIDAL IDEATION AMONG MALAYSIAN ADOLESCENTS : WHAT ARE THE RISK FACTORS? (chan.yy@moh.gov.my)

Chan Ying Ying^{1*}, Lim Kuang Hock², The Chien Huey², Kee Chee Cheong², Sumarni Mohd Ghazali², Lim Kuang Kuay¹, Khoo Yi Yi¹, Tee Eng Ong³, Noor Ani Ahmad¹, Normala Ibrahim⁴

¹ Institute for Public Health, Ministry of Health, Malaysia;

² Institute for Medical Research, Ministry of Health, Malaysia;

³ Allied Health Sciences College, Sungai Buloh, Selangor, Malaysia;

⁴ Dept. of Psychiatry, Faculty of Medicine and Health Sciences, UPM, Malaysia

8th Malaysian Conference on Healthy Ageing, Royale Bintang Hotel, Kuala Lumpur, 31 Mar – 2 April 2016

Introduction: Suicidal behavior is an important public health problem worldwide. In Malaysia, It has become an urgent concern as the suicide rates among adolescents keep increasing. Suicidal ideation, defined as thoughts, ideas and the desire to commit suicide, is common among young people and is known as a major predictor of future suicide risk. This study aims to determine the prevalence of suicidal ideation and its associated factors among school-going adolescents in Malaysia. **Methods:** This study was conducted based on 2789 school-going adolescents aged 16-17 years who participated in the Malaysian Adolescent Health Risk Behaviour (MyAHRB) Study in 2013 and responded to the questionnaire on suicidal ideation. Data were collected using self-administered questionnaire. Prevalence and factors related to suicidal ideation were analyzed using univariate and multivariate logistic regression. **Results:** The overall prevalence of suicidal ideation among adolescents was 6.2%. The prevalence was significantly higher among females than males (7.6% vs 4.7%; $P=0.002$). Multivariate analysis revealed that adolescents who were female (aOR = 2.02; 95% CI: 1.40 – 2.92) or Indian ethnic group (aOR = 2.32; 95% CI: 1.35 – 3.98) were more likely to report suicidal ideation. Loneliness (aOR = 2.54; 95% CI: 1.57 – 4.11), anxiety or worry (aOR = 2.70; 95% CI: 1.70 – 4.31), no close friend (aOR = 2.71; 95% CI: 1.43 – 5.14), and lack of supportive peers (aOR = 1.69; 95% CI: 1.15 – 2.47) were found to be positively associated with adolescents' suicidal ideation. Adolescents who ever had sexual intercourse (aOR = 2.70; 95% CI: 1.48 – 4.92) and having been in a physical fight (aOR = 2.45; 95% CI: 1.62 – 3.70) were also significantly associated with suicidal ideation. **Conclusion:** This study provides evidence on factors associated with suicidal ideation among adolescent students in Malaysia. Early identification of adolescents who are at risk of suicidal ideation is an important step towards suicide prevention. Targeted mental health and health risk behavioral interventions for high risk adolescents are recommended.

Keywords: Suicidal ideation, suicide, adolescents, MyAHRB, Malaysia

11th NCCR

In Co

REACTA FORUM



njunction With

2017



The 11th National Conference for Clinical Research (NCCR 2017) in conjunction with the 5th Regional Asian Clinical Trial Association (REACTA) Forum 2017 was successfully held on 27 - 29 September 2017 at the International Convention Centre in Putrajaya. With the Theme "Precision Medicine-The Future is Now", this esteemed event was attended by over 500 participants from both local and Asian region.

This conference was supported by the National Clinical Research Centre (NCRC); organised by the Association of Clinical Registries Malaysia

(ACRM), Clinical Research Malaysia (CRM), Institute for Medical Research (IMR), University of Malaya (UM), for the first time together with REACTA. Officially opened by the Honourable Minister of Health Malaysia, Datuk Seri Dr S. Subramaniam, NCCR 2017 witnessed the launch of the Malaysian Medical Research Repository (MyMedR) and REACTA Forum. The event introduced MyMedR as an open access website that hosts Malaysian journals and provides easy access to researchers. REACTA, is a collaboration of 4 countries; i.e. Japan, South Korea, Taiwan and Malaysia. It aspires to promote and facilitate clinical research activities in the region.

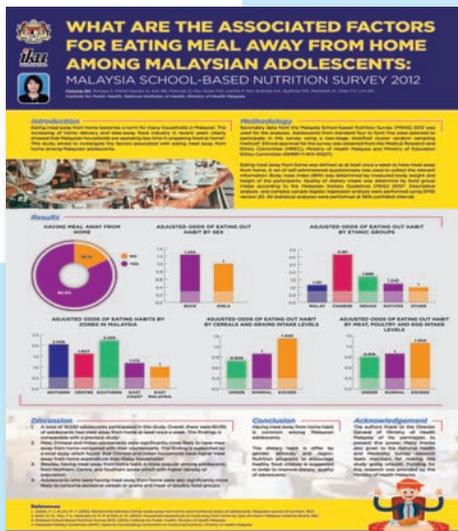
This three-day event featured keynote address, plenary sessions and symposiums; delivered by 39 speakers from nine countries across the globe. This conference had successfully brought together leaders and global experts in healthcare as well as academicians from various disciplines. The speakers presented the latest developments in precision medicine, including clinical trial developments and research collaborations. The first two days of NCCR 2017 focused on precision medicine in oncology, diagnostics and therapeutics in precision medicine, emerging precision medicine in Asia, current precision medicine impact on individual and community, pharmacogenomic and big data. On the last day of the event, the REACTA Forum focused on the Collaborative Research in Asia and Global Initiatives: Collaboration and Best Practices.

This event also featured exhibitions by the clinical research industries and local institutes. It showcased 182 posters by upcoming, bright and young researchers in the categories of research, audits and case reports.

The NCCR 2017 and REACTA Forum was concluded with the Dr Wu Lien-Teh Research Awards Ceremony. Dr Wu's descendant Alison Chong presented three Best Poster Awards for each abovementioned categories, along with three Young Investigator Awards. Dr Goh Pik Pin, the Director of NCRC, officially closed the NCCR 2017.

POSTERS and ABSTRACTS

BEST 5 POSTER AWARD



WHAT ARE THE ASSOCIATED FACTORS FOR EATING MEAL AWAY FROM HOME AMONG MALAYSIAN ADOLESCENTS: NATIONAL SCHOOL-BASED NUTRITION SURVEY 2012 (smcheong@moh.gov.my)

Cheong Siew Man, Ruhaya Salleh, Mohd Hasnan Ahmad, Azli Baharudin Shahrudin, Fatimah Othman, Nor Azian Mohd Zaki, Lalitha Palaniveloo, Nur Shahida Abd Aziz, Syafinaz Mohd Sallehudin, Rashidah Ambak, Chan Ying Ying, Lim Kuang Kuay

Institute for Public Health, National Institute of Health, Ministry of Health Malaysia

21st National Public Health Colloquium, Bangi Putrajaya Hotel, 23 – 24 Aug 2017

Background : Having meal away from home was associated with increasing trend in energy intake. **Objective** : This study aimed to investigate the factors associated with eating meal away from home habit (eating away from home at least once a week) among Malaysian adolescents which include socio-demographic characteristics, BMI-for-age, and food groups intake. **Methods and Study Design** : This was a nationwide survey conducted using two-stage stratified cluster random sampling method to obtain a representative sample of adolescents aged 10-18 years who were attending government schools. Validated self-administered questionnaire in Malay language was used to obtain relevant information. Complex sample logistic regression analysis was used in the data analysis. **Results** : A total of 21,916 students provided necessary data for eating meal away from home. Overall, 82.2% of adolescents were eating away from home at least once a week. Those who eating meal away from home were

more likely to be boys (aOR=1.255, 95% CI=1.134,1.389), living in Northern zone (aOR=2.038, 95% CI=1.511,2.748) Central zone (aOR=1.607, 95% CI=1.178,2.193) and Southern zone (aOR=2.223, 95% CI=1.687,2.929), exceeded the recommended cereals/grains intake (aOR=1.442, 95% CI=1.279,1.626) and meat/poultry intake (aOR=1.304, 95% CI=1.190,1.428). **Conclusions** : Eating meal away from home was common among Malaysian adolescents especially among boys and those living in the Western part of Peninsular Malaysia. Further study of other factors associated with eating meal away from home such as parents' occupation, living areas, and so on is suggested to improve the strategies to promote healthy food choices when eating out among Malaysian adolescents.

Keywords : meal away from home, youth, socio-demography, food group intake, unhealthy eating habit

BEST POSTER PRESENTATION

THE EFFECTIVENESS OF DOKTOR MUDA AS PEER EDUCATOR : HEALTH KNOWLEDGE, ATTITUDE AND PRACTICES OF PRIMARY SCHOOL CHILDREN IN MALAYSIA (suraiya.sm@moh.gov.my)

Suraiya SM, Siti Nur Farhana H, Md Sabtuh MR, Nor Haryati AS, Kamarul Zaman S

Institute of Health Behavioural Research

3rd International Conference on Public Health (ICOPH) 2017, Hotel Armada, Petaling Jaya, 27 – 29 Jul 2017

Abstract

Doktor Muda (DM) as a school-based programme was established to achieve better health status among school children. DM is a group of trained school children that met certain criteria as peer educators in order to empower their peers' to adopt healthy practices. A multi-centered comparative cross-sectional study between SDM (*School with Doktor Muda*) and SBDM (*School without Doktor Muda*) was carried out from January to December 2016 with objective to identify the effectiveness of *Doktor Muda* as peer educator. A two-stage cluster sampling was applied in this study; first stage was the selection of school and second stage, the selection of school children (matched group). The data was obtained using a guided self-administered questionnaire through survey involving 2588 (1294 SDM; 1294 SBDM) year 5 pupils from 87 primary schools nationwide. The prevalence of obesity in SBDM male students was comparatively higher (24.6%) compared to SDM. Overall, students have the least knowledge regarding ideal body weight (82.3%) compared to other components. As for *Tak Nak Merokok* component, knowledge of SDM students (17.1%) was found to be better than SBDM (15.4%) with significant difference (CI: (0.009, 0.145)). The study shows SBDM students have a more positive attitude (34.2%) compared to SDM students on active lifestyle with significant difference (CI: (-0.133, 0.052)). Overall, healthy eating (49.7%) was found as the most non-compliant practice and *Tak Nak Merokok* practice by SDM students (40.7%) was found to be higher compared to SBDM students (37.1%) with significant difference (CI: (0.006, 0.162)). The prevalence of obesity has increased steadily and quite alarming especially when this study shows students have an unfavorable attitude towards active lifestyle, negative practices regarding nutrition and low knowledge on ideal body weight. However, *Doktor Muda* plays an important role to increase the knowledge, attitude and health practices to the peers.

Keywords : Doktor Muda, Peer Educator, Effectiveness, Healthy Lifestyle





EXPOSURE TO SECOND-HAND SMOKE AMONG SECONDARY SCHOOL ADOLESCENTS: FINDINGS FROM THE MALAYSIAN YOUTH HEALTH RISK BEHAVIOR (MyHRB) STUDY (sayan@moh.gov.my)

Sayan P¹, Faizah P¹, Hazrin H¹, Noor Aliza L¹, Teh CH², Lim HL³, Chong KH³, Kee CC², Tee EO⁴, Sumami MG², Lim KH²

¹ Institute for Public Health, Jalan Bangsar, 50590, Kuala Lumpur.

² Institute for Medical Research, Jalan Pahang, 50588, Kuala Lumpur.

³ Melaka Manipal Medical College, Jalan Padang Jambu, Bukit Baru, 75150 Melaka, Malaysia

⁴ Allied Health College Sungai Buloh, 47000, Jalan Hospital, Sungai Buloh, Selangor.

1st International Conference on Community Health, UniSZA, Kuala Terengganu, Terengganu, 7 – 9 October 2017

Introduction: Exposure to second-hand smoke (SHS) is one of the main causes of morbidity and it has been proven to be associated with an increased likelihood of smoking initiation among adolescents. Nonetheless, evidence on SHS exposure among Malaysian adolescents is scarce and this warranted a detailed investigation in order to address the existing knowledge gaps. Therefore, this write-up aims to demonstrate the magnitude and factor/s associated with SHS exposure among school-going adolescents in selected secondary schools in Peninsular Malaysia. **Methodology:**

Data was derived from the Malaysian Youth Health Risk Behaviour (MyHRB) study conducted in 2013. A total of 2599 adolescents were recruited into the study using a two-stage proportionate-to-size sampling method. Data were obtained from self-administered questionnaires. Descriptive analysis and multivariable logistic regression were performed to determine risk factors/predictors associated with SHS. **Results:** More than half of the respondents were exposed to SHS during the last one week (56.4%) and SHS exposure was significantly higher among respondents who smoked (94.0% vs 49.9%, $p < 0.001$). Multivariable analysis revealed that the likelihood of exposure to SHS was higher among those who smoked (aOR 12.90, 95% CI: 8.01-20.4), have at least one parent/guardian who smoked (aOR 5.49, 95% CI: 4.41-6.94) and adolescents of Malay ethnicity (aOR 2.10, 95% CI: 1.68-2.63). **Conclusion:** Our findings suggested that effectiveness of anti-smoking measures implemented in the recent years to protect adolescents from the health risks of passive smoking were less obvious. Therefore, educational and awareness programmes which emphasise on the negative health impact of SHS exposure on Malaysian adolescents, particularly among the smoking adults should be intensified indirectly preventing them from initiating smoking.

Keywords : Second-hand smoke, school-going adolescents, smoking, MyHRB health risk behavior.

FACTORS ASSOCIATED WITH E-CIGARETTE USE AND THE REASONS FOR INITIATION AMONG MALAYSIAN ADOLESCENTS: TOBACCO AND E-CIGARETTE SURVEY AMONG MALAYSIAN ADOLESCENTS (TECMA) 2016 (drtania@moh.gov.my)

Tania Robert, Maria Safura Mohamad, Jane Ling Miaw Yn, Hamizatul Akmal Abd. Hamid, Thamil Arasu Saminathan, Hasimah Ismail, Halizah Mat Riffin, Wan Shakira Rodzlan Hasani, Nur Liana Majid, Abd. Aiman Abd. Ghani, Muhammad Fadhli Yusoff

5th Asia Pacific Conference on Public Health, Riverside Majestic Hotel, Kuching, Sarawak, 10 – 13 Sept 2017

Introduction : Electronic cigarette (e-cigarette) is an electronic nicotine delivery system (ENDS) device. It vapourises a liquid consisting propylene glycol, glycerin, flavourings, nicotine and other chemicals. Its use has gained popularity among the younger generation despite its unknown health risks and lack of legislation. The aim of this study was to determine the factors associated with e-cigarette use and the reasons for initiation among adolescents. **Methods :** Data from the Tobacco and E-cigarette Survey among Malaysian Adolescents (TECMA) 2016, a nationwide cross-sectional survey using a two stage stratified cluster sampling design was used. The target population were school going adolescents aged 10 to 19 years. A self-administered structured questionnaire, which was developed, pre-tested and validated, was used. Descriptive analysis and logistic regressions were used to determine factors associated with e-cigarette use and the reasons for initiation among adolescents. **Results :** The overall prevalence of adolescent e-cigarette users in Malaysia was 9.2%. Adolescents who were cigarette smokers had greater odds of using e-cigarettes compared to non cigarette smokers (aOR: 12.92; 95% CI 10.93, 15.28). Similarly, males (aOR: 4.10; 95% CI 3.37, 4.98) were more likely to use e-cigarettes compared to females. Adolescents aged 16-19 years old (aOR: 2.75; 95% CI 2.23, 3.38) had a greater likelihood to use e-cigarettes compared to the others. Main reasons for initiating e-cigarette use were liking the taste and smell (83.6%), wanting to experiment (76.7%), popularity (68.6%) and feeling it is safer than tobacco cigarettes (65.6%). **Conclusion :** The findings indicate that e-cigarette use was significantly associated with adolescents who were current cigarette smokers, male and those aged 16-19 years old. The main reason for e-cigarette initiation was taste and smell. Therefore, proper legislation and guidelines should be formed and targeting this group by restricting the flavours available and also by imposing a minimum age limit on its sale.

Keywords : e-cigarettes, adolescents, TECMA, Malaysia

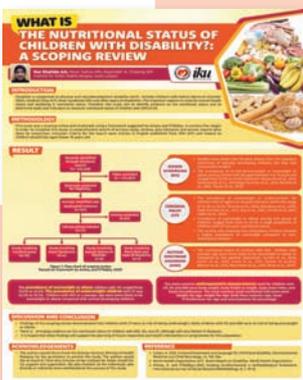


WHAT IS THE NUTRITIONAL STATUS OF CHILDREN WITH DISABILITY? : A SCOPING REVIEW (nshahida@moh.gov.my)

Nur Shahida AA, Noor Safiza MN, Rashidah A, Cheong SM.

Institute for Public Health, Ministry of Health Malaysia

8th National Public Health Conference 2016, Equatorial Hotel, Melaka 2-4 Aug 2016



Introduction : Disability is categorised as physical and neurodevelopment disability which includes children with Autism Spectrum Disorder (ASD), Cerebral Palsy (CP), Down Syndrome (DS) and other types of disabilities. The important aspects to indicate overall health status and wellbeing is nutritional status. Therefore this study aim to identify evidence on the nutritional status and to determine tools and indicators to measure nutritional status of children with ASP,CP,DS. **Methodology :** This study was a scoping review and conducted using a framework suggested by Arksey and O'Malley. It contains five stages in order to complete this study. A comprehensive search of primary study, reviews, grey literature and annual reports were done by researchers. Inclusion criteria for the search were articles in English published from 1990-2014 and related to children

disabilities aged below 18 years old. **Results :** A total of 305,268 titles were extracted and from that only 21 articles were selected in the review based on inclusion criteria. Overall, the majority of the studies found that children with CP were at risk of underweight with the prevalence was 22.2% to 78.2%. However children with DS and ASD were tend to be at risk of overweight or obesity. The prevalence of children with DS was 33.5% to 43.5%. The most common nutritional indicator were z-score for weight-for-age, height-for-age, body mass index-for-age, and head circumference-for-age. **Conclusion :** There is emerging evidence on the nutritional status of children with ASD, DS, and CP, although still very limited in Malaysia. It is hoped that these findings will support the planning of future researches and health intervention or programmes for this population.

Keywords : Nutritional status, Children, Autism Spectrum Disorders, Cerebral Palsy, Down Syndrome.



ORAL HEALTH AMONG SCHOOLCHILDREN : MOVING FORWARD (nurezdiani@moh.gov.my)

Nur Ezdiani M, Zurina AB, Siti Haniza M, Noraini A, Norizan O, Izzatur Rahmi MU, Hairinnisa AD, Norhana R, Savithri V, Nurul Izzati MA, Zabidah O, Zuraini MY, Nur Khairah B, Tong WT, Emy Sarah Ng AN, Hanan AS, Siti Norhasmah S, Fatin Nabila AK, Norshafiqah MN

5th International Public Health Conference, Seri Pacific Hotel, Kuala Lumpur, 26 – 27 Aug 2015

Introduction : Childhood oral health has a significant impact on a child's wellbeing. In Malaysia, oral healthcare is provided since fetal inception, while monitoring of the status begins in school life. Indicators percentages of primary and secondary schoolchildren maintaining orally fit statuses were developed to monitor the continuity of services provided and indirectly mirrored the oral health status of Malaysia's younger population. Post 20 years, recent performance data revealed a consistent plateau. This flagged a room for improvement in the services offered. Hence, this study aimed at identifying other factors that may contribute to the oral health status among the schoolchildren. **Methodology :** A systematic review of literatures was conducted based on PICO keywords developed by the team members. Target population involved schoolchildren aged 6-18 while outcomes looked at conditions such as caries and DMFT. All types of study design were included. Only Malay and English full text articles dated as far back as 20 years ago were accepted. Three databases searched were PubMed, Ovid and grey literatures which were these done by oral health masters students from the ministry's library. Total hits from each database were divided among 14 reviewers. Each was assigned an ID and paired in a group. The reviewer independently screened the articles in the first level of screening. Any disagreement was resolved through discussion or, if required, a third reviewer was consulted. About 16.6% of titles and abstract from total hits of PubMed and 49.3% of titles and abstract from total hits of grey literature were accepted. **Results :** The literatures reported genetic, *Streptococcus mutans*, dietary habit and water fluoridation are among the possible factors that influence the oral health status. **Conclusion :** This systematic review approach will assist the Oral Health Program in identifying the related strategies to improve the Oral Health Program.

Keywords : oral health, schoolchildren

YOUTH AND TOBACCO: AN ALARMING TREND (drmoorani@moh.gov.my)

Noor Ani Ahmad, Tee Guat Hiong, Lim Kuang Kuay, Tahir Aris

Institute for Public Health, Malaysia

48th Asia Pacific Academic Consortium for Public Health Conference, Teikyo University, Tokyo, Japan, 16 – 19 Sept 2016

Objectives : A trend analysis of tobacco used among youths will guide policy makers in planning of programmes and strategies to curb the problem. This study aims to assess the trend of tobacco used among youths aged 15 to 24 years in Malaysia from 1996 to 2015. **Methods :** Data from the 'tobacco consumption' modules from the National Health and Morbidity Surveys (NHMS) conducted in 1996 and 2006, and data from the Global Adult Tobacco Survey (GATS) 2011 and Mini GATS 2015 using Tobacco Questionnaire Survey was analysed. These population-based surveys were conducted as two-stage stratified sampling design. For NHMS 1996 and 2006, data analysis was based on CDC definition of current smokers which include those who smoked daily or some days in the past one month, whereas GATS 2011 and Mini GATS 2015 defined current smokers as smokers who smokes any tobacco product daily or occasionally, over a period of one month or more. **Results :** The prevalence of current smokers among youth aged 20-24 years increased from 23.0% (21.3, 24.6) in 1996 to 24.7% (23.2, 26.1) in 2006. Using GATS definition, the prevalence of current smokers among youth aged 15-24 years increased from 16.7% (13.6, 20.3) in 2011 to 19.3% (17.6, 21.0) in 2015. In 2015, among those who smoked cigarette daily, 32.9% had smoked an average of at least 25 cigarettes per day, compared to only 5.6% in 2011. In both surveys, it was noted that majority of them preferred manufactured cigarette. More than half of those youth had attempted to quit smoking in both surveys. The percentage of those who had visited healthcare providers for the purpose of quitting smoking had reduced from 26.0% in 2011 to only 5.2% in 2015. **Conclusion :** The findings showed increasing trends of current smokers among youth. More youth had become heavy smokers and less youth had visited healthcare providers for help. The findings indicate that the current strategies were ineffective. More creative and innovative strategies should be employed to attract the youth who planned to quit smoking to seek professional help.

Keywords : youth, current smokers, GATS, Malaysia



FACTORS ASSOCIATED WITH DAILY SMOKING AMONG MALAYSIAN ADOLESCENTS - FINDINGS FROM TOBACCO & E-CIGARETTE SURVEY AMONG MALAYSIAN ADOLESCENTS (TECMA)

(wshakira@moh.gov.my)

Wan Shakira R.H., Ling M. Y, Hamizatul A, Hasimah I., Liana A. M., Halizah M. R., Tania R. L, Thamli A. S, Aiman A.G, Fadhli M. Y.

Institute of Public Health, Bangsar, Kuala Lumpur

1st International Conference on Community Health, UniSZA, Kuala Terengganu, Terengganu, 7 – 9 October 2017

Introduction : Daily smoking among adolescents is a public health problem. Understanding factors associated with daily smoking may help public health policy makers and practitioners in improving strategies to prevent or delay adolescent cigarette smoking. **Objective :** To identify the prevalence and associated factors of current daily smoking among Malaysian adolescents. **Methodology :** This study analysed data from the Tobacco and E-Cigarette Survey among Malaysian Adolescent (TECMA) conducted in 2016 targeted school-going adolescents aged 10-19 years old. A cross-sectional population design and two stage stratified cluster sampling was applied. A total of 14832 students from 136 schools were selected in this survey. A complex sampling and Multiple Logistic Regression analysis were applied. **Results :** The overall prevalence of daily smoking among adolescents was 1.60% (95%CI: 1.2, 2.1), with the highest prevalence in males (3.2%) and secondary school students (2.4%). 13.9% of students who currently smoke took cigarette every day. The multivariable model showed that adolescents aged above 12 years was 24.4 times more likely to smoke daily compared to those aged below 12 years old (aOR 24.4, 95% CI: 5.9, 99.7). Male adolescents also had 23.3 times higher odds of being daily smokers compared to females (aOR 23.3, 95% CI: 5.7, 95.0). Students who were given more amount of pocket money (RM 2-5) were 2.6 times higher odds of taking cigarette every day (aOR 2.65, 95% CI: 1.17, 6.00). Adolescents who claim that the premise refused to sell tobacco to underage were 43% less likely of being daily smokers (aOR 0.57, 95% CI: 0.40, 0.82). **Discussion/Conclusion :** Male, secondary school students, those who had more pocket money and not prevented from underage tobacco purchases were at greater risk of becoming daily smokers. It recommended strengthening the laws against cigarette sales to underage person. Also, parents/guardians should monitor their child's spending.

Keywords : Daily smoking, adolescents, tobacco, cigarette



PERCEPTION ON ELECTRONIC CIGARETTE AND VAPE (ECV) USE AND SCHOOL ENVIRONMENT INFLUENCE AMONG CURRENT SMOKERS: FINDINGS FROM THE TOBACCO & E-CIGARETTE SURVEY AMONG MALAYSIAN ADOLESCENTS (TECMA) (hamizatul_ah@moh.gov.my)

Hamizatul Akmal A.H, Wan Shakira R.H., Tania R. L, Ling M. Y., Hasimah I., Halizah M. R., Liana A. M., Thamil A. S, Aiman A.G, Fadhli M. Y.

Institute of Public Health, Bangsar, Kuala Lumpur

1st International Conference on Community Health, UniSZA, Kuala Terengganu, Terengganu, 7 – 9 October 2017

Background: Electronic cigarettes and vape (ECV) use has increased rapidly around the world. However, published data on the Malaysian population is limited especially its use among adolescents. This study aimed to investigate the association of the adolescent's perception on ECV use and school environment influence among current smokers. **Methods:** Data from the Tobacco and E- Cigarette Survey among Malaysian Adolescents (TECMA) 2016, a cross-sectional study using two-stage stratified cluster sampling design was analysed. A total of 14,832 school going adolescents aged 10-19 years old were selected in this study. A validated self-administered questionnaire was used. Complex sampling and multivariate analysis were applied to identify the association of the individual perception on the ECV use and school environment influence among current smokers. **Results:** A total of 13162 (response rate 88.7%) respondents participated in this study. The prevalence of the ECV users among adolescents who currently smoke cigarette was 51.7% (95% CI: 46.3, 57.0) overall, 51.9% (95% CI: 46.3, 57.3) among males, 58.9% (95% CI: 46.3, 57.3) among Sabah Bumiputera and adolescents with mean age of 14.7 (± 1.88) years old. Logistic regression analysis showed that ECV use among current smokers was associated with age and several individual perceptions (e.g. that they will use ECV if offered by their best friend, felt that ECV use is less harmful than cigarette smoking and thought that they might enjoy using ECV). **Conclusion:** Age and several individual perceptions (e.g. that they will use ECV if offered by their best friend, felt that ECV use is equally harmful as cigarette smoking and thought that they might enjoy using ECV) were noted as significantly associated with the ECV use among smokers. These findings could assist policy makers in forming specific interventions targeting adolescents so as to increase awareness on the detrimental health effects of ECV use.

Keywords: Adolescents, perception, electronic cigarette, vape, cigarette

THE RELATIONSHIP BETWEEN NEGATIVE LIFE EVENTS AND DEPRESSION AMONG STUDENTS OF MORAL REHABILITATION CENTRE SEKOLAH TUNAS BAKTI (normawati@moh.gov.my)

Normawati Ahmad¹, Normawati Yusoff², Norhayati Ibrahim³

¹ Institute for Health Behavioural Research, Ministry of Health, Malaysia

² Hospital Raja Perempuan Zainab, Kota Bharu, Kelantan, Malaysia

³ Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

11th Allied Health Scientific Conference, Istana Hotel, 6 – 7 Sept 2016

Introduction : Depression is a mental health problem most frequently experienced by adolescents compared to other mental health problems. Adolescent especially of low social class backgrounds who do not succeed academically and detained in rehabilitation centre actually experienced the negative life events and at risk of depression. This study aims to identify the relationship between negative life events and depression among students of moral rehabilitation centre Sekolah Tunas Bakti (STB). **Methodology :** A cross-sectional study using a self-administered questionnaire. The study was conducted in STB Sg.Besi, Kuala Lumpur (boys) and STB Sg.Lereh, Melaka (girls) from July 2014 to November 2014. The questionnaires included the Beck Depression Inventory II (BDI II) and the Adolescent Life Events Questionnaire (ALEQ). Data were analyzed using t-test and correlation. **Results :** A total of 171 students STB participated in this study. The number of participants consisted of 114 (67.0%) boys and 57 (33.0%) girls. Participants were aged between 10-14 years (12 students) and 15-19 years (159 students). The results showed that there was no significant differences in depression by gender and age. However, there is a significant relationship between negative life events and depression. **Conclusion/Discussion :** In conclusion, this study provides input and increasing understanding of the relationship between negative life events and depression. This invention can be used as guidelines for the STB to manage the risk of depression among students and also develop intervention programs to reduce the level of depression.



DOKTOR MUDA PERCEPTION ON THEIR ROLE OF BEHAVIOURAL CHANGE IN DENGUE PREVENTION

(pises@moh.gov.my)

Pises B¹, Muhamad Fahami A², Suraiya SM¹, Kamarul ZS¹, Md Sabtu MR¹

¹ Institute for Health Behavioural Research, Ministry of Health Malaysia, Malaysia

² Wilayah Persekutuan Kuala Lumpur Health Departments, Malaysia

11th Allied Health Scientific Conference, Istana Hotel, 6 – 7 Sept 2016



Introduction: Dengue prevention is the responsibility of all parties. *Doktor Muda* programme was developed by the Ministry of Health, Malaysia to train a group of pupils to become the agent of health promotion and peer educator in schools in assisting dengue prevention activities. **Aim:** To explore *Doktor Muda's* perception on their role on behavioral change in Dengue prevention among peers in Cheras. **Method:** This is a qualitative study involving 21 *Doktor Muda* from year 6 in SK Seri Anggerik and SK Taman Midah 1 using in-depth interviews and semi structured questionnaire. The findings were analyzed based on five main themes; Dengue prevention activities, ability of *Doktor Muda* to change peers' behaviour, self-efficacy, future needs and barrier in delivering the activities. **Result:** There were five groups of Dengue prevention activities most frequently mentioned by

subjects: giving advice, cleaning the school compound, organizing performance for peers, implementing health campaigns and interactive activities. Giving advice is most frequently mentioned. They were positive with their ability to change the behavior of their peers and helping the health personnel in communicating dengue prevention messages. All subjects were confidence in delivering health messages. The main barrier in delivering activities was lack of cooperation from their peers. The most mentioned needs were teaching aids, training and attractive prizes for competition. **Discussion & Conclusion:** *Doktor Muda* was capable to change the behavior of their peers pertaining to dengue prevention activities. However, they need better teaching aids, regular training, attractive prizes for competition and more public speaking activities in order to improve their self-efficacy and skills in delivering health messages.

Keywords: *Doktor Muda*, Dengue prevention, behaviors change, self-efficacy



LOW KNOWLEDGE, PRACTICE AND SELF-EFFICACY: EFFECTS ON HAND WASHING DEMONSTRATION SKILL AMONG "DOKTOR MUDA" (pises@moh.gov.my)

Pises B¹, Suriyani A², 1Suraiya SM¹, Kamarul ZS¹, Md Sabtuah MR¹

¹ Institute for Health Behavioural Research, Ministry of Health Malaysia, Malaysia
² Terengganu State Health Departments, Malaysia

11th Allied Health Scientific Conference, Istana Hotel, 6 – 7 Sept 2016

Introduction : *Doktor Muda* (DM) is a group of school children trained to be agents for change in motivating and assisting their peers to adopt healthy practices. As competent agents, DM requires good knowledge, positive attitude, high self-efficacy and skill to deliver health messages and function effectively. **Aim :** To identify the level of knowledge, attitude, practices, self-efficacy and hand washing demonstrating skills. **Methods :** This is a cross-sectional study conducted in state of Terengganu Malaysia, involving 84 DM year 6. Seven eligible schools were selected using a simple random sampling. Self-administered questionnaires and observation checklist were used in data collection. Pearson Chi-Square and Fisher's Exact Test was performed to assess the association between knowledge, attitude, practices, self-efficacy and hand washing demonstrating skills. Knowledge, attitude, practice and self-efficacy were assessed based on standard competency score (80%) set by the programme manager. **Results :** Few respondents had good knowledge (16.7%), practice (23.8%) and moderate self-efficacy (41.7%) in hand washing. However, majority (79.8%) respondents showed positive attitude towards hand washing practices. None of the DM was able to demonstrate all the steps in hand washing demonstration. Forgetfulness (70.2%) and assume hands are not dirty (66.7%) found to hinder hand washing practices. Significant association were found between practices and self-efficacy in hand washing (Pearson Chi-Square, p=0.003). **Conclusion :** DM with good knowledge, practice, self-efficacy and demonstration skill score were low. Hence, various strategies were needed to improve knowledge, practices, self-efficacy and in hand washing demonstration skill amongst DM to strengthen their role as peer educators and health change agents in school.

Keywords: knowledge, practices, self-efficacy, hand washing, peer educator

HEALTH SEEKING BEHAVIOUR ON SEXUAL AND REPRODUCTIVE HEALTH AMONG ADOLESCENTS IN SAMARAHAN, SARAWAK (albeny@moh.gov.my)

PANTING Albeny

Institute For Health Behavioural Research

NIH Research Week, Institute for Health Management, Kuala Lumpur, 19 – 23 Nov 2016

Introduction : Adolescents involvement in risky sexual behavior are becoming emerging problems in Sarawak in which limited studies focus on issues pertaining to health seeking behaviour (HSB) on sexual and reproductive health (SRH). The purpose of this study is to identify adolescent HSB pertaining to their accessibility to SRH information and adolescent health care services (AHCS). **Methods :** Data for this presentation is part of pilot study on protective factors and risky sexual behaviour among adolescent in Sarawak. A cross-sectional study was conducted in Samarahan, Sarawak from April until May 2016 among 190 adolescents age between 15 until 19 years old. Multistage clustered sampling was applied which includes sub-district Asajaya and Serian in Samarahan. Data were collected using self-administered questionnaire. Descriptive statistics analysis was employed using SPSS version 21. **Results :** A total of 190 respondents; 35.4% (n=67) male and 64.6% (n=123) female. Age ranging from 15 to 19 years old (mean 18.3, SD 1.28). Respondents reported had searched for SRH information in the past 3 months were 62.1% (n=118). Three main communication channels of accessing SRH information were through internet (49.6%), friends (40.7%) and print media (35%). Respondents intention to search for SRH information in the next 3 months were 73% (n=138). While 38.1% (n=72) out of total respondents reported had heard the services offered by AHCS clinic but only 24.7% (n=47) admitted had used the services for the past 12 months. **Conclusion :** Results suggested a need to look into the importance of internet in SRH information seeking and adolescent low accessibility to AHCS.



KNOWLEDGE AND ATTITUDE ON SEXUAL AND REPRODUCTIVE HEALTH AMONG ADOLESCENTS IN SAMARAHAN, SARAWAK (albeny@moh.gov.my)

PANTING Albeny, Institute For Health Behavioural Research, Kuala Lumpur

ALEXANDER Christy, State Health Department Sarawak

KIPLI Teh Rafidah, Samarahan Divisional Health Office Sarawak

SAPERI Suriati, Sibu Divisional Health Office Sarawak

ALBERT Silvia, Betong Divisional Health Office Sarawak

MAHDI Aziman, State Health Department Sarawak

NIH Research Week, Institute for Health Management, Kuala Lumpur, 19 – 23 Nov 2016

Introduction : Risky sexual behavior are becoming emerging problems in Sarawak. Previous studies indicated its negative implications to the well-being of the adolescent population in Malaysia. However, limited studies focus on adolescent's health behaviour pertaining to sexual and reproductive health (SRH) in Sarawak. The purpose of this study is to identify adolescent's health behaviour related to their knowledge and attitude on SRH. **Methods :** Data for this presentation is part of pilot study on protective factors and risky sexual behaviour among adolescents in Sarawak. A cross-sectional study was conducted in Samarahan, Sarawak from April until May 2016 among 190 adolescents age between 15 until 19 years old. Multistage clustered sampling was applied which includes sub-district Asajaya and Serian in Samarahan. Instrument for attitude measured 9 items with 4 scale from not agree to agree while the knowledge on SRH with 10 items with true and false response. Data were collected using self-administered questionnaire. Descriptive statistics analysis was employed using SPSS version 22. **Results :** A total of 190 respondents; 35.4% (n=67) male and 64.6% (n=123) female involved in this study. Age ranging from 15 to 19 years old (mean 18.3, SD 1.28). A total of 185 respondents response to knowledge items on SRH in which 93.1% (n=177) scored more than 70%. While the result for attitude on SRH among the respondents (n=190) indicated that mean for the 9 items, with the lowest were 2.4 (SD 0.89) ranging to highest 3.02 (SD 0.71). **Discussion/Conclusion :** Results suggested respondents had high knowledge and positive attitude on SRH.



RELATION OF ACANTHOSIS NIGRICANS STATUS WITH METABOLIC SYNDROME MARKERS IN PRIMARY SCHOOL (MyBFF@SCHOOL) (ruziana@imr.gov.my)

Farah Aqilah R¹, Muhammad Yazid J¹, Fazliana M², Fuziah MZ³, Janet YH Hong³, Ruziana Mona WMZ², Nur Zati Iwani Ak², Abqariyah Y¹, Rusidah S⁴, Zahari I1, Abdul Halim M¹

¹ University of Malaya ² Institute for Medical Research
³ Hospital Putrajaya ⁴ Nutrition Division Ministry of Health Malaysia

8th Malaysian Endocrine & Metabolic Society Annual Congress, Hilton Kuala Lumpur, 19 – 21 May 2017

Background : There is a rising trend of overweight and obesity among school aged children. MyBFF@school is an interventional programme introduced as a curricular activity specific for overweight and obese students in Malaysian schools. Acanthosis nigricans (AN) is one of the significant markers for insulin resistance which previous studies have shown to increase the risk of diabetes by 3-5 folds during adulthood. This study investigated the difference of clinical and metabolic profiles among overweight and obese students with AN and without AN. **Research Design and Methods :** This study involved 1371 overweight and obese primary school students aged 9 to 11 years according to

WHO BMI growth chart. Participants were required to fast overnight for at least 8 hours prior to the assessment. BMI, body fat percentage, waist circumference, pubertal status, and AN were measured by trained medical personnel. Blood profiles were measured for fasting plasma glucose (mmol/l), total cholesterol (mmol/l), triglyceride (mmol/l), high density lipoprotein (HDL) (mmol/l) and low density lipoprotein (LDL) (mmol/l) using Dirui CS-400 automated chemistry analyzer and using reagent purchased from Randox Laboratories. **Results :** The findings showed that mean BMI, waist circumference and body fat percentage were significantly higher among participants with AN compared to participants absence of AN (BMI 25.3 kg/m² vs. 22.1 kg/m² p<0.001; waist circumference 79.4 cm vs. 71.0 cm p<0.001; body fat percentage 40.3 % vs. 35.4 % p<0.001). In addition, participants with AN have significantly reduced mean HDL level (1.11 mmol/l) when compared to the participants absence of AN (1.17 mmol/l). **Conclusion :** The data showed that AN was associated with BMI, waist circumference, body fat percentage, and HDL level. To prevent disease progression, it is critical to have early recognition during adolescent stage.

SMOKING AMONG SCHOOL-GOING ADOLESCENTS IN SELECTED SECONDARY SCHOOLS IN PENINSULAR MALAYSIA - FINDINGS FROM THE MALAYSIA ADOLESCENTS HEALTH RISK BEHAVIOUR (MyAHRB) STUDY (limkh@imr.gov.my)

Lim KH¹, Teh CH², Lim HL³, Ling MY¹, Kee CC², Sumarni MG², Chan YY², Tee EO⁴, Shubash Shander G¹, Lim KK¹, Wan KK¹, Wan Shakira RH¹, M Fadli Y¹

¹ Institute for Public Health, Kuala Lumpur ² Institute for Medical Research, Kuala Lumpur
³ Melaka manipal Medical College, Melaka ⁴ Allied Health College, Sungai Buloh, Selangor

4th Asia Pacific Conference on Public Health, MS Garden, Kuantan, 7 - 9 September 2015

Introduction : A multitude of studies have revealed that smoking is a learned behaviour during adolescence and reducing the incidence of smoking has been identified as a long-term measure to curb the smoking menace in the Malaysian. The objective of this study was to assess the prevalence and the intra- and inter- personal factors associated with smoking among upper secondary school students in selected schools in Peninsular Malaysia. **Methods :** Thirty secondary schools were randomly selected using two-stage proportionate to sampling and upper secondary school students from each selected school were invited to participate in the study. Prevalence and associated factors were assessed using a validated standardised questionnaire. **Results :** This study revealed that the prevalence of smoking was 14.6%, significantly higher among males compared to females (27.9% vs 3.4%, p<0.001). The majority of smokers initiated smoking during the early adolescent years (60%) and almost half of the respondents bought the cigarette themselves. Multivariable analysis revealed that the following factors increased the likelihood of being a current smoker: being male (adjusted odds ratio (aOR) 21.51; 95% CI 13.10-35.10); perceived poorer academic achievement (aOR 3.42, 95% CI 1.50-7.37), had one or both parents who smoked (aOR 1.80, 95% CI 1.32-2.45; aOR 6.50, 95% CI 1.65-25.65), and always feeling lonely (aOR 2.23, 95% CI 1.21-4.43). On the other hand, respondents with higher religiosity (aOR 0.51, 95% CI 0.15-0.92) and protection (aOR 0.71, 95% CI 0.55-0.92) scores were less likely to smoke. **Conclusion :** This study showed that the prevalence of smoking among adolescents is still high, despite implementation of several anti-smoking measures. More robust measures intergrating the factors identified in this study are strongly recommended to curb the smoking menace among adolescents in Malaysia.

Keywords : Adolescence smoking, intrapersonal, interpersonal, school-going adolescents, Peninsular Malaysia



21



RESPIRATORY OUTCOMES OF CHILDREN AND ADOLESCENTS WITH PERSISTENT SEVERE ALLERGIC ASTHMA TREATED WITH ANTI-IgE (OMALIZUMAB) THERAPY (drmariana@moh.gov.my)

Mariana D

Pediatric Department, Hospital Raja Perempuan Zainab, Kota Bharu, Malaysia

Malaysian Thoracic Society Annual Congress, Sunway Putra Hotel, Kuala Lumpur, 20 – 23 Jul 2017

Background: Severe asthma has many significant consequences with serious respiratory morbidity and increased healthcare expenditures. Omalizumab is an established anti-IgE therapy for add-on treatment of persistent severe allergic asthma. **Objective:** To evaluate respiratory outcomes at ≥52 weeks of anti IgE treatment. **Methods:** A descriptive analysis of children and adolescents aged ≥6 to <18 years old with persistent severe allergic asthma, uncontrolled symptoms despite GINA step 5 (on add-on oral corticosteroid) were added Omalizumab 300mg-600 mg every 2-4 weekly from August 2012 until May 2017 at HRPZ 2, Kelantan. Data on asthma control (GINA classification), asthma control test (ACT), spirometry, severe asthma exacerbations and unscheduled healthcare utilization at ≥ 52 weeks of treatment were obtained. **Results:** Six patients with equal male to female ratio were analysed. The median age of starting Omalizumab was 11.06 years (IQR: 4.64) and the median duration of Omalizumab treatment was 2.34 years (IQR: 2.72). The mean total IgE level was 1,959.8 kU/L (SD:1514.3). Despite being treated with high-dose inhaled corticosteroids and long- acting b2-agonists, leukotriene modifiers and oral prednisolone, 83% of patients experienced frequent uncontrolled symptoms in the past year, reduced ACT ≤ 19 and reduced baseline FEV1. At ≥52 weeks of treatment, 83% of them have controlled asthma (GINA classification), asthma control test (ACT) becoming good control (≥ 20), and 100% had FEV1 ≥ 80%. There were significant reductions between 75 to 100% per patient in unscheduled healthcare utilization and severe asthma exacerbation that required hospitalizations at /≥ 52 weeks of treatment. 67% of them were able to cease oral maintenance steroids. There was no anaphylaxis noted. **Conclusion:** Omalizumab has been showed to improve asthma control, reduced exacerbation rates and unscheduled healthcare utilization, and improvement of FEV1. Omalizumab is effective as add-on therapy in the treatment of children and adolescent with persistent severe allergic asthma.

Keywords: Respiratory outcome, severe allergic asthma, children and adolescents, anti-IgE treatment

JOURNAL ABSTRACTS

A CLINICAL PHARMACIST-BASED SCREENING FOR DEPRESSION IN CHILDREN WITH TRANSFUSION-DEPENDENT THALASSEMIA IN MALAYSIA

See-Yee Ng, Huan-Keat Chan¹

Pharmacy Department, Clinical Research Center, Sultanah Bahiyah Hospital, Kedah, Malaysia

ABSTRACT

An understanding of the psychosocial problems in pediatric patients with thalassemia is crucial, as depression has been shown to affect their adherence to long-term treatment including iron-chelating agents. This study was conducted to determine the prevalence of depression in children and adolescents with transfusion-dependent thalassemia through screening by a pharmacist in a tertiary care center. Of the 63 participants screened using the Children Depression Inventory (CDI), 19% (n=12) were identified to have depression. The finding is consistent with those of the previous studies, suggesting that pharmacists could play a role in identifying the depressed patients by using a validated tool, refer them to physicians for clinical diagnosis, and make recommendations to change or modify the treatment if necessary.

Archives of Pharmacy Practice, IP: 103.245.88.221. <http://www.archivepp.com>

PREVALENCE OF TRUANCY AND ITS ASSOCIATED FACTORS AMONG SCHOOL-GOING MALAYSIAN ADOLESCENTS : DATA FROM GLOBAL SCHOOL-BASED HEALTH SURVEY 2012

Norzawati Yoep^{1*}, Leni Tupang², Ahmad Nadzri Jai¹, Lim Kuang Kuay¹, Faizah Paiwai¹, Noor Safiza Mohd Nor¹

¹ *Institute for Public Health, Ministry of Health, Kuala Lumpur, Malaysia*

² *Keningau Division Health District, Sabah, Malaysia*

ABSTRACT

This study aimed to examine the prevalence of truancy and its associated factors among school going Malaysian adolescents. The Malaysia Global School-based Health Survey (GSHS) was conducted from February to April 2012 involving 28,933 students aged 12 - 17 years old. A two-stage cluster sampling was used to select the schools and students with an overall response rate of 88.6%. The data were obtained using the GSHS questionnaire. The prevalence of truancy was 30.8% and significantly higher among male than female (32.9% vs 28.7%). The factors associated with truancy were current smoker (aOR: 2.23; 95% CI: 2.03 - 2.46), current drug user (aOR: 2.23; 95% CI: 1.52 - 3.29), current alcohol use (aOR: 1.39; 95% CI: 1.24 - 1.56), having been bullied (aOR: 1.31; 95% CI: 1.22 - 1.42) and not currently live with both parents (aOR: 1.25; 95% CI: 1.16 - 1.35). High truancy among school going adolescents warrants a new effective strategy to control truancy in Malaysia.

Keywords: Adolescent, GSHS, Protective Factors, Risk Factors, Truancy

Psychology, 2016, 7, 1053-1060. <http://dx.doi.org/10.4236/psych.2016.78106>

DEMOGRAPHIC AND LIFESTYLE FACTORS ASSOCIATED WITH SEXUAL ACTIVITY AMONG ADOLESCENTS IN MALAYSIA

Yong Kang Cheah¹, Hock Kuang Lim², Chee Cheong Kee³, and Sumarni Mohd Ghazali³

¹ *School of Economics, Finance and Banking, College of Business, UUM, Kedah, Malaysia.*

² *Health Risk Assessment Unit, Institutes for Medical Research, MoH, Malaysia.*

³ *Epidemiology and Bio-statistic Unit, Institutes for Medical Research, MoH, Malaysia.*

ABSTRACT

Having a better understanding of the factors associated with sexual behaviour among adolescents is important as it may assist government in lowering the prevalence of teen pregnancy. The objective of the present study is to examine the effects of demographic and lifestyle factors on likelihood of engaging in sexual intercourse with a focus Malaysian adolescents. Using a nationally representative data collected by the Ministry of Health Malaysia, the present study finds that age, self-rated academic performance, parents' marital status, alcohol consumption and cigarette smoking can significantly affect the sexual behaviour among adolescents. The present study concludes by discussing the policy implications of these findings. As a measure towards reducing underage sex, successful policies should be targeted primarily at adolescents who aged more than 16 years self-rate their academic performance as poor, have single parents, and adopt alcohol drinking and cigarette smoking behaviours.

Keywords : Adolescent; demographic factor; intercourse; lifestyle; sex

Vulnerable Children And Youth Studies 2016; 11(4):324-331, 324-331. <http://dx.doi.org/10.1080/17450128.2016.1218095>

SMOKING AMONG SCHOOL-GOING ADOLESCENTS IN SELECTED SECONDARY SCHOOLS IN PENINSULAR MALAYSIA- FINDINGS FROM THE MALAYSIAN ADOLESCENT HEALTH RISK BEHAVIOUR (MyAHRB) STUDY

Kuang Hock Lim¹, Hui Li Lim², Chien Huey Teh¹, Chee Cheong Kee¹, Yi Yi Khoo³, Shubash Shander Ganapathy³, Maw Yn Jane Ling³, Sumarni Mohd Ghazali¹, Eng Ong Tee⁴

¹ Institute for Medical Research, Jalan Pahang, 50588 Kuala Lumpur, Malaysia

² Melaka Manipal Medical College, Jalan Batu Hampar, Kuala Lumpur, 75150 Melaka Malaysia

³ Institute for Public Health, Jalan Bangsar, 50590 Kuala Lumpur, Malaysia

⁴ Allied Health College, Jalan Hospital, 47000 Sg. Buloh, Malaysia

Background : A multitude of studies have revealed that smoking is a learned behaviour during adolescence and efforts to reduce the incidence of smoking has been identified as long-term measures to curb the smoking menace. The objective of this study was to determine the prevalence as well as the intra and inter-personal factors associated with smoking among upper secondary school students in selected schools in Peninsular Malaysia. **Methods :** A study was carried out in 2013, which involved a total of 40 secondary schools. They were randomly selected using a two-stage clustering sampling method. Subsequently, all upper secondary school students (aged 16 to 17 years) from each selected school were recruited into the study. Data was collected using a validated standardised questionnaire. **Results :** This study revealed that the prevalence of smoking was 14.6% (95% CI:13.3-15.9), and it was significantly higher among males compared to females (27.9% vs 2.4%, $p < 0.001$). Majority of smokers initiated smoking during their early adolescent years (60%) and almost half of the respondents bought cigarettes themselves from the store. Multivariable analysis revealed that the following factors increased the likelihood of being a current smoker: being male (aOR 21.51, 95% CI:13.1-35), perceived poor academic achievement (aOR 3.42, 95% CI:1.50-7.37) had one or both parents who smoked (aOR 1.80, 95% CI:1.32-2.45; aOR 6.50, 95% CI:1.65-25.65), and always feeling lonely (aOR 2.23, 95% CI:1.21-4.43). In contrast, respondents with a higher religiosity score and protection score were less likely to smoke (aOR 0.51, 95% CI:0.15-0.92; aOR 0.71, 95% CI 0.55-0.92). **Conclusion :** This study demonstrated that the prevalence of smoking among Malaysian adolescents of school-going age was high, despite implementation of several anti-smoking measures in Malaysia. More robust measures integrating the factors identified in this study are strongly recommended to curb the smoking epidemic among adolescents in Malaysia.

Keywords : Adolescent smoking, Intrapersonal, Interpersonal, School-going adolescents, Peninsular Malaysia

Tobacco Induced Diseases (2017) 15:9. DOI 10.1186/s12971-016-0108-5

CLINICAL SPECTRUM OF CHILDREN RECEIVING PALLIATIVE CARE IN MALAYSIAN HOSPITALS

Chong LA¹, Khalid F², Khoo TB³, Teh SH⁴, Kuan GL⁵, Aina Mariana AM⁶, Alias E⁷, Chieng CH⁸, Razali H⁹, Ong GB¹⁰, Zainah SH¹¹, Shukor IN¹², Wong JJ¹³

¹ Hospis Malaysia, Cheras, Kuala Lumpur, Malaysia

³ Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

⁵ Malacca Hospital, Malacca, Malaysia

⁷ Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

⁹ Hospital Sultan Ismail, Johor Bahru, Johor, Malaysia

¹¹ Hospital Sultanah Nora Ismail, Batu Pahat, Johor, Malaysia

¹³ Hospital Pakar Sultanah Fatimah, Muar, Johor, Malaysia

² Universiti Putra Malaysia, Faculty of Medicine and Health Sciences, Selangor, Malaysia

⁴ Hospital Miri, Miri, Sarawak, Malaysia

⁶ Hospital Port Dickson, Negeri Sembilan, Malaysia

⁸ Hospital Sibul, Sibul, Sarawak, Malaysia

¹⁰ Sarawak General Hospital, Kuching, Sarawak, Malaysia

¹² Hospital Segamat, Segamat, Johor, Malaysia

INTRODUCTION : Awareness for paediatric palliative care has resulted in the impetus for paediatrician-led palliative care services across Malaysia. However, there is paucity of local data on patients receiving hospital-based paediatric palliative care. We aim to review the clinical spectrum of patients referred to these services. **METHODS :** An observational study of children aged between 0-18 years receiving palliative care at 13 hospitals between 1st January and 31st December 2014 was carried out. **RESULTS :** There were 315 patients analysed, 90 (28.6%) and 46 (14.6%) were neonates and adolescents respectively. The main ICD-10 diagnostic categories for all patients were identified to be 'Congenital malformations, deformations and chromosomal abnormalities' 117 (37.1%), 'Diseases of nervous system' 76 (24.1%) and 'Neoplasms' 60 (19.0%). At referral 156 (50%) patients had holistic needs assessments. Patients with 'Diseases of nervous system' were assessed to have significantly more physical needs than the other two diagnostic categories. Majority of patients who knew of their diagnosis and prognosis were those with malignancy. Over a fifth of referrals were at their terminal admission. Of 144 who died, 111 (77.1%) had advanced care plans. There was bereavement follow-up in 98 (68.1%) patients. **CONCLUSION :** Patients referred for palliative care have varied diagnoses and needs. To ensure all paediatricians are competent to deliver quality care to all children, further education and training initiatives is imperative.

Keywords : Paediatric, Palliative care, Malaysia, Hospital-based care, Palliative care diagnosis

Medical Journal of Malaysia Vol 72 No 1 February 2017

SCHOOL CHILDREN AS HEALTH AGENT: AN EXPLORATIVE STUDY ON PEERS' PERSPECTIVES

SM Suraiya¹, B Pises¹, B Faizal², M Shahnaz³ & M Nor Asiah^{4,5}

¹ Institute for Health Behavioural Research, MoH, Malaysia

² Institute for Medical Research, MoH, Malaysia

³ Office of Deputy Director General of Health (R&TS), MoH, Malaysia

⁴ Non Communicable Disease Section, MoH, Malaysia

⁵ Institute for Public Health, MoH, Malaysia

INTRODUCTION: School based programme known as 'Doktor Muda' was established to empower school children using their knowledge and health skills to achieve better health status. "Doktor Muda" (DM) is a group involved a selection of trained school children that met certain criteria as peer educators in order to influence their peers' attitude and health practices. **METHODOLOGY:** A cross sectional study was carried out from March 2014 to January 2015. Qualitative data were collected by Focus Group Discussion (FGD) to identify peers perspective towards DM as a health promotion agent using a semi structured open ended questionnaire. The questionnaire was developed according to the relevant themes that identify the ability of DM to influence their peers' attitude and health practices. **RESULTS:** The findings showed that majority of participants admitted positive response towards information given by DM in their behavioural beliefs towards health. Majority of the participants agreed DM has succeeded in changing their attitudes toward the importance of health involving were participants' concern on health. However, some of the participants claimed negative response showed by the peers during dissemination of information by DM and participants' observations. Verification from the feedback groups regarding individual who influence their personal hygiene practice revealed 45.5% by their ownself, 36.4% by their parents/family and 36.4% by DM respectively. **CONCLUSIONS:** This study has succeeded in exploring peers' perspectives on the efficacy of DM as health promotion agent. Strengthening in positive beliefs among peers towards health, influencing positive attitudes to accentuate health and encouraging health practices at a moderate level were established in this study.

keywords : Doktor muda, Peer's perspective, FGD, Health Promotion Agent.

Global Journal of Health Science; Vol. 9, No. 5; 2017. <http://doi.org/10.5339/gjhs.v9n5p1>

DO ADOLESCENTS UNDER-REPORT THEIR SMOKING STATUS? – FINDINGS FROM SECONDARY SCHOOL STUDENTS IN KOTA TINGGI, JOHOR

Lim H.L.¹, Teh C.H.², Kee C.C.², Normala I³, Lim K.H.³

¹ Melaka Manipal Medical College, Melaka

² Institute for Medical Research, MoH, Kuala Lumpur

³ Faculty of Medicine, UPM, Selangor

Background: The denormalisation of smoking behavior and anti-smoking measures taken to curb smoking prevalence have created an environment which might contribute to the under-reporting of smoking status among adolescents. The detection of under-reporting is crucial in ascertaining the accuracy of smoking data, therefore this study was undertaken to determine the prevalence of under-reporting of smoking status among school-going adolescents. **Materials and Methods:** A total of 405 of 2700 adolescents who participated in a longitudinal study in Kota Tinggi were randomly selected and their exhaled carbon monoxide concentration was measured using a pre-calibrated carbon monoxide (CO) analyzer. The cut-off point of exhaled CO of 5 parts per million (ppm) was used to determine smoking status. A total of 343 adolescents responded (84.69%) in the study, of which 85 smokers and 8 non-smokers with recent respiratory illness were excluded from the analysis. **Results:** Of these 250 non-smoking adolescents, 44.6% (115) were male, and 76.4% (197) were in lower secondary school. Analysis showed that the concentration of exhaled CO among 257 adolescents (99.6%) were between 0 - 5.00ppm. In addition, the CO level of all non-smoking females and lower secondary school students were in the range of 0 - 5.00ppm. This study revealed that the under-reporting of smoking status was negligible. **Conclusion:** Self-reported smoking status among adolescents can be accepted as valid answers for their smoking status. However, more studies in different localities on a larger scale are warranted to determine that self-reported smoking status is a valid measurement of actual smoking status among adolescents in the country.

Keywords: self-reported smoking, carbon monoxide, under-reporting, school-going adolescents.

International Journal of Public Health and Clinical Sciences 2017; Vol.4:No.2:66-72

TRIGLYCERIDE TO HDL-C RATIO IS ASSOCIATED WITH INSULIN RESISTANCE IN OVERWEIGHT AND OBESE CHILDREN

Nur Ahmad Kamil Zati Iwani^{1,2}, Muhammad Yazid Jalaludin¹, Ruziana Mona Wan Mohd Zin^{1,2}, Md Zain Fuziah³, Janet Yeow Hua Hong³, Yahya Abqariyah⁴, Abdul Halim Mokhtar⁴ & Wan Mohamud Wan Nazaimoon²

¹ Department of Paediatrics, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

² Diabetes and Endocrine Unit, Institute For Medical Research, Kuala Lumpur, Malaysia

³ Department of Paediatrics, Putrajaya Hospital, Putrajaya, Malaysia

⁴ Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

⁵ Department of Sports Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia.

ABSTRACT

The purpose of this study was to investigate the usefulness of triglyceride to hdl-c ratio (TG:HDL-C) as an insulin resistance (IR) marker for overweight and obese children. A total of 271 blood samples of obese and overweight children aged 9–16 years were analysed for fasting glucose, lipids and insulin. Children were divided into IR and non-insulin resistance, using homeostasis model assessment (HOMA). The children were then stratified by tertiles of TG: HDL-C ratio. The strength between TG:HDL-C ratio and other parameters of IR were quantified using Pearson correlation coefficient (r). Odds ratio was estimated using multiple logistic regression adjusted for age, gender, pubertal stages and IR potential risk factors. Children with IR had significantly higher TG:HDL-C ratio (2.48) ($p=0.01$). TG:HDL-C ratio was significantly correlated with HOMA-IR ($r=0.104$, $p<0.005$) and waist circumference ($r=0.134$, $p<0.001$). Increasing tertiles of TG:HDL-C ratio showed significant increase in mean insulin level ($p=0.03$), HOMA-IR ($p=0.04$) and significantly higher number of children with acanthosis nigricans and metabolic syndrome. The odds of having IR was about 2.5 times higher (OR=2.47; 95% CI 1.23, 4.95; $p=0.01$) for those in the highest tertiles of TG:HDL-C ratio. Hence, TG:HDL-C may be a useful tool to identify high risk individuals.

sci.rep.7,40055;doi:10.1038/srep40055(2017)

PREScribing PATTERN OF ANTIDEPRESSANTS IN CHILDREN AND ADOLESCENTS : FINDINGS FROM THE RESEARCH ON ASIA PSYCHOTROPIC PRESCRIPTION PATTERN

KY Chee¹, A Tripathi², A Avasthi³, MY Chong⁴, YT Xiang⁵, K Sim⁶, S Kanba⁷, YL He⁸, MS Lee⁹, HFK Chiu¹⁰, SY Yang¹¹, H Kuga¹², P Udomratn¹³, AJ Tanra¹⁴, MM Maramis¹⁵, S Grover¹⁶, R Mahendran¹⁷, RA Kallivayalil¹⁸, WW Shen¹⁹, N Shinfuku²⁰, CH Tan²¹, N Sartorius²²

¹ Dept. of Psychiatry & Mental Health, Kuala Lumpur Hospital, Malaysia

² Dept. of Psychiatry, PGIMER, Chandigarh, India

³ Faculty of Health Sciences, University of Macao, Macao SAR, PR China

⁴ Dept. of Neuropsychiatry, Kyushu University, Japan

⁵ Dept. of Psychiatry, Korea University, South Korea

⁶ Dept. of Pharmacy, Taipei City Hospital, Taiwan

⁷ Dept. of Psychiatry, Prince of Songkla University, Thailand

⁸ Airlangga University, Jawa Timur, Indonesia

⁹ Dept. of Psychological Medicine, National University Hospital, Singapore

¹⁰ Dept. of Psychiatry, Taipei Medical University, Taiwan

¹¹ Dept. of Pharmacology, National University of Singapore, Singapore

¹² Dept. of Psychiatry, King George's Medical University, India

¹³ Dept. of Psychiatry, Chang Gung University, Taiwan

¹⁴ Institute of Mental Health, Buangkok Green Medical Park, Singapore

¹⁵ Dept. of Psychiatric Epidemiology, Shanghai Mental Health Center, PR China

¹⁶ Dept. of Psychiatry, The Chinese University of Hong Kong, PR China

¹⁷ Dept. of Neuropsychiatry, Kyushu University, Japan

¹⁸ Dept. of Psychiatry, Hasanuddin University, Makassar, Indonesia

¹⁹ Dept. of Psychiatry, PGIMER, Chandigarh, India

²⁰ Dept. of Psychiatry, Pushpagiri Medical College, India

²¹ Dept. of Psychiatry, Kobe University, Japan

²² Association for the Improvement of Mental Health Programmes, Geneva, Switzerland

Objective: Pharmacotherapy of depression in children and adolescents is complex. In the absence of research into the efficacy and safety of antidepressants in this group of patients, their off-label prescription is common. This paper aimed to illustrate the prescription pattern of antidepressants in children and adolescents from major psychiatric centres in Asia. **Methods:** The Research on Asia Psychotropic Prescription Pattern on Antidepressants worked collaboratively in 2013 to study the prescription pattern of antidepressants in Asia using a unified research protocol and questionnaire. Forty psychiatric centres from 10 Asian countries / regions participated and 2321 antidepressant prescriptions were analysed. **Results:** A total of 4.7% antidepressant prescriptions were for children and adolescents. Fluoxetine, sertraline, and escitalopram were the most common antidepressants prescribed for children and adolescents. Almost one-third (30.3%) of prescriptions were for diagnoses other than depressive and anxiety disorders. There was less antidepressant polypharmacy and concomitant use of benzodiazepine, but more concomitant use of antipsychotics in children and adolescents compared with adults. **Conclusion:** Off-label use of antidepressants in children and adolescents was reported by 40 Asian psychiatric institutions that participated in the study. In-service education and regulatory mechanisms should be reinforced to ensure efficacy and safety of antidepressants in children and adolescents.

Key words: Adolescent; Antidepressive agents; Child; Ethnopsychology

East Asian Archives of Psychiatry 2016;26:10-7

SUICIDAL IDEATION AMONG SINGLE, PREGNANT ADOLESCENTS : THE ROLE OF SEXUAL AND RELIGIOUS KNOWLEDGE, ATTITUDES AND PRACTICES

Chan LF¹, Mohamad Adam B², Norazlin KN^{3,4}, Siti Haida MI⁵, Lee VY⁶, Norazura AW⁷, Ek Zakuan K⁶, Tan SM⁶

¹ Department of Psychiatry, National University of Malaysia Medical Centre (UKMMC), Kuala Lumpur, Malaysia.

² Biostatistics Unit, National Clinical Research Centre, Kuala Lumpur, Malaysia.

³ Department of Pediatrics, National University of Malaysia Medical Centre (UKMMC), Kuala Lumpur, Malaysia;

⁴ Johns Hopkins Bloomberg School of Public Health, Baltimore, USA.

⁵ School of Psychology and Human Development, Faculty of Social Sciences and Humanities, University Kebangsaan Malaysia, Bangi, Selangor, Malaysia.

⁶ Child & Adolescent Psychiatry Unit, Department of Psychiatry, National University of Malaysia Medical Centre (UKMMC), Kuala Lumpur, Malaysia.

⁷ Department of Medical Social Welfare, National University of Malaysia Medical Centre (UKMMC), Kuala Lumpur, Malaysia.

ABSTRACT : Pregnant adolescents are a high-risk population for suicide. However, a knowledge gap still exists on how sexual and religious knowledge, attitudes and practices (KAP) influence suicidal ideation (SI) in teenage pregnancy. We aim to explore the interplay between psychiatric diagnoses, sociodemographic factors and KAP of sexual and religious issues as risk factors of SI among 114 pregnant Malaysian adolescents from 6 rehabilitation centers and a tertiary hospital. Single sexual partner was an independent predictor of SI, suggesting the role of less sexual experience as a risk factor for SI after controlling for major depression. Participants who were unsure versus those who agreed with the statement that most religions' viewed sex outside marriage as wrong had a lower risk of SI after controlling for major depression. Pregnant adolescents with a single sexual partner were significantly associated with current SI. Ambivalence towards religious prohibitions on premarital sex may protect against suicidal ideation.

Keywords : Risk factors; Sexual & religious KAP; Suicidal ideation; Teenage pregnancy

Journal of Adolescence 52 (2016) 162-169. <http://dx.doi.org/10.1016/j.adolescence.2016.08.006>

PREVALENCE AND RISK FACTORS ASSOCIATED WITH SUICIDAL IDEATION AMONG ADOLESCENTS IN MALAYSIA

Chan YY¹, Lim KH², Teh CH², Kee CC², Ghazali SM², Lim KK¹, Khoo YY¹, Tee EO³, Ahmad NA¹, Ibrahim N⁴

¹ Institute for Public Health, MoH, Malaysia

² Institute for Medical Research, MoH, Malaysia

³ Allied Health Sciences College Sungai Buloh, MoH, Malaysia

⁴ Dept. of Psychiatry, Faculty of Medicine and Health Sciences, UPM, Malaysia

Background : Suicidal ideation, defined as thoughts, ideas and the desire to commit suicide, is becoming a major public health problem among adolescents. Indeed, suicidal ideation is known as a key predictor of future suicide risk. **Objective :** This study aims to determine the prevalence and risk factors associated with suicidal ideation among adolescents in Malaysia. **Methods :** This study used data from the 2013 Malaysian adolescent health risk behavior (MyAHRB) study, a cross-sectional school survey conducted in Peninsular Malaysia among school-going adolescents aged 16-17 years (n=2789). Logistic regression analysis was used to determine the risk factors associated with suicidal ideation among Malaysian adolescents. **Results :** The overall prevalence of suicidal ideation among the adolescents was 6.2%. The prevalence was significantly higher among females than males (7.6% vs. 4.7%; p=0.002). Multivariate regression analysis revealed that adolescents who were females [odds ratio (OR)=2.02; 95% confidence interval (CI): 1.40-2.92] or of Indian ethnicity (OR=2.32; 95% CI: 1.35-3.98) were more likely to report suicidal ideation. Loneliness (OR=2.54; 95% CI: 1.57-4.11), anxiety or worry (OR=2.70; 95% CI: 1.70-4.31), no close friends (OR=2.71; 95% CI: 1.43-5.14), and lack of supportive peers (OR=1.69; 95% CI: 1.15-2.47) were identified as risk factors for adolescents' suicidal ideation. Adolescents who ever had sexual intercourse (OR=2.70; 95% CI: 1.48-4.92) and had been in a physical fight (OR=2.45; 95% CI: 1.62-3.70) were also reported to have higher risks of suicidal ideation. **Conclusion :** This study provides evidence on risk factors associated with suicidal ideation among Malaysian adolescents. Targeted mental health and health risk behavioral interventions for high-risk adolescents are recommended.

Keywords : Adolescents, Malaysia, Suicidal ideation, Suicide.

International Journal of Adolescent Medicine and Health 2016;aop - 10.1515/ijamh-2016-0053

FACTORS ASSOCIATED WITH PARTICIPATION IN PHYSICAL ACTIVITY AMONG ADOLESCENTS IN MALAYSIA

Cheah YK¹, Lim HK², Kee CC³, Ghazali SM³

¹ School of Economics, Finance and Banking, College of Business, UUM, Kedah, Malaysia

² Institute for Public Health, MoH, Malaysia

³ Institute for Medical Research, Malaysia

Background : The rising prevalence of non-communicable diseases (NCDs) has become a serious public health issue. Among the multi-factorial drivers behind NCDs are modifiable health risk factors, most notably, physical inactivity. **Objective** : In response to the nearly global policy priority of encouraging regular participation in physical activity, the objective of the present study is to examine the factors that determine participation in physical activity among Malaysian adolescents. **Methods** : Nationally representative data consisting of a large sample size was used. A censored regression model was developed to estimate the likelihood of participation and time spent on physical activity. **Results** : There are significant relationships between physical activity and gender, ethnicity, self-rated academic performance, maternal education, household size and time spent on physical education. **Conclusion** : The present study provides new insights into the factors affecting physical activity participation among adolescents. Specifically, self-rated excellent academic performance, household size and physical education can increase the likelihood of being physically active. Evidence of the present study implies that policy makers should pay special attention to females, Chinese, adolescents with self-rated poor academic performance and adolescents who have low maternal education.

Keywords : Adolescent, determinant, health, physical activity, student

International Journal of Adolescent Medicine and Health 2016;28(4):419-427

ABDOMINAL TUBERCULOSIS MANIFESTED AS TUBERCULOSIS OF THE URACHAL SINUS IN AN ADOLESCENT AND THE ROLE OF LAPAROSCOPY IN THE MANAGEMENT : A RARE CASE REPORT

Sze Li Siow^{1,2*}, Hon Leong Sha¹ and Chee Ming Wong^{1,2}

¹ Dept. of Surgery, Jalan Hospital, Kuching, Sarawak, Malaysia

² Dept. of Surgery, Faculty of Medicine and Health Sciences, UNIMAS, Sarawak, Malaysia

Background : Abdominal tuberculosis (TB) is an uncommon affliction in adolescence. It is usually associated with pulmonary tuberculosis. The disease is caused by lymphohaematogenous spread after primary infection in the lung or ingestion of infected sputum and has a typically protean and nonspecific presentation. The occurrence of TB in an urachal remnant is probably from the contiguous spread of an abdominal focus or mesenteric lymph node. Urachal TB is a rare entity, with only two reported cases in the literature. We report here a case of clinically silent pulmonary and abdominal TB that manifested in the infection of an urachal sinus and highlight the role of laparoscopy in its diagnosis and treatment. **Case presentation** : A 14-year-old boy presented to our institution with peri-umbilical swelling and purulent discharge from his umbilicus for 2 weeks duration. There were no radiological, microbiological or clinical evidences of TB in the initial presentation, though he had close social contact with someone who had TB. A computed tomography scan of the abdomen confirmed the diagnosis of an urachal abscess. An incision and drainage procedure was performed followed by a course of antibiotics. A scheduled laparoscopic approach later showed that the peritoneum and serosal surface of the small and large intestines were studded with nodules of variable sizes, in addition to the urachal sinus. The histology of the resected tissues (urachal sinus and nodules) was consistent of TB infection. He recovered fully after completing 6 months of anti-tuberculous therapy. **Conclusion** : This report highlights a rare case of TB urachal abscess in an adolescent boy, the difficulties in the diagnosis of abdominal tuberculosis, the need to consider TB as a cause of urachal infection in endemic areas and the use of laparoscopy in both diagnosis and treatment.

Keywords : Tuberculosis, Urachal sinus, Urachal abscess, Infection, Laparoscopy

BMC Infectious Diseases (2016)16:68. DOI 10.1186/s12879-016-1405-6

RELIABILITY AND VALIDITY OF THE PHYSICAL ACTIVITY QUESTIONNAIRE FOR OLDER CHILDREN (PAQ-C) IN MALAY LANGUAGE

Nor Azian Mohd Zaki, Norhafizah Sahril, Mohd Azahadi Omar, Mohammad Hasnan Ahmad, Azli Baharudin, Noor Safiza Mohd Nor

Institutes for Public Health, Ministry of Health, Malaysia

Introduction : Physical activity assessment in children is the first step in assessing the relationship between activity and health, as well as the determinants of childhood physical activity and changes in activity level. Physical Activity Questionnaire for Older Children (PAQ-C) is self-administered questionnaire to assess physical activity among older children. The objective of this study was to determine the validity and reliability of Physical Activity Questionnaire for Older Children in Malay language PAQ-C(M). **Methodology** : The validation study was done among 73 students aged 10 to 17 years old. The PAQ-C was translated into Malay language using forward and backward translation. The evaluation of the psychometric properties included internal consistency, test-retest reliability and criterion validity. Reliability of PAQ-C(M) was determined using Cronbach alpha and intra-class correlation coefficient (ICC). The PAQ-C(M) was administered twice in one week interval to assess test-retest reliability. Criterion validity was assessed between PAQ-C(M) and 3 Day Physical Activity Recall (3DPAR). **Results** : The internal consistency of PAQ-C(M) assessment calculated in this study was $\alpha = 0.75$ and $\alpha = 0.77$ for assessments one and two, respectively. The ICC between individual items of PAQ-C(M) was 0.59 to 0.91 indicating moderate to good correlation. The Spearman correlation coefficients between PAQ-C(M) and 3DPAR was acceptable ($r_s=0.60$, $p<0.01$). **Conclusion** : In conclusion, the findings of this study suggest that the PAQ-C(M) has moderate to good reliability and validity in assessing physical activity among older children and adolescents. Future validation of PAQ-C(M) against different measures such as accelerometer is recommended.

Keywords : Physical Activity Questionnaire for Older Children (PAQ-C), (PAQ-C) reliability, (PAQ-C) validity, PAQ-C Malay language

International Journal of Public Health Research; 2016;6(1):670-6

SMOKING AMONG SECONDARY SCHOOL STUDENTS IN KOTA TINGGI, JOHOR, MALAYSIA - FINDINGS FROM A CROSS-SECTIONAL STUDY

Lim Kuang Hock^{1*}, Teh Chien Huey², Hui Li Lim³, Keng Joo Lau⁴; Chee Cheong Kee²; Sumarni Mohd Ghazali²; Chan Ying Ying¹; Mohd Yusoff Sabtu¹; Hasimah Ismail¹; Nor Azian Mohd Zaki¹; Leni Tupang Thomas¹; Lim Kuang Kuay¹; Cheong, SM¹; Normala Ibrahim⁵; Muhammad Fadhli Mohd Yusoff¹

¹ Institute for Public health, MoH, Malaysia ² Institute for Medical Research, MoH, Malaysia
³ Manipal Medical College, Malacca, Malaysia ⁴ School of Health Sciences, USM, Kelantan, Malaysia
⁵ Universiti Putra Malaysia, Serdang, Malaysia

BACKGROUND : Smoking is a learnt behavior during adolescence and understanding the factor/s associated with smoking will assist in identifying suitable measures in combating the rising prevalence of smoking among adolescents. This research aimed to identify the factor/s associated with smoking among form four students in Kota Tinggi, Johor. Multistage sampling was used to select a representative sample of students in 2008 and data were collected using a self-administered validated questionnaire. This study revealed that the overall smoking prevalence was 19.0% with a significantly higher proportion of male smokers (35.8%) as compared to females (3.15%). Adolescents who were male (aOR 6.6, 95%CI 2.61-16.4), those who had peer/s who smoked (aOR 4.03, 95% CI 1.31-12.4), and those who studied in rural areas and Felda Settlements (aOR 4.59, 95 CI 1.11-18.0; aOR 9.42, 95%CI 3.91-29.1) were more likely to smoke in the past one week. On the other hand, adolescents with better knowledge on the hazards of smoking and negative attitudes towards smoking were less likely to smoke (aOR 0.51, 95%CI 0.37-0.72; aOR 0.67, 95%CI 0.46-0.99). Future promotional and interventional programmes on smoking should be considered and the above identified risk factors integrated to reduce smoking prevalence among students of school-going ages in Kota Tinggi, Johor.

Keywords : Adolescent smoking, weekly smoker, intrapersonal, interpersonal, Johor

Asian Pacific Journal of Cancer Prevention, Vol 16, 2015 DOI: <http://dx.doi.org/10.7314/APJCP.2015.16.11.4563>

PREVALENCE OF SEXUAL ACTIVITY IN OLDER MALAYSIAN ADOLESCENTS AND ASSOCIATED FACTORS

S Maria Awaluddin^{1*}, Noor Ani Ahmad¹, Noridah Mohd. Saleh², Tahir Aris¹, Noraida Mohd Kasim¹, Noor Azlin Muhammad Sapri³ and Nik Rubiah Nik Abdul Rashid²

¹ Institute for Public Health, Ministry of Health Malaysia, Malaysia.
² Family Health and Development Division, Ministry of Health Malaysia, Malaysia.
³ The National Population and Family Development Board, Ministry of Women, Family and Community Development, Malaysia

Background: Unprotected sexual activity predisposes adolescents to serious consequences later in life. This study aimed to identify the risks and protective factors associated with sexual activity in Malaysian adolescents aged 18 to 19 years. **Methods:** Data from a health screening program among adolescents conducted in 2010 were analyzed. A total of 21,438 unmarried adolescents responded to this topic using a self-administered non-anonymous validated questionnaire. **Results:** Among the participants, 54.5% were males and 45.5% were females. Ethnicities included 66.2% Malays, 20.7% Chinese, 7.2% Indians and 5.9% other ethnicities. Most of the respondents (97.1%) reported having a secondary level of education. The overall prevalence of sexual activity in older adolescents was 6.4% (8.9% among males and 3.6% among females). In a multivariate logistic regression model, sexual activity was positively associated with pornographic viewing (adjusted odds ratio [aOR]: 2.55; 95% confidence interval [CI]: 2.01-3.22), risky behavior (aOR: 2.62; 95%CI: 2.11-3.25), anti-social behavior (aOR: 2.44; 95%CI: 2.06-2.90), female (aOR: 2.24; 95%CI: 1.76-2.85), history of abuse (aOR: 1.81; 95%CI: 1.46-2.24), low religiosity (aOR: 1.71; 95%CI: 1.30-2.26) and masturbation (aOR: 1.34; 95%CI: 1.07-1.68). **Conclusions:** A comprehensive intervention program should be developed to target this at-risk group to prevent the spread of sexually transmitted diseases and criminal abortion.

Keywords: Sexual activity, risky behavior, pornographic viewing, Malaysian, adolescents

Journal of Public Health Aspects 2015;2:1.<http://dx.doi.org/10.7243/2055-7205-2-1>

NUTRITIONAL STATUS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS, CEREBRAL PALSY AND DOWN SYNDROME : A SCOPING REVIEW

Noor Safiza Mohamad Nor, Nur Shahida Abdul Aziz, Cheong Siew Man, Rashidah Ambak, Azahadi Omar

Institutes for Public Health, Ministry of Health Malaysia, Jalan Bangsar, Kuala Lumpur, Malaysia

Introduction : Autism Spectrum Disorders (ASD), Down Syndrome (DS) and Cerebral Palsy (CP) are the most common disabilities among children. Nutritional status assessment is important as these children are at risk of underweight, overweight or obesity. Therefore, the objectives of this review were to identify evidence on the prevalence of nutritional status of children with DS, CP and ASD, and to determine tools and indicators to measure the nutritional status of these children. **Methods :** This scoping review was conducted using a framework suggested by Arksey and O'Maley. A comprehensive search was performed to identify published and unpublished works, reviews, grey literature and reports. Inclusion criteria for the search were articles in English published from 1990 to 2014 and related to children with ASD, DS and CP. Titles, abstract, and keywords for eligibility were examined independently by the researchers. **Results :** A total of 305,268 titles were extracted from electronic database and other resources. Based on the inclusion criteria, 21 articles were selected for review. The prevalence of overweight or obese children with DS ranged from 33.5% to 43.5%. The prevalence of underweight children with CP was 22.2% to 78.2%. Children with ASD at a younger age were more likely to be overweight or obese compared with normal developing children. The common nutritional indicators used were z-scores for weight-for-age, height-for-age, body mass index-for-age, and head circumference-for-age. **Conclusions :** Overall, there is emerging evidence on the nutritional status of children with ASD, DS and CP although this is still very limited in developing countries including Malaysia. The evidence shows that children with CP were at risk of being underweight, while children with DS and ASD were at risk of being overweight or obese.

Keywords : Nutritional status; children; autism spectrum disorders; cerebral palsy; down syndrome

The Open Access Journal of Science and Technology Vol.3 (2015) Article ID 101174.[doi:10.11131/2015/101174](http://dx.doi.org/10.11131/2015/101174)

Moving Forward to a new NIH COMPLEX



NATIONAL INSTITUTES OF HEALTH, MINISTRY OF HEALTH MALAYSIA

<http://www.nih.gov.my>

Secretariat of the NIH (National Institutes of Health)
c/o Institute for Health Management
Jalan Bangsar
59000 Kuala Lumpur, Malaysia
Tel : 03-2287 4032 Fax : 03-2287 4030

NIH

NATIONAL INSTITUTES OF HEALTH, MINISTRY OF HEALTH MALAYSIA